

Supplementary Information

Fossil calibrations.—For further information and literature regarding the fossil calibrations, please refer to the relevant citations associated with each previously published calibration. All calibrations use soft upper bounds that represent conservative estimates based on the age of known fossil lineages that are hypothesized to represent a more stem lineage in the evolutionary history of ray-finned fishes. As a result of using these soft upper bounds for the lognormal priors, the parameters associated with each calibration have been slightly modified from their original source.

Calibration 1 (Modified from Near et al., 2012; calibration 1). Node: Crown-group Actinopterygii. First occurrence: †*Mimipiscis toombsi* and †*Moythomasia durgaringa*. Stratigraphy: lower Frasnian. Absolute age estimate: 382.5 Ma. The upper bound is based on the age of stem chondrichthyian †*Elegestolepis conica*.

Absolute age offset = 382.5 Ma

95% soft upper bound = 438 Ma

Log(Mean) = 2.17

Log(StDev) = 0.8

Calibration 2 (Modified from Near et al., 2012; calibration 2). Node: Crown-group Actinopteri. First occurrence: †*Cosmoptychius striatus*. Stratigraphy: Asbian regional

stage, but often correlated with the upper Viséan. The upper bound is based on the age of †*Mimipiscis toombsi* and †*Moythomasia durgaringa*.

Absolute age offset = 325.5 Ma

95% soft upper bound = 382.5 Ma

Log(Mean) = 2.475

Log(StDev) = 0.8

Calibration 3 (Modified from Arratia 2013). Node: Stem lineage Teleostei, dating the MRCA of Teleostei and *Amia*. Occurrence: †*Prohalecites*, the oldest stem teleostomorpha. Stratigraphy: Middle/Upper Triassic, Ladinian-Carnian boundary. The soft upper bound is based on the age of †*Cosmoptychius striatus*.

Absolute age offset = 237 Ma

95% soft upper bound = 325.5 Ma

Log(Mean) = 2.915

Log(StDev) = 0.8

Citation: Arratia G (2013) Morphology, taxonomy, and phylogeny of Triassic pholidophorid fishes (Actinopterygii, Teleostei). *Jour Vert Paleo* 33(6): 1–138.

Calibration 4 (Modified from Near et al., 2012; calibration 5). Node: Stem lineage Notopteridae, dating the MRCA of *Gymnarchus*, *Gnathonemus*, *Xenomystus*, and *Chitala*. First occurrence: †*Palaeonotopterus greenwoodi*. Stratigraphy: uppermost

Albian- lowermost Cenomanian. The upper bound is based on the age of stem teleost †*Pholidophorus*.

Absolute age offset = 99.6 Ma

95% soft upper bound = 220 Ma

Log(Mean) = 3.223

Log(StDev) = 0.8

Calibration 5 (Modified from Near et al., 2012; calibration 6). Node: Stem lineage Chanidae, dating the MRCA of *Chanos* and *Cromeria*. First occurrence: †*Rubiesichthys gregalis*. Stratigraphy: Berriasian-Valanginian. The upper bound is based on the Tithonian stem-lineage ostariophysian †*Tischlingerichthys viohi*.

Absolute age offset = 133.9 Ma

95% soft upper bound = 150 Ma

Log(Mean) = 1.26

Log(StDev) = 0.8

Calibration 6 (Modified from Davis and Fielitz, 2010). Node: Stem Lineage Euteleostei, dating the MRCA of Euteleostei, Alepocephaloidei, Clupeiformes, and Ostariophysi. First occurrence: †*Leptolepides sprattiformis*. Stratigraphy: Late Jurassic, Early Tithonian (Malm Z2) deposits. The upper bound is based on the age of stem teleost †*Pholidophorus*.

Absolute age offset = 150 Ma

95% soft upper bound = 220 Ma

Log(Mean) = 2.345

Log(StDev) = 0.8

Calibration 7 (Modified from Near et al., 2012; calibration 10). Node: Stem lineage Salmoninae, dating the MRCA of *Thymallus*, *Salvelinus*, and *Coregonus*. First occurrence: †*Eosalmo driftwoodensis*. Stratigraphy: middle Ypresian, U-Pb zircon dated to approximately 51.8 Ma. The upper bound is based on the Tithonian stem-lineage ostariophysian †*Tischlingerichthys viohi*.

Absolute age offset = 51.8 Ma

95% soft upper bound = 150 Ma

Log(Mean) = 3.019

Log(StDev) = 0.8

Calibration 8 (Modified from Davis and Fielitz, 2010). Node: Stem lineage Alepisauridae, dating the MRCA of *Anotopterus*, *Alepisaurus*, and *Omosudis*. First occurrence: †*Enchodus brevis* and †*Saurorhamphus freyeri*. Stratigraphy: Upper Cenomanian. The upper bound is based on the stem-lineage euteleost †*Leptolepides sprattiformis*.

Absolute age offset = 100 Ma

95% soft upper bound = 150 Ma

Log(Mean) = 2.344

Log(StDev) = 0.8

Calibration 9 (Modified from Davis and Fielitz, 2010). Node: Stem lineage

Myctophiformes, dating the MRCA of Myctophiformes and Acanthomorpha. First

Occurrence: †*Sardinoides*. Stratigraphy: Middle Cenomanian of Hakel and Middle

Cenomanian of Hajula deposits. The upper bound is based on the stem-lineage

euteleost †*Leptolepides sprattiformis*.

Absolute age offset = 96 Ma

95% soft upper bound = 150 Ma

Log(Mean) = 2.421

Log(StDev) = 0.8

Calibration 10 (Modified from Near et al., 2012; calibration 11). Node: Stem lineage

Polymixiiformes, dating the MRCA of *Polymixia* and Percopsiformes (*Percopsis*,

Aphredoderus, and *Chologaster*). First occurrence: †*Homonotichthys dorsalis*.

Stratigraphy: middle-upper Cenomanian. The conservative upper bound is based on the

minimal age of stem teleost †*Pholidophorus*.

Absolute age offset = 93.6 Ma

95% soft upper bound = 220 Ma

Log(Mean) = 1.88

Log(StDev) = 0.8

Calibration 11 (Modified from Near et al., 2012; calibration 12). Node: Stem lineage Percopsidae, dating the MRCA of Percopsiformes (*Percopsis*, *Aphredoderus*, and *Chologaster*). First occurrence: †*Massamorichthys wilsoni*. Stratigraphy: Thanetian, or middle Tiffanian NALMA. The upper bound is based on the minimal age of †*Homonotichthys dorsalis*.

Absolute age offset = 57 Ma

95% soft upper bound = 93.6 Ma

Log(Mean) = 2.032

Log(StDev) = 0.8

Calibration 12 (Modified from Near et al., 2012; calibration 13). Node: Stem lineage Aphredoderidae, dating the MRCA of *Aphredoderus* and *Chologaster*. First occurrence: †*Trichophanes foliarum*. Stratigraphy: upper Priabonian, dated to approximately 34.1 Ma. The upper bound is based on the minimal age of †*Massamorichthys wilsoni*.

Absolute age offset = 34.1 Ma

95% soft upper bound = 57 Ma

Log(Mean) = 1.563

Log(StDev) = 0.8

Calibration 13 (Modified from Near et al., 2012; calibration 16). Node: Stem lineage Lampridae dating the MRCA of *Lampris*, *Regalecus*, and *Trachipterus*. First occurrence: †*Turkmene finitimus*. Stratigraphy: uppermost Thanetian-lowermost Ypresian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 55.8 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.669

Log(StDev) = 0.8

Calibration 14 (Modified from Near et al., 2012; calibration 14). Node: Stem lineage Zeiformes, dating the MRCA of Zeiformes (*Cyttopsis*, *Zenopsis*, and *Zeus*), Gadiformes (*Lota* and *Coryphaenoides*), and *Stylephorus chordatus*. First occurrence: †*Cretazeus rinaldii*. Stratigraphy: latest Campanian-earliest Maastrichtian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 70.6 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.4278

Log(StDev) = 0.8

Calibration 15 (Modified from Near et al., 2012; calibration 15). Node: Stem lineage *Zenopsis*, dating the MRCA of *Zenopsis* and *Zeus*. First occurrence: †*Zenopsis clarus*, †*Zenopsis tyleri*, and †*Zenopsis hoernesii*. Stratigraphy: lower Rupelian [P18], lower Khadumian regional stage. The soft upper bound is based on the minimal age of †*Cretazeus rinaldii*.

Absolute age offset = 32 Ma

95% soft upper bound = 70.6 Ma

Log(Mean) = 2.0852

Log(StDev) = 0.8

Calibration 16 (Modified from Near et al., 2012; calibration 17). Node: Stem lineage Trachichthyoidei dating the MRCA of Beryciformes. First occurrence: †*Hoplopteryx lewesiensis* and †*Hoplopteryx simus*. Stratigraphy: middle-upper Cenomanian, zone of *Holoaster subglobosus*. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 93.6 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 1.88

Log(StDev) = 0.8

Calibration 17 (Modified from Near et al., 2012; calibration 23). Node: Stem lineage Carangidae, dating the MRCA of Carangidae (*Caranx*, *Seriola*, and *Trachinotus*), *Echeneis*, *Coryphaena*, and *Rachycentron*. First occurrence: †*Archaeus oblongus*. Stratigraphy: uppermost Thanetian-lowermost Ypresian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 55.8 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.669

Log(StDev) = 0.8

Calibration 18 (Modified from Near et al., 2012; calibration 24). Node: Stem lineage Echeneidae, dating the MRCA of *Echeneis*, *Coryphaena*, and *Rachycentron*. First occurrence: †*Opisthomyzon glaronensis* and unnamed echeneid cf. *Echeneis*. Stratigraphy: Engi slates: Rupelian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 30.1 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.985

Log(StDev) = 0.8

Calibration 19 (Modified from Near et al., 2012; calibration 26). Node: Stem lineage Siganidae, dating the MRCA of *Siganus* and Scatophagidae (*Scatophagus* and *Selenotoca*). First occurrence: †*Siganopygaeus rarus*. Stratigraphy: uppermost Thanetian- lowermost Ypresian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 55.8 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.669

Log(StDev) = 0.8

Calibration 20 (Modified from Near et al., 2012; calibration 33). Node: Stem lineage Diodontidae, dating the MRCA of Diodontidae (*Diodon* and *Chilomycterus*) and *Tetraodon*. Stratigraphy: upper Ypresian. The conservative upper bound is based on the minimal age of the oldest aulopiform †*Atolvorator longipectoralis*.

Absolute age offset = 50 Ma

95% soft upper bound = 125 Ma

Log(Mean) = 2.75

Log(StDev) = 0.8

Calibration 21 (Modified from Near et al., 2012; calibration 35). Node: Stem lineage of Balistidae, dating the MRCA of *Abalistes* and *Cantherhines*. First occurrence:

CTTGCTTTCACACGGCTTTTATGCTGTTTTGCATTAGTGTCACCCGATAC
CTCGCCATAGCCCATCACCGCTTTTACACGAAAAGATTAACCTTCTGGAC
CTGCCTGGCTGTGATCTGTATGGTTGGACGCTCTCGGTTCGCTATGGCTT
TCCCGCTGTACTGGATGTGGGGACCTACTCATTTATCCGGGAGGAAGAT
CAGTGTACCTTTCAGCATCGCTCATTCAGGGCTAACGATTCGCTGGGATT
TATGCTGCTCTTGGCCCTCATCCTACTAGCCACCCAGCTGGTCTACCTCA
AGCTCATCTTTTTTGTGCACGACCGGAGGAAGATGAAACCCGTTTCACTT
GTGCCAGCTGTGACCCAGAACTGGACCTTTCATGGTCCGGGGGCTAGCGG
CCAGGCGGCGGCAACTGGTTAGCTGGCTTCGGCAGAGGCCCTACCCGC
CTACTCTTCTGGGAATAAGACAAAAACCAACACCACGGGCAGAAGAAGA
CTGCTCGTCCTGGATGAGTTTAAACTGAAAAGCGAATAAGCAGGATGTT
CTACATCATGACGTTCTTCTTTTTGACCCTGTGGGGCCCCCTATCTTGTTG
CCTGCTACTGGAGAGTGTGTTGCTAGGGGGCCGGCGGTGCCAGGGGGTTAC
CTGACGGCCCGCTGCTGGATGAGTTTTGCCCAGGCTGGTGTCAATCCCTT
TATCTGCATCTTTTCCAACAGGGAG-----

----NNNNNNNNNGTCACCGACAGAGAAGTGGGGTTGGGGATAAATCCATTTGCTGATG
GGATGGGCGCTTTTAAAATCAACCACAGTACCCACGATCTTGCATCTGG-
--TCAAACGGCTTTTTCATCCCAGGCG--CCGGGGTAC--GCAGCGGC
AGCGCTGGGG---CATCATCA-----CCACCCCTCTCATGTCAGCTCT-
--TATTCACCGCAGCTTTCAATTCCACTCGGGACTTTCTTTTCCGAAAT
CGGGGATTTGGTGAAGCAGCCAG-----CGCCCAACATAGCCT
GTTTGCCTCTGC---CGCGGGAAGTTT--T-----GCGGGGGCCCATG
GACACACAGATGCTGCTGGACATTTGCTTTTCCCGGGACTTCACGAG---
CAGGCGACAACCTCATGCGTCTCCCAACGTTGTAAACAGTCAAATGCGATT
AGGCTTTTCCGGAGACATGTATGGCAGAGCAGACCAGTACAGCCAGGTAA
CAAGCCCCAGAT---CAGACCATTATGCTTCGACCCAGCTACACAGCTAC
GGACCCATGAACATGAATATGGCTGCA--CACCATGGGGCAGGGGCCTT
TTTTTCGTTATATGAGGCAGCCAATAAAGCAAGAACCTTATCTGTAAATGGA
TAGAACCTGAACAGTTGACAAAACCCGAAAAGTCTTGTAACAAAACTTTT
AGCACAATGCACGAACTAGTAACTCACCTCACAGTGGAAACATGTGGGGGG
ACCAGAGCAAGCCAACCATATCTGCTTTTGGGAAGAATGCGCACGAGAAG
GAAAGCCATTTAAAGCCAAGTATAAGCTTGTAATCACATACGAGTCCAC
ACAGGTGAAAACCTTTTCCTTGTCCANNNNNNNNNNNNNNNNNNNNN

>Polyodon spatula
AGTCTACTGATTCGTGCCGAACCTAAGCCAACCCGGTGCCTTACTTGGCGA
TGATCAAATCTATAATGTTATCGTTCACAGCCCACGCCTTTGTCATGATTT
TCTTTATAGTAATACCCATCATAATCGGCGGATTCGGAAATTGACTGGTC
CCCCTGATAATCGGAGCTCCAGATATAGCCTTCCCTCGCATGAATAATAT
GAGTTTCTGGCTCCTACCCCATCCTTCCTTCTCCTTTTGGCCTCCTCTG

-----CCC
AACAAAGGAGGCCTTCAAGTGTGAGGAGTGC GGCAAGA ACTACAACACCAA
GCTGGGCTACAAGCGCCACGTGGCCATGCATGCTGCCACCAACGGAGACC
TGACCTGCAAGGTGTGCCTGCAGAGCTACGAGAGTACGCCCGTGCTACTG
GAGCACCTCAAGAGCCACTCTGGTAAGTCCTCGGGCGGCCTGAAGGAAAA
GAAGCATCCCTGCGACCACTGCGACCGCCGCTTCTACACCCGGAAGGATG
TGCGCCGCCACATGGTGGTCCACACGGGCGCAAGGACTTCTATGCCAG
TACTGTGCCAGCGCTTTGGCCGCAAGGACCACCTGACCAGGCACGTCAA
GAAGAGCCACTCCAGGAGCTGCTAAAGATCAAGACAGAGCATCCCGACA
TGCTGGGGCTGCTCCACTCCAGCTCGCCCATCT---CTGTGAAGGAGGAG
CTCAGCCCCATGATGTG---CATGCCCCCTTGCAAAGACTCCATGATGGG
CAAGCCCTTTGCCAGCT-----CTTTCCCATGAGCATGTACAACCAGC
AC-----CTGCAGTCCATGTCCA ACTCAGGGGTCTCG-----
-----CACACCTTGGTGCCAGTTCGCTG---GCCACCATGGGGATGGG
TTGCCCCATGGAGTATCTAATTTATGCATCATTTTCTTTTCATGGGGTGT
TGCAAATTAGTGATGGATCAAACATAGTCAACCTCTTACCTAGTACTCG
CCAAGTGTCTCCTATGCACTGACCCAGCAAAAATACTTCAGTAACTACAG
TCCTGTAATTGGGTTCTATATTTATGAGCCGATAGAGTACTGGAACACAA
CCGTACAAGAACATTTAAATACATTAGGTCATGGGTTTAAATAGAATATCA
TGGATTGATCATTACTTTTCAGCATTTAAAAGTCATCAATATTACTACTCC
AACCAAAAGCGATTTTATAACTGTTCTGCAAAATTCATTCTTGATAAAAA
AAGAATTTTCAGCACTTTAAAGATGACATCATTTTTTCCAAAA---CAGGG
G-----ATGAAGTTGATATCATTGCATCCAGGATGTATATGGT
TGCCAGAACCAGCGAGAACACAAGGGAAGAAGTCGTTGAATTGCTGGAAA
GGCTAAGGCCATTGTCTCTTATCAACAGCATCAAATTTATTGTGTTTAAAT
CCTACCTTTGTGTTTCATGGATCGCTACAGCGCCTCCATCATATCACCCAT
TGTGACGTCTGGATTTAGTGTCTGATTGCCTTAGTCCTGACCGTCTTCC
TAGTTATTAATCCACTTGGTA ACTTTTGGTTGATAATTACAGTCACCTCA
GTAGAGTTAGGCGTTCTTGGCTTGATGGGATAACCACCGTTTGAGTGGCA
GCCAGCCCTGAAGAATGTCTCTAGCAGCACAGATGTGGGGATTATTGATG
GGTTGTCAGGCTGGACAGTTTCTGTGGAGGACTCTCAAATGGACACTATT
GCTCGCAGGTTCCGCTATGATGCTGCCTTGGTTTCAGCCTTAAAAGACCT
AGAGGAGGACATCCTGGAAGGCATTAATGAGCAAGGACTGGACGAATTC-
--TCCACAGAGGTCTTCTCAGTGGTGATCAAGGAATCATGTGATGGAATG
GGCGATGTGAGTGAGAAACACGGAGGTGGACCATCGCTCCAGAGAAAGC
TATCCGCTTCTCCTTCACCATCATGTCTATTGCCACCAAGAACGAAGATG
GAGAA-----AACATAAATGTC
TTCCAGGAACACAAGCCAAACTCAGAGCTCTGCTGCAAACCCATGTGTTT
GATGTTTGCAGATGAATCTGACCATGAGACACTGACAGCTATTCTGGGTC
CAGTGCTGGCCGAACGGGAAGCCATGAAAGAGAGTCGCCTGATCCTGGAG
ATTGGTGGCCTGTCTAGGTCTTTTCGATTTATCTTTAGGGGCACAGGGTA
TGACGAGAAGCTGGTGAAGGATGTTGAAGGATTGGAGGCCTCAGGGTCAA
CCTATATCTGTACCCTTTGTGATGCCACCAGAGCCGAAGCTGCCAGAAT
ATGGTTCTTCACTCTGTCACCAGGAACCATGAGGAAAACCTAGATCGCTA
TGAGATATGGCGGTCCAATCCCTACTCAGAGTCAGTGGATGAACTCCGTG
ACAGAGTGAAGGGAGTTTCAGCTAAGCCCTTTATGGAACCCAGCCTTCC
ATTGATGCCCTGCACTGTGACATTGGCAATGCCACAGAGTTCTACAAAAT
ATTCCAGGATGAAATAGGGGAAGTCTACCAGAATTA---CAAC---CCTA
CCCACGAGGAGAGGAAAAGGTGGCAATCTGCCCTAGATAAACAGCTGAGG
AAGAAGATGAACCTTAGACCTGTGATGAGGATGAAATGGCAATTTTGCCCG
CAAGTTGATGACTAAGGAGACAGTAGAAGCTGTTTGTGAGCTTGTCCCAT
CTCAAGAACGAAGAGAGGCCCTCAGGGAGCTTGTGCACCTGTACCTCCAA
ATGAAGCCTGTCTGGCGTGCCA ACTGCCAGCCAAAGAGTGCCAGACTT

GCTCTGCCGTTACAGCTTCAACTCACAGCGCTTTGCAGAGCTCCTCTCCA
CTACCTTCAAGTACAGATATGATGGAAAGATCACCAACTACCTCCACAAG
ACCTTGGCCCATGTGCCTGAGATCATTTGAAAGGGAGGGTTCCATAGGCGC
CTGGGCCAGTGAGGGCAATGAGTCCGGGAACAAGACATACGCCATTGAGA
TGGGCACCAGAGGACCCAGTGGAGTGCCAACCCAAGGCCCTTTGTCTGC
TMCATCGAGGAGCCGATCAAGCAGACCAAATTCAGGGCATCAAGACCTA
CATCTCCTACCGGGTGTCCCCAGCCACACAGGCAGYCCTGTCTACCGSC
GCTACAAGCACTTCGACTGGCTCTACAACCGGCTGCTGCACAAGTTCACC
GTCATCTCAGTACCYCACCTGCCAGAGAAGCAGGCCACTGGCCGATTCTGA
GGAGGACTTCATCGAGAAGCGCAAAAAGGAGGCTGATCCTCTGGATGGACC
ACATGACCAGCCACCCTGTTCTCTCCAGTATGAGGGCTTCGAACTTC
CTCATGTGTGSCGATGACAAGCAGTGGAAAGCTGGGCAAGCGGGCAGGA
GAAGGATGAGATGGTGGGCGCCAGCTTTCTGCTCACCTTCCAGATCCCCA
GTGAACACCAGGACCTGCAGGATGTGGAGGACCGGGTTGACACCTTCAAG
GCCTTCASTAAGAAGATGGACGACAGCGTGTTCAGCTCACAAACGTGAC
CACCGAGCTGGTACGCAAGCAYGTGGGAGGCTTCCGCAAGGAGTTCAGA
AGCTGGGCAGCGCATTCCAGTCAGTCAGCCAGGCCCTTACCCTAGACCCA
CCCTACAGCTTCGATGCCCTCAACAACGCCATCTCCCA-CCTCTTACGAC
TTTTCTCAAAGTACTTCCCTTGGCTTCATCATTGGGGTTGGCATGGTTG
GTAACCTCCTGATATCCATCTTATTGGTCAAAGACAAGACCTTGCACAGA
GCTCCCTACTACYTTTTACTTGGATCTTTGTGGTTTCAGATATACTCAGATC
CGCAATTTGTTTCCATTTGTGTTCACTTCAGTTAAAAATGGTTCATCGT
GGACATATGGAACACTTACATGTAAAGTGATTGCCCTCCTGGGWGTTTTG
TCTTGCTTTTCATACTGCCTTTATGCTGTTTTTGCATCAGTGTGACTCGATA
YCTAGCCATAGCTCATCACCGTTTCTATAYGAAAAGGCTGACGTTTGGGA
CCTGCTTGGCTGTCAATTTGTATGGTGTGGACTCTTCCGTGGCTATGGCK
TTTCCACCAGTCTTGGACGTGGGTACCTACTCCTTTATCAGAGAGGAAGA
CCAGTGCACCTTCCAACATCGCTCCTTTCAGAGCCAACGACTCACTGGGAT
TTATGCTACTTCTAGCCCTAATACTTCTCGCCACCCAGCTTGTCTACCTC
AAGCTTATTTTTTTTTTGTCCATGATCGCAGGAAGATGAAACCAGTCCAGTT
TGTACCAGCCGTCAGCCAAAACCTGGACTTTTTCATGGTCCAGGRGCCAGTG
GCCAGGCGGCTGCAAACCTGGTTAGCTGGCTTTGGAAGAGGCCCTACTCCA
CCGACCCTGCTGGGAATAAGGCAAAACACCAATACAACAGGGAGAAGACG
GCTCCTCATTTTTGGATGAATTTAAAACCTGAAAAAGGGTTAGCAGGATGT
TCTACATTATGACGTTTTTTTTTCTTACTTTGTGGGGCCCTATCTTGTA
GCATGCTATTGGAGAGTGTGTTGCCAGGGGGCCCGTGGTGCCAGGGGGTA
TCTGACAGCTGCAGTCTGGATGAGTTTTGCCAGGCTGGAGTCAATCCAT
TTATCTGCATTTTNNNNNNNNNNNNNNN-----

-----ACAGGCGA
TGTCACCGACAGAGAAGTGGGGTTGGGAATAAACCCGTTTGCAGATGGGA

TGGGGGCTTTTAAAAATCAACCACAGTACTCATGATCTTGCMCTG---C
CAAACCTGCATTTGCATCCCAAGCG---CCCGGGTAT---GCTGCGGCGGC
TCTGGGG---CATCATCA-----CCATCCCACCCATGTCAGCTCG---T
ATTCCACTGCTGCTTCAATTCAACCCGGGACTTCTGTTTCGAAACCGG
GGGTTTGGAGAAGCGGCTAG-----CGCACAGCACAGCCTCTT
TGCCCTGTC---TGCAGGAACTTT---T-----GCGGGGCCTCACGGGC
ACACAGATGCTGCAGGACACCTACTTTTCCCCGGACTTCACGAA---CAG
GCGGCCACTCATGCCCTCTCAAATGTTGTTAACAGCCAAATGCGCTTAGG
CTTTTCTGGGGACATGTATGGCAGGGCAGACCAGTATAGCCAGGTACTA
GTCCCAGAT---CMGATCACTATGCATCGACCCAGCTGCACAGTTACGGT
GCCATGAACATGAACATGGCCGCC---CACCACGGTGCRGGGGCCTTYTT
TCGTTACATGAGGCAACCCATCAAACAAGAACTTATTTGCAAATGGATTG
AACCSGARCAATTGGCAAACCCCAAAAAGGCTTGAACAAAACCTTTTAGC
ACAATGCACGAGCTCGTTACTCACCTCACAGTAGAGCACGTTGGGGGACC
CGAGCAAGCGAATCATATCTGTGTTTGGGAAGAGTGTCCAGAGAAGGAA
AACCTTCAAAGCCAAGTACAAACTTGTAATCATATCCGAGTACACACC
GGCGAGAAACCTTCCN>NN>NN>NN>NN>NN>NN>NN>NN>NN>NN>NN>NN

>Amia calva

AGTCTCCTAATTCGAGCAGAATAAGTCAACCAGGAGCCTTGCTAGGTGA
CGACCAGATCTATAATGTAATTGTTACAGCACATGCCTTTGTAAATAATTT
TCTTTATAGTAATGCCCGTTATAATTGGTGGGTTTGGCAACTGGCTAGTC
CCCCTAATAATTGGAGCCCCGGACATAGCTTTCCCCGAATAAACAACAT
GAGCTTCTGACTGCTGCCCCATCCTTCCTACTTCTTCTTGCCCTCCTCAG
GCGTAGAAGCGGGAGCCGGGACCGGCTGAACTGTATACCCCTCTGGCA
AGCAACCTTGCACACGCAGGCGCATCAGTAGATTTAACCATCTTCTCCCT
ACACTTAGCTGGAGTTTCATCCATCTTGGGGCAATTAACCTTTATCACA
CCATTATCAACATAAAACCCCGAGCAGCCTCTCAATACCAAACACCTCTG
TTCGTATGATCCGTCCTAATTACTGCTGTTCTACTCCTCCTATCCCTGCC
CGTCTTGGCCCGCAGGCATCACAATGCTACTAACTGACCGAAATCTCAATA
CCACATCTTTTGACCCTGCCGGAGGGGGCGACCCCATCTTATACCAACAC
CTTTTCTGATTCTTCGACACCCAGAAGTATACATTTTAATTCTCCCAGG
GTTTCGGAATAGTTTCCCATATTGTAGCATACTACGCAGGTAAAAAGAAC
CATTCGGCTATATGGGAATAGTATGAGCCATAATGGCCATCGGCCTATTA
GGATTCATCGTATGAGCTCACCACATGTTTACAGTTGGAATAGACGTGGA
CACTCGAGCTTATTCCTAGAGAGAAACCTTCATCCATCCAACCTGCCTGG
CATGCTGCTGCTGTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CATGGGGCATGTGCCCTCAGCAACTTTCCCGCTATTTGCAAGACCGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTCCAGCTTTTGTACATGAGGA
GCTGGAGACAGAGGATGAGAGACTGGTTTATGAAGCTGCCCTTAACGGA
TCAACTATGACCTGGAAAAGAGACACTGTAACCTTCCAGAGCTCCTGAGA
ACAGTGCGTCTGGCCCTGCTGCCTGCCATCTTCTCATGGAGAATGTATC
TACCGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGGTGTAAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAAC
AGCCCGTGTGCTAGACCAAGAAAAACAGCCATGCCCTCTTCTCTGCGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGCTGACATCCCCAGCCAAAGGAAAGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGCGGCA--GAGGCTC-
AGAGAATGGTGTTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCAAAGGCGGCACCAATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTGAAGCACTGCCTCTACGTGGTAGGAGGTCACACCGCAGCGAC
TGGCTGCCTCCCGGCTCTCCATCTTGAGGAGTACATTTGTGGTCTTTAGC
CGTAGCATCAACAGGCTCATCCTTAATGAAGCCGAACTAATTTTGGCTCT
GGCTCAGGAGTTTCAGATGAAGACGATCACGGTGTCTTTAGATGAGCACT

CCTTCGCAGATATCGTACAAATAATCAGTAAGGCGTCAATGCTTGTTCAGT
ATGCACGGGGCTCAGCTGGTACCTCACTCTTCCCTGCCCCGCGGCGCTAT
AGTGGTAGAGCTTTTCCCATATGCTGTGAACCCTGAGCACTACACGCCCT
ACAAAACATATAGCCTCCTTGCCTGGCATGGATCTTCAGTATGTGGCCTGG
CAAAACACCAAAGAAGAGAACTCCATTGCGTTCCCAGACAGGCCCTGGGA
TCAAGGCGGAATAGCCCATCTAGAAAAGGAGGAGCAGGATCGCATCTTAA
AAAGCAAGGAGGTGCCCTCGGCACTTGTGTTGCCGTAACCCGGAGTGGCTT
TTCCGCATTTACCAGGACACTAGTGTGGACATCCCCCTCTCTTCTTGAAGT
ACTGAG---GCAGACGGTGAAG---TYTAAGCCCAATCTGAAAAA---GT
TTAAGCCGGCCAGCACAAATTCACCCCGGTAAAGTGCGGGAACCCAAATGC
CAGGCTTCTGTACAAGGAACCAACGAGGCGAAGCTGACAGTGTGCTGGCA
GATCCCTTGGAAATCTGAAGTATTTGAAAGTCAGGGAGGTCAAGTATGAAG
TGTGGATACAGAAGAAAGACACAGGCAAAGGGACACTGGAAGATCAAATC
ATCCAGGCCAACCCCTGCTCTGGAAGCTTTTGGCAAATGCCAAAAACTGCG
AAATGATAACTCCTCGCGTTTTTGGCAAATTCATCCGTATTCATTTCCGGAG
CCAGTGGGAAGCTGTCTCTGCAGACATAGAGACTTACCTTCTTGAAAAA
TCCCGTGTACCTTTTCAGCTCAAAGCAGAAAGAAACTACCACATATTTTA
CCAGATATTATCTAATCAAAGCCCGAGCTGCTGGACATGCTTTTAATCA
CAAACAATCCGTACGACTACTCCTATGTGTCCCAAGGAGAAGTCACAGTT
GCATCTATAGATGATGCTGAAGAAGTATCGCCACGGACAGTGCCTTTGA
TGTGCTTGGCTTACCACAGAAGAAAAAATGGGGGTCTATAAACTAACAG
GTGCCATCATGCATTATGGGAACATGAGGTTCAAGCAAAGCAGCGTGAA
GAGCAGGCAGAGCCCGATGGCAGTGAGTCTGCTGACAAGTCAGCATACCT
GATGGGACTCAACTCAGCTGACCTCTTGAAGGACTTTGCCACCCCAAGG
TGAAAGTCGGCAATGAGTATGTAACCAAGGGCAAAGTGTGTAACAGGTT
TACTATCCGAACAAGGAGGCTTTCAAGTGCAGGAGTGTGGCAAGAATA
CAACACCAAGCTGGGCTACAAGCGGCACGTGGCCATGCACGCTGCCACCA
GTGGCGACCTCACCTGCAAAGTGTGCCTGCAGACGTACGAGAGCACGCCT
GTGCTGCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCCTCCGGCGGCAC
CAAGGAGAAGAAGCACCCCTGCGACCCTGTGACCGCCGCTTCTACACCC
GCAAGGATGTGCGGCGCCACATGGTTGTACACACGGGGCGCAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCCGCAAGGACCACCTGACCCG
GCACGTCAAGAAGAGCCACTCTCAGGAGCTCCTGAAGATCAAATCGGAGC
CACCCGACATGCTAGGCCCTCCTCAACTCAGGCTCACCCATCT---CTGTG
AAGGAGGAGCTCAGCCCATGATGTG---CATGGCTGCCTCCAAGGACAA
CATGATGGGCAAGCCCTTCAGTAACA-----GCTTCCCATGGGCATGT
ACAACCCACAC-----CTCCAGGTCATGTCCAACCTCAGGAGTGTCA
CAC-----TCGCACACCTTGGTGCCGAACCTACTG---GCCGAYAT
GGGAATGGGCTGCCCCAT---TACCTAATTTATGCATCGTTTTCTTTTA
TGGGATGTTTACAAATTAGTGATGGGTCAAACATCGTCAACCTCCTAGCC
AGTGATTCACCGAGCGTATCCTATGCTCTCACACAGCAAAAATACTTTAG
CAACTACAGTCCTGTCAATTGGATTCTACATTTATGAGCCGATAGATTATT
GGAATACAACCTGTTTCAGGACCACCTGAAGACCTTGGGTCATGGGTCAAT
AAAATATCATGGATTGATCATTACTTTCAGTATCTAAAGGTAGTAAACAT
CAGTGCATCGACCAAAAGTGATTTTCATAACTGTCTCCAGAGTTCCTTCT
TAAGGAAGCCAGAATTTCAACACTTTAAGGAAGACATTATTTTTTCCAAA
A---CCGGGG-----ATGACATTGATATAATTGCGTCCAGAAT
GTACATGGTGGCAAGAACAACGGAGAAAACAAGAGAGGAAGTCGTGGAAT
TGTTGGATAGGCTTAGGCCCTTTCTCTCATCAACAGCATCAAATTTATA
GTGTTAACCCACCTTTGTGTTTCATGGATCGTTACAGCTCCTCTGTTCAT
TTCACCGATCCTGACCTCTGGATTTCAGTGTCTTGATTGTTTTAATTCTGA
CATTCTTCCCTAGTCATTCATCCTCTTGGCAACTTTTGGTTGATACTAACA
GTTACATCTGTAGAGCTAGGNNNNNNNNNNNNNNNNNN-----

-----ACACAGAGGTGGGGATTATAGATGGGCTGTC
TGGCTGGGTGGCTTCTGTGGATGACCAACAGATCAACACCATCTCCCGCA
GGTTTCGCTATGATGTGGCTCTTGCCGCTGCTTTGAAGGACTTTGAAGAG
GACATTGTGGAAGGCATGAGGGAGCAGCAGCTGGATGACAGC---TTGAC
TGAKAGTTTCACTGTGATCATCAAGGAGGCTTGGGATGGCATGGGAGACG
TCAGCGAGAAACATGGGAATGGCCAGCTCTTCTGAGAAAGCTGTCCGC
TTCTCCTTACCATCATGTCTATTTCCGCCACAGCGAAGATGGG-----
-----AAAAATGTCAAGATCTTCCAGG
AGCTCAAACCTAACTCAGAGCTCTGCTGCAAGCCCCGTGCCTTATGTTT
GCGGACGAATCTGACCATGAAACGCTGACTGCTATATTGGGGCTGTAGT
GGCTGAGCGGGAAGCCATGAAAGAAAAGCCGCTTGATCCTTTCAATTGGGG
GCATGCTGAGGTCTTCCGGTTTGTGTTTAGGGGCACAGGCTATGATGAG
AAATTGGTCAAGATGTGGAAGGACTTGAGGCTTCAAGGCTACTTACAT
CTGCACCCTTTGTGATTCCACCAGAGCAGAAGCTTCTCAGAATATGGTGC
TGCACACAATCACCAGGAGCCACGAGGAGAACCTAGAACGCTATGAGATC
TGGAGGACCAACCCATACTCAGAGTCGGCCGATGAGCTGCGTGATCGGGT
CAAAGGGGTTTTCAGCAAACCGTTCTTGGAAACGTTGCCCTCCATCGATG
CGCTGCACCTGTGACATCGGGAATGCCACCGAGTTTACAAGATCTTCCAG
GATGAAATTGGAGAGCTCTACATCAAAAG---CAAC---CCCACCCGGGA
GGAACGGAAGCGGTGGCAGTCTGCCCTAGACAAGCAGCTGAGGAAGAAGA
TGAACCTTAAGCCATCATGAGAATGAATGGCAATTTTGCCCGCAAACCTG
ATGACCAAGGAGACGGTGGATGCTGTGTGTGAGCTGGTTCTTCTGAGGA
GCGCCGAGAAGCTCTCAAGGAGCTGATGAATCTCTACCTCCAAATGAAAC
CTGTTTGGCGCTCCACCTGCCAGCCAAAGAGTGTCTGACTTGCTGTGC
CGCTATAGCTTCAACTCGCAACGTTTGGCGAGCTCCTATCTTCCACCTT
CAAATACCGCTACGATGGCAAGATCACCATTACCTGCACAAGACCCTCG
CTCACGT-----
-----ACTTACCAAGTCGAGATGGGTTT
CAGAGGCCACAGTGGAAGGCAACCCAGGCCTTTTCTTGTTCATTG
AGGATCCCCTAAACAGACCAAATCAAGGCATCAAGACCTACATTTCC
TATCGGGTGACACCCAGCCACACAGGCAGGCCTGTCTACCGCCGCTACAA
GCACTTTGACTGGCTCTACAACCGGCTACTGCACAAGTTCACAGTTATCT
CCGTGCCCCACCTGCCGAGAAGCAGGCCACTGGGCGCTTCAAGAGGAC
TTCATTGAGAAGCGGAAGCGGAGGCTAATCCTGTGGATGGACCACATGAC
CAGCCACCCAGTGCTCTCCAGTATGAAGGCTTCGAGCACTTCTCATGT
GTGCAGATGACAAACAATGGAACCTGGGTAAGCGGCGGGCCGAGAAGGAC
GAGATGGTGGGTGCCAGCTTCTCCTCACATTTAGATTCCCAATGAGCA
CCAGGACTTGCAGGATGTGGAGGAGCGGGTAGACTCCTTCAAGGCCTTCA
CCAAGAAGATGGATGATAGTGAATGCAGCTCACCCATGTGGCCTCCGAG
CTTGTGCGCAAACACTTGGGTGGATTCCGCAAGGAGTTCCAGAAGCTGGG
CAATGCCTTCCAGTCTGTGAGCCAGGCTTTTGCCTTAGATCCCCCATA
CCTCAGAGGCCCTCAACAAGCAAATCTCCANNNNNNNNNNNNNNNNNNNNNTGACGTCCCTCGGTTT
TAT
CATTGGAGTCGGTGTGGTTGGCAATCTCCTGATCTCTATCCTGCTCGTCA
AAGACAAAACCTTGCACAGGGCACCCACTACTTCTTACTGGATCTGTGT
GGCTCAGACATCCTGAGGTCTGCGATTTGTTTCCCTTTTGTGTTCACTTC
GGTCAAAAATGGGTCAACGTGGACATATGGTACACTTACATGCAAAGTAA
TTGCCCTCCTAGGAGTTTTATCTTGCCTTTCACACTGCCTTTATGTTATTT
TGATCAGTGTGACACGGTATCTCGCCATAGCCCACCACCGCTTCTATAC
AAAAAGGCTGACGTTCTGGACTTGTCTGGCTGTCTGCATGGTGTGGA
CGTTGTGAGTGGCTATGGCTTTCCCCCAGTCTTGGACGTGGGGACCTAT
TCTTTCATCAGGGAAGAAGATCAATGCACCTTCCAGCACCGATCCTTCAG
AGCCAACGATTCCCTGGGATTTATGCTCCTCCTAGCCCTCATCTTCTGG

CCACTCAGCTTGTCTACCTCAAGCTAATCTTTTTTCGTCCATGACCGCAGA
AAAATGAAACCAGTCCAGTTTGTGCCGGCTGTGAGCCAGAACTGGACATT
TCACGGTCCAGGAGCCAGTGGTCAGGCGGCTGCCAACTGGCTAGCTGGCT
TCGGAAGAGGCCCAACCCACCAACCCTGTTAGGAATAAGGCAGAATACC
AATACGGCAGGCAGGAGAAGGCTTCTGGTGTGGACGAGTTTAAGACTGA
AAAGAGGATAAGCAGGATGTTCTACATAATGACGTTCTTCTTTCTCACCT
TGTGGGGCCCCCTATCTGATAGCTTGCTATTGGAGAGTGTTTGCCAGGGGG
CCAGTTGTGCCAGGAGGTTACCTGACAGCTGCAGTCTGGATGAGTTTGC
CCAGGCAGGAGTCAATCCATTTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----

-ACAGCGGATGTCACCGACAGAGAAGTGGGGTTGGGGATAAAATCCGTTTG
CTGATGGGATGGGCGCTTTTTAAAATCAACCACAGTACCCACGATCTAGCT
TCTGG---CAAACGGCTTTTTTCGTCCCAAGCG---CCTGGTTAT---GC
GGCCGCAGCTCTGGGG---CATCATCA-----CCACCCCTCCCATGTAA
GCTCC---TATTCYACCGCGCTTTCATTTCTACACGGGACTTTCTCTTT
CGAAATCGGGGTTTCGGAAGAAGCGGCCAG-----CGCTCAGCA
CAGCCTCTTTGCGTCTGC--AGCAGGAAGTTT---T-----GCGGGG
CACATGGACACACAGATGCCACAGGACACTTACTTTTCCCCGGACTTCAC
GAG---CAGGCGACCACTCACGGGCTCTCCAATGTTGTAAATAGCCAGAT
GCGCTTGGGCTTTTCTGGGACATGTACGGCAGAGCCGAGCAATACAGCC
AGGTAACAAGCCCCAGAT--CAGATCACTATGCGTCGACCCAGTTACAC
AGTTATGGCCCTATGAACATGAACATGGCTGCA---CACCATGGGGCAGG
GGCCTTTTTTCGGTATATGAGGCAACCTATAAAAACAAGAACTTATCTGCA
AATGGATTGAACCGGAGCAGTTGAGTAACCCGAAAAAGTCTTGTAATAAA
ACTTTTAGCACAAATGCATGAGCTCGTCACTCACCTCACAGTGGAGCATGT
TGGGGGACCAGAACAGTCAATCATATCTGTTTCTGGGAAGAGTGTCCA
GGGAAGGGAAACCGTTTAAAGCCAAGTACAACTGGTAAATCACATCCGA
GTGCACACAGGCGAGAAACCGTTTCCATGTCCGTTCCTGGCTGTGGCAA
A

>Abalistes stellatus
AGCTTGCTAATCCGAGCAGAATTAAGCCAACCCGGCGCTCTCTTAGGCGA
CGATCAAATTTATAATGTCATCGTCACAGCACATGCTTTCGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGAGGCTTTGGAAATTGATTAATT
CCATTAATGATTGGAGCCCCTGACATAGCATTTCCCCGAATAAACAACAT
GAGCTTTTGACTTTTACCCCCCTCCCCTCCTTCTCTACTCGCTTCTTCAA
GCGTAGAGGCCGGGGCCGGAACCTGGGTGAACAGTGTACCCCCCTCTTGCC
GGCAATCTAGCCCATGCAGGGGCTTCCGTAGACCTGACTATTTTTTCTCT
TCACCTAGCAGGAATTTGTCATCCCTTGGAGCAATTAATTTTATTACAA
CAATTATTAATATGAAACCCCTGCCATCTCCCAATATCAAACACCACTA

TTCGCTGAGCAGTCCTAATCACAGCCGTTCTCCTTCTCCTTCCCTTCC
TGTCTAGCCGCCGAATCACGATACTACTTACCGACCGAAATTTAAATA
CCACATTTTTTTGACCCCGCCGGAGGTGGGGACCCAATCCTCTATCAGCA-

-----NNNNNNNNGAGAAACCTTACCCATCTAACTGCCTTGGCATGCTGC

TGCTGTCTGACGCCACCAGTGCACCAAGCTGTCCGAGCTGTCTGGGGC
ATGTGCCTCAGCAACTTCCC GCCATTTGCAAGACGGAGGACTTCTTGCA
ACTGCCCAAAGATATGGTGGTGCAGCTTTTGTCGCACGAGGAGCTAGAGA
CCGAAGATGAGAGACTGGT TTTATGAAGCGGCCCTGAACTGGATCAACTAC
GACCTGGAAAAGAGGCACTGCCACCTTCCC GAGCTCCTGAGAACGGTCCG
YCTGGCACTTCTGCCCGCCATCTTTCTCATGGAGAATGTCTCTACAGAAG
AGCTGATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACGAAGCTATC
CGATGCAAGCTGAAGATCCTGCAGAATGACGGCGTTGTTAACAGTCCGTG
TGCTCGGCCGAGAAAAACCAGCCACGCTCTCTTTCTTCTGGGTGGGCAA
CGTTCATGTGTGACAAGTTGTATCTGGTGGACCAGAAGGCCAAAAGAGATC
ATCCCCAAGGCGGACATTCCTAGCCCTAGGAAGGAGTTTAGTGCCGTGTGC
CATTGGCTGCAAGGTGTACATCACTGGAGGAA--GGGGCTC-TGAGAACG
GTGTGTCCAAAGATGTGTGGGTCTACGACACAGTCCACGAGGAATGGTCT
AAAGCAGCGCCATGCTTATCGCCAGGTTTGCCACGGCTCTGCAGAGCT
GAAACACTGCCTCTACGTGGTAGGANNNNNNNNNNNNNNNNNNNNNNNNNNNN
TGAATATATTGTTGTGTTCAGT

CGCTCAACAACGAGGCTGATACTGAATGAAGCCGAGCTAATTATGGCGCT
GGCGCAGGAGTTTCAGATGAGAGTGGTTACGGTGTCACTGGAAGAGCAGT
CTTTCCCCAGTATCATCCAGGTGATCAGCGGTGCTACCATGTTAGTCAGC
ATGCATGGAGCTCAGCTCATCACCTCACTCTTCTGCCCAGAGGAGCTGC
TGTGGTTGAGCTGTTTCCCTTTGCAGTGAACCCGGAGCAATACACCCCAT
ATAAAACCCTTACATCCCTTCCAGGTATGGACCTTCACTATATTTCTTG
AGAAACACGAAGGAGGAGAACACCATCACCCATCCGGACAGACCCCTGGGA
ACAAGGGGGCATCGCTCACTTAGAGAAGGAGGAGCAAGAGAGGATACTGG
CGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAATCCAGAGTGGCTT
TTCCGGATCTACCAGGACACCCCTGGTGGACATTCCGTCCTTCTTGGAAGT
CCTCAA---GGAGGGCTTAAAA---ACAAAGCCCACTTTAAAAAA---GT
CAAAGCCAGCCAGCTCGCTGCACCCAGGCCGGGTCAGAGAACCCTCAGTGT
CAGACCTCAGTACAGACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAATNNNNNNNNNN
GACACCAGCAAGGGGACCCTTGAGGATCAAATCATTCAGGCCAACCCCGC
CCTGGAGGCCTTCGGAAACGCCAAAACGGTGAGAAAACGACAACCTCATCTC
GGTTTGAAAATTTCATCCGGATTCACTTTGGTCCGAGCGGCAAGCTGTCA
TCAGCTGACATTGAGACATACCTGCTGGAGAAGTCACGTGTCACCTTTCA
GCTCAAGTCTGAGAGGAATTACCACATCTTCTACCAGATTCTGTCCAATC
AGAAGCCAGAACTGCTGGACATGCTGCTGATCACCACAACCCCTACGAC
TACTCTACATCTCCCAGGGAGAGGTAACAGTGGCCTCCATCAACGATTC
CGAGGAGTTGATGGCCACCGACAGCGCCTTCGATGTGCTGGGCTTACGG
TCGAGGAGAAGATGGGCGTCTACAACTGACTGGCGCCATCATGC ACTAC
GGCAACATGAAGTTCAAACAAAAGCAGCGCAGGAGCAGGCCGAACCCGA
TGGGACAGAAGCTGCCGATAAATCGGCTTACCTCATGGGCCTGAACTCTG
CTGACCTCATCAAAGGGCTGTGCCACCCCGAGTCAAGGTGGGCAATGAA
TATGTCACCAAAGGCCAGAGCGTAGACCAAGTCTACTACCCTAACAAAGA
GGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGTTGGGAT
ATAAGCGCCACGTGGCCATGCACTCTGCCACAGCAGGTGATCTCACCTGT

NNNNNNNNNTCTTACACAATTGAGATGGGTCTCTGGGGCCC
CAATGGAAGGAGAGCCCACAGCCCTTCTCCTGCTCCATCGAAGACCCAAC
AAAGCAGACAAAGTTCAAGGGCATTAAAGACGTACATATCGTACCGGGTGA
CGCCGAGCCACACTGGGCACCCTGTCTACCGGCGCTACAAACACTTTGAC
TGGCTGTACAACCGCCTACTGCACAAGTTTACTGTGATCTCTGTGCCTCA
CCTGCCCGAGAAACAGGCCACGGGGCGATTTGAGGAAGACTTCATCGAGA
AGCGCAAGAGGGCGACTGATCCTGTGGATGAACCACATGACCAGTCACCCC
GTCTCTCCCAGTACGAAGGCTTTGAACACTTTCTGATGTGCGCCGATGA
CAAGCAGTGGAACTGGGCAAGAGGCGGGCGGAGAAGGACGAGATGGTGG
GTGCGCATTTTCATGCTGACCCTCCAGATCCCAAACGAGCACCAGGACCTG
CAGGACGTTGAGGAGCGTGTGACTCCTTCAAGGCC TTCGCCAAAAAGAT
GGATGACAGCGTGATGCAGCTCACGCACGTTGCCTCGGAGCTGGTGC
AACACCTGGGTGGATTCAGGAAGGAGTTCCAGCGGCTGGGGAATGCCTTC
CAGTCAATCAGCCAGGCGTTCATGCTGGACCCTCCCCACAGCTCAGAGAC
CTTGAACAACGCCATCTCCCATNNNNNNNNNNNTTCTCAAACCTGACCTCTCTTGGCTTCA
TCATCGGTGTGCGGCGTGGTTCGAAACCTCCTGATCTCCATCCTGCTGGT
AAAGATAAGAGCCTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTG
CGCCTCGGACATTTCTCGATCCGCCATCTGCTTCCCGTTTGTCTTCACCT
CCGTCAAGAATGGATCCGCGTGGACGTACGGCACGCTGACCTGCAAGGTG
ATCGCCTTCTGGGCGTGTCTCTCTGTTTTCCACACGGCCTTTATGCTGTT
CTGCGTTAGTGTACGCGCTATTTGGCCATAGCGCACCACCGTTTCTACA
CCAAGAGGCTGACCTTCTGGACCTGCCTGGCCGTCATCTGCATGGTTTGG
ACGTTGTGCGGTGGCGATGGCGTTCCCGCCGGTGCTCGACGTGGGGACGTA
CTCTTTTATCCGGGAGGAGGACCAGTGCACATTCCAGCACCAGCTCCTTCA
GGGCGAATGACTCCTTGGGCTTCATGCTCCTCCTGGCTCTCATCCTCCTC
GCCACACAGCTGGTTTACCTCAAGCTCATCTTTTTCGTTTACGACCGCAG
GAAGATGAAGCCTGTCCAGTTTGTGCCTGCTGTTAGCCAAAACCTGGACAT
TCCACGGGCCGGGCGCCAGCGGGCAGGCCGCGCCAACCTGGCTGGCTGGA
TTCGGGCGAGGCCCCACCCACCGACTCTGCTGGGTATCCGGCAGAACAG
CAACGCGGCGGGCCGAGGCGTCTTCTGGTACTGGATGAGTTCAAACAG
AGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTTGGCA
CTGTGGGGGCCCTATTTGGTTCGCTGCTACTGGCGGTTATTTGCGAGGGG
CCCCGTGGTCCCCGGAGGCTACCTGACAGCAGCCGTGTGGATGAGCTTTG
CCNNNGCCAAATCTCGCTTTCACCTGG
CATGGGACTGGTCTTGGCACGGA
GC---GCAGCGTCCCCTCGGCAACAGCTTGCTGTCCCCGAGCAAACCG
AGGAGCCCCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CT
GCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCGGCC-----
----GATTCGCGGGTAACGCGGCCACCTTGCTGTCTACGCAGCGGCCG
GAGTGAAGGCTC-----TCCCCCTGCCACTGCGGGCTGCTCCAACCG
CCTCTTGGTTATTACGCAGACCCGTCGG---GCTGG---GGAGGACGCAC
GCCGCCGAGTACTGTGGCGTCAACAGCAAGTCCAGCTCGGTCTTCTCCT
GCTGGCCTTCCAACCTCCATCGCGGGCAGAGCGGGCG---CC---AACTAC
CTGG-----CCGAGGA---GGC---GACC---CGTGCCACGGA
GAGGTGCGCG---AT---CGGCGGCGCCGAGGAG---ACCAAACCGAAGG
ACATAAG---CTCGGA---GTCGAACGGATAGAG---ACGCCGTCTCC
ATCAAGTCCATAGATTCGAGCGACTCTGGGATCTTTG---AACAGGCCAA
ACGGAGGCGGATCTCACCTTCTGCCACGCCG-----GTGTCAGAGG
CAGTGTCCCCGCTGAAGTCTGAGCATCACTCAACAGGCGAAGTCACGGAG
AGAGAAGTGGCGCTGGGGATAAATCCGTTCGCGGACGGGATGGGCGCCTT
CAAGATAAACACAGCTCCCACGACATTGGCTCCGG---GCAGACGGCGT
TTTCTCTCAGGCG---CCGGCTACGCGGCGGGCAGCCCTGGGA---
CACCATCA-----CCACCCGACCCAGTTGGCTCT---TACTCCACGGC

-----AAGAAAGACTCCAGTAAGGGGACCCTGGAGGATCAGATCATCCAG
GCCAACCCAGCGCTTGAGGCCTTTGGGAACGCCAAGACGCTCAGGAACGA
CAACTCGTCTCGTTTTGGAAAGTTCATACGGATCCACTTTGGAACGAGCG
GGAAGCTGTCTCGCCGACATCGAGACGTACCTGCTGGAGAAGTCCCGC
GTCACCTTTTCAGCTCAAAGCTGAGAGGAACTACCACATCTTCTACCAGAT
CTTGTCCAATCAGAAGCCGGAGCTGCTGGACATGCTTTTGATCACCAACA
ACCCGTACGACTACTCCTACATCTCGCAGGGAGAGGTAACAGTGGCCTCC
ATCAACGACGCAGACGAGCTGATGGCCACCGACAGTGCCTTCGACGTGCT
TGGCTTCACACCCGACGAGAAGATGGGCCTGTACAAGCTGACGGGCGCCA
TCATGCACACGAAATATGAAGTTTAAGCAGAAGCAGCGTGAGGAGCAG
GCGGAGTCAGACGGGACTGAAGCGGCGGATAAATCGGCGTACCTCATGGG
GCTGAACTCCGCCGACCTCATCAAGGGGCTGTGCCATCCCAGGGTGAAGG
TGGGGAACGAATACGTGACCAAAGGACAGAGTGTGGACCAAGTCTACTAC
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGAAGCACTACAACACCAAGCTGGGATACAAGCGCC
ATGTGGCCATGCA
CTCGGCCACAGCGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACG
AGAGCACGCCGGTTCTCCTAGAGCACCTCAAGAGTCACTCCGGGAAGTCT
TCAGGCGGCACCAAGGAGAAAAACACCCCTGCGATCACTGCGACCGTCTG
ATTCTACACGCGGAAGGATGTGAGACGACACATGGTGGTTACACGGGCA
GAAAGGACTTCCTGTGTCACTACTGCGCCAGCGCTTCGGCAGGAAGGAC
CACCTGACGCGTCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGAT
CAAGACGGAGCCTCCTGACATGTTGGGTCTGTTGGCGTGGGGTTCGCCCC
CCTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGTATGGGTCT
AACAAAGACCCCATGATGGGCAAACCTTCCCCAGCGGGGCTCCTTTCCC
GATGGGCATGTACAACCCCCACCAC-----CTCCAGGCCATGTCTAATT
CAGGGGTGGGTACCCCT-----CACCCGTCCCTGGTGGCCACCTCCTTG
TCTGCAGCTATGGGCATGGGCTGCCANN
NN
TCCAAGTGTTTTCTTTGCTATGACCCAGCAGAAATACTTCAGTAACTACA
GTCCAGTGATTTGGTTTTACATTTACGAGCCCATTTGAATATTGGAACCTCA
ACGGTACAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTC
CTGGATGGACAACCTTTTCCACTACCTGAGGATGGTGAATGTGAGTGCCT
CAACCAAGAGTGACTTCATCAGCATCCTTAAGGGCTCCTTCCCTGCGCAGC
CCGGAGTACCAGCACTTCACTGAGGACATCATCTTTACAAAGA---ACCG
CGACACTG-----ATGAGTATGACATTATTGCCTCGCGGATGTATTTGG
TGGCGAGGACGACAGAGAAAAAGCGCGAGGAGGTGGTGGAGCTTTTGGAG
AAGCTTCGTCCATTGATGCTGATCAACAGCATCAAATTCATTGCCTTCAA
TCCTACGTTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTTCATCTCACCCA
TTCTGACCTCAGGCTTCAGCGTGCTCACAATCCTCATCCTCACTTTCTTC
CTGGTCATCAACCCCTTGGAAAACCTCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
GGCATTATTAATGGGCTGTCTGGATGGGTTTTCTCGGTGGATGACTCCCC
AGCTGACACTATCACTCGACGCTTTCGCTATGATGTGGCACTGGTGTCAG
CGATAAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGCGGG

TTGGAAGACAGTGCATGCAACGCAGGCTTCAGTGTCATGATCAAAGAATC
CTGTGATGGTATGGGCGATGTCAGTGAGAAGCACGGCGGAGGACCGGCTG
TTCTGAGAAGGCTGTGCGTTTTTCTTTCACTGTATGTCTGTCTCTGTCT
CTGGCAGACGGCAAGAAG-----GA
AGAAGTTACCATCTTCACCGAGCCGAAGCCAAACTCAGAGCTGTCCGTGTA
AGCCACTTTGCTTAATGTTTGTGGATGAGTCAGACCATGAGACTCTCACA
GCCATCCTTGGGCCTATAATTGCAGAGCGTGATGCGATGCAGCAGAGCCG
ACTCATCCTGTCCATGGGTGGACTACCTCGATCTTTTTCGCTTTCACTTTA
GAGGCACGGGATATGACGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAG
GCCTCGGGATCATCTACATTTGCACTCTTTGTGACTCCAGTCGTGTAAA
TGCCCTCGAAAACATGGTGTACACTGCATAACTCGCAGTCATGAGGAGA
ACCTAGAGCGTTATGAATTATGGAGAACCAACCCCTTTTCTGAGCTGCA
GATGAGCTGCGAGATAGAGTCAAAGGGCTCTCTGCCAAGCCCTTCATGGA
GACCCATCCACAATGGATGCATTACACTGTGACATCGGCAATGCCACAG
AGTTCTACAAAATCTTCCAGGACGAGATCGGGGAAGTGTACAAAAGGT--
--CAAC---CCAAGCCGGGAGGAACGGCGCAGCTGGAGGGCCGCCCTAGA
TAAACAGCTGAGGAAGAAGATAAAGCTTAAACCCGTAATGAGGATGAATG
GGAACCTTTGCCCGCAAGCTAATGACCAGGAGGCTGTGGAGGTGGTGTGT
GAGCTAGTGCCTTCGGAGGAGCGCAGACAGGCCCTGAGGGAGCTTATGAG
ACTCTATCTCCAGATGAAGCCAGTGTGGCGGCCACCTGTCCGGCCAAAG
AGTGCCCAGACCAGCTGTGCCGCTACAGCTTCAACTCTCAGAGCTTTGCC
GACCTCCTCTCTCTACCTTCAAATATAGATACAAAGGGAAGATAACCAA
TTACCTGCACAAGACCCTGGCCATGTGCCTGAAATCATAGNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNNNTCGTACACC
ATCGAAATGAGCCCCCTTGGTCCGGGGTGAAGGAGAGTCCACAGCCGTT
CTCCTGCTCCATCGAAGACCCGACAAAACAGACCAAGTTCAAAGGCATCA
AGACGTACATCTCGTACCGGGTGACGCCGAGCCACACCGGGCGTCCCGTC
TACAGGCGATACAAACACTTTGACTGGCTTTACAACCGCCTACTGCACAA
GTTCACTGTGATCTCCGTGCCCCACCTGCCYGAGAAGCAGGCCACGGGCC
GCTTTGAGGARGACTTCATCGAGAAACGCAAACGGCGACTGATCTTGTGG
ATGAACCATATGACCAGTACCCCTGTCTCTCGCAGTACGAAGGCTTCGA
GCACTTTCTTATGTGCGCCGACGACAAGCAGTGGAAGCTTGGAAGAGGGC
GGGCGGAGAAGGACGAGATGGTTGGCGCCCATTTTCATGCTGACCCCTCAG
ATCCCCAATGAGCACCAGGACCTTCAGGACGTGGAGGAGCGCATAGACAC
TTTTCAAGTCTTTGCAAAGAAAATGGACGACAGCGTGATGCAGCTTACGC
ACGTGGCCTCAGAGCTGGTTTCGAAACACCTGGGCGGATTTCAGGAAGGAG
TTCCAACGGTTAGGAAACTCCTTCCAGTCTATCAGCCAGGCTTTTCATGCT
GGATCCACCGCACAGCTCCGAGACCTTAAACAACGCCTTTTCCCACNNNNNN
NN
NNNNNNNNNNGGTT
TTATCATTTGGGGTGGCGTGGTTCGGAAACCTCCTGATTTCCATCCTACTG
GTCAAAGACAAGAGCCTGCACCCGAGCGCCCTACTATTTCCCTGCTGGACCT
GTGCGCCTCCGACATCCTGCGATCCGCCATCTGCTTTCCCTTTGTCTTCA
CGTCGGTTAAAAACGGTTCCGGCCTGGACGTATGGTACACTGACCTGCAA
GTGATCGCCTTCCTCGGGGTGCTATCCTGTTTCCACACGGCGTTTATGCT
CTTCTGTGTTAGCGTTACCCGCTACCTGGCCATCGCACACCACCGCTTCT
ACACCAAGAGGCTGACCTTCTGGACCTGCCTCGCCGTCATCTGCATGGTG
TGGACGTTGTCGGTGGCTATGGCCTTTCGGCCGGTGCTAGATGTAGGGAC
TTACTCTTTTTATCCGCGAGGAGGACCAGTGCACGTTCAGCACCCGCTCCT
TCCGGGCGAACGATTTCTCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTC
TTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCACGACCG
GCGGAAGATGAAGCCTGTCCAGTGTGTGCCTGCTGTTCAGCCAAAACCTGGA
CCTTCCACGACCGGGGGCCAGCGGGCAGGCGGGCCAACTGGCTGGCT
GGATTCGGTCGAGGCCCCACCCCGCTACTTTACTGGGAATCCGGCAGAA

CAGCAATGCAGCGGGCCGAGGGCTCTCCTGGTGTGGATGAATTCAAAA
CAGAGAAGAGGATTAGTAGGATGTTCTACATTATGACGTTTTTTCTCCTG
GCTCTCTGGGGGCCCTATCTGGTCGCCTGCTACTGGCGGGTGTGGCGAG
GGGCCCGTGGTCCCTGGAGGCTACCTGACGGCAGCCGTGTGGATGAGCT
TTGCNNNGCCAAATCTCGCTTTCACCC
TGGCGTGGGGACTGGTCCTGGCATGG
AGC---GCAGCGTCCCCTCGGCAACAGCTTGCTGTCCCCGAGCAAACC
GACGAGTCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCCC---C
TGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT----
-----GATTTGCGCCGGTAACGCGGCCACCTTGCTGTCTACGCAGCGGCC
GGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCAACCG
GCCTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GGAGGACGCA
CACCGCCGAGTACTGTGGTGTAACAGCAAATCCAGCTCGGTCTTTTCC
TGCTGGCCCCGCTAACTCTATCGGTGGCAGAGCGGGCA---CT---AACTA
CCTGG-----CCGAGGA---GGGA---GACTC---CATCACGACGG
AGAGGTGCGCCG---CT---CGGCGGCTCGGACGAG---ACCAAACCCAAA
GACATGAC---ATCCGA---GTCGAGCTGGATAGAG---ACGCCGTCCTC
CATTAAGTCAATTGATTTCGAGCGATTCTGGTATCTTTG---AACAGGCCA
AAAGGAGAAGAATCTCACCTTCTGCCACGCCA-----GTTTCAGAG
ACAGTGTCCCCGTTAAAATCTGAG-----

>*Acanthurus nigricans*

AGCCTCCTAATCCGAGCAGAATTAAGCCAACCAGGCGCCCTCCTCGGGGA
TGATCAAATTTATAATGTAATTGTTACAGCACACGCATTCGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGTGGATTGGAATTGATTAATT
CCACTAATGATTGGAGCTCCTGACATAGCATTCCCACGAATAATAATAT
GAGCTTTTGGCTCCTACCCCCATCCTTCCTGCTTCTACTAGCATCTTCTG
CAGTAGAGTCTGGTGTGGCACAGGGTGAACAGTATACCCTCCTCTAGCC
GGTAATTTAGCACATGCAGGAGCATCTGTAGACCTAACCATTTTCTCCCT
CCACCTCGCAGGTATTTCTTCAATTCCTGGAGCTATTAATTTTATTACAA
CAATTATTAATATGAAACCTCCTGCTATTTCTCAATATCAAACCCCTA
TTTGTATGAGCCGTAATAACTGCTGTCTTCTACTCCTTCTCTCACTTCC
CGTTCTCGCCGCCGGAATTACAATGCTACTAACAGACCCTAATCTAAACA
CTACCTTCTTTGATCCGGCAGGGGGAGGAGACCCCATCCTATACCAACAT
TTATTCTGATTTTTTTGGTC-----

-----TTCTAGAGAGAAAACCTTCATCCATCTAACTGCCTTGG
CATGCTGTTACTGTCTGACGCCCACCAGTGCACCAAGCTCTCYGAGCTCT
CCTGGGGCATGTGCCGTGAGCAACTTTCCAGCTATTTGCAAGACTGAGGAC
TTCTCCAGCTACCCAAAGATATGGTAGTGCAGCTTTTGTACATGAGGA
RCTAGAGACAGAAGATGAGAGGCTGGTTTATGAGGCTGCCCTCAACTGGA
TCAACTATGACCTGGAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGA
ACAGTCCGCCTGGCTCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACTGAAGAGTTGATCAACGCCCAGGCCAAGAGCAAAGAGCTGGTGGATG
AAGCCATCCGTTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTC AAC
AGCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCTCTCTTCTTCTGGG
AGGGCAGACCTTTATGTGTGACAAGTTGTATCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAGGCCGACATTTCCAGTCCCAGGAAGGAGTTCAGC
GCCTGCGCCATTGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGCTC-
AGAGAACGGTGTGTCCAAAGATGTATGGGTTTACGATACCGTCCACGAGG
AATGGTGAAGGCTGCGCCCATGCTTATCGCTAGGTTTCGGCCATGGCTCT
GCAGAGCTGAAACACTGTCTCTATGTGGTGGGAGGTCACACTGCTGCGAC
TGGCTGTCTCCCGCCTCTCCCTCCGGACGAGTACATTTGTTGTGTTTAGT
CGGTCTACAACAAGACTCATACTGAATGAAGCCGAGCTCATCATGGCACT
CGCCAGGAGTTCCAGATGAGAGTGGTCACAGTTTCCCTGGAGGAACAGT
CTTTTCCAGTATCGTCCAGGTGATCAGCAGTGCTACCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCGCTCTTCCCTCCCAGAGGAGCTGT
TGTGGTGGAGCTGTTCCCCTTGTCTGTGAACCCAGAGCAGTACACCCAT
ATAAAAACCTAGCTTCTCTTCCAGGTATTGACCTTCACTATATCTCCTGG
AGAAAACCAAGGAGGAGAACACAGTCACTCACCCAGACAGACCTTGGGA
ACAAGGCGGCATCACTCACTTGGAAAAGGAGGAGCAGGAGAGAATACTGG
GGAGCAAAGATGTCCCTAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACCTTGGTGGACATCCCCCTCCTTTCTGGAAGT
TCTCAA---AGAGGGCATGAAG---ACAAAGCCAGCCTGAAGAA---GT
CCAAACCGGCCAGCACTGTCCACCCGGGCGTGTCAGAGAACCCAGTGT
CAGACTTCAGTACAAACAATAATGAGGCTAAACTCACAGTCTCCTGGCA
GATTCCATGGAATCTGAAATACCTGAAGGTGAGAGGTTGAAATACGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGGGACTCTGGAGGATCAAATC
ATCCAGGCCAACCCTGCACTGGAGGCCTTCGGCAACGCCAAGACACTAAG
AAACGACAACCTCGTCTCGCTTTGGAAAATTTATCAGAATTCACCTTGTA
CGAGTGGSAAGCTGTCTGTCTGTGACATCGAGACGTACCTGTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGTGAGAGGAACCTATCACATTTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTCGACATGCTGCTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCCCAAGGAGAGGTGACGGTC
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACAGACAGCGCCTTCGA
TGTGCTCGGCTTACCAGCAGATGAGAAGATGGGTGTGTACAAGCTGACGG
GCGCCATCATGCACTACGGTAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCGGACGGGACGGAGGCTGCTGATAAATCAGCTTACCT
GATGGGGCTGAACTCTGCCGACCTCATCAAAGGGCTTTGCCATCCCAGAG
TCAAGGTGGGAAATGAATATGTCACCAAAGGCCAAAGTGTAGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGAAAAATTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CGGGGGATCTCACCTGCAAAGTGTGCATGCAGACCTACGAGAGCACACCT
GTGCTCTTGAGACCTCAAGAGCCACTCTGGGAAGTCTTCGGGTGGCAC
CAAGGAGAAAAAGCACCCCTTGCACCCTGTGACCGTCTGTTTCTACACTC
GTAAGGATGTGAGAAGGCACATGGTGGTCCACACGGGCGCAAAGGACTTC
CTGTGCCAGTACTGTGCCAACGCTTTGGCAGGAAGGACCACCTGACACG

CCATGTGAAGAAAAGCCACTCACAAAGAGCTGCTGAAGATCAAGACGGAGC
CCCCGATATGTTAGGTCTTTTAGCTTCTGGGTACCACCTTGTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCCCAGTGGGGCCCCCTTCCCGATGGGTATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTCAATGGAATATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAAATTAGTGATGGATCAAATATCGTGAACCTGCTGGCA
AGTAACTCTCCGAGTGTTCCTACGCTCTGACCCAGCAAAAATACTTTAG
CAACTACAGTCCCGTGATTGGGTTTACATTTATGAGCCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACTCTAAGYCATGGCTTCAAC
AAGATATCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
AAGTGCATCGACCAAGAGCGACTTCATCACCATCCTCAAAGGCTCCTTCT
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
G---ACCGTGAAACTG-----GTGAGTATGACATTATTGCCTCACGGAT
GTACTTGGTGGCACGGACGACAGAGAAGAAGCGGAAGAGGTGGTGGAGC
TTCTGGAAAAGCTGCGTCCATTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCCACGTTTGTGTTTCATGGACCGTTACAGCTCCTCTGTCAT
CTCGCCCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTTA
CTTTCTTCTGTCATCAATCCCTTGGGTAACCTTCTGGCTCATCCTCACT
GTCACATCTGTGGAGCTTGGCGTCCCTGGGTTTGGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGGCTCTCTGGAAGGGCTTCCTCAGTGGATGACTCCCCGGCT
GACACCATCACTCGACGCTTTCGCTATGATGTGGCACTTGTGTCAGCATT
AAAGGATATGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGTGCCTGCACCTCGGGCTTCAGTGTGATGATCAAAGAATCTTGT
GATGGCATGGGCGATGTCAGCGAAAAGCACGGCGGAGGACCAGTTGTTCC
TGAGAAGGCTGTACGTTTTTCTTTCACCATAATGTCTGTTTCTGTCCTGG
CAGACGGTGAGGAG-----GAAGAG
GTTACCATCTTACCCGAGCCAAAGCCAAACTCAGAGCTGTCTTGTAAGCC
TCTTTGCCTGACATTTGTGGATGAGTCAGACCATGAGACACTCACAGCCA
TCCTGTACCTATAGTTGCAGAGCGTGACGCAATGAAAGAAAGCAGGCTG
ATCCTATCCATYGGTGGTCTATCTCGTGCCTTCCGCTTTCACCTCAGAGG
CACKGGATACGAYGAGAAGATGGTACGTGAGATGGAGGGCCTCGAGGCTT
CAGGGTCCCTCATATATCTGCACTCTTTGTGACTCTGGTCGGGCAGAGGCC
TCTCAGAACATGGTGCTACACTCCATCACCCGCAGCCATGAAGAGAACCT
CGAACGTTATGAAGTATGGAGAACCAACCCCTTTTCAGAATCTGTGGAAG
AGCTCAGAGACAGAGTCAAAGGGGTCTCTGCCAAACCCCTTTTTGGAGACC
CATCCTACGCTAGATGCATTACACTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGACGAGATCGGAGAGGTGTTCAAAATGC---CA
AC---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTCGATAAA
CAGCTGAGGAAGAAGTTAAAGCTTAAACCGGTAATGAGGATGAATGGGAA
CTATGCCCCCGGCTAATGACTCTTGAGACCGTAGAGGCCGTGTGCGAGC
TGGTGGCCTCAGAAGAGAGGAGAGAGGCCCTGAGGGAGCTTGTGAGGCTC
TACCTCCAGATGAAGCCTGTATGGCGTGCCACCTGCCAGCCAAGGAGTG
CCCCGATCAGCTGTGCCGCTACAGCTTCAACTCTCAGCGCTTCGCCGAAC
TCTTATCTTCTACCTACAAATATAGGTATAAGGGAAAGATACCCAATTAC
CTGCACAAGACCCTGGCCCATGTCCCAGAAATCATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAGGGGAACGAATCAGCAAACAAATCGTACA
CCATTGATATGGGGCCCCCTGGGCCCCAGGTGGAAGGAGAATCCACAGCCT
TTCTCCTGCTCCATTGAAGACCCCAAAAACAGACAAAGTTTAAAGGCAT
CAAGACGTACATTTTCGTACCGSGTCACGCCGAGCCACACGGGGCATCCTG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTGCTGCAC

AAGTTCACTGTGATCTCAGTGCCTCACCTGCCTGAGAAGCAGGCCACTGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGGCTGATACTGT
GGATGAACCACATGACCAGTCAACCAGTCTCTCCAGTATGAAGGCTTC
GAGCACTTYCTCATGTGTGCCGATGACAAGCAGTGGAACCTTGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTCACCTCC
AGATCCCCAATGAGCACCAGGACCTTCAGGATGTAGAGGAACGGATCGAC
ACCTTCAAATCCTTYGCTAAGAAAAATGGATGACAGTGTGATGCAGCTCAC
ACACGTCGCCTCGGAGCTGGTGCAGGAAACACCTGGGTGGGTTCAGGAAGG
AGTTCCAGCGGCTGGGAAACGCCTTCCAGTCCATCAGCCAGGCGTTCATG
CTGGACCCTCCTCACAGCTCAGAGGCCCTCAACAANNNNNNNNNNNNNNNNNNNNNNNNNGTTCTCAAAC
TGAC

CTCTCTGGGTTTCATCATCGGAGTCGGTGTGGTTGGGAACCTCCTGATCT
CCATCCTGCTGGTCAAAGACAAGAGTCTGCACCGAGCGCCCTACTACTTC
CTGCTCGACCTGTGCGCCTCCGATATCCTGCGCTCTGCCATCTGCTTCCC
CTTTGTCTTACCTCGGTCAAGAATGGATCTGCCTGGACGTACGGCACGC
TGACCTGCAAAGTGATCGCCTTCTGGGTGTGCTTTCCTGTTTCCACACG
GCGTTTATGCTGTTCTGTGTGTCAGCGTCACACGCTACCTGGCCATCGCACA
TCACCGTTTCTACACCAAGAGGTTGACCTTCTGGACCTGTCTAGCTGTGA
TCTGCATGGTGTGGACGTTGTGTCAGTGGCTATGGCGTTTCCGCCGGTGCTA
GATGTAGGGACGTACTCTTTTATCCGAGAGGAGGACCAGTGCACATTCCA
GCACCGCTCCTTCCAGGGCCAATGATTGCTGGGCTTCATGCTCCTGCTGG
CRCTCATYCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTC
GTCCACGACCGTCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCTGTGAG
CCAGAACTGGACCTTCCATGGGCCAGGTGCCAGCGGGCAGGCGGCAGCCA
ACTGGCTGGCCGGGTTTGGTTCGCGGCCACCCACCAACTTTGCTGGGC
ATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTACTGGTATTGGA
TGAATTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGT
TTTTCTTCTTGCAGTGTGGGGCCCTATCTGGTCGCCTGCTACTGGCGA
GTGTTTGCAAGGGGCCAGTGGTCCCTGGGGTTACCTGACAGCAGCCGT
GTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTCATCTGCATCTTCT
CCAACCAGNNNGCCAAATCTCGCTTTCACCCTGGCATGGGGACTGGTCCTGGC
ACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTATCCCCGCAGCA
AAGCGAGGAGCCCCTGTTGCCACCCCGCAGCGATGGTTTGTACCC
---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT
-----GATTTGCGCCGGTAACGCGGCCACCTTGCTGTCTACGCAGC
GGCCGGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCA
ATCGGCCTCTTGGCTATTACGCAGACCCGTCAG---GCTGG---GGAGGA
CGCACGCCCGCAGTACTGTGGTGTAAATAGCAAATCCAGCTCGGTGTT
TTCTGCTGGCCCACTAACTCTATCGGWGGCAGGGCGGGCA---GC---A
ATTACCTGG-----CGGAAGA---GGGA---GACCC---CATCCCG
ACAGAGAGGTCACCG---AT---CGGCGGCTCGGAGGAG---ACCAAACC
CAAAGACATGAC---ATCAGA---GTCGAACTGGATAGAG---ACGCCGT
CCTCCATTAAGTCCATCGATTCAAGCGATTCTGGTATCTTTG---AACAG
GCCAAAAGGAGAAGGATCTCACCGTCTGCAACGCCA-----GTTTC
AGAGACTGTGTCCCCGTTAAATCTGAGCATCACTCAACAGGCGAAGTCA
CAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGGATGGGC
GCCTTCAAATAAACCACAGCTCCCACGATATTGGTTCCGG---ACAAAC
GGCTTTTCTCCTCCAGGCG---CCCGGCTAT---GCAGCAGCTGCCCTGG
GA---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCC
ACGGCGGCTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGATT
CGGGGACGCCACCAG-----CGCGCAGCACAGTTTGTTCGCCT
C-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCA
GATGCAGCGGGCACCTGCTCTTCCCGGGGCTCCATGAA---CAAGCGGC

GAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGGCTGGGCTTCT
CGGGGGACATGTACGGACGGGCCGACCAGTATGGCCACGTTACGAGCCCC
CGGT---CCGACCCTATGCTTCGACCCAGCTGCACGGCTATGGCCCCAT
GAACATGAATATGGCCGCA---CACCACGGAGCAGGGCCCTTCTTTCGAT
ACATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCG
GAGCAGCTGACAAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGCACGAT
GCACGAGCTCGTGACCCATCTGACGGTGGAGCATGTTGGGGGACCGGAGC
AGACCAACCACGTCTGCTTCTGGGAGGATTGCGCCAGAGAAGGAAAGCCA
TTCAAAGCCAAATACAAACTTGTAAATCATATCAGAGTGCACACCGGAGA
AAAGCCCTTTCCGTGTCGGTTCCCGGGCTGTGGCAA

>Acropoma japonica

AGCCTGCTAATTTCGAGCAGAACTGTGCCAGCCGGGCTCTCTTCTGGGAGA
CGATCAAATCTATAATGTAATTGTTACAGCCCATGCCTTTGTGATAATCT
TCTTTATAGTAATACCCATCATGATCGGAGGCTTCGGAAACTGGCTCATT
CCCCAATAATTGCTGCCCCGACATAGCATTCCCTCGGATAAAATAATAT
GAGCTTTTGACTCCTACCCCTTCCCTTCTCTTGCTCCTTGCCCTCCTCTG
GAGTAGAAGCAGGAGCCGGCACCAGGATGAACAGTTTATCCCCCTCTCTCT
AGCAACCTGGCCCACGCAGGAGCGTCCGTAGACCTCGCAATCTTCTCCCT
CCACTTAGCAGGAATTTTCATCAATTTCTAGGGGCCATTAATTTTATTACAA
CCATTATTAACATAAAAACCTCCTGCTATTTTACAGTACCAAACACCCCTC
TTTGTGTGGTCCGTACTAATTACCGCGTACTCCTCCTTCTCTCCCTCCC
CGTGCTTGCCGCAGGCATTACAATGCTTCTCACAGACCGAAACCTAAATA
CCACCTTCTTTCGACCCTGCCGGCGGCGGAGACCCCATCCTCTATCAACAC
CTC-----

-----NNNNNNNNNNNAACCTTACCCATCTAACTGCCTTGGCATGCTGTTGCT
GTCTGATGCCACCAGTGCACCAAGCTGTGAGAGCTCTCCTGGGGCATGT
GCCTCAGCAACTTTCCCGCTATTTGTAAGACGGAGACTTCCCTCCAACCTG
CCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGAGCTAGAGACAGA
AGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGATCAACTATGACC
TGGAAAAGAGGCACCTGCAACCTTCCAGAGCTCCTGAGAACGGTGCCTCTG
GCCCTGCTGCCATCTTTCTCATGGAGAACGTTTCTACAGAAGAGCT
GATCAACGCCACGGCCAAGAGCAAGGAGTTGGTGGATGAAGCTATCCGCT
GTAAGCTGAAGATCCTGCAAAATGATGGCGTCGTAAACAGCCCGTGTGCT
CGACCAAGAAAAACCAGCCATGCCCTTCTTCTTCTGGGAGGGCAGACTTT
CATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCAAAGAGATCATCC
CCAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCATC
GGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAAAATGGTGT
GTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGGAATGGTCAAGG
CGGCGCCCATGCTCATTTGCCAGGTTTGGCCATGGCTCTGCGGAGCTGAAA
CACTGCCTCTACGTGGTAGGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGATGAG
TACATTGTTGTGTTTCAGTCGT
TCAACGACGAGGCTGATATTGAATGAAGCTGAGCTAATCATGGTGTGCTGGC
CCAGGAGTTCAGATGAGAGTGATCACGGTATCCCTGGAGGAACAGTCTT
TCCCCAGTATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGTATG
CATGGAGCTCAGCTTATCACCTCACTCTTCTTCCCCAGAGGAGCTGCTGT
GGTGGAGCTGTTCCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGTATA
AAACTCTTGCCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCTGAGG
AACGCTAAGGAGGAGAACACTATCACCCACCCAGACAGACCCTGGGAGCA
AGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCGA
GCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAATGGCTCTTC

CGGATCTACCAGGACACATTGGTCGACATCCCTTCCTTCCTGGAAGTCCT
CAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GTCAA
AGCCGGCCAGCACAGTCCACCCGGGCCGGGTGAGAGAACCTCAGTGTCAG
ACCTCAGTACAAACACTAATGAGGCTAAACTCACAGTCTCCTGGCAGAT
CCCGTGGAATCTGAAATTCCTAAAGGTGAGAGAGGTCAAATATGAAGTG-
-----AAGAAAGACACCAGTAAGGGGACATTGGAGGATCAAATCATC
CAGGCGAACCCTGCGCTGGAGGCCCTTCGGCAATGCCAAAACATTGAGAAA
TGACAACTCGTCTCGTTTTGGAAAAATTCATCAGAAATCACTTTGGTACGA
GCGGCAAGCTGTCTGCTGACATCGAGACGTACCTGCTGGAGAAGTCA
CGTGTACCTTTTTCAGCTCAAAGCTGAGAGGAACTACCACATCTTCTACCA
GATTCTGTCCAATCAGAAGCCAGAGCTCCTGGACATGCTGTTGATCACCA
ACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGCTAACGGTTGCT
TCCATCAATGACTCAGAGGAGCTGATGGCCACTGACAGCGCCTTCGATGT
GCTCGGCTTCACTACAGACGAGAAGATGGGCGTCTATAAACTGACTGGCG
CCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAG
CAGGCAGAGCCGGATGGGACAGAGGCTGCTGATAAATCAGCTTACCTAAT
GGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAGTCA
AGGTAGGAAATGAATACGTCACCAAAGGCCAAAGTGTGGACCAAGTCTAC
TACCCCAACAAGGAGGCCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAA
CACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAGCAG
GGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACACCTGTG
CTCTTGAGACCTCAAGAGCCACTCTGGGAAGTCTTCGGGTGGCACCAA
GGAGAAAAAACACCCGTGCGATCACTGTGACCGTCGTTTTCTACACACGGA
AGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCCTG
TGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCGCCA
TGTGAAGAAGAGCCACTCTCAGGAGCTGCTGAAGATCAAGACAGAGCCTC
CTGATATGTTAGGTCTTTTTAGCGTCGGGGTACCACCCTGCTCTGTGAAG
GAGGAGCTCAGCCCCATGATGTGTGGCATGGGACCCAACAAGACCCCAT
GATGGGCAAACCGTTCCCCAGTGGGGCCCCCTTCCCGATGGGCATGTACA
ACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTCAC
CCA-----CACCCGTCCCTAATGCCTAGTTCCTTGTCTGCAGCTATGGG
CATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCATGG
GATGTTTACAAATCAGTGATGGCTCAAATATCGTTAACCTGCTGGCTAGT
AACTCTCCGAGTGTTCGTATGCTCTGACCCAGCAGAAATACTTCAGTAA
CTACAGTCTGTAAATGGGTTTTACATTTATGAGCCCATAGAGTACTGGA
ACTCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAG
ATCTCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAATGTGAG
TGCATCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCCTGC
GCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA--
-ACCGCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGATGTA
CTTGGTGGCACGGACGACAGAGAAGAAGCGTGAAGAGGTGGTAGAGCTTC
TGGAGAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCC
TTCAATCCTACATTTGTCTTCATGGACCGCTACAGCTCCTCTGTCTATCTC
GCCATCCTGACCTCAGGCTTACAGGTAATCACAATCCTCATCTCACTT
TCTTCTGGTCATAAACCCTTGGGGAACCTTCTGGCTCATCTCACTGTA
ACGTCCGTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTTTGA
ATGGCAGCCAGCTCTCAGGAATGTGTCTACATCTTGCAATGTTGGCATT
TTAATGGGCTCTCTGGATGGGCTTCCTCGGTGGATGATTCCCCAGCTGAC
ACCATCACTCGACGGTTTCGCTATGATGTCGCGCTGGCATCAGCAATAAA
GGATCTGGAGGAGGACATAATGGAGGGACTGAGAGAGAGTGGGATGGAAG
ACAGTGTGTGCACCTCAGGCTTCAGTGTGATGATCAAGGAATCCTGTGAT
GGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGTTGTTCTTGA
GAAGGCTGTACGTTTCTCTTTCACTATTATGTCTGTCTCGGCTTGGCAG

ACGATGAGGGG-----AAAGAGGTT
ACCATCTTCACCGAGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCCTCT
TTGCCTGACGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCCATCC
TAGGGCCTATAGTTGCAGAGCGTACTGCGATGAAAGAAAGTAGGCTCATC
CTATCCATGGGTGGACTACCTCGTTCCTTTTCGCTTTCACCTCAGAGGCAC
AGGATACGATGAGAAGATGGTACGTGAGATGGAGGGCCTCGAGGCCCTCAG
GGTCTCCTATATCTGCACGCTTGTGACTCCAGTCGGACAGAAGCCTCT
CAAAACATGGTGCTACTCCGTCACCTCGGAGTCATGACGAGAACCCTAGA
ACGTTATGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAGC
TGAGAGACAGAGTCAAAGGGGTATCTGCCAAGCCTTTCATGGAGACCCAT
CCCACGCTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTCTA
CAAAATCTTCCAGGACGAGATCGGAGAGGTGTACCAAAGGT---CAAC-
--CCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACAG
CTGAGGAAGAAGATAAAGCTTAAACC GGTAATGAGGATGAATGGGAAC TA
TGCACGCAGGCTAATGACCCAGGAGGCTGTGGATGTGGTGTGTGAGCTGG
TGCCCTCAGAAGGGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTCTAC
CTCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCCAGCCAAGGAGTGCCC
CGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTTGCCGACCTCC
TCTCCTCTACCTTCAAATATAGGTACAATGGAAAAGATAACCAATTACCTG
CACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGGATCCAT
AGGAGCCTGGGCCAGCGAGGGGAACGAGTCGGCAAACAAATCGTACACCA
TCGAGATGTGCCCTTGGGGCCGGGTGGAAGGAGAGCCACAGCCTTTC
TCCTGCTCCATTGAAGACCCACGAAACAGACAAAAGTTCAAGGGCATCAA
GACATACATTTTCGTACCGGGTCACGCCGAGCCACACAGGGCGTCCCCTCT
ACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAG
TTCACTGTGATCTCCGTGCCGCACCTGCCTGAGAAGCAGGCCACGGGGCG
ATTTGAGGAAGACTTCATCGAGAAGCGTAAGAGGCGACTGATACTGTGGA
TGAACCACATGACCAGTCACCCAGTCCTCTCCCAGTATGAAGGCTTTGAG
CACTTCTGATGTGCGCTGACGACAAGCAGTGGAAACTGGGCAAGAGACG
GGCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCCCTCAGA
TCCCTAACGAGCACCAGGACCTTCAGGACGTAGAGGAACGGATCGACTCC
TTCAAGTCCTTTGCTAAGAAAATGGATGACAGCGTGATGCAGCTCACGCA
TGTTGCCTCAGAGCTGGTGCCTAAGCACCTGGGTGGATTTCAGGAAGGAGT
TCCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCGTTTCATGCTG
GACCTCCGCACAGCTCAGAGACCTTCAACAACGCCATCTCCCATCCTCT
CACCACGTTCTCAAAC TGACCTCTCTGGGTTTCATCATTGGAGTCGGTG
TGTTGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTG
CACCGGGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCTGATATCCT
GCGCTCCGCCATCTGCTTCCCCTTTGTTTTACCTCGGTCAAGAATGGAT
CTATCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTTGGGG
GTGCTCTCCTGTTTCCACACGGCGTTTATGCTGTTCTGTGTGTCAGCGTAC
GCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCT
TCTGGACCTGTCTAGCTGTATSTGCATGGTGTGGACGTTGTGTCAGTGGCT
ATGGCGTTCCC GCCGTGTTAGACGTAGGGACGTA CTCTTTTATCCAGGA
GGAGGACCAGTGCACCTTCCAGCACCGTTCCCTTCAGGGCGAATGATTCGC
TGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTT
TACCTCAAGCTCATCTTCTTCGTCCACGACCGTCAAAGATGAAGCCTGT
CCAGTTCGTGCCTGCTGTGTCAGCCAGA ACTGGACCTTCCACGGGCCAGGCG
CCAGCGGGCAGGCGGGCCAACTGGTTGGCCGGATTTGGTTCGAGGTCCC
ACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCG
CAGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTA
GGATGTTCTACATCATGACGTTTTTCTTCTGGCACTGTGGGGGCCCTAT
CTGGTCGCCTGCTACTGGCGGGTGTGCAAGGGGCCCTTTGGTCCCTGG

-----TATCTCATTTACGCTTCCTTTTCGTTTCAT
GGGATGTTTACAAATCAGTGACGGTTCAAATATTGTAAACCTCTTGGCGA
GCAATTCGCCAAGTGTTTCATACGCTCTGACCCAGCAGAAATACTTTAGC
AACTACAGTCCCGTCATTGGCTTTTACATTTACGAACCCATCGAGTACTG
GAACTCCACGGTGCAGGAGCACCTGAAGACTTTGAGTCACGGCTTCAACA
AGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTG
AGTGCATCGACCAAGGGTGACTTCATCTCCAACCTCAAAGGCTCCTTCCT
GCGGAGCCCTGAGTACCAGCACTTCACAGAGGACATAATATTCACCAAGA
---ACGCGAGACAG-----ATGAATACGACATTATCGCCTCACGGATG
TACCTGGTGGCACGGACCACAGAGAAGAAGCGTGAGGAGGTGGTGGAGCT
TCTCGAGAAGCTTCGCCCTCTGATGCTGATCAACAGCATCAAGTTCATTG
CCTTCAATCCCACCTTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTTATC
TCACCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATACTTATTTCTCAC
TTTCTTCTGGTTCATCAACCCCTTGGGGAACTTCTGGCTCATCCTCACGG
TCACATCCGTGGAGCTAGGAGTCTTGGGTTTGGATGGGTTTTTACCATTTT
GAATGGCAGCCAGCGCTAAAAAATGTTTCCGCATCTTCAAATGTAGGCAT
TATGAATGGGCTCTCTGGATGGGTGTCTTCACTGGACGACTCACCAGGTG
ATACCATCACCCGGCGATTTTCGCTATGATGTGGCTCTCGTGTGACACTA
AAGGATCTGGAAGAGGACATCGTGGAGGGCTGAGAGAGAACAGGATGGA
AGACAGTGCTTGCACCTCAGGCTTCAGTGTGATGATCAAAGAATCTTGTG
ATGGTATGGGTGATGTTAGTGAAAAGCATGGTGGAGGGCCAGCTGTCCCA
GAGAAGGCTGTGCGTTTCTCTTTCACTCTTATGTCCATCTCTGTCTGCC
AGATGGTGACACT-----GAGGCTG
TAACCATCTTTACTGAGCCAAAGCCAAACTCGGAACTGTCTGCAAGCCC
CTTTGTCTCATGTTTGTGATGAATCAGACCATGAGACACTCACAGCTGT
CCTGGGGCCTATAGTTGCAGAACGAAATGCAATGAAGGAAAGCAGACTCA
TCCTATCCATCGGTGGCCTACTTCGCTCCTTCCGATTCCACTTCAGGGGT
ACAGGATATGATGAGAAGATGGTGCCTGAAATGGAGGGTCTGGAGGCCTC
GGGGTCCACCTATATCTGCACTCTGTGTGACACCAGTCGTGCTGAGGCCT
CTGAAAACATGGTACTACACTCTATTACACGTAGCCATGATGAGAACCTA
GAACGTTATGAAATATGGAGAACAAATCCCTTTTCTGAGCCTATAGACGA
GCTGCGGGACAGAGTGAAAGGAGTTTCTGCCAAGCCATTCCTGGAGACTC
AGTCCACACTAGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTC
TACAAAATTTTCCAGGATGAAATTGGTGAAGTGCACCAAAGGT---CAA
T---CCAGCCGCGAAGAACGGCGCAGCTGGAGGGCTGCCCTTGATAAAG
AGTTAAGGAGGAAGCTGAAGCTTAAACCAGTRATGAGGATGAATGGTAAC
TATGCCCGCAAGCTAATGACACTAGAGGCTGTGGAGGTGGTGTGTGAGCT
GGTGCCCTCGGAGGAGAGGAGGGAGGCCTTGAGGGAGCTTATGAGGCTCT
ACCTCCAGATGAAGCCCCTGTGGCGCACCACTGCCAGCCAAGGAGTGC
CCTGACCAGCTGTGCCGCTACAGCTTTAACTCCAACGCTTTGCTGACCT
CCTCTCCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACC
TGCACAAGACCCTTGCCCATGTCCCTGAAATCATAGAGAGAGATGGATCT
ATCGGTGCCTGGGCTAGTGAGGGAAATGAGTCGGCAAACAAGTCATACAC
CATCGAGATGGGCCCTGTGGGGCCCCGTGGAAAGAGAGCCCACAGCCTT
TCTCATGCTCCATTGAAGACCCTACCAAACAGACAAAGTTTAAAGGCATC
AAAACCTACATCTCATACCGTGTACACCGAGCCACACAGGTTCATCCTGT
ATACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCCTTCTGCACA
AGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGG
CGATTTGAGGAAGACTTTATTGAGAAGCGCAAGAGACGACTGATACTGTG
GATGAACCACATGACCAGTCACCCAGTTCTTTCCCAATATGAGGGCTTTG

AGCACTTTCTGATGTGTGCGGATGACAAGCAGTGGAAGACTGGGTAAGAGA
CGAGCTGAGAAGGATGAGATGGTGGGTGCCACTTCATGCTGACCTCCA
GATCCCTCAAGAGCACCAGGATCTTCAGGATGTAGAGGAGAGAGTTGACT
CCTTTAAGGCCTTTGCAAAGAAAATGGATGACAGTGTTCATGCAGCTCACT
CACGTTGCCTCAGAGCTGGTCCGCAAGCACCTGGGTGGATTTCAGGAAGGA
ATTCCAGAGACTGGGAAATTTCTTCCAGTCCATCAGCCAGTCATTTATGC
TGGATCCTCCCCACAGCTCAGAGGCCCTCAACAAGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNCGTTCCTCAA
GACCTCTCTGGGTTTTATCATTGGAGTYGGTGTGGTGGGAACCTCCTGA
TCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCACCCTACTAT
TTCTGCTGGACCTGTGCGCCTCCGACATCCTGCGCTCAGCCATCTGCTT
CCCTTTCGTCTTACCTCCGTCAAAGATGGCTCTGCTTGGACTTACGGCA
CGCTGACCTGCAAAGTGATCGCCTTCCCTGGGGGTGTTGTCCTGTTCCAC
ACGGCGTTCATGCTCTTCTGCGTCAGCGTCACCCGCTAYTTGGCCATCGC
ACATCACCCTTTCTACACCAAGCGGCTCACCTTCTGGACCTGCCTGGCCG
TCATCTGCATGGTGTGGACTCTGTGGTGGCTATGGCGTTCCCGCCGGTG
TTGGATGTCGGGACGTATTCTTTTATTCAGGAGGAGACCAGTGCACGTT
CCAGCACCGTTCCCTCAGGGCGAATGATTCACTGGGCCTTCATGCTGCTGC
TGGCGCTCATCCTCCTGGCCACACAGCTGGTTTTACCTCAAGCTCATCTTC
TTTTGTCACGACCCCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCTGT
CAGCCAGAAGTGGACATTCACCGGCCCGGGGCCAGCGGCAGGCAGCGG
CAAAGTGGTTAGCTGGATTTGGTAGAGGCCCCACGCCCGACTCTGCTG
GGCATCCGGCAGAAGCAAGCAAGCAGCGGGCCGACGGCCTGCTGGTGT
GGATGAGTTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGA
CGTTTTCTTCCCTGGCGCTGTGGGGGCCCTATCTGGTGGCCTGCTACTGG
CGGGTGTTCGAGGGGGCCCCGTGGTCCCTGCGGGCTACCTTACGGCGGC
CGTGTGGATGAGCTTTGCCCAGGCTGGGGTCAATCCTTTTCATCTGCNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----

-----NNNNNNNNNNNNNNNGCGAAGTCACAGAGAGAGAAGTGGCGCTGGGGAT
AAATCCGTTTGCAGATGGGATGGGCGCTTTCAAATCAACCACAGCTCCC
ACGACCTGGGCTCCGG---ACAGACGGCGTTCTCCTCCCAGGCG---CCC
GGCTAC---GCAGCAGCCGCTTAGGACACCACCACA-----CCACCC
GACCCAGTGGCTCT---TACTCCAGGCGGCTTTCAACTCCACCAGGG
ACTTCTGTTCAGAAATCGGGGTTCGGGGACGCCACCGG-----
---CGCTCAGCACAGCTTGTGCTC-----CGGAAGTTT---C---
----GCAGGGCCACACGGACACTCGGAGGCGGGGGCACCTGCTCTTCC
CGGGGCTCCAGAA---CAGGCGGCGAGTCATGCGTCCAACGTGGTC
AACAGCCAGATGCGTCTGGGCTTCTCGGGGACATGTACGGACGGCCCCGA
CCAGTACGGCCAGTCACGAGCCCACGGT---CCGA---CTATGCTTCGA
CTCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCG---CAC
CACGGAGCGGGGCCCTTCTTTCGGTACATGCGGCAGCCGATCAAGCAAGA

--AAGAAGGATACCAGCAAGGGAACGCTGGAGGATCAAATCATCCAAGCT
AACCCAGCTTTAGAGGCTTTTGGCAATGCCAAAACGTGAGGAACGACAA
CTCCTCACGTTTCGGGAAATTCATCCGCATTCATTTTGGAGTAAGTGGCA
AACTGTCCTCTGCTGACATTGAAACGTACCTGCTTGAGAAATCTCGTGTC
ACTTTTCAGCTCAAAGCTGAGAGGAACTACCACATCTTTTTCCAGATTTT
GTCCAACAAAAGCCAGAACTACTGGACATGCTGTTGATCACTAACAACC
CATATGATTATGCATATGTCTCCCAAGGAGAGGTGTCGGTTGCTTCAATT
GATGACTCAGAGGAACTGATTGCAACCGACAGTGCCTTTGATGTGTGGG
CTTCACAGCAGRTGAGAAGATGGGTGTTTACAAGTTGACAGGCGCCATCA
TGCACTACGGCAATATGAAGTTCAAGCAGAAGCAGCGCGAGGAGCAGGCA
GAGCCTGACGGCACCGAGTCAGCTGACAAATCAGCCTACCTAATGGGGCT
CAACTCGGCTGACCTCCTTAAGGGACTATGCCATCCAAGGGTTAAAGTCG
GCAATGAATATGTCACTAAAGGCCAAAATGTAGATCAAGTCTACTAC---

-----TACCTAATTTATGCATCTTTTTCTTCATGGGATGTT
TACAAATCAGTGATGGATCTAATATTTGTCAACCTCTTAGCCAGCAACTCC
CCAAGCGTCTCCTATGCTCTGACACAGCAGAAATATTTTCAGCAATTACAG
TCCGGTGATTGGATTCTACATATATGAACCTATAGAGTACTGGAATTCCA
CAGTTCAAGAACACCTGAAGACCTGGGCAATGGATTCAACAAGATTTCA
TGGATCGACAACCTCTTTTCAGTATCTGAAGGTAGTGAATGTCAGTGCCTC
AACCAAAAGTGAATTCATAACCATCTGCAGACTTCCTTCTTGAGGAGCC
CAGAGTACCAGCACTCAAAGATGACATCATTTCATAAAA---TGAGG
G-----ATGAAACTGAGATCATTGCATCCCGGATGTACTTGGT
GGCCAGAACCACAGAGAAGACGAGGGAGGAGGTGGTGGAACTACTGGAGA
GACTGAGACCTCTGTCCCTCATCAACAGCATAAAAATTCATAGTCTTCAAC
CCCACATTTGTGTTTCATGGATCGATACAGCTCCTCTGTTCATTTCTCCAAT
CCTGACCTCTGGATTCAGCGTCTGATTGTCTTGATCCTGACATTCCTTC
TGGTCATCAACCCCTCGGAAACTTCTGGTTGATTCTGACTGTCACCTCA
GTGGAGCTGGGAGTTCTTGGCCTAATG-----

-----AGCGAGAAGCATGGGGGTGGTCCAGCCCTCCAGAGAAGGC
AGTGAGGTTCTCCTTCACCGTGATGTCGGTGTCTGTCAGGCCTGAGGGGG
GTGAA-----GGGGAAGTGACTCTC
TTCTGCGAACC CAAGCCAAACTCAGAGCTCAGCTGCAAGCCGCTGTGCCT
GATGTTTGTGGATGAGTCTGACCACGAGACGCTGACTGCCATTTTGGGGC
CTGTAGTGGCTGAACGCAACGCCATGAAAGAAAGCAGGCTCATTCTGTCT
GTCGGTGGCCTGCTGCGATCTTTCCGCTTCCACTTCCGGGGCACGGGGTA

--GCCGCTGATTTTGGCTGGAAACGCGGCCACCTTGCTGTCATACGCAGCG
GCGGGAGTGAAGGCAT-----TACCGTTGCCTACAGCAGGGTGCTCGAG
CAGACCTCTGGGTTACTATGCAGACTCTTCGG---GATGG---AGCACAC
GGACTCCTTCCCAGTATTGC-----AGCAAACCTAGCTCTGTTCTT
TCCTGCTGGCCCTCCAATTCTTCTGGGAACAGGACTGGCA---CCTCTAC
CTATCCTG-----CGGATGA---GAGT---GATAC---TATCCCAA
ATGAGAGGTCACCC---CT---CGGTGGGTCTGAGGAT---GTAAAACCT
AAAGACTT-----GTCGGA---ATCCAACCTGGATAGAA---ACGCCATC
GTCCATAAAATCGATTGATTCAAGCGATTCTGGGATTTTTG---AGCAGG
CCAAACGGAGACGTATGTCTCCCTCCGCAACGCCG-----GTTTCT
GAAACTACCTCCCCATCTAAGAGCGAA-----ACCGGAGAAGTCAC
AGACAGAGAAGTGGCTTTGGGGATAAATCCCTTTGCTGATGGGATGGGCG
CTTTTAAAATCAACCACAGCACCCACGACCTGGGCTCTGG---ACAAACG
GCATTTTCTTCGCAAGCA---CCAGGCTAC-----GCCGCTGCCCTGGG
A---CACCATCA-----CCACCCACTCATGTCAGCTCC---TATTCCA
CCGCGGCTTTCAATTCCACTCGGGACTTTTCTGTTTCGAAACCGGGGCTTT
GGAGACGCGACGAG-----TGCACAGCACAGCCTGTTTCGCCTC
CGC---AGCAGGAAGTTT---T-----GCAGGGCCACATGGACACTCGG
ATGCCACCGGGCACCTGCTTTTTCCGGGACTTTCATGAG---CAAGCGGCT
ACTCACGCGTCTTCCAATGTTGTAAATAGTCAGATGCGTCTGGGCTTTTC
GGGGACATGTACGGTCGAGCCGAGCAGTATGGCCATGTAACCAGCCCCA
GGT---CTGATCATTACGCTTTCGACCCAGTTGCACGGATATGGCCCTATG
AACATGAACATGGCTGCA---CACCATGGGGCTGGGGCCTTCTTTCGGTA
CATGAGGCAACCGATCAAGCAGGAACCTTATCTGCAAATGGATCGAACCGG
AACAGTTGACAAACCCGAAAAAGTCCCTGCAACAAAACCTTTCAGTACCATG
CACGAGCTCGTTACACACCTCACAGTGGAAACATGTCGGAGGACCAGAACA
ATCGAATCATATCTGCTTTTTGGGAAGAGTGTCCGAGGGAAGGGAAACCTT
TCAAAGCAAAGTACAAACTTGTAAATCACATTAGAGTACACACCCGCGAA
AAACCTTCCCATGTCCGTTTTCCCGCTGTGGGAAA

>Aldrovandia affinis

AGCCTTTTAAATTCGGGCAGAACTAAGCCAACCCGGAGCCCTTTTAGGAGA
TGACCAAATTTATAATGTTATCGTTACAGCACACGCTTTCGTAATGATCT
TCTTTATGGTTATAACCCGTAATAATTGGAGGCTTCGAAACTGACTCGTT
CCCCAATGATCGGCGCCCCGACATAGCATTCCCGCGAATAAAACAACAT
AAGCTTCTGACTCCTACCCCGTCATTTCTCCTTCTACTCTCTTCTCTG
GGGTTGAGGCAGGGGCAGGAACAGGCTGAACAGTATACCCCCACTTGCT
AGCAACCTAGCACATGCCGGGGCATCCGTCGACCTAACCATCTTCTCCCT
ACACCTTGCAGGTATCTCATCAATCTTGGGGCTATTAACCTTCATTACCA
CAATCATTAACATGAAACCCCGCAATCTCACAATATCAAACACCCCTA
TTTGTATGATCAGTACTTGTCACTGCAGTCTTGCTACTCCTATCTCTACC
AGTCCTAGCCGCAGGCATTACCATGCTACTTACGGATCGAAATCTTAATA
CAACATTCCTTTGACCCGGCAGGAGGGGAGACCCAATTCTGTACCAACAT
CTGTCTGATTCTTCGGCCACCCCGAGGTGTATATCCTAATCCTCCCTGG
GTTTCGGAATAATCTCGCACATCGTCGCATATTATGCCGGCAAAAAGAAC
CGTTTGGCTACATAGGAATAGTGTGAGCTATAATGGCCATCGGCCTTCTA
GGGTTCAATGTCTGAGCACACCACATATTTACAGTAGGCATAGATGTAGA
CACACGAGNNNN-----

-----AAGAAGGATACCAGCAAGGGCACACTCGAGGATCAAATCATCC
AGGCTAACCCAGCGCTGGAAGCTTTTGGCAATGCTAAGACTGCGAGGAAC
GACAACCTCTCGCGTTTTGGGAAATTTCATCCGCATTCATTTTGGAGTAAG
TGGCAAGCTTTCGTCGCTGACATCGAAACTTACCTGCTTGAGAAATCTC
GCGTCACTTTCAGCTCAAAGCCGAGAGGAAGTATCACATCTTTTACCAG
ATTATGTCCAACAAAAAGCCTGAATTGYTGGACATGATGTTGATCACTAA
CAACCCATACGATTATGCTTACGTCTCCCAAGGAGAGGTGACAGTCGCGT
CAATTGATGACTCTGATGAACTAATTGCCACAGACAGTGCTTTTGGATGTG
CTGGGATTCACAGCTGAGGAAAAGATGGGTGTCTACAAGCTGACAGGTGC
CATCATGCATTACGGAAATATGAAATTC AAGCAGAGGCAGCGTGAGGAGC
AGGCTGAGCCTGATGGCACTGAGTCTGCTGACAAGTCAGCCTACCTGATG
GGGTGAACTCAGCCGACCTTCTCAAAGGACTATGCCACCCAAGGTTAA
AGTCGGCAATGAGTATGTCAAAAAGGGCCAAGGTGTTGATCAAGTCTACT
ATACCCAACAAGAGGCCCTTCAAGTGCGAGGAGTGTGGCAAGAACTACAAC
ACCAAGTTAGGCTACAAGCGTCACGTGGCCATGCACGCGGCCACCAGCGG
CGACCTCACCTGCAAGGTGTGCCTGCAGAGCTATGAGAGCACGCCCCTGC
TGCTGGAGCACCTCAAGAGTCACTCGGGGAAGTCTCGGGTGGGGCCAAG
GAGAAGAAGCACCCCTGTGACCACTGCGACCGGCGCTTCTACACGCGCAA
GGACGTGCGGCGCCACATGGTGGTGCACACAGGCCGCAAGGACTTCCTGT
GCCAGTACTGCGCCCAGCGCTTTGGCCGCAAGGACCACCTGACCCGGCAT
GTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGCCACC
GGACATGTTGGGCCTGCTGGGCTCCGGCTCCCCGCTTGCTCCGTCAAGG
AGGAGCTCAGCCCATGATGTG---TATGGGGCCCTCCAAGGACTCCTTG
ATGGGCAAGCCCTTCCCTGGTG-----CCTTCCCATGGGCATGTACAA
CCCCAC-----CTGCAGGCTATGTCCAACCTCTGGGGTATCC----
-----CACCACTCACTGGTGTCCGGGTCTCTGTCTGCAGCTATGGGG
ATGGGCTGCCACATGGAGTACCTTATTTATGCATCGTTTTTCCCTTCATGGG
ATGTTTACAAATCAGCGACGGATCGAATATAGTCAACCTTTTAGCCAGCA
ACTCCCGAGTGTCTCGTATGCTCTGACCCAGCAGAAATATTTTCAGCAAT

>Alepisaurus ferox

AGTCTCCTTATCCGAGCCGAGCTAAGCCAACCCGGAGCCCTCCTGGGAGA
TGACCAAATCTATAACGTAATCGTAACCGCCACGCCTTCGTAATAATCT
TCTTCATAGTAATACCCGTTATAATCGGCGGGTTCGGAAACTGACTTATC
CCCTTGATAATCGGGGCCCTGACATAGCCTTCCGCGAATGAACAACAT
GAGCTTCTGGCTACTTCCTCCATCCTTCCTCCTCCTCCTCCTCCTCAG
CTGTTGAAGCTGGGGCCGGAACAGGGTGAACAGTCTACCCTCCTCTAGCT
AGCAACTTAGCCCACGCCGGAGCCTCGGTGACCTGACCATCTTCTCTCT
CCATCTGGCGGGTATTTCTTCTATCCTGGGGGCTATTAACCTTCATCACA
CAATTATTAACATGAAACCCCGGCCATCACCAATACCAAACCTCCCCTG
TTTGTGTTGAGCCGTTCTAATTACCGCAGTCTTCTCCTACTCTCCCCTCC
CGTCTTAGCGGCAGGCATCACTATGCTCCTTACAGATCGAAACCTAAACA
CAACCTTCTTTGACCCAGCCGGCGGGGGGATCCAATTCTTTACCAACAC
CTCTTCTGGTTCTTTGGCCACCCAGAAGTTTACATCTTAATTCTTCCCGG
CTTCGGAATGATCTCCACATTGTTGCCTACTATTCAGGTAAAAAAGAAC
CCTTCGGCTACATGGGCATGGTCTGAGCAATGATAGCAATCGGACTTCTA
GGTTTCATTGTCTGAGCACCTCCCATGTTTACAGTCGGAATGGACGTAGA
CACACGTGCCTATTTTTAGAGAAAAATCTGCATCCCTCAAATTGCTTGG
AATGTTCTTCTCTCCGACGCTCATCAGTGCACGAAGCTCAACGAACTTT
CCTGGAGCATGTGTCTCAGTCATTTCCCTACGATATGCAAGACTGAGGAC
TTTTTGCAGTTGCCCAAAGACATGGCAACCCAGTTGCTATCCCACGAGGA
GCTGGAGACGGAGGATGAGAGGCTGGTCTATGAGGCGGCCCTCAGCTGGG
TTAACTATGACCTGGAGAGGAGGCACCTGCCACCTGACAGAGCTTCTGAGA
ACAGTCCGGCTGGCCCTTCTACCGGCCATCTTCCCTCATGGAGAATGTATC
CACAGAGGAGCTAATTAATTCCAGACCAAGAGCAAGGAACCTGTAGACG
AGGCCATACGCTGCAAGCTGAGAATACTTCAGAACGATGGTGTGGTCAAC
AGCCCATTTGGCAAGACCCAGAAAGACCAGCCATGCCCTTGTTCCTGCTCGG
TGGCCAGACCTTCATGTGTGATAAGCTTTACCTGGTAGACCAGAAGGTCA
AGGAGATCATTCCCAAGGCTGACATACCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACCGGTGGGA--GAGGCTC-
AGAGAACGGTGTGTCCAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTCCAAGGCGGCCCATGCTCATTGCCAGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTATNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNGGATGAGTACATTGTGGTGTTCAGTC
GTTCCACAACCTAGGCTGATTCTGAATGAAGCAGAGCTGATACTGGCACTG
GCCCAAGAGTTTCAGATGAGGGTGGTCACTGTGTCCCTGGAGGAACAGTC
TTTCCCCAGCATCGTACAGGTCATCAGTGGTGCCTCCATGTTGGTCAGTA
TGCACGGAGCTCAGCTCGTCACCTCACTCTTCCCTCCTAGAGGATCTGCT
GTTGTAGAGCTCTTCCCCTATGCCGTGAACCCAGAGCAGTACACTCCGTA
CAAAACCTCGCCTCCCTACCGGGCATGGACCTTCAATACGTTTCTGGA
GGAACACTGTTGAGGAGAACACCGTCTCCCACCCAGACAGACCCTGGGAG
CAAGGAGGCATTGCCCATTTGGAGAAAGAAGAGCAGGAGAGAATCCTAGC
CAGCACGGATGTCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTCT
TCAGGATCTACCAGGACACTCTGGTAGACATCCCCCTCCTTCTTAGACGTC
CTCAA---GGAGGGCCTGAAG---ACGAGGCCAAGCTTGAAGAA---GTC
CAAGCCGGCCAGCACGGTTCACCCGGGCCGGGTGCGAGAACCCCAAGTGCC
AGACTTCAGTCCAAGCCACCAACGAGGCTAAACTCACAGTGTCTTGGCAG
ATCCCGTGGAACCTTAAGTACCTGAAGGTGCGAGAGGTGAA-----
-----AAGAAGGACACAAGCAAGGGAACCTGGAGGATCAAATCA
TTCAGGCAAACCCCGCACTGGAGGCTTTCGGTAATGCCAAAACATGAGG
AACGATAATTCTTCCCGTTTTGGAAAATTCATCAGAATCCACTTTGGAAA
CAGTGGTAAGCTGTCTTCTGCGGACATTGAGACCTACCTGCTGGAGAAGT
CACGGGTCACCTTTCAGCTTAAGGCAGAGAGGAACTACCACATATTCTTC

-----ACAGGCGAAGTCACAGAAAGAGAAG
TGGCTTTGGGGATAAACCCGTTTCGCGGACGGCATGGGCGCCTTCAAATA
AACCACAGCTCCCACGACATCGGCTCCGG--GCAAACGGCGTTTTCTC
CCAGGCG---CCCGGCTAC---GCGGCGGCCGCCCTGGGA---CACCACC
A-----CCATCCGACCCACGTACGTCC---TATTCACGGCAGCCTTC
AATTCCACGCGGGACTTTCTCTTCAGAAACCGGGGCTTCGGGGACGCCAC
CAG-----CGCGCAGCACAGTCTGTTTCGCCTCCGC---CGCCG
GAAGTTT---C-----GCAGGGCCACACGGACACTCAGATGCCGCGGGC
CACCTGCTCTTCCCCGACTCCACGAG---CAAGCTGCGAGCCACGCGTC
GTCTAATGTCGTGAACAGCCAGATGAGACTGGGCTTTTCCGGAGACATGT
ACGGGCGGGCCGACCAGTATGGCCACGTTACGAGCCCGAGAT---CCGAC
CACTACGCTTCGACCCAACGACGGCTATGGCCCCATGAACATGAATAT
GGCCGCT---CACCACGGCGCGGGGGCCTTCTTTTCGGTACATGCGGCAGC
CGATCAAACAAGAGCTGATCTGCAAGTGGATCGAACCGGAGCAACTGTTCG
AACCCCAAAGAGTGTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGT
GACCCACCTGACGGTGGAGCATGTGGGAGGACCCGAGCAGTGAACCACA
TTTGCTTCTGGGAAGATTGCGCCAGGGAAGGGAAACCGTTCAAAGCCAAA
TACAAACTCGTAAATCATATCAGAGTTCACACCCGAGAAAAACCTTCCC
GTGTCCGTTCCCCGCT-----

>Alepocephalus agassizii

AGCCTCTTAATTTCGAGCCGAGCTTAGCCAGCCCCGGCGCCCTCCTCGGCGA
TGACCAAATTTATAATGTCATCGTACAGCACATGCCTTCGTAATGATTT
TCTTTATAGTAATACCAATCATGATCGGAGGCTTCGAAACTGGCTACTC
CCCCAATACTAGGGGCCCTGACATAGCATTCCCCGAATGAACAACAT
GAGTTTCTGACTTCTACCCCCCTCACTCCTCCTCCTTTTCATCCTCAG
GGGTTGAAGCTGGGGTGGGGACAGGGTGGACCGTCTATCCCCCTTGGCC
GGCAACTTAGCCCACGCCGGTGCTCTGTAGACCTCGCCATCTTCTCTTT
ACACCTGGCAGGTGTTTCCTCAATTCTGGGATCAATTAATTTTATTACCA
CAATTACCAACATGAAGCCCCAGCCATCTCCCAATACCAGACACCCCTG
TTCGTGTGATCCCTTCTCGTCACAACGTCCTACTTCTCCTGTCTCTCCC
AGTTCTAGCCGCCGCTATCACCATGTCCTCACAGACCGTAATCTTAACA
CAACATTTCTTTGACCCAGCCGGAGGAGACCCCATCCTATATCAACAC
CTATTCTGATTCTTCGGCCACCCAGAGGTTTACATTCTAATCCTGCCCCG
ATTTGGCATCGTCTCACACGTGTCGCCTACTACGCCGGTAAAAAGAAC
CATTCGGTTATATGGGCATAGTTTGGGCTATAATAGCTATCGGACTCCTA
GGATTTATTGTTTGAGCCACCACATGTTTACAGTGGGAATGGACGTAGA
CACTCGTGCCTA-----

-----GGATGAGTACATCGTGGTCTTCAGC
CGCTCCGTCAACCGGCTCATCCTCAACGAGGCTGAGTTGATCCTGGCTCT
GGCGCAAGAGTTCCAGATGAGGGCCATCACAGTGTCCCTGGAGGAGCAGT
CGTTTGCCAGCATCGTTCAGTTGATCAGTGGGGCGTCCATGCTGGTCAGC
ATCCACGGAGCCCAGCTGATCAGCTCCCTGTTCCCTGCCACGCGGCGCGGC
CGTGGTGGAGCTCTTCCCCTACGCCATCAACCCAGAGCAGTACACGCCCT
ACAAAACTCTGGCTTTGTTGCCAGGCATGGACCTCCAGTATGTGGCTTGG
AGGAACACCATGGAGCAGAACTCGGTGGCTTACCCCTGAGCGTGCCTGGGA
CCAGGGTGGCATCGCCACCTGGAGATGGAGGAACAGGAGCGCATCCTGG
CGAGCGATGAGGTGCCGCGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTTCGGATTTACCAGGACCCCAGGTGGACGTCCCCTCCTTGCTGGAGGT
CCTCAG---AGAAAATCTGAAG---GCCAAGCCTAACCTGAGAAA---GG
CCAAGGCAGCTAGTACAGTACACCCCGGTAGAGTCAGGGAGCCCAAGTGC
CAGACTTCGGTCCAGGCCACCAACGAGGCCAAGCTGACAGTGTGCTGGCA
GATCCCCTGGAACCTCAAATACCTGAAGGTCAGGGAGGTCAAAATATGAAG
TATGGATACAGAAGAAGGATGCCAGCAAAGGGACCTTGGAGGATCAAATC
ATTCAAGCCAACCCAGCACTGGAGGCTTTTGGCAACGCCAAAACCTCAAG
AAACGACAACCTCCTCACGCTTTGGGAAGTTCATTGCTATTCAATTTGGAA
CGAGCGGCCAAACTCTCCTCTGCTGACATAGAAACTTACTTGCTTGAGAAA
TCCCGCGTGACCTTTCAGCTCAAATCGGAGAGGAATTACCACGCTTCTA
CCAGATATTGTCCAATGAAAAGCCAGAGCTGCTGGACATGCTGTTGATTA
CCAACAACCCCTTATGATTATTGCTACATCTCCCAAGGAGAAGTAACAGTT
AAGTCCATCAATGACAATGAAGAGTTGCTTGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACAG
GTGCCATTATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCAGAGCCTGATGGCACTGAGGCAGCTGACAAGTCAGCCTACCT
GATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCCAGGG
TCAAAGTTGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTC
TATTAC-----

-----TACCTGATCTACGCTTCCTTCTCGTTCA
TGGGATGTTTACAAAACACAGACGGATCCAACATAGTCAACCTTTGGCC
AGCGACTCGCCAAGCGTGTCGTACGCTCTGACCCAGCGGAAGTATTTAG
CAACTACAGCCCAGTGATAGGGTCTACATCTACGAGCCCATTGACTACT
GGAACCTCCACGGTGCAGGAGCACCTCAGGACACTGGGCCAGGGATTCAT
ACCATATCGTGGATCGATAATTACTTTCAGTATCTGAAGGTGACGAACGT
CAGCGCGTGCACAAAAGCGACTTCATCGCCGTCCTCAAGACTTCGTTCC
TGAGGAGTCCCAGATATCAGCACTTCACGGACGACATCATCTTTACAAA

A---CGGGCG-----ACGACTTCAACATCATCGCGTCCAGGTT
GTACTTGGTGGCGGGACCACGGAGAAGACGCGGGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTCCGCCCCTCTCGCTCATCAACAGCATCAAGTTCATC
GTGTTCAACCCACCTTCGTGTTACGGACCGCTACAGCTCCTCGGTCGT
CTCCCCATCATGACGTCCGGATTCAGCGTCCTGACCGTGCTCGTGCTCA
CGTTCCTCGTCGTCGAACCCACTGGGCAACTTCTGGCTGATACTGACC
GTCACCTCCGTGGAGCTGGGCGTCTGGGCCTGATG-----

-----TCCTACA
CCATCGAGATGGGCGCAAGAGGGCCTCAGTGGAAGGAGAGCCCCAGCCT
TTCGCTTGCTCCATTGAGGACCCCACTAAGCAAACCAAGTTCAAGGGGAT
TAAGACGTATATATCCTACCGCGTGACCCCAAGCAGTTCGGCCGGCCTG
TGTACCGTCGCTACAAGCACTTTGACTGGCTGTATAACAGGTTGCTGCAC
AAGTTCACGGTCATCTCTGTGCCCCACCTGCCTGAGAAGCAGGCGACTGG
GCGTTTTGAGGAGGACTTCATTGAAAAGCGTAAGAGGCGGCTCATCCTCT
GGATGGACCACATGACCAGTCACCCCTGTCCTCTCGCAGTACGAGGGCTTT
GAACACTTCTTCATGTGCGGTGACGATAAACAGTGGAAGCTGGGCAAGCG
GAGGGCGGAGAAGGATGAGATGGTGGGAGCCCACTTCATGCTCACCTTCC
AGATCCCCAACGAGCACCAGGACCTGCAGGACGTGGAGGAGCGGGTGGAC
TCCTTTAAGGCCTTTGCCAAGAAGATGGACGACAGYGCATGCAGTTAAC
GCACGTGGCCTCCGAGCTGGTGCGCAAGCACCTGGGAGGGTTCGCAAAG
AGTTCAAAGGCTGGGGAACTCCTTCCAGTCCATCAGCCAGGCTTTCATG
CTGGACCCCCCTACAGCTCTGATGCCCTGAATAATGCCATCTCCAC--

-----GCCAAATCCCGCTTT
CACCATGGCGTTCGGCAGGGGCTGGCAGCGACC---GCAGCGTCCCAC
C---AACAGCTTGCTATCCCGCAACAAACCGATGAGACCGCAGTGG---
CCTCCCGCAGCGATGGTTTTGTACCC---CTGCCAACAAACCGACTGGAC
TTTGCCGCCTCGGCATACGATGCCGCGCTGCAGCTGATTTTGCAGGTA
CGCGGCCACCCTTCTGTTCGTACGCAGCTGCCGAGTGAAAGCGC-----
TCCCCTGCCACTGCAGGCTGCTCCAACAGAGCCTTGGGCTATTACGCG
GAGCCGCCAG---GGTGG---GGCACACGCACCCACCGCAGTACTGT--
-----AGTAAATCAAGCGCGGTTCTCTCATGCTGGCCCGCAATTCG
TTGGGAGCAGAACATCCA---CCTCCAATTATCTGG---TTGGCTTGGAC
GA---CGGG---GACGC---TATCGCACCTGAGAGGTCACCT---CT---
CGGGGGGGCAGACGAA---GCCAAGCCAAAAGACCT-----GTCGGA--
-ATCAAGCTGGATAGAG---ACCCGCTTCAATTAAGTCAATCGACTCA
AGTGATTCTGGGATCTTTG---AGCAGGCCAAACGGAGGAGAATTCGCC
ATCTGCTACACCG-----GTTTCAGAGACGTCGTCGCCATTAAAT
CAGAA-----TGGGG
ATAAATCCGTTTCGCCGACGGTATGGGAGCGTTCAAAATCAACCACAGCTC
CCACGATTTTGCTCTGG---GCAAACGGCGTTTGCTCAGAGCG---C
CCGGCTAC---GCAGCCGCTGCCCTGGGA---CACCATCA-----CCAC
CCAACCCATGTCAGCTCC---TACTCCACCGCGGCTTCAACTCCACCCG
GGACTTCTCTTTTCGGAATCGGGGATTCGGAGACGCCACTAG-----
----CGCGCAGCACAGTCTCTTCGCCCTCAGC---TGCAGGAAGTTT---C
-----GCAGGGCCACATGGACACACCGATGCCACGGGACACCTGCTCTT
CTCGGGACTGCACGAG---CAAGCGGCGACGCACGCGTCTTCGAACGGG
TGAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACATGTACGGCAGAGCC
GAGCAGTACGGTACGTAACGAGCCCCGGT---CCGAGCACTACGCTTC
GACTCAGTTGCACGGCTATGGCCCCATGAACATGAATATGGCTGCC---C
ACCACGGGGCAGGGGCCCTTCTCCGTTACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTTGAACCAGAGCAGCTGTCGAATCCGAAAAA
GTCCTGCAACAAAACTTTCAGCACGATGCATGAGCTCGTGACCCACCTCA
CAGTGGAACATGTCGGGGGACCGGAACAGTCAATCACATTTGCTTTTGG
GAAGAGTGTCGCGGAGAAGGGAAACCAATTTAAAGCCAAGTACAAACTTGT
AAATCATATCAGAGTGCAC-----

>Alepocephalus bicolor
AGCCTCTTAATCCGAGCCGAGCTTAGCCAGCCCCGGCGCCCTCCTGGGCGA
TGACCAAAATTTATAATGTCATCGTCCAGCACATGCCTTCGTAATGATTT
TCTTTATAGTAATACCAATCATGATCGGGGGCTTTGGAAACTGGCTACTC

NNNTGATGATTATA
TAGTAGTGTTTAGTAGAACTTCTAACAGGTTGATACTCAATGAGGCAGAG
TTGCTTCTTTCTTTGGCTCAAGAGTACAAAATGAGAACAGTCACCGTGTC
CTTGGAGGAGCAAACATTTGCAAGTATAGTCCAGCTTATCAGTGCGGCAT
CCATGCTGGTCAGCATGCATGGTGCTCAACTGATCACGTCCATGTTCCTA
CCACGAGGGGCTGCTGTCATCGAGCTTTTTCCATACGCTGTCAACCCAGA
ACAGTATACTCCATATAAAACTCTGGCCTCCTTGCCAGGAATGGACTTGC
AGTACATAGCATGGAGAAACACCATTGAAGAGAATTCTGTAACCTATCCT
GACCGCCCTTGGGACCAAGGAGGTATCACTCACCTGGAAAAAGAGGAACA
GGAACGTATCCTAGCTAGTAAGGAGGTGCAGAGACACCTCTGCTGTCGCA
ACCCAGAGTGGCTTTTCCGGATTTATCAAGACACCATTGTGGACATTCCT
TCCTTCCTGGAAGTCTTCG---AGACGGTCTAAAA---ATTAAGCCTAA
TCTGAAAA---GAGCAAACCTGTCAGTGTAGTCCATCCTGGTCGAGTCA
GACATCCCAAGTGCCAGACATCAGTGCAGGCTGCCCATGAAGCAAAGCTG
TCTGTGCTCCTGGCAGATTCTTGGAACCTCAAGTACTTGAAGGTAAGAGA
GGTGAAATATGAAGTGTGGATCCAGAAGAAAGATTCTAACAAAGGGACAC
TGGAAGATCAAATCATCCAGGCCAACCTGCACTAGAGGCTTTTGGAAT
GCCAAAACAGTGAGAAATGACAACCTCATCTCGCTTTGGAAAGTTCATTCG
CATTCATTTTGGAAACAAGTGGTAACTATCTTCAGCTGACATTGAAACAT
ACCTGCTGGAAAAAATCACGAGTGACCTTTCAGCTAAAGGCAGAAAGAAAC
TATCACATCTTTTACCAGATACTGACCAATGCAAAGCCTGAGCTGTTGGA
TATGCTGCTGATTACAAATAATCCGTACGATTACTCTTACATCTCCCAAG
GAGAAATATCTGTTCAATCCATCAATGATAGTGAGGAGTTAATGGCCACT
GACAATGCATTTGATGTGCTAGGCTTCACCGCAGATGAGAAGACGGGAGT
CTACAAACTGACGGGAGCCATCATGCATTATGGCAACATGAAATCAAGC
AGAAACAGCGAGAAGAACAGGCAGAACCCAGATGGTACAGAAGCTGCTGAC
AAGTCAGCCTACCTTATGGGGCTGAACCTCTGCTGATCTCCTGAAAGGACT
CTGTCATCCACGGGTTAAGGTAGGAAATGAATATGTCACAAAAGGCCAGG
GTGTGGATCAAGTATACTACCCCAACAAAGAGGCTTTTAAGTGTGAGGAG
TGTGGCAAGCACTATAACACAAGCTAGGCTACAAACGGCATGTGGCCAT
GCACTCTGCCACAGCAGGAGACCTGACCTGCAAGGTATGTTTTGCAGAGCT
ACGAGAGCACTCCTGCCCTCTTGGATCACCTCAAGAGCCATTCTGGCAAG
TCTTCAGGTGGTACCAAGGAGAAGAAACACCCATGCGATCACTGTGACCG
TCGCTTCTACACCCGCAAGGATGTTCCGGCAGCACATGGTAGTGACACCG
GTCGCAAAGATTTCTGTGCCAGTACTGTGCCAGCGCTTTGGAAGAAAG
GACCACCTCACACGACACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAA
GATCAAGACAGAGCCACCAGATATGCTGACTCTACTTGGTTCTGGCTCTC
CAACCTGTGCTGTCAAGGAAGAGCTCAGTCTTATGATGTGTAGCATGGGC
CCCAACAAGGACTCCATGATGACCAAACCTTTCCGTAAGTGGTACCCCTTT
CTCTATGGGCATGTACAACCCACACCAC-----CTCCAGGCCATGTCCA
GCCCAGGATTGGGCCAC-----CATCACTCCTTGTTTCTGGGTCA
CTGTCCGCTGCTATGGGTATGGGTGCTCCATGGAGNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNAGTGAATTTACTCG
CCAGCAACTCACCAGTGTGTGCTTGGCCCTGACCCAGCAGAAACTGTTC
AGCAACTATAGCCCGGTGATAGGATTCTACATCTATGAGCCTATTGAATA
CTGGAACCTCACAGTACAGGAGCACCTCAAGACACTAGGGCAGGGTTTCA
ATAAAATTTCTGGATTGATAATTACTTTAATTATTTGAAGGTACAAAT
GTCAGCGCATCAACCAAAGCGATTCATCAATATTTCAAGACGTCTGTT
TCTTAGAAGACCGGAGTATCAGCACTTCCGGAAGACATCATTTTCTCAA
AAA---ATGGCG-----ATGAGTATGACATCATTGCATCCAGG
ATGTACTTGGTAGCGAGAACCCTGAGAAGACAAGGGAGGAGGTGGTGGA
GCTGCTGGAGAGACTCAGACCCCTCTCTTTATAAACAGCATCAAGTTCA
TCGCTTCAACCCACCTTTGTGTTCATGGACCCTACAGTTCTTCAGTT

GTCTCCCCGATTCTAACATCAGGTTTCAGTGTCTGACCATCCTCATCCT
CACGTTCTTCCTCGTCATTAACCCCTTAGGGAACCTCTGGTTGATTTTGA
CCGTCACCTCTGTGGAGCTGGGTGTCCTAGGCCCTCATGGGCTTCCATCAA
TTTGAGTGGCAACCAGCTCTCAAAAATGTCTCAAACTCTTGCAATACTGG
GATCATCGATGGGCTTTCTGGGTGGACTGCCTCTGTAGATGATGTACCTG
CAGAGACCATTTCTAGAAGATTCCGTTATGATGTGGCGCTGGTATCAGCG
TTAAAGGACTTGGAGGAGGACATCATGGAGGGACTTAGAGAAAAAGGATT
GGATGACAGCACCTGCACCTCAGGTTTCACTGTGGTGATTAAGGAGTCAT
GTGATGGTATGGGAGATGTCAGTGAGAAGCATGGAGGAGGACCAGCTGTC
CCAGAAAAGGCAGTGAGATTTTCTATTACAGTGATGTCTATCACTATTCA
AGCTGAAGGTGAAGAG-----GAAG
CAGTCACAATCTTCCAGGAAAAAAGCCTAACTCTGAGCTTTCTGTAGG
CCACTGTGCCTCATGTTTGTGGATGAGTCTGATCATGAGATACTGACGGC
CATCTTGGGACCTGTGGTGGCAGAGCGTAAAGCTATGAAGGAGAGTCGCC
TCATTTCTCTATAGGTGGGCTCCAACGCTCCTTCCGCTTTTATTTTAGG
AGCACAGGCTATGATGAAAAAATGGTGAGAGACATGGAAGGTTTGGAGGC
TTCAGGCTCCACTTACATCTGCACCTCTGTGACTCAACACGAGCTGAAG
CCTCTCAGAATATGGTACTTCACTCCATCACTAGAAGCCATGATGAAAAT
CTTGAGCGCTATGAGATATGGGAACTAACCTTTTTCTGAGTCTGCAGA
GGAGCTTCGGGATCGAGTCAAAGGGGTCTCAGCCAAGCCTTTCATGGAGA
CACAACCCACATTAGATGCCTTGCACCTGTGACATTGGCAATGCTACTGAA
TTCTACAAGATCTTCCAAGATGAAATTGCTGAAGTGTACTTGAAAA---
CAAC---CCAACCTCGAGAAGAACGCAGACGCTGGCGGTCAGCCCTTGACA
AGCAGTTGAGAAAGAAGATGAAGCTAAAACCAGTGATGAGAATGAATGGG
AACTATGCCCGGCGACTTATGACCCGTGAGGCTGTTGAAGTGGTGTGTGA
GCTAGTTCCCTTCAGAGGAGCGCCGTGAGGCTTTGAAAGAATAATGGAGC
TGTATCTCCAGATGAAACCTGTGTGGCGTTTCACTTGTCCAGCTCGAGAG
TGTCTGATCAGCTTTGCCGCTATAGCTTCAACTCTCAACGTTTTGCAGA
GATCCTCTCCACCACATTCAAATATCGCTATGATGGCAAATTACTAACT
ACCTCCACAAGACTTTAGCCCATGTACCTGAAATGTTGAGCGGGATGGC
TCAATTGGTGCCTGGGCCAGCGAAGGGAATGAATCTGGGAACAAANNNNNNNNNNNNNNNNNNNNN
NNNNNNNTCAGT
GGAAGGAGAGTCCCTCAGCCTTTCATCTGCTCCATCGAGGATCCCACCAA
CAGACCAAGTTCAAGGGCATTAAAGAGTTACATTTCTACAGAGTCACCCC
CAGCCACACTAGCAGGCCCTGTGTATCGGCGCTATAAGCACTTTGACTGGC
TGTACAATCGCCTGTGTCACAAATTTACCGTCATTTCCGTACCCACCTC
CCGGAGAAGCAAGCCACCGGGCGNTTCGAGGAAGACTTCATCGAAAAGAGA
AAGCGGCGGCTCATCCTATGGATGGATCACATGACCAGTCACCCGTTCT
GTCTCAGTATGAGGGTTTCGAACACTTCCTCATGTGTGTGGATGACAAGC
AGTGAAACTGGGAAAGCGTCGTGCTGAGAAGGATGAGATGGTGGGAGCT
CATTTTATGCTCACTCTCCACATCCCATAAGAGCATCAGGACCTGCAAGA
CGTCGAGGAGCGCATCGATACCTTCAAGGCCTTCGCCAAGAAAATGGACG
ACAGCGTCATGCAGCTGACGCACGTCGCGTCCGAACTCGTCCGCAAGCAT
CTCGGCGGCTTTCGCAAGGAGTTTCAGCGGCTGGGTAATGCTTTCCAGTC
CATCAGCCAGGCGTTCATGCTGGACCCTCCGTACAGNNNNNNNNNNNNNNNNNNNNNNNNNNCC
CTCGCCACATT
CCTCAAATAACCTCCCTGGGCTTCATCATCGGGCTCGGTGTTGTGGGAA
ACCTCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGTGCA
CCCTATTACTTCTTGTGGACCTGTGCGCCTCTGACATCCTGCGCTCAGC
CATCTGCTTCCCTTTGTATTACCTCGGTGAAGAACGGCTCGGCGTGGA
CGTACGGCACCCCTCACGTGCAAAGTGATCGCCTTCTGGGTGTGCTCTCC
TGCTTCCACACAGCCTTCATGCTGTTCTGTGTCAGCGTGACACGTTACTT
AGCTATCGCACACCACCGCTTCTATACCAAACGGCTGACCCTGTGGACGT

-----CCCAACAAGGAGGCCTT
CAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGC
GCCACGTGGCCATGCACTCTGCCACTGCGGGAGATCTCACCTGTAAAGTG
TGCATGCAGACCTACGAGAGCACGCCGTTCTCCTGGAGCACCTCAAGAG
CCTACTCTGGGAAGTCTTCGGGTGGCACCAAGGAGAAGAAACACCCGTGTG
ACCACTGCGACCGCCGCTTCTACACCCGCAAGGATGTGAGACGGCACATG
GTGGTCCACACGGGCCGCAAGGACTTCCTGTGCCAGTACTGTGCCAGCG
CTTCGGCAGGAAGGACCACCTGACACGCCACGTGAAGAAGAGCCACTCAC
AGGAGCTCCTGAAGATCAAGACGGAGCCTCCTGACATGCTAGGTCTTTTA
GCTTCGGGCTCCTCGCCTTGCTCCGTGAAGGAAGAGCTCAGCCCCATGAT
GTGCAGCATGGGTCCCAATAAAGACCCCATGATGGGCAAACCATTTCTCCA
GTGGGGCCCCCTTCTCCATGGGCATGTACAACCCGCACCAT-----CTC
CAGGCCATGTCTAATACTGGGGTGGGTACCCA-----CACCCGTCCCT
GATGCCCGCTTCTTGTCTTCTGGCATGGGCATGGGCTGTCACATGGAAT
ATCTCATATACGCTTCTTTCTCATTCATGGGATGTTTACAAATCAGTGAT
GGATCGAATGTTGTAAATCTGTTGGCTAGTAACTCTCCGAGTGTCTCGTA
TGCTATGACCCAGCAGAAATACTTTAGTAACTACAGTCCTGTGATTGGGT
TTTACATCTACGAGCCCATCGAGTACTGGAACTCCACGGTGCAGGAGCAT
CTGAAGACTCTGAGTCACGGTTTCAACAAGATCTCCTGGATGGACAACCTT
TTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCAACAAAGGGCGACT
TCATCAGCATCCTCAAGGGCTCCTTCTGCGCAGCCCGGAGTACCAGCAC
TTCACAGAGGACATCATATTCTCCAAGA--ACCGTGAGACCG-----A
TGAGTATGACATTATCGCCTCGCGGATGTACTTAGTTGCACGGACNACGGA
GAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAAAAGCTCCGTCCGTTGA
TGCTGATCAACAGCATCAAATTCATTGCCTTCAATCCCACGTTTGTGTTT
ATGGACCGCTACAGCTCCTCTGTTCATCTCGCCCATCCTGACCTCAGGCTT
CAGCGTACTCACAATCCTCATCCTCACATTCTTCTGGTTCATCAACCCCT
TGGGGAACCTTCTGGCTCATCCTCACCGTGACGTGCGTGGAGCTGGGAGTG
TTGGGTCTNN
NNNNNNNNNTTAATGGGCTCTCTGGATGGGCTTCTCGGTGGATGACTGCCC
TGCTGACACCATCACTAGGCGCTATCGCTATGATGTGGCACTGGTGTGAG
CATTAAAAGACCTGGAGGAGGACATCATGGTGGGCTGAGAGAGAGCGGG
ATGGAAGACAGCGCATGCACCTCAGGCTTCAGTGTCAAGATCAAAGAATC
TTGTGATGGCATGGGCGATATCAGTGAGAAGCACGGTGGAGGACCAGCCA
TTCTTGAGAAAGCTGTACGTTTCTCTTTGACTGTTATGTGAGTCTCTGTC
CTGGCAGAGGACAAGGAG-----GA
AGAGATGACCATCTTACTGAGCCAAAGCCAAACTCTGAACTGTCTTGCA
AGCCTCTTTGCCTTATGTTTGTGGATGAGTCAGACCACGAGACAATCACA
GCCATCCTGGGGCCTATAGTCGCAGAGCGTAATGCCATGAAAGAGAGTAG
GCTCATCTTATCCATGGGTGGACTACCTCGCTCCTTCCGCTTCCACTTCA
GAGGCACGGGATACGATGAGAAAATGGTGCCTGAGATGGAGGGCTTGGAG
GCCTCAGGCTCCACATACATCTGCACTCTTTGTGACTCCAGTCGGGCAGA
GGCATCTGAAAACATGGTGCTACACTCTGTACGCGCAATCATGACGAGA
ACCTAGAGCGTTACGAAATATGGAGAACCAATCCCTTTTCTGAGTCTGTG
GATCAGCTGCGAGACAGAGTCAAAGGGGTGTCTGCCAAGCCCTTTATGGA
GACCCACCCACTCTGGATGCATTACACTGCGACATTTGGCAACGCAACCG
AGTTCTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTTCCAAAGGGT--
--CAAC---CTCAGTCGGGAGGAACGGCGTAGCTGGAGAGCAGCGCTAGA
TAAACAGCTGAGGACGAAAATGAAGCTTAAACCAGTAATGAGGATGAATG
GGAACTTTGCCCGCAGGCTAATGACCCTGGAGGCTGCAGAGGTGGTGTGT
GAGTTGGTGGCCACAGAGGAGAGAAGGGAGGCCCTGAGGGAGCTCATGAG
GCTGTACATCCAGATGAAGCCAGTATGGCGTGCCACCTGCCAGCCAAGG
AGTGCCCTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCC

GACCTTCTCCTCTACCTTCAAATATAGGTACAATGGGAAGATAACCAA
TTACCTGCACAAGACCCCTGGCCCATGTTCCCGAAAANN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCGTACACCATCGAA
ATGGGTCCCYTGGGTCCCGTTGGAAGGAGAGCCCGCAGCCTTCTCTTG
CTCCATCGAAGACCCACCAAACAGACAAAGTTAAGGGCATCAAGACGT
ACATCTCGTACCGGTGACGCCAGCCACACGGCGCATCCCGTCTACCGG
CGCTACAAACACTTTGACTGGGTGTACAACCGCCTGCTGCACAAGTTCAC
TGTGATCTCCGTGCCACCTGCCGAGAAGCAGGCCACGGGGCGTTCG
AGGAGGACTTCATCGAGAAGCGCAAGAGGGGACTGGTCCTGTGGATGAAC
CACATGACCAGTCACCCGGTCTCTCCAGTACGAGGGCTTCGAGCACTT
TCTGATGTGCGCCGACGACAAGCAGTGGAACTGGGCAAGAGGCGGGCGG
AGAAGGACGAGATGGTGGGGCCCCATTTTCATGCTGACGCTGCAGATCCCC
AACGAGCACCAGGACCTCCAGGACGTGGAGGAACGGGTGGACACCTTCAA
GGCCTTCGCTAAGAAGATGGACGACAGCGTTTTTGACGCTCACACACGTGG
CCTCGGAGCTGGTGGGAAGCACCTGGGCGGCTTCAGGAAGGAGTTCCAG
AGGCTGGGGAACGCCCTCCAGTCTGTCAGCCAGGCCCTTCATGCTGGACCC
TCCACACAGNNCTGACCTCT
CTGGGTTCNTCATTGGAGTCGGTGTGGTTGGA
AACCTCCTGATMTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGC
ACCTACTATTTTCTGCTGGACCTGTGCGCTCCGATATCCTCCGCTCTG
CCATCTGCTTCCCTTTTGTCTTACCTCAGTCAAGAATGGATCTGCCTGG
ACCTATGGCACGCTGACYTGCAAAGTGATCGCTTCCCTGGGTGTGCTCTC
CTGTTTCCACACGGCGTTTATGCTATTCTGYGTGAGCGTCACCCGCTACC
TGCCATYGCACATCATCGTTTTTCTACACCAAGAGRCTGACCTTCTGGACC
TGCTGGCTGTCTGATGATGGTGGACGTTGTCAGTWGCTATGGCGTT
CCCGCCGGTGTAGACGTRGGGACATACTCTTTTATCCGGGAGGAGGACC
AGTGACATTCCAGCACCGCTCCTTCAGGGCRAATGATTCGTTGGGCTTC
ATGCTCCTGCTGGCRCTCATTCTCCTGGCCACACAGCTGGTTTTACCTCAA
GCTCATCTTCTTCGTCCACGACCGYCGAAAGATGAAGCCTGTCCAGTTCTG
TGCTGCTGTGAGCCAGAAGTGGACCTTCACGGGCCAGGCGCCAGCGGG
CAGGCGGGCYAACTGGCTGGCTGGATTTGGTAGAGGCCCCACCCCGCC
TACTTTRCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTC
TGCTGGTATTGGATGAATTCAAACAGAGAAGAGGATTAGTAGGATGTTT
TACATCATGACGTTTTTCTTCTGACTGTGGGGTCCCTATCTGGTAGC
CTGCTACTGGCGGGTGTGGCAAGGGGCCCTGTAGTCCCTGGGGGCTACC
TGACGGCAGCCGTGTGGATGAGCTTGGCCARGCTGGGGTCAATCCTTTC
ATCTNNNNNNNNNNNNNNNNNNNNNNGCAAATCTCGCTTTCACCTGGCGTGGGGACCGGTCTGGCACGG
AGC---GCAGCGTCCCACTCGGCAACAGCTTGCTCTCCCCGCAGCAAAGC
GAGGAGCCCACTGTGGCACCCCCCGCAGCGATGGTTTTGTCACCC---C
TGCCAAACAACCGACTGGACTTTGCTGCCCTCGGCATACGACGCCGCT----
----GATTTCCGCGGTAACGCGGCCACCTTGCTATCCTACGCAGCGGCC
GGAGTGAAAGCTC-----TTCCGCTGCCGACTGCAGCCTGCTCCAACCG
GCCTCTTGGCTATTACGCAGACCCGTCGG--GCTGG---GGAGGACGCA
CGCCGCGCAGTACTGTGGCGTCAACAGCAAACCCAGCTCGGTCTTTTCC
TGCTGGCCCCCAACTCTATCGGTGGCCGAGCGGGCA---CCATGAACATA
CCTGG-----CCGAGGA---GGTA---GACTC---CATAACGACGG
AGAGGTCACCC---ATAGGCGGGCGGCTCGGAGGAG---GCCAAACCCAAG
GACATGAC---GTCAGA---GTCGAGCTGGATAGAGACTACGCCGTCCTC
CATAAAGTCAATCGACTCCAGCGACTCTGGCATCTTTG---AACAGGCAA
AACGGAGAAGAATCTCACCTTCTGCCACGCCA-----GTTTCAGAG
ACAGTGTCCCCTTAAAGTCCGAGNNNNNNNNNACAGGC GAAGTCACGGAGAGAGAAGT
GGCGCTGGGGATAAAATCCGTTTCCGCTGATGGGATGGGAGCCTTCAAAAATAA
ACCACAGCTCCACGATATTGGCTCCGG---ACAAACGGCGTTTCTCCTCC

CAGGCG---CCC GGCTAC---GCAGCAGCCGCCCTGGGA---CACCACCA
-----CCACCCGACCCACGTTGGCTCT---TACTCTACGGCGGCGTTCA
ACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGTTTCGGGGATGCCACC
GG-----GGCGCAGCACAGTCTGTTTCGCCTC-----CGG
AAGTTT---C-----GCGGGGCCACATGGACACTCGGATGCGGCAGGGC
ACCTGCTCTTCCC GGGGCTCCACGAG---CAAGCGGCGAGCCATGCGTCT
TCCAACGTGGTCAACAGCCAGATGCGGGCTGGGCTTCTCGGGGGACATGTA
CGGACGGGGCCGACCAGTACGGCCACGTTACGAGCCC GCGCT---CCGACC
ACTACGCCTCGAGCCAGCTACACGGCTACGGCCCCATGAATATGAATATG
GCCGCA---CACCACGGAGCAGGGGCCCTTCTTCCGATACATGAGGCAGCC
GATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCGA
ATCCCAAAAAGTCGTGCAACAAAAC TTT CAGCACGATGCACGAGCTCGTG
ACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGACAAACCACAT
CTGCTTCTGGGAGGAATGCGCCAGAGAAGGAAAGCCATTCCAAGCCAAAT
ACAAACTTGTAATCATATCAGAGTGCACACCGGAGAGAAGCCCTTTCCA
TGTCCGTTCCCCGGCTGTGGNNNN

>Anarhichas lupas

-----TTCTAGAGAGAAAACCTTACCCGTCTAATTGCCTTGG
CATGCTCCTGTCTGTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCTCAGCAATTTCCCCGCTATTTGCAAGACAGAAGAG
TTCTCCAAGTGCCEAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTAGAGACAGAAGATGAGAAACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAAGAGACACTGCCACCTTCCGGAGCTCCTGAGG
ACTGTCCGCTGTGGCCCTGTTGCCTGCCATCTTCTCATGGAGAATGTTTC
GACAGAAGAGCTGATCAATTTCCAGTCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGATGTAAGCTGAAGATCCTGCAGAATGACGGTGTAGTTAAC
AGCCCGTGTGCCC GACCAAGAAAGACCAGCCATGCCCTATTTCTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTTGTGGACCAGAAAGCCA
AAGAGATCATCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCATGAGG
AATGGTCAAGGCAGCGCCCATGCTCATTGCCAGGTTTCGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCCAGCTTCTCCATCTGGATGATTACATCGTCTGTTTCAGT
CGCTCAACAACAAGGCTGATACTGAATGAGGCGGAGCTAATCATGGCGCT
GGCCAGGAGTTCAGATGAGAGTGGTACAGTGTCCCTAGAGGAACAGT
CTTTCCCCAGTATCGTCCAGGTGATCAGCGGCGCTTCTGTGTTGGTCAGT

ATGCATGGCGCTCAGCTCATTACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
ATAAAACCCTCGCCACCCTTCCAGGCATGGACCTTCACTATATCTCCTGG
CGGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGA
GCAAGGGGGCATCACTCACTTGGAGAAGGAGGAGCAGGAGCGTATACTGG
AGAGCAGAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTGGACATCCCTTTCCTTCCCTGGAAGC
CCTTAA---AGAGGGCATGAAG---ACAAAGCCCAGCGTGAAGAA---GT
CAAAGCCGGCCAGCACAGTCCACCCGGGCGGGTCAGACAACCCAGTGT
CAGACCTCGGTACAAACCACCAACGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACTTGAAGGTGAGAGAGGTGAAGTACGAAG
TG-----AAAAGAGACACTAGCAAGGGGACGCTGGAGGACCAGATC
ATCCAGGCCAACCCGGCGCTGGAGGCTTTCGGCAACGCCAAAACGCTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTTATCCGGATTCACTTCGGCA
TGAGCGGAAAGCTGTGCTCTGCCGACGTGAGACTTACCTGCTGGAGAAG
TCCCAGTGCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCTTACGATTACTCCTACATCTCCCAAGGGGAGGTAACGGTC
GCCTCCATCAACGACTCGGAGGAACTGCTGGCCACCGACAGTGCCTTCGA
TGTGCTCGGCTTCACTCAGGAGGAGAAGATGGGCGTCTACAAGCTAACTG
GTGCCATCATGCACTACGGCAACATGAAGTTC AAGCAGAAGCAGCGCGAG
GAGCAGGCCGAGTCGGACGGGACGGAGGCTGCCGATAAAACCGCATACT
AATGGGGCTGAATTCGCGACGTTATCAAGGGGCTGTGTCATCCAGAG
TCAAGTTCGGAATGAATTCGTCACCAAAGGACAAAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGCGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGT
CAGGGGATCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACACCC
GTGCTCTTGGAGCACCTCAAGACCCACTCGGGGAAGTCTTCGGGCGGCAC
CAAGGAGAAAAAGCACCCGTCGACCACCTGTGACCGTCGTTTTCTACACAC
GCAAGGATGTGAGACGGCACATGGTGGTCCACACGGGTCGAAAGGACTTC
CTCTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACACG
TCACGTGAAGAAGAGTCACTCGCAGGAGCTACTGAGGATCAAGACGGAGC
CTCCGATATGTTGGTCTTTTAGCGTCCGGGTCACCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCCCAGCGGGGCCCTTTCCGATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCG-----CACCCGTCCCTGATGCCAGTCCCTTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAATATCTCATCTACGCCCTTTTTTCATTCA
TGGGATGTTTACAGATCAGTGATGGATCAAATATAGTGAACCTGCTGGCT
AGTAACTCTCCGAGTGTTCCTACGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGTCTGTGATTGGCTTCTACATTTATGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACCCTGAGTCATGGCTTCAAC
AAGATCTCTTGGATGGACACCTTTTCCACTACCTGCGTGTGGTGAATGT
GAGCGCGTCAACCAAGAGCGACTTCATCGCAATCCTTAAGGGCTCCTTCC
TTCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATTTTCTCCATG
A---ACCGCGATACTG-----ACGAGTACGACATATCGCCTCTCGGAT
GTACCTGGTGGCACGGACGACAGAGAAGAAGCGAGAGGAGGTGGTGGAGC
TTCTGGAAAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAATGCATT
GCCTTCAATCCCACGTTTGTGTTTATGGACCGCTACAGCTCCTCTGTTCAT
CTCGCCATCCTGACCTCAGGCTTTAGCGTACTACAATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCATTTGGGAACTTCTGGCTCATTCACG
GTGACGTCGCTGGAGCTGGGCGTCTGGGTTTGGATGGGTTTTACCAGTT
TGAGTGGCAGCCAGCTCTCAGGAATGTGTCTACATCTTGCAATGTTGGCA

TTATTAATGGGCTCTCTGGATGGGCTTCCTCGGTGGATGACATCCCAGCT
GACACCGTCACTCGACGGTTTCGCTACGATGTGGCTCTGGTGTGAGCATT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGTGTTCACCCGAGGCTTCAGTGTGATGATCAAGGAATCCTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCC
TGAGAAGGCTGTGCGTTTTTCTTTCACTGTTATGTCGTCTCTGTCCTGG
CAGACGAGGGGGAG-----GACAAG
GTTACCATCTTTACTGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAAGCC
CCTTTGCCTGATGTTTGTGGATGAGTCAGACCACGAGACACTCACAGCTG
TCCTGGGGCCTGTAGTTGCAGAGCGTAATGCAATGACAGAGAGCAGGCTC
ATTCTGTCCATGGGTGGACTACCTTGCTCCTTCCGCTTTCACTTCAGAGG
CACGGGATATGATGAGAAGATGGTGCAGGAGGTAGAGGGCCTGGAGGCCT
CAGGGTCCACCTACGCTGCACTCTTTGTGACTCCACTCGGGCAGAGGCC
TCTCAAACATGGTGCTACACTCCATCACTCGCAGCCATGAACAGAACCT
AGATCGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATG
AGCTGCGGGACAGAGTCAAAGGGATCTCTGCCAAGCCCTTCATGGAGACC
CAGCCCACAATGGATGCACTACACTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CA
AA---CCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTGGATAAA
CAGCTGAGGAAGACGGTGAAGCTTAAACCGGTGATGAGGATGAATGGGAA
CTATGCCCGCAGGCTAATGACCCAAGAGGCTGTGAGGTTGTCTGTGAGC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTGATGAGGATC
TACATCCAGATGAAGCCTGTGTGGCGAGCCACCTGCCCTGCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACC
TTCTCTCCTCTACCTTCAAATACAGGTACAATGGAAAGATAACTAATTAC
CTGCACAAGACCCCTGGCCATGTGCCCTGAAATCATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCCGCAACAAGTCGTACA
CCATCGAGATGGGCCCGTATGGCCCTGTGGAAGGAGAGCCACAGCCT
TTCTCCTGCTCCATCGAGGACCCCAAAAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATTTTCGTACCGGGTCACGCCGAGCCACACGGGGCATCCCG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTTGAGGAGGACTTCATCGAGAAGCGCAAGAGACGGCTGATACTGT
GGATGAACCACATGACCAGCCACCCGGTCTCTCCAGTACGAGGGCTTC
GAGCACTTCTGATGTGCGCTGACGACAAGCAGTGGAAACTGGGCAAGAG
GCGGGCGGAGAAGGACGAGATGGTGGGTGCCATTTTCATGCTGACCCTGC
AGATCCCCAACGAGCACCAGGACCTTCAGGATGTGAGGAGCGGATCGAC
ACCTTCAAGGCCTTCGCCAAGAAAATGGACGACAGCGTGATGCAGCTCAC
GCACGTTGCCCTCGGAGCTAGTGCGCAAGCACCTGGGCGGGTTAGGAAGG
AGTTCCAGCGGCTGGGAAATTCTTTCCAGTCCATCAGCCAGGCATTCATG
CTGGACCTCCCCACAGCTCGGAGGCCCTCAACAAAGCCATCTCCCATNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNGG
TTTTATCATTGGAGTCGGTGTGGTTGGAAACCTCCTAATCTCCATCCTGC
TGGTCAAAGACAAGAGTCTGCACCGAGCGCCCTACTATTTCCCTGTTGGAC
CTGTGCGCCTCTGACATCCTGCGCTCTGCCATCTGCTTCCCCTTTGTCTT
CACCTCGGTCAAGAAATGGATCCACCTGGACCTATGGCACGCTGACCTGTA
AAGTGATCGCCTTCTGGGTGTGCTCTCCTGTTCCACACAGCGTTTATG
CTGTCTGTGTGACGCTCACACGCTACCTGGCCATCGCACACCACCGTTT
CTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGTGATCTGCATGG
TGTGGACGTTGTGCGTGGCTATGGCATTCCC GCCGGTGTAGATGTAGGG
ACGTACTCTTTTATCCGGGAGGAGGACCAGTGCACATTCAGCACCCTTC
CTTTAGGGCGAATGATTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATCC
TCCTGGCCACGCAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCACGAC

CGTCGAAAGATGAAGCCTGTCCAGTTTGTGCCTGCTGTCAGCCAGA ACTG
GACCTTCCACGGGCTGGCGCCAGCGGGCAGGCGGGCCAACTGGCTGG
CCGGATTCGGTCGAGGCCCCACCCGCCTACCTTGCTGGGCATCCGGCAG
AACAGCAACGCAGCGGGCCGCAGGCGTCTACTGGTGTGGATGAATTCAA
AACAGAGAAGAGGATTAGCAGGATGTTCTACATCATGACGTTTTTCTTCC
TGGCGCTGTGGGGGCCCTATCTGGTCGCCTGCTACTGGCGGGTGTGGCA
AGGGGCCCTGTGGTCCCTGGGGGTACCTGACGGCCGCCGTGTGGATGAG
CTTTGCCAGGCTGGGGTCAATCCTTTCATCTGCATCTTCTCCAACAGNNN-

-----CATCACTCAACAGGCGAAGTCACAGAGAGAG
AAGTAGCGTTGGGGATCAATCCGTTTCGCGGATGGGATGGGCGCCTTCAA
ATAAACACAGCTCCCACGATATCGGCTCCGG---ACAACGGCGTTTTTC
CTCCAGGCG---CCGGCTAC---GCGGCAGCCGCACTGGGA---CACC
ATCA-----CCACCGACCCACGTTGGCTCT---TACTCCACGGCGGCT
TTCAACTCCACCAGGACTTTCTCTTCAGAAATCGGGGTTTCGGGGACGC
CACCGG-----GGCGCAGCACAGTTTGTTCGCCTC-----
-CGGAAGTTT---C-----GCAGGGCCACATGGACACTCGGATGCAGCG
GGGCACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCAGCGAGCCATGC
GTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACA
TGTATGGACGGGCCGACCAGTACGGCCACGTTACGAGCCACGGT---CC
GACCACTACGCGTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAA
TATGGCCCGC---CACCACGGAGCAGGGGCTTCTTTCGATACATGAGGC
AGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTG
ACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAGCT
CGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGACCAACC
ACATCTGCTTCTGGGAGGAATGCGTCAGAGAAGGAAAGCCATTCAAAGCC
AAATACAAACTTGTAATCATATCAGAGTACACACCGGAGAAAAGCCCTT
TCCGTGTCCGTTCCCCGGCTGTGGCAA

>Anguilla rostrata

AGCCTTCTAATCCGTGCCGAATTAAGTCAACCAGGCGCCCTTCTTGGAGA
TGACCAAATTTACAATGTCATCGTCACAGCGCATGCCTTTGTAATGATTT
TCTTTATAGTAATGCCAGTAATAATCGGAGGATTTGGCAACTGACTTGTG
CCATTAATAATCGGCGCTCCAGACATAGCATTCCCCGAATAAATAATAT
AAGCTTCTGACTTTTACCCCCATCATTTCTTCTACTACTAGCCTCCTCTG
GAGTAGAGGCTGGGGCTGGTACAGGCTGAACTGTATATCCGCCCCCTGGCT
GGAAACTTAGCCCACGCCGAGCATCTGTTGACCTGACAATTTTCTCACT
TCACCTTGCAGGTATCTCATCAATTCAGGGGCCATTAATTTTATTACTA
CAATTATTAACATGAAACCGCCTGCAATTACACAATACCAAACCTCCCCTG
TTCGTATGAGCTGTATTAGTAACCGCTGTTCTGCTACTCCTCTCCCTGCC
AGTCCTAGCCGCAGGCATTACAATACTTCTAACTGACCGAAATCTAAATA

CAACCTTCTTTGACCCTGCAGGGGTGGGGACCCAATCCTCTACCAACAC
TTANNN
NN
NN
NNTTACTGGAGAGGAACCTGCACCCACCAACTGCCTGGGCATGCTGCT
GCTGTGCGACGCCACCAGTGCGCCAAGCTGTGCGAGCTCTCCTGGGGCA
TGTGCCCTGAGCAACTTCCCCACCATCTGCAAGACGGAGGACTTCTTGCAG
CTGCCCAAAGACATCCTGGTCCAGCTGCTTTCCCACGAGGAGCTGGAGAC
GGAGGACGAGAGGCTGGTGTACGAATCGGCCCTCAACTGGGTCAACTACG
ACCTGGAGAGGAGGTACTGCGACCTCCCCGAGCTGCTACGCACTGTCCGA
CTGGCCCTGCTGCCCGCCATCTTCTCATGGAGAACGTCTCCACCGAGGA
GCTCATCAACAAGCAGGTGAAGAGCAAAGAGCTGGTGGACGAGGCCATCC
GGTGCAAGCTGAAGATCCTGCAGAACGACGGTGTGGTGACCAGCTTGTGC
GCCCCGCCAGGAAGACCAGCCACGCCCTCTTCTTGGGCGGTCAGAC
CTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCAAAGAGATCA
TCCCCAAGGCCGACATCCCCAGCCCTCGCAAGGAGTTCAGCGCCTGCGCC
ATCGGCTGCAAGGTGTACGTGACGGGGGGGC--GGGGCTC-CGAGAACGG
GGTGTCCAAAGACGTTTGGGTCTATGACACCCTGCACGAGGAGTGGTCCA
AGGCCGCGCCCATGCTCATCGCCAGGTTTCGGACACGGCTCGGCCGAGCTC
AAGCACTGCCTCTACGTGGTGGGCGGGCACACGGCCGCCACCGGCTGCCT
GCCGGCTCCCCGTCAGGACGAGTATATTGTGGTCTTCAGCCGCTCTCTT
AACAGGCTGATCCTGAACGAGGCGGAGCTGATCCTGGCACTAGCGCAGGA
GTTCCAGATGAAGGTCGTACCGTGTCCCTGGAGGAGCAGTCTTTGCGG
ACATCGTCCGAGTCTCAGCAGGGCGTCCATGCTGGTCAAGTATGCATGGG
GCCAGCTGGTCACTCTCTCTTCTTCTCGTGCGCCGCTGTGGTGGG
GCTGTATCCATATGCCGTCAACCCAGAGCATTATGCTCCCTACAGGACAC
TGACCTCGCTGCCAGGTATGGACCTGCAGTATGTGGCCTGGAGGAACACC
AAGGAGGAGAACTCTGTGACCTTCCAGAGCGTGCCTGGGATCAGGGTGG
CATTGCACACTTGGAGAAGGAGGAGCAGGAACGTATCATGAAGAGCAAGG
AGGTGCCGCGACACCTGTGCTGTGCGAACCAGAGTGGCTTTTCCGCATC
TACCAGGATAACCAAGGTGGACATTGCCCTCCCTTCTGGATGCCCTGCA---
CCAGGGACTGGCC---TCCAGGCCAGGGCCCAAGAG---GGCTAGGCCTG
CCAGCACAGTCCACCCAGGCAGGGTGAGGGAGCCCAAGTGCCAGACCTCC
GTCCAGGCCGACCAACGAGGCCAAGCTGACCGTGTCTTGGCAGATCCCCTG
GAACCTCAAGTACCTGAAGGTGAGGGAGGTGAAGTATGAGGTATGGATTTC
AGAAGAGGGATAACCAGCAAGGGAACACTGGAGGATCAAATTATCCAGGCA
AACCCAGCCCTGGAGGCTTTTGGCAATGCCAAGACTGTGAGAAATGACAA
CTCCTCACGTTTTGGGAAATTCATTCGCATTTCATTTCCGAGTAAGTGGCA
AGCTGTCTCTGTGACATAGAAACCTACCTACTCGAGAAATCCCGTGTCT
ACCTTTCAGCTCAAAATCTGAGAGGAACTATCAYATTTTCTACCAGATCAC
ATCCAACAAAAAGCCAGAATTGCTGGACATGATGTTAATCACCAACAACC
CGTACGATTATGCTTATGTCTCCCAAGGAGAGGTGACGGTTCGCATCCATC
GATGACTCAGAGGAACTGATCGCCACAGACAGTGCCTTTGATGTGCTGGG
CTTCACGCCCCGAGGAGAAGATGGGCGTCTATAAGCTGACGGGTGCCATCA
TGCATTACGGAAACATGAAATTCAGCAGAAGCAGCGTGAGGAGCAGGGC
GAGCCTGATGGCACTGAGTCTGCTGACAAGTCAGCCTACCTGATGGGGCT
GAACTCTGCTGACCTTCTCAAGGGACTCTGCCATCCACGGGTAAAGTTCG
GAAATGAGTATGTCACCAAAGGTCAAATGTGGATCAAGTCTACTAT---

GGGGCTCATGGACACTCAGATGCCACCGGACACCTTCTATTCCCGGGACT
GCACGAG---CAGGCAGCCACACATGGGTCTCCGAACGTTGTAAATAGTC
AGATGCGTCTGGGGTTTACCGGGGACTTGTACGGCAGAGCACAACACTAT
GGGCAGGCGACCAGTCCCAGGT---CTGAGCACTATGCATCGACACAGTT
GCACGGTTATGGTGTATGAATATGAACATGGCTGCA---CACCACGGGG
CTGGGGCCTTTTTTCGATACATGAGGCAACCGATTAAACAAGAGCTTATC
TGTAAGTGGATTGAACCGGACCAGCTGTGCAATCCCAAAAAGTCTTGTA
CAAACTTTTCAGCACCATGCACGAGCTCGTGACTCACCTCACAGTTGAGC
ATGTTGGGGGCCAGAACAGTCAAAATCACATCTGCTTTTGGGAAGAATGT
CCCCGGGAAGGCAAGCCATTTAAAGCTAAATACAAGCTAG-----

>Anomalops katoptron

AGCCTTCTCATCCGAGCTGAGCTTAGTCAACCTGGGGCACTCTTAGGAGA
TGACCAGATTTACAATGTAATTGTTACAGCACATGCCTTCGTAATAATTT
TCTTTATAGTAATGCCAATCATGATTGGTGGCTTTGGCAACTGATTGGTA
CCCCAATGATTGGGGCTCCAGACATGGCATTCCCACGAATAAATAACAT
AAGCTTCTGACTTCTTCCCCCTCTTTCCTTCTCCTTCTAGCCTCTTCCG
GAGTTGAAGCAGGTGCCGGAACCGGATGAACCGTCTACCCACCCCTTGCG
GGGAACCTCGCCCACGCAGGGGCTCCGTAGACTTAACCATCTTCTCCCT
ACATCTTGCAGGTGTCTTCTATTTCTGGGTGCCATTAATTTTATTACAA
CCATTATTAACATGAAGCCCCCTGCCATCTCCCAATACCAAACCCACTA
TTTGTGTGAGCCGTATTAATTACAGCAGTCCCTGCTTCTACTATCCCTTCC
AGTCCCTTGCAGCCGGCATCACAATACTCCTCACAGACCGAAACTTAAATA
CAACCTTCTTTGACCCTGCAGGGGGAGGCGACCCCATTTCTGTACCAACAC
CTG-----

-----TTTCTAGAGAGAAACCTTACCCATCTAACTGCCTGGG
GATGCTGTTGCTGTCTGATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCAGCTATTTGCAAGACCGAGGAC
TTCCCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCATGAGGA
GCTGGAGACAGAAGATGARAGATTGGTTTATGAAGCTGCCCTTAACTGGG
TCAACTATGACCTGGAAGGAGGCACTGCCACCTGCCAGAGCTGCTGAGA
ACGGTTCGCTTGGCCCTGCTGCCTGCCATCTTCCCTCATGGAGAATGTCTC
TACAGAAGAGCTGATCAATGCCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATTTCGGTGAAGCTGAAGATCTTGCAGAATGACGGCGTGGTTAAC
AGCCCCGTGTCTCGGCCAAGAAAACCAGCCATGCCCTTTTCTTATTTGGG
AGGGCAGACCTTCATGTGTGACAAGTTGTATCTGGTGGACCAGAAGGCAA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGT
GCCTGCGCCATTGGCTGCAAGGTCTACATCACAGGTGGCA--GAGGCTC-
AGAAAATGGTGTATCTAAAGATGTATGGGTCTATGACACCATCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATCGCCAGATTTGGTTCATGGCTCT
GCTGAGCTGAAACACTGCCTTTACGTAGTAGGAGGTCACACAGCAGCAAC
TGGTTGCCTCCCAGCCTCTCCCTCCGGATGAATACATTGTAGTCTTCAGC
CGTTCAACAACAAGGCTGATTCTGAACGAAGCAGAGCTAATCATGACGCT
GGCCAGGAATTTTCAGATGAGAGTGGTTACGATCTCCCTGGAGGAACAAA
CTTTCCCCAGCATTGCCAGGTAATCAGTGGGGCTTCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTGTCACTTCACTTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTATGCTGTCAACCCAGAAGTATAACCCAT
ATAAAACCCTCGCCTCCCTACCAGGCATGGACCTTCAATATGTTTCCCTGG
AGGAACACTATAGAGGAGAACACTGTCACCCACCAGACAGACCCTGGGA

ACAAGGAGGCATTGCCCATTTGGAAAAGGATGAGCAAGAGCGAATACTGG
CCAGCAATGATGTCCCCAGACACCTGTGCTGCCGCAATCCAGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTGGACATCCCTTCATTCCCTGGAGGT
CCTCAA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GA
CCAAGCTGGCCAGCACGGTTCACCCAGGCCGGGTCAGAGAACCCAGTGC
CACACCTCAGTCCAAGCCACCAATGAGGCTAAACTCACGGTTTCCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGG
TG-----AAGAAAGATACCAGCAAAGGAACACTGGAGGATCAAATC
ATCCAGGCAAACCCTGCACTGGAGGCTTTTGGTAACGCCAAAACAGTGAG
GAATGACAATTCATCCCGTTTTGGAAAATTCATCCGAATTCACTTTGGAA
CCAGTGGCAAGCTGTCTCTGCTGATATTGAAACTTACCTATTGGAGAAG
TCACGTGTCACCTTCAACTCAAGGCTGAGAGGAACTACCACATCTTCTT
CCAGATATTGTCCAATCAGAAGCCAGAGCTGTTGGACATGATGTTGATCA
CTAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAACGACTCAGAGGAGCTGATGGCCACTGACAGCGCTTTTGA
CGTCCCTTGGTTTTCACTCAAGAGGAGAAGATGGGAGTATATAAGCTGATTG
GTGCAGTTATGCACTATGGCAACATGAAGTTTAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCTTACCT
TATGGGACTGAACTCGGCAGACCTCATCAAAGGGCTATGCCATCCCAGAG
TCAAAGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTC
TACTACCCAAACAAGGAGGCCTTCAAGTGCAGAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAACGCCATGTGGCCATGCACTCTGCCACAG
CAGGGGACCTTACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCG
GTGCTCCTGGAGCACCTTAAGAGCCACTCGGGGAAGTCCCTCGGGTGGCGC
CAAGGAGAAAAAACCCATGCGACCACTGCGACCGCCGTTTCTACACAC
GAAAGGATGTGAGAAGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGATCACCTGACACG
CCACGTAAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCAGATATGTTAGGTCTTTTAGGTTCTGGCTCACCGCCATGCTCTGTC
AAGGAGGAGCTTAGCCCTATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGTAAACCCTTCCCAGCGGGACCCCCCTCCCATGGGTATGT
ACAACCCCCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGT
CACCCC-----CACCCCTCCCTGATGCCTAGCTCCCTCTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTATGCTTCTTTCTCATTCA
TGGGATGTTTACAAATCAGCGATGGCTCAAACATTTGTGAACTTGTGGCT
AGTAACTCTCCGAGTGTTCATATGCTCTGACCCAGCAGAAATACTTTAG
TAATTACAGTCCCTGTGATTGGATTTTACATTTACGAGCCCATTGAGTACT
GGAACTCCACAGTGCAGGAGCATCTGAAGACACTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGT
GAGCGCGTCGACCAAGAATGACTTTATCAGCATCCTAAAGGGCTCTTTCC
TGCGTAGCCCTGAGTACCAGCACTTCACTGAGGACATCATCTTCTCCAAG
A---ACCGTGAGAGTG-----ATGAGTATGACATTATTGCCTCGCGCAT
GTACCTAGTGGCGCGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TTCTGGAGAAACTGCGTCCACTGATGCTGATCAATAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTTTTTCATGGACCGCTACAGCTCCTCAGTCAT
CTCACCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACA
GTTACTTCTGTGGAGCTGGGTGTCTTGGGTTTAAATGGGCTATCATGTATT
CGAATGGCAGCCGGCCCTCAAGAATGTGTCTGCATCCTGCCATGTGGGCA
TTATTAATGGTCTCTCTGGATGGGCTGCCTTGGTGGATGATACCCAGTT
GACACCATTACTCGGCGGTTTTCGCTACGATGTGGCCCTGGTATCAGCCTT
AAAGGATCTGGAGGAAGACATCATGGAGGGACTGAGAGAGAGTGGGCTTG
AAGACAATGCTTGACCTTGGGCTTCAGTGTTATGATCAAGGAATCTTGT

TTGTGGGGGCCCTATCTGGTAGCCTGCTACTGGCGGGTGTGTTGCAAGGGG
CCCCGTAGTCCCCGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTG
CCCAGGCTGGGGTCAACCCCTTCATCTGCATCTTCTCTAACAGGGAGGCC
AAAACTCGCTTTCACCCCTGGCGTGGGGACTGGGCTGGCACGGAGC---G
CAGCGTCCCCTCGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGC
CCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAAC
AACCGACTGGACTTTGCTGCCTCGGCATACGACGCGGCC-----GA
TTTTGCCGGTAAACGCGGCCACCTTGCTGTCCTACGCAGCGGCCGGAGTGA
AGGCTC-----TTCCTTTGCCGGCTGCAGGCTGCTCCAACCGGCCCTTT
GGCTATTACGCAGACCCGTCGG---GCTGG---GGCGGACGCACGCCGCC
GCAGTACTGTAGCGTAAACAGCAAACCGAGCTCGGTCCTTTCTGCTGGC
CTTCTAATTCCGTCGGCGGCAGAACAGGCG---CC---AACTACCTGG--
-----CCGAGGA---CGGA---GACGC---CATCCCGACGGAGAGATC
CCCG---AT---CGGTGGCTCCGAGGAG---ACGAAACCCAAGGACCT--
----GTCGGA---GTCGAGCTGGATAGAG---ACGCCGTCCTCCATTAAG
TCAATTGATTCAAGCGATTCTGGTATCTTCG---AACAGGCCAAGAGGAG
AAGAATCTCGCCCTCTGCCACGCCG-----GTTTCAGAAACTGTGT
CCCCGTAAAATCTNNNCATCACTCAACAGGCGAAGTCACAGAGAGAGAAGTG
GCGTTGGGGATAAATCCGTTTCGCGGACGGAATGGGCGCCTTCAAAAATCAA
CCACAGCTCCCACGATATTGGCTCCGG---ACAGACGGCGTTTTCTCC
AGGCG---CCCGCTAC---GCAGCGGCCGCCCTGGGA---CACCACCA-
-----CCACCCGACCACGTTGGCTCT---TACTCCACGGCAGCTTTCAA
CTCCACCCGGGACTTTCCTTTCAGAAATCGGGGTTCGGAGACGCCACCG
G-----GGCGCAGCACAGTTTGTTCGCCCTC-----CGGA
AGTTT---C-----GCAGGGCCACATGGACACTCAGATGCCCGGGACA
CCTGCTCTTCCCAGGACTCCACGAG---CAAGCAGCGAGCCACGCGTCTT
CTAATGTGGTCAACAGTCAAGTGCATGCGATTGGGCTTCTCGGGGACATGTAC
GGTCGGGCAGACCAGTATGGCCACGTTACAAGCCCAAGGT---CCGACCA
CTATGCTTCGACCCAGTTGCACGGCTATGGCCCCATGAACATGAATATGG
CCGCA---CACCACGGAGCAGGGGCCCTTCTTTAGATACATGAGGCAGCCG
ATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGAGCAACTGACGAA
TCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACGATGCATGAGCTGGTGA
CCCATCTGACGGTGGAGCATGTGGGGGACCAGAGCAGTCCAACCACATC
TGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAACCATTCAAAGCCAAATA
CAAACCTGTGAATCATATCAGAGTACACACCCGGAGAGAAACCTTCCCAT
GTCCGTTTCCCGGGTGTGGCAA

>Anoplogaster cornuta

AGTTTGCTCATCCGTGCCGAACCTTAGCCAACCCGGGGCACTCCTCGGGGA
CGACCAGATTTATAATGTTATTGTTACAGCACATGCCTTTGTAATAATTT
TCTTTATAGTAATAACAGTTATAATCGGAGGCTTTGGGAACTGACTTATT
CCCCAATGATCGGGGCCCTGACATAGCATTTCCTCGAATAAATAATAT
GAGTTCTGACTCCTTCCCCCTCCTTCCTACTTCTGCTGTCTCCTCCTCCG
GAGTTGAAGCAGGGGCCGGAACCGGGTGAACCGTCTACCCGCCCTCGCA
GGAAACCTTGCCACGCAGGAGCTTCCGTAGACCTAACCATCTTCTCCCT
TACTTAGCGGGTATCTCCTCCATCTAGGGGCCATTAACCTTTATTACAA
CTATTATTAATATGAAACCCCGAGCCATCTCCCAATACCAAACCCCTTTA
TTTGTGTGGTCCGTTCTTATTACAGCAGTCTCCTTCTCCTCTCCCTCCC
CGTCTTGCAGCCGGCATCACCATGCTTCTGACAGATCGTAACCTTAATA
CAACCTTCTTTGACCCCGCAGGAGGGGTGACCCCATCCTATATCAACAC
CTG-----

-----TTTCTAGAGAGAAACCTTCATCCATCTAACTGCCTGGG
CATGCTGTTGCTGTCTGATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCAGCTATTTGCAAGACAGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTACCCTTAACTGGG
TCAACTATGACCTGGAAAGGAGGCAC TGCCATCTGCCAGAGCTGCTGAGA
ACGGTTCGCCTGGCCCTGCTACCTGCCATCTTCTCATGGAGAATGTCTC
TACAGAAGAACTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATTTCGCTGCAAGCTGAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCCGTGTGCTCGGCCGAGAAAAACCAGCCATGCCCTTTTTCTGTTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCAA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTCTACATCACCCGGTGGCA--GAGGCTC-
AGAAAACGGTGTGTCTAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGGCGGCACCTATGCTCATTGCCAGATTTGGCCACGGCTCT
GCTGAGCTGAAACACTGCCTTTACGTAGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCCAGCCTCTCCCTCCGGATGAATACATTTGTAGTGTTCAGC
CGTTCAACAACAAGGCTGATTCTGAACGAAGCGGAGCTAATCATGAGGCT
GGCCAGGAATTTTCAGATGAGAGTGGTTACGGTCTCCCTGGAGGAACAAA
CTTTCCCCAGCATCGTCCAGATGATCAGTGGGGCTCCRTGTTAGTCAGC
ATGCATGGAGCTCAGCTTGTACCTCACTCTTCTCCCCAGAGGAGCTGC
TGTAGTGGAGCTGTTCCCTTATGCTGTCAACCCAGAACAGTACACCCCAT
ATAAAAACCTCGCCTCCCTACCAGGCATGGACCTTCATTATGTTTCCTGG
AGGAACACTATAGAGGAGAACACTGTCACCCACCCAGACAGACCCCTGGGA
AGAAGGAGGCATCGCCATTTGGAAAAGGACGAGCAAGAGCGAATACTGG
CCAGCAAGGATGTCCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTGGACATCCCTTCATTSTGAGGT
CCTCAA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GG
CCAAGCTGGCCAGCACGGTTCATCCAGGCCGGGTCAGAGAACCCCAAGTGC
CACACCTCAGTCCAAGCCACCAACGAGGCTAAACTCCTGGTTTTCTGGCA
GATACCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGG
TG-----AAGAAGGATAACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCCTGC ACTGGAGGCTTTTGGTAACGCCAAAACACTGAG
GAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGAATTCACTTCGGAA
CCAGTGGCAAGCTGTCTCTGCTGATATTGAAACGTACCTATTGGAGAAG
TCACGTGTCACCTTCAGCTCAAGGCTGAGAGGAAC TATCACATCTTCTT
CCAGATATTGTCCAATCACAAGCCAGAGCTGTTGGACATGATGTTGCTCA
CTAACAACCCATATGACTACTCCTTCATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAATGACGCAGAGGAAC TGATAGCCACTGACAGCGCCTTTGA
CGTGCTTGGCTTTACTCAAGAGGAGAAGATGGGAGTATATAAGCTGATTG
GTGCAATTATGCACTATGGCAACATGAGGTTTAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCTTACCT
TATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTATGCCATCCCAGAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAACGCCATGTGGCCATGCACTCTGCCACCG
CGGGCGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTSCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCNGGCGGCGCC
AAGGAGAAGAAACACCCGTGCGACCACTGCGACCGCCGCTTCTACACGCG
GAAGGACGTGAGGCGGCACATGGTGGTCCACACGGGCCGGAAGGACTTCC
TGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCGC
CACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCC
TCCGGACATGTTGGGGCTTTTAGGTTCTGGCTCGCCGCCGTGCTCTGTCA

AGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCCC
ATGATGGGCAAACCCCTTCCMCAGYGGGACCCCTTCCCCATGGGCATGTA
CAACCCACCAC-----CTCCAGGCCATGTCCAACCTCTGGGGTGGGTC
ACCC-----CACCCCTCCCTGATGCCAGCTCCCTGTCTGCAGCTATG
GGCATGGGCTGCCACATGGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAGATCAGTG
ATGGCTCAAACAT

TGTGAACTTGCTGGCTAGTAACTCTCCGAGCGTTTCATATGCTCTGACCC
AGCAGAAATACTTCAGTAACTACAGTCCCCTGATTGGRTTTTACATTTAC
GAGCCCATTTGAGTACTGGAACCTCCACGGTGCAGGAGCACCTGAAGACACT
GAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACCTTCTTCCACTACC
TGCGGGTGGTGAACGTGAGCGCGTCGACCAAGAGCGACTTCATCACCATC
CTCAAGGGCTCCTTCTGCGCAGCCAGAGTACCAGCACTTCACTGAGGA
CATCATCTTCTCCAAGA--ACCGTGAGAGTG-----ATGAGTACGACA
TTATYGCCTCGCGCATGTACCTGGTGGCGCGACCACAGAGAAGAAGCGC
GAGGAGGTGGTGGAGCTTCTGGAGAAGCTGCGTCCGCTGATGCTGATCAA
CAGCATCAAGTTCATCGCCTTCAACCCACCTTTGTTTTTCATGGACCGCT
ACAGCTCCTCGGTTCATCTCACCCATCCTGACCTCAGGCTTCAGCGTGCTC
ACCATCCTCATCCTCACTTTCTTCTGTCATCAACCCCTTGGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNTGCCATG

TGGGCATTATTAATGGGCTCTCTGGGTGGGCTGCCCTGGTGGATGACTCC
CCGGCTGACACCATTGTCTCGACGGTTTCGCTACGACGTGGCCCTGGTATC
AGCATTAAAGGATCTGGAGGAGCACATAATGGAGGGACTGAAAGACTGTG
GGCTGGAAGACAGCTCTTGACCTCAGGCTTCAGTGTATGATCAAGGAA
TCTTGTGACGGCATGGGAGATGTCAGCGAGAAGCACGGGGGAGGGCCGGT
GGTCCCCGAGAAGGCTGTACGCTTCTCTATTACTGTTATGTCTGTCTCTG
TCCTGGCAGATGGAGAGGAA-----
GAGGCGGTTACCATCTTCAGCGAGCCAAAGCCCAACTCAGAAGTGTCCCTG
TAAGCCCCTAAGCCTGATGTTTTGTGGATGAGTCAGACCATGAGACAGTCA
CTGCTATCCTGGGACCTTTAGTTGCAGAGCGTAACGCAATGAAGCAGAGC
CAACTCATCCTATCTATGGGTGGCCTCCCTCGCTCCTTCCGCTTCCACTT
CAGAGCCACGGGATWTGATGAGAAGATGGTGCCTGACATGGAGGGCCTGG
AGGCCTCAGGTTCCGCTTATGTCTGCACTCTGTGTGATTCCAGTAGAGCA
GAAGCCTCTCACAACATGACGCTGCACCTCCATCACACGCAACCACGATGA
GAACCTGGAGCGTTATGAAATATGGAGGAGCAATCCCTTTTCTGAGTCTG
TTGAGGAGCTGCGAGACCGGGTCAAAGGGATCTCTGCCAAGCCCTTTATG
GAGACCCAGCCCCTATCGATGCATTACACTGTGACATTTGGTAATGCCAC
AGAGTCTAYAAAATCTTCCAGGATGAGATTGGGGAGGTGTACCGGAAGG
C---CAAC---CCCACCCGGGAGGAACGGCGGAGCTGGCGAGCAGCCCTG
GACAAGCACCTGAGGAAGAAGATGAAGCTTAAACCAGTGTGAGGATGAA
TGGGAACATATGCCCGGAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGT
GTGAGCTGGTACCCTCAGAAGAGAGGGCGAAAGGCCCTGACGGAGCTTATG
GGGCTCTACATCCAGNN
NN
NN
NNNTCGTACACCATTGAGATGGCTCCAAAGGGGC
CCCA

GTGGAAGGAGAGTCTCAGCCTTCTCCTGCTCCATTGAAGACCCACAA
AACAGACCAAGTTCAAAGGCATCAAGACCTACATTTTCGTACCGGGTCACA
CCGAGCCACACAGGGCGTCCGGTCTACAGACGCTACAAACACTTTGACTG
GCTGTACAACCGCTTGCTGCACAAGTTCAGTGTGATCTCGGTGCCCCACC
TGCCGGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATCGAGAAG
CGAAAAGACGWCTGATYCTGTGGATGAACCACATGACCAGTCACCCGGT

CCTCTCCCAGTACGAGGGATTTGAGCACTTCTTTATGTGTGCTGACGACA
AGCAGTGGAAAGCTGGGCAAGAGGCGGGCGGAGAAGGACGAGATGGTGGGC
GCCACTTCATGCTGACCTTCCAGATTCCTAACGAGCATCAGGACCTCCA
GGATGTGGAGGAGCGGGTTGACTCCTTCAAGTCTTTGCTAAGAAAATGG
ACGACAGCGTCATGCAGCTCACACATGTTGCCTCGGAGCTGGTGCCTAAG
CACCTGGGTGGATTGAGGAGGAGTTCCAGCGGCTAGGAAACGCCTTCCA
GTCCATCAGCCAGGCATTCATGCTGGAACCTCCCCACAGCTCCGATGCCC
TCAACAACGCCATCTCCCACNTCTCTCGCACGTTCCTCAAAGTACCTCGC
TGGGTTCATCATTGGCGTGGGGTGGTGGGAACCTCCTGATCTCCATC
CTGCTGGTCAAAGACAAGAGCCTGCACCGTGTGCCCTACTACTTCTGCT
GGACCTGTGCGCTGACATCCTGCGCTCTGCCATCTGCTTCCCTTTG
TCTTCACCTCTGTCAAGAATGGATCCGCCTGGACCTATGGCACGCTCACC
TGCAAAGTGATCGCTTCTCGGGCGTCTCTCTGTTTCCACACGGCGTT
CATGCTATTCTGTGTCAGTGTCACTCGCTACCTGGCGATTGCGCATCACC
GCTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGTCTATCTGC
ATGGTGTGGACGTTGTCAGTAGCCATGGCTTTCCCCCCTGTGCTGGACGT
AGGGACGTACTCCTTCATCCGGGAGGAGGACCAGTGCACATTCCAGCACC
GTTCTTTCAGGGCCAATGACTCACTGGGCTTCATGCTCCTGCTGGCACTC
ATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTTGTCCA
CGACCGTCCGGAAGATGAAGCCCCTCCAGTTTCTGTGCCCGCCGTCAGCCAGA
ACTGGACCTTCCATGGGCCGGGAGCCAGTGGGACGCGCGGCTAACTGG
CTCGCTGGATTTGGGAGAGGCCCCACCCCGCCTACCTTGCTGGGCATCCG
GCAGAACAGCAACCGGCGAGGCCGAGGCGTCTGCTGGTGTGGATGAGT
TCAAAACAGAGAAGCGGATTAGTAGGATGTTCTACATCATGACGTTTTTC
TTCTTGGCGTTGTGGGGCCCTATCTGGTAGCCTGCTACTGGCGGGTGT
CGCAAGGGGGCCCCGTTAGTCCCCGGGGCTACCTGACGGCAGCCGTTGGA
TGAGCTTTGCCAGGCTGGGGTCAATCCCTTCATCTGCATCTTCTCGAAC
AGGGAG-----

NN
NN
T---CCCAGGCTAC---GCAGCGGCCGCCCCTGGGA---CACCATCA-----
-CCACCCGACCCACGTCGGCTCTGCCACTCCACGGGCGGCTTTCAACTCC
ACGCGGGACTTTTCTTCCGAAATCGGGGTTTTCGGAGACGCCGCCGG---
-----GGCGCAGCACAGCTTGTTCGCCTC-----CGGGAGTT
T---C-----GCAGGGCCACATGGGCACTCTGATGCGGCGGGGCACCTG
CTCTTCCCggggTCCACGAG---CAAGCGGCGAGCCACGCGTCTTCCA
CGTGGTCAACAGCCAGATGCGACTGGGCTTCTCGGGGGACATGTACGGTC
GGGAGATCAGTACGGCCACGTTACAAGCCCCGAGGT---CCGACCACTAT
GCTTCGACCCAGTTGCACGGCTATGGTCCCATGAACATGAATATGGCCGC

A---CACCATGGAGCAGGGGCCTTCTTTTCGATACATGAGGCAGCCGATCA
AGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCGAACCCC
AAAAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAGCTGGTGACCCA
TCTGACGGTGGAGCATGTGGGGGGCCAGAGCAGTCCAACCACATCTGCT
TCTGGGAAGACTGCGCCAGAGAAGGGAAGCCGTTCAAAGCCAAATACAAA
CTTGGAATCACATCAGGGTACACACCGGAGAAAAGCCCTTCCCCTGTGCG
GTTTCCCAGNNNNNNNNNN

>Anotopterus pharao

AGCCTTTTAATCCGGGCAGAACTTAGCCAACCCGGGGCCCTTTTAGGGGA
TGATCAAATTTATAATGTAATCGTCACTGCCACGCCTTCGTAATAATCT
TCTTTATAGTAATGCCTATTATAATCGGCGGTTTCGGAAATTGATTAGTT
CCATTAATAATCGGAGCCCCTGATATAGCCTTCCCCGAATAAATAATAT
AAGCTTCTGACTACTCCCCCATCTTTTCTTCTTTTATTATCCTCCTCAG
CAGTAGAAGCAGGGGCCGGCAGGGTTGAACTGTTTATCCTCCCCCTGCT
AGTAACCTAGCACATGCTGGAGCTTCAGTTGACTTAACTATTTTTTCTCT
TCACTTGGCAGGAATCTCTTCTATTTTAGGGGCCATTAACCTTTATTACAA
CTATTATCAATATAAAACCTCCAGCTATTACACAGTATCAAACCCCTTTA
TTCGCTGATCAGTCTTAATTAAGTACTGAGTACTTCTACTTCTTGCCTCCC
TGTTTTAGCAGCAGGAATTAATACTTACTGACAGACCGAAATTTAAATA
CCACCTTTTTTTGACCAGCAGGTGGAGGAGACCCGATTCTTTATCAACAC
TTANNN
NN
NN
NN
NNNNNNNNNNNNNNNNNNNTCCGTCCAACCTGCCTTGGCATGCTGCTGCTGCTGCGGATGCCACCAGT
GCACCAAGCTGTCAGAGCTGTCTGGGGTATGTGCCTCAGCAACTTCCCT
GCCATCTGCAAGACGGAGGACTTCTCCAGCTGCCCAAAGACATGGTGGT
GCAGCTCCTGTCCCATGAAGAGCTGGAGACGGAAGATGAGCGACTGGTTT
ATGAGGCTGCCCTTAACTGGGTCAACTATGACCTGGAGAGGAGACTGC
CACCTACCAGAGCTGCTGAGAACCGTACGCCTGGCCTTGCTTCCCGCCAT
CTTCTCATGGAGAAGCTCTCCACGGAGGAGCTGATCAATGCCCAGGCAA
AGAGCAAGGAATTGGTGGACGAGGCCATCCGCTGCAAGCTGAAGATCCTG
CAGAACGACGGCGTGGTCAACAGTCCCTGTGCCCGGCCAGAAAGACCAG
CCATGCCCTTTTCTGCTGGGAGGGCAGACCTTCATGTGTGACAAGCTGT
ACTTGGTAGACCAGAAGGCCAAAGAGATCATCCCCAAGGCAGACATCCCC
AGCCCAGGAAGGAGTTACGCGCCTGCGCCATTGGCTGCAAGGTCTACGT
CACGGGCGGGA--GAGGCTC-TGAGAACGGCGTGTCTAAAGACGTGTGGG
TCTATGACACCGTCCACGAGGAGTGGTCCAAGGCGGCCCATGCTCATC
GCCAGGTTTGGCCACGGCTCCGCGGAGCTCAAACACTGCCTCTATGTGGT
CGGAGGACACACGGCAGCCACCGGCTGCCTCCCAGGCTCTCCGTCCGGAC
GAGTACATCGTGGTGTTCAGTCCGTCCACGACGCGGCTGATTCTGAACGA
AGCAGAGCTGATCCTGGCGCTGGCCCAGGAGTTCAGATGAGGGTGGTCA
CCGTGTCCCTGGAGGAGCAGTCCCTTCTCGGCATTGTGCAGGCCATCAGC
GGGGCTCCATGTTGGTCCAGCATGCACGGAGCTCAGTCTCGTACCTCGCT
CTTCTCCCCAGAGGAGCTGCCGTGGTGGAGCTCTTCCCCTATGCCGTGA
ACCCGGAGCAGTACACCCCGTACAAAACCCTTGCCCTCCCTGCCAGGCATG
GACCTCCAGTACGTCTCCTGGAGGAACACTATTGAGGAGAACACCGTCTC
CCACCCGGACAGACCCTGGGACCAAGGAGGCATCGCCCACTTGGAGAAAG
ACGAGCAGGAGAGAACTTAGCCAGCGAGGACGTCCCAGGCACCTGTGC
TGCCGCAACCCAGAGTGGCTCTTACAGGATCTACCAGGACACGCTGGTGA
CATCCCCTCCTTCTGGACATCCTCAA---GGAGGGCCTGAAG---ACAA
GGCAAACCTTGAAGAA---GTCCAAGCCGGCCAGCACGGTTCACCCGGGC
CGGGTCCGGGAACCCAGTGCCAGACTTCCGGTTCAGCCACCAACGAGGC
TAAGCTCACAGTGTCTGGCAGATCCCGTGGAACTCAAGTACCTGAAGG

TGCGAGA-----AAAAGGGACGCGAGCAAG
GGAACCCTGGAGGATCAAATCATTGAGGCAAACCCCGCACTGGAGGCTTT
CGGTAATGCCAAAACATTGAGGAACGATAATTCCCTCCCGTTTTGGAAAAT
TCATCCGAATCCACTTTGGAACCAGTGGTAAGCTGTCTTCTGCGGACATT
GAGACCTACCTGCTGGAGAAGTCGCGGGTCACCTTTCAGCTTAAGGCGGA
GAGGAATTACCACATCTTCTTCCAGATTTTGTCCAATCAAAGCCGGAGC
TGCTGGACATGCTGTTGATCACCAACAACCCCTATGACTACTGCTACATC
TGCCAAGGAGAAGTAACCGTAGCATCCATCAACGATTCAGAAGAGCTGAT
GGCTACCGACAGTGCCTTCGACGTTCTTGGCTTCACGCAAGAGGAGAAAC
TGGGAGTCTACAAGTTGATAGGGGCCATTATGCACTATGGCAACATGAGG
TTCAAGCAAAGCAGCGCGAGGAACAGGCTGAGTCAGACGGTACAGAGGC
AGCTGATAAGTCAGCTTATCTAATGGGGCTGAATTCAGCAGACCTAATCA
AGGGACTCTGCCATCCAGAGTCAAGGTAGGGAATGAGTATGTCACCAA
GGCCAGGGTGTAGATCAAGTCTATTACCCCAACAAGGAGGCCTTCAAGTG
TGAAGAGTGCGGCAAGCACTACAACACCAAGCTGGGCTACAAGCGCCATG
TGGCCATGCACTCGGCCACGGCGGGGGACCTCACCTGCAAGGTGTGCATG
CAGAGCTACGAGAGCACGCCGGTGTCTCTGGAGCACCTCAAGAGCCACTC
CGGGAAGTCCCTCGGGCGGCGCAAGGAGAAGAAGCATCCATGCGACCACT
GCGACCGCCGCTTCTACACGCGGAAGGACGTCAGGCGGCACATGGTCGTC
CACACAGGCCGAAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTCGG
CAGGAAGGATCACCTGACGCGGCACGTGAAGAAGAGCCACTCGCAGGAGC
TGCTGAAGATCAAGACGGAGCCTCCGGATCTGTTGGGCTCCTGGGCTCC
GGCTCGCCGCTTGTCTGTCAAGGAGGAGCTAAGCCCCATGATGTGCAG
CATGGGTCCCAATAAAGACCCCATGATGGGCAAACCTTCCCCAGCGGGA
CCCCCTTCCCATGGGCATGTACAACCCCCACCAC-----CTCCAGACC
ATGTCTAATCCCGGGTGGGCCACCCC-----CACCCCTCCCTTATGCC
CGGTTCCCTGTCTGCAGCTATGGGCATGGGCTGTCATATGGAATACCT-A
TCTACGCTTCCCTTCTCCTTTCATGGGGTGTTTACAGATCAGCGACGGTTCG
AACGTGGTGAACCTGCTGGCCAGCAACTCTCCGAGCGTCTCGTACGCGCT
CACGCAGCAGAAGTACTTCAGCAACTACAGCCCCGTGATCGGCTTCTACA
TCTACGAGCCCATCGAGTACTGGAACCTCACGGTGCAGGAGCACCTGCGG
ACGCTGAGCCACGGCTTCAACAAGATCTCCTGGGTGGACAACCTTCGCCCA
ATACCTGCGGGCGGTGAACCTGAGCGCCTCCACCAAGGCCGACTTCGTTCG
CCGTCTCAAGGGCTCCTTCCCTGCGGAGCCCTGTATACCAGCACTTCACC
GAGGACATCATCTTCTCCAAGA---GCCACGAGAACA-----ACGAGTA
CGACATCATCGCCTCGCGGATGTACCTGGTGGCACGCACCACCGAGAAGC
GGCGAGAGGACGTGGTGGAGCTGCTGGAGAAGCTCCGGCCGCTGATGCTG
ATCAACAGCATCAAGTTCATCGCCTTCAACCCCACGTTTCGTCTTCATGGA
CCGCTACAGCTCCTCGGTCATCTCGCCCATCCTCACGTCGGGCTTCAGCG
TGCTCACCATCCTCATCCTCACCTTCTTCCCTGGTTCGTCACCCGCTGGGG
AACCTGTGGCTCATCCTGACCGTCACGTCGGTGGAGCTCGGCGTTCGGG
TCTGATGGGCTACCACACGTTTCGAGTGGCAGCCTGCCCTCAAGAATGTGT
CTCCATCCTGCCATGTGGGTATCATCAATGGGCTTGCGGGGTGGGCCGCC
TCGGTGGATGACGTCCTGCTGACACCATCACCCGTCGGTTTTCGTTATGA
CGTGGCGCTGGTATCGGCCCTGAAGGACCTAGAGGAGGACATCATGGAAG
GACTGAGTGAGCATGGGCTGGAAGACAGCGCTTGCACCTCAGGCTTCAGT
GTTATGATCAAGGAATCCTGTGACGGCATGGGAGATGTCAGCGAGAAGCA
CGGTGGGGGGCCAGCGATGCCTGAGAAGGCTGTGCGTTTTCTCTTTCACCG
TCATGTCCATCTCTGTCCAGGCCGACGGAGAGGAC-----
-----GAGGCGTTCGTTGTTTTTCAGGGAGCCAAAGCCCAA
CTCGGAACTGTCTGTAAAGCCCCTGTGTCTGATGTTTGTGGACGAGTCAG
ACCACGAGACACTCACTGCTGTCTTGGGCTTTGGTAGCCGAGAGGAAT
GCAATGAAGCAAAGCCGACTCATCCTCCCAGTGGGAGACCTCCCCCGCTC

>Antennarius striatus

AGCCTACTAATCCGCGCAGAACTAAGCCAACCAGGCGCACTCTTAGGTGA
TGATCAAATTTACAATGTTATCGTTACAGCACATGCTTTCGTTATAATTT
TCTTTATAGTCATAACCAATTATGATCGGAGGGTTCGGCAACTGATTAATT
CCACTAATAATTGGCGCCCTGACATAGCATTCCCTCGAATAAACAATAT
AAGCTTCTGACTCTTACCCCATCATTTCTTCTTTATTAGCCTCATCAG
GAGTAGAAGCTGGAGCAGGCACAGGATGAACGGTTACCCACCTCTTGCG
GGCAACCTAGCCCATGCCGGAGCATCTGTTGATTTAACTATTTTCTCACT
CCACCTTGCAGGTGTATCATCCATCCTAGGGGCTATTAATTTTATTACAA
CTATTATTAATATAAAAACCACCAGCTCTTTCACAATACCAAACACCTTTA
TTTGTATGGGCTGTATTAGTCACTGCTGTACTTCTCCTCCTTCCCTTCC
TGTTCTTGCTGCAGGGATTACAATATTATTAAGCTGATCGAAACCTTAATA
CAACTTCTTTGACCCCACTGGCGGAGGAGACCCCATTTCTATAACCAACAC
TTATTCTGGTTTTTTGGCCA-----

-----TTCCTAGAGAGAAACCTTCACCCAACCAACTGCCTCGG
GATGCTGTTGCTGTCTGATGCGCACCAGTGCACCAAGCTGTCCGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCTATTTGCAAGACTGAGGAC
TTTCTCCAAGCTGCCAAAAGATATGGTTGTGTCAGCTTTTGTACACGAAGA
GTTAGAAACTGAAGATGAGAGACTTGTTTATGAAGCTGCCCTCAATTGGA
TCAACTATGACCTGGAAAAGAGGCACAGCCACCTTCCAGAACTCTTGAGA

ACGGTCCGACTGGCCCTGCTGCCTGCCATCTTTCTGATGGAGAACGTCTC
TACAGAAGAGCTGATTAATGCCAGCCCAAGAGCAAGGAACTGGTGGATG
AAGCTATCCGTTGTAAGCTGAAGATCTTGCAGAATGATGGTGTGTTAAC
AGCCCATGCGCTCGACCAAGAAAAACCAGCCATGCTCTTTTTCTCTGGG
TGGTCAGACATTCATGTGTGATAAGTTGTATCTGGTAGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGAGGAA--GAGGTTT-
CGAGAACGGAGTGTCCAAAGATGTATGGGTCTACGATACAGTTCATGAGG
AATGGTCCAAGGCGGCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCAGAGCTTAAACACTGCCTCTATGTGGTAGGAGGTCACACTGCAGCAAC
CGGCTGCCTCCCAGCNNNNNNNNNGGATGAGTACATTGTTGTGTTTCAGTCCGGTCAACAA
CAAGACTGATTCTGAATGAAGCAGAGCTAATTATGGCATTGGCCCAGGAG
TTTCAAATGAGAGTGGTGACATTGTCCCTGGAGGAACAGTCTTTCTCTAG
TATTGTCCAGATGATCAGCAGTGTACCATATTAGTGAGTATGCATGGAG
CTCAACTCATTACCTCACTCTTCTTACCTAGAGGATCTGTTGTGGTGGAG
TTGTTCCCTTATGCTGTGAACCCAGAACAGTACACCCCATATAAAAACCT
TGCTCCCTTCCAGGCATGGACCTTCATTATATTTTCATGGAGGAACAATA
ACGAGGACAACAGCATCACCCACCCAGACAGACCTGGGAACAAGGGGGT
ATTGCTCATTGGAAGAGGAGCAAGAACGTATAAAGATGAGYAAAGA
CGTCCCAGGCATCTATGCTGCCGCAACCCAGAGTGGCTCTTCAGGATCT
ACCAGGACACTTTGGTGGACATCCCCCTCTTCTGGAAGTTCTCAA---A
GATGGCATGAAG---ACAAAGCCCAGCCTGAGAAA---GTCAAAGCCGTC
TGGTACACTCCACCCGGGCAGGGTCCGAGAACCTCAGTGTCAAACCTCAG
TTCAAACCAGCAATGAGGCTAAACTCATAGTCTCTGGCAGATACCATGG
AATCTGAAGTACCTGAAGGTGAGAGGTTGAAATACGAGGTGTNNNNNNNNAGGAAGG
ATGCCAACAAGGGGACCCTGGAGGATCAAATCATTTCAGGCCAACCTGCG
TTGGAGGCCCTTTGGCAACGCAAAAACGTTGAGGAACGACAACCTCATCCCG
TTTTGGCAAGTTCATCAGAATTCATTTTGGGACAAGCGGCAAGTTGTCTT
CTGCGGACATTGAGACGTACCTGCTGGAGAAGTCTCGCGTCACTTTTCAG
CTCAAGGCTGAGAGAACTATCACATCTTCTACCAGATCCTGTCCAATCA
GAAGCCAGAGCTGCTGGACATGCTGCTGGTCACCAACAACCCCTATGACT
ACTCCTACATCTCCAAGGAGAGGTATCCGTCCCTTCCATTAACGACTCG
GAGGAGCTGATGGCCACCGATAGTGCCTTTGACGTACTGGGCTTCACGGC
AGATGAGAAGATGGGTGTCTACAAGCTCACAGGAGCCATCATGCATTACG
GCAACATGAAGTTTAAACAGAAGCAGCGTGAAGAGCAGGCAGAACCCGAC
GGAACGGAGGCGCGGATAAATCCGCCTACCTGATGGGGCTGAACTCCGC
TGACCTCATCAAAGGGTTGTGTACCCCAGGGTGAAGGTAGGAAACGAAT
ACGTCACCAAAGGCCAAAGTGTGGATCAAGTCTACTACCCCAACAAGGAG
GCCTTCAAATGTGACGAGTGTGGGAAGCACTACAACACCAAGCTGGGATT
TAAGCGCCATGTGCCATGCACTCTGCCACGGCTGGGGACCTCACATGTA
AAGTGTGCATGCAGACCTACGATAGCACGCCTGTGCTGCTGGAGCACCTG
AAGAGCCACTCTGGGAAGTCTCTGTTGGCACCAAGGAGAAGAAACACCA
GTGCGACCACTGTGATCGGCGTTTCTACACAAGGAAGGACGTGAGACGCC
ACATGGTGGTCCACACCGGCAGGAAGGACTTCTTTGCCAGTACTGTGCC
CAACGCTTTGGCAGGAAGGACCACCTGACGCGCCACGTGAAGAAGAGCCA
CTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCTGACATGTTGGGTC
TCTTGGCTTCCGGGTCGCCCGCGTGTCTGTGAAGGAGGAGCTCAGCCCC
ATGATGTGTGGGATGGGTCCCAACAAGGACCCCATCATGAGCAAACCTT
TCCTAGTGGGGCCCCTTTTCCCATGGGCATGTACAACCCTCATCAC----
--CTCCAGGCCATGTCTAATTCAGGGGTCCGGTCACTCA-----CACCCG
TCCCTGATGCCCGGCTCCCTGTCCGCGGCCATGGGTATGGGCTGTCACAT
GGAATACCTCATCTACGCCTTTTTTCTTCATGGGATGTTTACAAATCA
GTGATGGATCAAATATTGTGAACCTGCTGGCAAGTAACTCTCCAAGTGT

TCATATGCTCTAACCCAGCAAAAATACTTCAGCAACTATAGTCCAGTGAT
TGGGTTTTACATTTATGAGCCCATTGAGTACTGGAACCTCCACAGTGCAGG
AGCACCTCAGGACTCTGAGCCAAGGCTTCATCAAGATCTCCTGGATGGAC
AATTTTTTCCAATACCTGAAGGTGGTAAATGTGAGTGCATCAACCAAGAG
CGACTTTATCAGCATCCTGAAGGGCTCCTTCTGCGCAGCCCAGAGTACC
AGCACTTCACTGAGGACATCATTTTCTCAAAGA---ACCGTGAGACTG--
----ATGAGTACGACATTATCGCCTCTCGGATGTACTTGGTAGCACGGAC
TACAGACAAGAAACGTGAAGAAGTGATGGTGCTTCTGGAAAACTTCGTC
CCCTGATGTTGATCAACAGCATCAAATTCATAGCCTTCAATCCTACATTT
GTGTTTATGAGCCGCTACAGCTCCTCGGTCATCTCACCCATCCTGACCTC
AGGATTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCTGGTCATCA
ACCCCTTGGGTAATTTTTGGCTCATTTCTCACTGTAACATCTGTGGAGCTG
GGAGTGCTGGGNNNNNNNGGCTTTCACCAGTTTGAATGGCAGCCAGCTCTCAAGAAT
GTGTCAACATCTTGCAGTGTTGGCATTATTAATGGTCTCTCTGGATGGGA
TTCTCAGTGGATGAGTCCCCAGTTGACACCATCACTCGTCCGTTTCGCT
ATGATGTGGCACTGGTATCAGCATTAAGGATCTGGAGGAGGACATCATA
GAGGGACTGAGAGAGAATGGAATGGAAGACAGCACTTGCC-----ACTT
TACTGTGATGATCAAAGAGTCTGTGATGGTATGGGTGATGTCAGTGAAA
AACATGGCGGAGGACCGGCTGTCCCTGAGAAGGCTGTGCGTTTCTCTTTC
ACCGTCATGTCTGTGCTTTTTCAGAAAAGACAGCAAGGAG-----
-----GAAGAGTCCACATCTTCACAGAACCAAAGC
CAAATTCAGAACTGTCTGTAAGCCCTTTGCCTGATGTTTGTGGATGAA
TCAGACCATGAGACACTCACAGCAATCCTGCATCCTATAATTGCAGAGCG
TAATGCAATGAAAGAGAGCAGATTAATCCTATCCATTGGTGGACTTCCAC
GATCCTTCAGCTTTCATTTTAGGGGCACGGGATATGATGAGAAGATGGTT
CGTGAGATGGAAGCCCTTGAGGCCCTCTGGGTCTGCCTACATTTGCACCCT
CTGTGATGCCAGTCTGTCAGAGGCCCTCTGAAAACATGGTGTACATTGTA
TCACCCGCAGTCATGAAGAGAATCTTGAGTGTTATGAAATTTGGAGAACC
AATCCATTTTCTGAGTCTGTAGAGGAGTTGCGAGATAGAGTCAAAGGGGT
CTCTGCCAAGCCCTTCATGGAGACCCATCCACGATGGATGCATTACACT
GTGACATTGGCAATGCCACTGAGTTCACAAAATATTCOAAGATGAGATT
GGGGAGGTGTACCAAAGGT---CAAT---CCCAGCCGGGATGAGAGGCG
TAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGAAAAGAAGATGAAGCTTA
AACCAGTAATGAGGATGAATGGGAACATATGCCCGCAGGCTAATGACCCTG
GAGGCTTTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGAAGGGA
GGCCCTTAGGGAACATAATGAGACTCTACATTCAGATGAAGCCCGTGTGGC
GCGCCACCTGCCAGCCAAAGAGTGCCCTGACCAGCTGTGCCGATACAGC
TTCAACTCCCAGAGCTTTGCAGAGGTCTCTCCTCTAAGTTCAAATATAG
GTACAATGGGAAGATAACCAATTACTTGCACAAGACTTTGGCTCATGTGC
CTGAAATCATAGACAGAGATGGATCCATAGGGGCTTGGGCCAGTGAAGGG
AATGAGTCAGCAAACAAATCCTACACCATTGAGATGGGTCCGCTGGGCCC
CGGATGGAAGGAGAGCCCACAGCCGTTCTCCTGCTCCATCGAAGACCCCA
CCAAACAGACGAAGTTCAAGGGCATCAAGACGTACATCTCGTACCGCGTG
ACGCCGAGCCACACCGGGCGTCCCCTTACCAGGCGCTACAAACACTTCGA
CTGGCTGTACAACCGCTCCTGCACAAGTTCACTGTGATCTCCGTGCCCC
ACCTGCCTGAGAAGCAGGCCACGGGCCGATTCGAGGAAGACTTCATCGAG
AAACGCAAGAGACGACTGATCCTGTGGATGAACCACATGACCAGCCACCC
CGTCTCTCCCAGTACGAAGGTTTCGAACACTTCTGATGTGCGCCGACG
ACAAGCAGTGGAACTGGGGAAGAGACGGGCCGAAAAGATGAGATGGTG
GGCGCCACTTCATGCTGACCCTCCAGATCCCCAACGAGCACCAGGACCT
TCAGGACGTGGAGGAGCGGATCGACACCTTCAAGTCTTCGCCAAGAAGA
TGGACGACAGCGTGATGCAGCTCACGCATGTTGCGTCGGAGTTGGTGCGG
AAACACCTGGGCGGGTTCAGGAAGGAGTTCAGCGTTCGGGGAACCTCCTT

CCCGGCTGTGGCAA

>Antigonia capros

AGCTTACTTATCCGAGCTGAACTAAGCCAACCTGGGGCACTCCTAGGAGA
TGACCAAATCTACAATGTTGTAGTTACAGCACATGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATTATAATTGGAGGATTTGGAACTGACTAATT
CCTTTAATGATTGGAGCCCCGATATAGCATTCCCCGAATGAACAATAT
GAGCTTCTGACTACTTCCACCCTCTTTTTTACTTCTCCTTGCCCTTTCTA
TAGTAGAAGCAGGGGCGGGCACTGGATGAACAGTTTACCCCCCTCTAGCT
GGGAACCTGGCCCATGCCGGGGCATCAGTTGACTTAACAATTTTTTCTCT
CCACTTAGCAGGGATTTCTCAATCCTTGGGGCCATCAACTTTATCACAA
CTATTATTAATATGAAACCTCCCGCTATTTCCCAGTACCAAACCTCCCCTG
TTTGTGGAGCAGTACTAATTACTGCAGTTCTTCTTCTCCTCTCCCCTCC
CGTCTTGCTGCCGAATTACAATACTTCTTACAGACCAGAACTTGAACA
CCACCTTCTTTGACCAGCCGAGGAGGAGACCCGATTCTTTATCAACAT
CTATTCTGATTTTTTGGGCACCCTGAAGTTTACATCCTGATTCTTCCGGG
CTTTTGGAAATAATTTCTCATATTTGTTGCCTACTACTCAGGTAAAAAAGAAC
CATTCGGCTATATAGGCATAGTTTGAGCCATAATGGCTATTGGACTCTTG
GGCTTCATCGTGTGAGCCATCATATGTTTACTGTAGGAATGGACGTAGA
CACACGAGCTTATTCCCTAGAGAGAAACCTTACCCATCTAATTGCCCTTGG
CATGCTTTTTGCTGTCCGATGCCACCAGTGACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGAC
TTCCCTCAACTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGA
GCTAGAGACTGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAATTGGA
TCAACTATGATCTGGAAAAGAGGCACCTGCCACCTTCCAGAACTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCCATCTTCTCATGGAGAATGTTTC
TACAGAAGAGCTGATCAATGCCAGGCGAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGCAAGCTGAAGATCCTGCAGAATGATGGTGTGCTTAAC
AGCCCATGTGCTCGACCAAGAAAACCAGCCATGCCCTCTTTCTGCTGGG
TGGGCAGACTTTCATGTGTGACAAAATTTGTACCTGGTGGACCAGAAGGCCA
AAGAAATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTGTATATCACTGGTGGGA--GAGGCTC-
AGAGAATGGGGTGTCTAAAGATGTATGGGTCTACGACACCGTCCACGAGG
AATGGTCAAAGGCGGCACCCATGATCATTGCCAGGTTTGACCTAGGCTCT
GCNN
NNNNNGGATGAATATATTGTTGTGTGTTAGTTCGTCAACAACGAGACTGATACT
GAATGAAGCGGAGTTCATCATGGCGCTGGCTCAGGAGTTCCAGATGAGAG
TGGTCACAGTATCCCTGGAGGAGCAGTCTTTCCCAGTATCGTCCAGGTG
ATCAGCGGTGCACCATGTTAGTCAGTATGCATGGAGCTCAGCTCADCAC
CTCACTCTTCTGCCAGGGGAGCTGCTGTGGTGGAGCTGTTCCCTTTG
CTGTGAACCCAGAGCAGTACCCCCATATAAGACTCTCGCTCCCTTCCA
GGAATGGACCTTACTATATCTCCTGGAGGAACACCAAGGAGGAGAACAC
CATCACATACCCAGACAGACCCCTGGGAACAAGGGGGTATTGCTCACTTGG
ATAAGGAGGAGCAAGAGCGAATACTGGCGAGCAAAGATGTCCCAGGCAT
CTGTGCTGCCGCAACCCGGAGTGGCTCTTCCGGATCTACCAGGACACTTT
GGTGGATATCCCCTCTTTCCTGGAAAGTCTCAA---AGAGGGCATGAAG-
--ACAAAGCCC GGCTGAAGAA---GTCTAAGCCGGCCAGCACGCTCCAC
CCGGGCCGGGTGAGAGAACTCAGTGTACAGACCTCAGTACAAACACTAA
CGAGGCTAAACTCACAGTCTTGGCAGATCCCGTGGAAATCTGAAATACC
TGAAGGTCAGAGAGGTCAAATACGAGGTG-----AAAAGGGACACC
AGCAAGGGGACACTGGAGGATCAAAATCATCCAGGCGAACCTGCGCTGGA
GGCTTCCGTAACGCCAAAACACTGAGAAATGACAACTCGTCTCGCTTTG
GAAAATTCATCCGAATTCACTTTGGTACGAGCGGGAAGCTGTCAATCCGCT
GACATTTGAAACGTACCTGTTGGAGAAGTACGCGTCACCTTTTCACTGAA

GTCTGAGAGAACTACCACATCTTCTTCCAGATCCTGTCCAACCAGAAGC
CAGAGCTGCTGGACATGCTGCTGATCACCAACAACCCATACGACTACTCC
TACATCTCCCAAGGAGAGGTAACGGTCGCTTCCATCAACGACTCCGAGGA
GCTGATGGCCACGGACAGCGCCTTTGATGTGCTCGGCTTCACTGCAGACG
AGAAGATGGGCGTCTATAAACTGACAGGCGCCATCATGCACTACGGCAAC
ATGAGGTTCAAACAGAAGCAGCGCGAGGAGCAGGCGGAGCCGGATGGGAC
GGAGGCTGCTGATAAAATCAGCATACTAATGGGGCTGAACTCTGCTGACC
TCATCAAAGGGCTATGCCATCCCAGAGTCAAGGTAGGAAATGAATACGTC
ACCAAAGGCCAAAGTGTGGACCAAGTCTACTATCCCAACAAGGAGGCCTT
CAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGTTACAAGC
GCCATGTGGCCATGCACTCGGCCACGGCAGGGGATCTCACCTGTAAAGTG
TGCATGCAGACCTATGAGAGCACGCCGTGTGCTCTTGGAGCACCTCAAGAG
CCATTCGGGAAGTCTTCAGGTGGCACCAAGGAGAAAAAGCACCCGTGCG
ACCCTGTGACCGTCGTTTCTACACAAGGAAGGATGTGAGACGGCACATG
GTCGTCCACACGGGCCGAAAGGACTTCCTGTGCCAGTACTGTGCCCAACG
CTTTGGCAGGAAGGACCACCTGACACGCCATGTGAAGAAGAGCCACTCAC
AGGAGCTGCTGAAAATCAAGACGGAGCCGCCTGATATGTTAGGTCTTTTA
GCTTCTGGGTACCACCTTGCTCTGTGAAGGAAGAGCTCAGCCCCATGAT
GTGCGGCATGGGTCCCAACAAAGACCCCATGATGGGCAAACCGTTCCCA
GCGGTGCCCTTTTCCAATGGGCATGTACAACCCCCACCAT-----CTC
CAGGCCATGTCTAATTCTGGGGTGGGTACCCA-----CACCCGTCCCT
GATGCCAGTTCCTTGTCTGCAGCTATGGGCATGGGCTGTCACATGGAAT
ATCTCATCTATGCCTCTTTCTCATTCATGGGATGTTTACAAATCAGTGAT
GGATCAAATATCGTGAACCTGCTGACTAGTAACTCTCCAAGTGTTCGTA
TGCTCTTACCAACAAAAATACTTCAGTAACTACAGTCCAGTGATTGGGT
TCTACATTTATGAGCCCATCGAGTACTGGAACCTCCACAGTGCAGGAGCAC
CTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACCT
CTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCAACCAAGAGCGACT
TCATCACCATCCTCAAGGCCTCCTTCTGCACAGCCCGGAGTACCAGCAC
TTCCTGAGGACATCATATTCACAAAGA---ACCGTGACACTG-----A
TGAGTATGACATTATCGCCTCACGGATGTACTTGGTGGCACGGACGACAG
AGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTGGAAAAGCTTCGTCCGTTG
ATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCTACGTTTGTGTT
CATGGACCGCTACAGTTCCTCTGTCTATCTCGCCCATCCTGACCTCAGGAT
TCAGCGTACTCACAATCCTCATCCTCACTTTTTTCTGCTCATCAACCC
TTGGGTAACCTTCTGGCTCATCCTCACTGTAACGTCCGTGGAGCTGGGCGT
CTTGGGGTTGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNT
GTTGGCATTATTAACGGACTCTCTGGATGGGCTTCCTC
AGTGGATGACTCCCCAGCTGACACCATCACTCGACGGTTTCGCTATGATG
TGGCACTGGTGTGAGCATTAAGGATCTGGAGGAGGACATCATGGAGGGG
CTGAGAGAGAGTGGGCTGGAAGACAGCGCTTGCACCTCGGGCTTCAGTGT
CATGATCAAGGAATCTTGTGATGGCATGGGTGATGTCAGTGAGAAGCATG
GTGGAGGACCAGCTGTTCTGAGAAGGCTGTACGTTTCTCTTTCACTGTT
ATGTCTGTTTCTGTCTGGCAGACGATGAGGAG-----
-----GAACGGGTTACCATCTTACAGAGGCAAAGCCAAACT
CAGAGCTGTCCTGTAAGCCCCTATGCCTGATGTTTGTGGATGAGTCAGAT
CATGAGACACTGACAGCCATCCTGTGGCCTGTAATTGCAGAACGTCAAGC
AATGAAAGACAGCAGGCTAATTTTATCCATCGGTGGACTACCTCGCTCCT
TCCGGTTTCACTTCAGAGGCACGGGATACGATGAGAAGATGGTGCCTGAG
ATGGAGGGGCTTGGAGCCTCTGGGTCCTCCTATATCTGCACTCTTGTGA
CTCCAGTCGAGCAGAGGCCTGTCAAAACATGGTGTACTACTCCGTCACCC
GGAGTCATGAAGAAAATCTAGAACGCTATGAAATATGGAGAACCAACCC
TTTTCTGAGTCTGTAGATGAGCTGCGAGACAGAGTCAAAGGGGTCTCTGC

CAAGGCCTTCATGGAGACCCATCCCACGCTGGATGCATTACACTGTGACA
TCGGCAATGCCACTGAGTTCACAAAATCTTCCAGGACGAGATCGGGGAG
GTGTACCAAAAGGT---CAAC---CCCAGCCGGGAGGAGCGGGCAGCTG
GAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGATGAAGCTCAAACCGA
TAATGAGGATGAATGGGAACCTATGCCCGCAGGCTAATGACCCAGGAGGCT
GTGGAGGTGGTGTGTGAGCTTGTGCCCTCTGAGGAGAGGAGGGAGGCCCT
GAGGGAGCTTATGAGGCTCTACATCCAGATGAAGCCCGTGTGGCGTGCCA
CCTGCCAGCCAAGGAGTGCCCCGACCAGCTGTGCCGCTACAGCTTTAAC
TCCCAACGCTTTGCTGACCTCCTCTCCTCTACCTTCAAATATAGGTACAA
TGGAAGATAACCAATTACCTGCACAAGACCCTGGCTCATGTGCCTGAAA
TCATAGAAAGAGATGGATCCATAGGAGCTTGGGCCAGCGAAGNNNNNNNNNNNNNNNNNNNTCTTACA
CCATCGAGATGGGCCCCATGGGGCCCCAATGGAAGGAGAGCCACAGCCG
TTCTCCTGTTCTATTGAAGACCCAACAAAACAAAAGTTCAAGGGCAT
CAAGACGTACATTTTCGTACCGGGTCACGCCGAGCCACACGGGGCATCCCG
TCTACAGGCGCTACAAACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACCTGTGATCTCCGTGCCTCACCTGCCCGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGGCGACTGATACTGT
GGATGAACCATATGACCAGTCACCCGGTCTCTCCAGTACGAAGGCTTC
GAGCACTTTCTGATGTGTGCTGACGACAAGCAGTGGAAGCTAGGCAAGAG
GCGGGCAGAGAAGGACGAGATGGTGGGGGCCATTTTCATGCTGACCCTCC
AGATCCCTAACGAGCACCAAGACCTTCAGGATGTTGAGGAGCGGATTGAC
TCCTTCAAGTCCTTCGCTAAGAAAATGGATGACAGCGTGATGCAGCTCAC
ACATGTTGCCTCGGAGCTGGTGCGCAAGCACCTGGGCGGGTTCAGGAAG
AGTTCAGCGGCTGGGAAACGCCTTCCAGTCTATCAGCCAGGCGTTCATG
CTGGACCCACCCACAGCTCCGAGACCCTAACAGNNNNNNNNNNNNNNN-
NN
NN
NN
NN
NNNNNNCTTCTGTGTCAGTG
TCACGCGCTATCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTG
ACCTTCTGGACCTGTCTAGCTGTCATCTGCATGGTGTGGACGTTGTCAGT
GGCTATGGCGTTCCCGCCAGTGCTAGACGTAGGGACGTA CTCTTTTATCC
GGGAGGAGGACCAGTGCACATTCCAGCACCGTTCTTCAGGGCGAATGAT
TCGCTGGGCTTCATGCTCCTGCTGGCGCTCATCTCCTGGCCACACAGCT
GGTTACCTCAAGCTCATCTTCTTCGTCACGACCCTCGAAAAATGAAGC
CTGTCCAGTTCGTGCCTGCCGTAGCCAGA ACTGGACCTTCATGGACCA
GGCGCCAGCGGGCAGGCGGACCAACTGACTGGCAGGATTCGGTCGACG
CCCCACCCCGCCTACTCTGCTGGGCATCCGGCATAACAGCAACGCACCAG
GTCGCAAGCATCTACTGGTATTGGATGAGTTCAAAACAAAGAACAGGATT
AGTACGATGTTCTACATCATGACTTTTTCTTCTCCTGGCACTGTGGGGGCC
CTACCTGGTCGCCTGCTACTGGCGGTGTTTCGACGGGGCCCCCGTGACCG
CTGGGGGCTACCTGACGTCAGCCGTGGATGAGCTTTGCCAGGCTGGG
GTCAATCCTTTTTCATCTGCATCTTCTCCAGC NNNNNNGCCAAATCTCGCTTTCACCC
TGGCATGGGGACTGGTCCGTCAGCGGAGC---GCAGCGTCCCCTCGGCA
ACAGCTTGCTATCCCCGACGAAACCGAGGAGCCCACTGTTGCCACCCCC
CCGCAGCGATGGTTTGTACCC---CTGCCAACACCGACTGGACTTTGC
TGCTCGGCATAACGACGCGCT-----GATTCGCCGGTAACGCGG
CCACCTTGCTGTCTTACGCAGCGGCGGAGTGAAAGCTC-----TTCCC
CTGCCGACTGCAGGCTGCTCCAACCGGCCTTGGCTATTACGCAGACCC
GTCAG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGGTGTGA
ACAGCAAACCCAGCTCGGTCTTTTCTGCTGGCCCTCTAACTCTATCGGA
GGCAGAGCGGGCA---CC---AACTACCTGG-----CCGAGGA---

GGAGAACGGCGTCTCCAAGGACGTGTGGGTGTACGACACGGTGCACGAGG
AGTGGTCCAAGGCGGCCCATGCTCATCGCCAGGTTCCGGCCACGGCTCG
GCCGAGCTGAAGCACTGCCTCTACGCGGTGGGCGGCCACACCGCCGCCAC
GGGCTGCCTCCCGCGTGCCTCTCGGGATGAATACATTGTGGTGTTCAGT
CGTTCAACAACAAGGCTGATTCTCAATGAAGCGGAGCTAATTATGGCACT
CGCACAAAGAGTTCAGATGAGAGTGGTCACCGTCTCCCTGGAGGAACAAC
CTTTTGCCAGTATCGTGCAGGTGATTAGCGGAGCCAGCATGTTGGTAAGC
ATGCATGGAGCTCAGCTGGTGCATCACTCTTCTTGCCAGAGGAGCAGC
CGTGGTGGAGCTCTTCCCTTATGCTGTGAACCCAGAGCAGTACACGCCAT
ATAGAACACTGGCCTCCCTACCAGGCATGGACCTTCAGTATGTTTCATGG
AGGAACACTATGGAGGAGAACACCGTCACCCACCCAGACAGACCTTGGGA
CCAAGGAGGCATTGCCCACTTGGAAAAGGAGGAACAAGAGCGGATACTGT
CCAGTAAGGATGTCCCCAGGCATTTATGTTGCCGCAACCCAGAGTGGCTT
TTCCGAATCTATCAGGACACTTTGGTAGACATCCCTTCAATCCTAGAGGT
CCTGAA---AGAGGGCCTGAAG---ACGAGGCCTAGCTTAAAGAA---AG
CCAGGCCGTCTAGCACCGTTCATCCTGGACGGGTGAGGGAAGTTCAGTGT
CAGACGTCCGTCCAAGCTGCTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTCAAATACCTGAAGGTGAGAGAAGTGAAGTACNNNNNNNNNNNNNNNAAGA
AGGACACCAGCAAGGGAACCTCTAGAGGATCAAATCATCCAGGCCAACCCG
GCACTGGAGGCCTTCGGCAATGCCAAGACCGCCAGGAATGACAACCTCCTC
CCGTTTTGGAAAATTCATTCGGATCCACTTTGGAACAAGCGGGAAGCTGT
CATCTGCTGACATTGAAACATATCTTCTGAAAAGTCCCGGGTACCTTT
CAGCTCAAGGCTGAGAGGAATTACCACATCTTCTTCCAGATCCTGTCCAA
TCAGAAACCAGAGCTCCTGGAGATGCTGCTGATCACCAATAACCCGTACG
ACTACTCCTACATTTCCAGGGAGAAGTGGCCGTCTCTCAATCAACGAT
TCAGAGGAGCTGATGGCCACAGACAGCGCCTTCGACGTGCTTGGGTTCAC
CGCAGAGGAGAAGATGGGCGTGTACAAGCTGACAGGCGCCATCATGCACT
ATGGCAACATGAAGTTTAAACAACAAACAGCGGAGGAGCAGGCGGAGCCG
GACGGCACCCGAGGCAGCGACAAGTCGGCATACTCATGGGTCTGAACTC
TGCGGACCTCATCAAAGGCCTGTGCCATCCAGGGTCAAGGTGGGAAATG
AGTATGTCACCAAAGGACAGGGTGTAGACCAAGTCTACTACNCCAACAAGG
AGGCCTTCAAGTGCAGAGTGTGGCAAGCACTACAACACCAAGCTGGGA
TACAAGCGCCATGTGGCCATGCACTCCGCCACGGCAGGGGACCTCACCTG
TAAGGTGTGCATGCAGAGCTACGAGAGCACCCCCGTTCTCCTGGAGCACC
TCAAGAGCCACTCGGGCAAGTCCCTCAGGCGGCCAAGGAGAAGAAGCAC
CCGTGCGACCACTGCGACCGCCGCTTCTACACCCGCAAGGACGTCCGGCG
GCACATGGTGGTGCACACCGGCCGAAAAGACTTCTGTGTGTCAGTACTGCG
CCCAGCGCTTTGGCAGGAAGGACCACCTGACGCGCCACGTGAAGAAGAGC
CACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCCCAGACATGCTGGG
CCTGCTGGGCTCTGGCTCCCCCGTGTCTCCGTCAAGGAGGAGCTGAGTC
CCATGATGTGCAGCATGGCCCCCAATAAAGACCCAATGATGGGCAAGCCC
TTCCCAGCGGGACCCCCCTTCCCCTGAGGATGTACAACCCCCAC-----
-----CTCCAGGCCATATCCAGCTCAGGGGTGGCCACCCT-----CACC
CCTCCCTGATGCCTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTATCTCATCTATGC
TTCTTCTCATTTCATGGGATGT
TTACAAATCAGCGACGGATCGAACATTTGTGAATTTGCTGGCCAGTAACTC
TCCAAGCGTTTCTACGCTCTGACCCAGCAGAAGTACTTCAGCAACTACA
GTCCGGTGATCGGGTCTACATTTACGAACCCATYGAGTACTGGAACCTC
ACAGTGCAGGAGCACTTGAAGACGCTGAGTACGGCTTCAACAAAATCTC
CTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGAGTGCCT
CGACGAAGAACGACTTCATCAACGTAATCAAGGGCTCCTTCTGCGCAGT
CCGGAGTACCAGCACTTCACAGAGGACATCATCTTCTCCAAGA---ACCG
CGAAAGCG-----ACGAGTACGACATCATCGCCTCGCGGATGTATCTGG

CTTCTGGCTTCTTCCCCCTCTTTCCTCCTCTTGCTTGCCTCTTCTGGGG
TTGAAGCAGGGGCTGGAACAGGGTGAACGGTATAACCCCCACTGGCGGGC
AACCTAGCGCACGCTGGCGCCTCTGTGGATCTCACTATTTTTTCTTCA
CTTAGCCGGCATTCTTCTATTCTAGGGGCCATTAACCTTATCACGACCA
TTATTAACATGAAACCCCCGCAATTTCAGTACCAGACACCCCTATTT
GTGTGGGCCGTGCTAATTACAGCCGTGCTCCTGCTCTTGTCCCTCCCAGT
TCTTGCTGCCGGAATCACTATGCTACTTACGGACCGAAACCTAAATACGA
CTTTCTTTGACCCTG-----

NNNGGCTCATCCTCAACGAGGCCGAGGTGAT

CCTGGCGCTGGCCCAGGAGTTCCAGATGCGGGTGGTGACGGTGTCCCTGG
AGGACCAGTCTTCCCCGGCATCGTCCAGGTCTCAGCCAAGCTTCCATG
CTGGTGAGCATGCACGGCGCCAGCTCATCACCTCCCTCTTCTCCCCCG
CGGGGCCGTGGTGGTGGAGCTCTTCCCTTACGCCGTCAACCCGGAGCAGT
ACACGCCTTACAAGACCCTGGCCTCCCTGCCAGGCATGGACCTTCACTAC
GCCGCTGGAGAAACACCATGAAGGAGAACACGGTGGCCCACCCGGAGCG
ACCCTGGGATCAGGGCGGCATCGCTCACCTGGAGAAGGAGGAGCAGGAGC
GCATCTAGCCAGCGAGGACGTCCCAGGCACCTGTGCTGCCGCAACCCC
GAGTGGCTGTTCCGCATCTACCAGGACACCAGGGTGGACATTCCGTCCCT
CCTGGAGCTCCTCCG---GGAGAACCTGAAG---ACCCGGCCAGTCTGA
AGAA---GGCGCGSCCGTACGACCCGTCCACCCGGGACGGGTCCGCGAG
GCCAGTGCCTGACGTCCGTCCAGGCCGGAATGAGGCCAAGCTGACGGT
GTCGTGGCAGATCCCCTGGAACCTGAAGTACCTGAAGGTCCGGGAGGTGA
NNNNNNNNNNNNNNNNNNNNAAGAAGGATACAAGCAAGGGGACCCTGGAGGATCAAATCATTCAGGCAA
TCCTGCACTGGAGGCTTTTGGGAATGCCAAAACGTTGAGAAACGACA
CTTCCCCTTTTGGTAAATTCATCCGAATTCACCTTGGAACTGGAAAA
TTATCTCTGCTGACATAGAGACTTACCTTCTTGAGAAATCGCGTGTAC
CTTTCAGCTAAAGTCAGAGAGGAACTACCATATCTTTTCCAGATCTTGT
CCAATCAAAGCCAGAGCTGTTGGACATGCTGCTAATCACCACCAATCCC
TATGACTACTCCTACATCTCCCAGGGAGAGGTGACCGTCGCGTCAATTA
TGATTCCGAAGAGTTGATGGCCACTGACAGTGCCCTTGATGTGCTAGGCT
TTACTCAGGAAGAAAAAATGGGTGCTACAAGTTGACAGGTGCCATCATG
CACTACGGCAACATGAGGTTCAAGCAAAAGCAGCGAGAGGAGCAGGCCGA

GCCAGATGGTACAGAAGCTGCTGACAAATCAGCTTACTTGATGGGCCTCA
ACTCTGCAGACCTTATTAAGGGCTTTGTACCCCCAGAGTGAAAGTAGGC
AATGAGTATGTTACCAAAGGGCAAGGTGTAGATCAAGTCTACTAC-----

-----GGCTACCACACCTTCGAGTGGCAGC
CGGCCCTGAAGAACGTGTCCCAGCACTGCCAGGKGGGCATCATCGACGGC
CTCTCTGGCTGGGCGGCCTCCGTGGACGACACCCCGGCGGACACCATCAC
CCGCCGTTCCGCTAYGACGTGGCACTGGCCTCCGCCCTGATGGACCTGG
AGGAGGACATCCTGGAGGGCCTGAGGGAGCGCGCCTGGAGGACAGCGCC
-----GCGGGCTTCAACGTCATGGTCAAGGAGTCCTGCGACGGCATGGG
GGACGTGAGCGAGAAGCACGGCGGGCGGCCATCCCCGAGAAAGCCG
TGCCTTCTCCTTACCCTCATGTCCGTCTCCGTCCGGGCCGAGGGCGG
GGC-----GAGGCCGTGACGGTGT
CCGGGAGGCCAAGCCCAACTCGGAGCTCTCCTGCAGGCCCTGAGTCTGA
TGTTTCGTGGACGAGTCGGACCACGAGACGCTCACCGCCATCCTGGGGCCG
GTGGTGGGCGAGCGGGACGCCATGAAGCAGAGCCGGCTCCTCCTGACGCT
GGGGGGCCTCCAGCGCTCCTTCCGCTTTCACTTCCGGGGCACCGGTTACG
ACGAGAAGATGGTGC GCGAGCTGGAGGGCCTGGAGGCCTCGGGCTCCACC
TACGCTGCACCCTGTGCGACTCCACGCGGGCCGAGGCCTCGTCCAACAT
GGTGTCTCACTCCATCACCCGCAGCCACGACGAGAACCTGGAGCGCTACG
AGGTGTGGCGGACCAACCCGTTCTCCGAGTCGGCCGAGGAGCTGCGGGAC
CGGGTGAAGGGGCTCCGCCAAGCCCTTCTGGAGACCCAGCCACCCT
GGACCGCTGCACTGCGACATCGGCAACGCCACCGAGTTCTACAAGATCT
TCCAGGACGAGATCGGGGAGGTGTTCCGGAAGGC---CAAC---CCGAGT
CGGCAGGAGAGGCGCGGCTGGCGGGCGGCCCTGGACAAACAGCTCCGGAA
GAAGCTGAAGCTGAAGCCAGTCATGCGCATGAAACGGGAACTACGCCCGGC
GCCTGATGACCCAGGAGGCAGTGGAGGTGGTGTGCGAGCTGGTGCCCTCC

GAGGAGAGGCGACGGGCCCTCAGTGAGCTGATGGGCCTCTACATCCAGAT
GAAGCCGGTGTGGCGCGCCTCCTGCCCGGCAARGAGTGCCCCGACCAGC
TGTGCCGCTACAGCTTCAACTCCCAGCGCTTCGCCGAGCTCCTCTCCACC
ACCTTCAAGTACAGGTACGACGGCAAGATCACCAACTACCTCCACAAGAC
GCTGGCCACGTCGCCGAGATCATAGAGAGGGACGGGTCCATTGGAGCGT
GGGCCAGCGAGGGCAATGAGTCGGGTAACAAG-----

-----GCCAAATCTCGATTTCACCCTGGCGT
AGGGACTGGTCCTGGCACAGACC--GCAGCGTCCCACCTTAGCAACAGCT
TGCTATCTCCGCAACAAACCGAAGAGCCCACAGTTG--CTTCCCACAG
CGTTGGTTTGTACACC--CTGCCAATAACCGACTGGACTTTGCCGCCTC
GGCATAACGATGCCGCTGCTGCTGCTGATTTTGCCGGTAACGCAGCCACCT
TGCTATCCTACGCAGCGGCTGGAGTAAAGGCAT-----TGCCCCTGCCC
ACAGCAGGTTGCTCAAACAGGCCACTTGGTTATTATGCCGATCCATCAG-
--GGTGG--GGCGCCCCGACTCCACCCCAATACTGT-----AGTA
AATCTAGTTCAGTACTCTCTTGCTGGCCTAGTAATTCGGTTGGTGGCAGA
ACAATA-----ACTACCTTA-----CGGAGGA--TGTA--
-GACGC--CCTCCCCACAGAGAGGTCGCC--AT--TGGCGGCTCCG
AGGAA--ACAAAACCTAAAGACTT-----GTCAGA--ATCAAGCTGG
ATAGAG--ACACCATCTTCAATAAAGTCAATTGATTCAAGTGATTCTGG
AATCTTTG--AGCAAGCCAAACGGAGAAGAATTCACCCTGCTGCCACTC

TGGCTGCCTCCCAGCCTCTCCATCTGGATGAATACATTGTTGTGTTTAGT
CGTTCAACAACAAGGCTGATACTGAATGAAGCAGAGTTAATCATGGCACT
GGCCAGGAGTTCCAGATGAGAGTGGTCACAGTATCGCTGGAGGAACAGT
CTTTCCCCAGTATCGTCCAGGTGATCAGCAGGGCTACCATGCTAGTCAGT
ATGCATGGAGCTCAGTTGATCACCTCACTGTTCCCTCCCAGAGGAGCTGT
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAACAGTACACCCCGT
ATAAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTTCATTATATCTCCTGG
AGGAACACGAAGGAGGAGAACCATCACCCACCCAGACAGACCCTGGGA
ACAAGGGGGCATCGTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGT
CGAGCAAAGATGTCCAAGGCACCTCTGCTGCCGAACCCTGAGTGGCTC
TTCCGGATCTACCAGGACACCTTGGTGGACATCCCCTTTTCTGGAAGT
CCTGAA--AGAGGGCATGAAG---ACAAAGCCAGCTTTAAGAA---GT
CAAAGCCGGCCAGTACAGTCCATCCAGGCCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACACTAATGAAGCTAAACTCACAGTATCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAGNNNNNNNNNNNNNNNNNNNNAAAAAAG
ACACCAGCAAGGGGACACTGGAGGATCAAATCATCCAGGCCAACCCGGCG
CTGGAGGCATTCGGCAATGCCAAAACACTGAGAAAACGACAACTCGTCTCG
TTTTTGGAAAATTTCATCCGAATTCACCTTTGGTACGAGCGGAAAGCTGTCGT
CTGCTGACATCGAGACGTACCTGCTGGAGAAGTACGCGTCACCTTTCAG
CTCAAAGCTGAAAAGAACTACCACATCTTCTACCAGATCCTGTCCAATCA
GAAGCCGGAGCTGCTGGACATGCTGCTCATTACCAACAACCCATACGACT
ACTCCTACATCTCCCAAGGAGAGGTGACGGTCGCCCTCCATCAATGACTCC
GAGGAGCTGATGGCCACCGACAGCGCCTTTTGTGCTCGGCTTCACTCC
AGATGAGAAGATGGGCGTCTATAAATTGACGGGCGCCATCATGCACTATG
GCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGCTGAGCCGGAC
GGCACGGAGGCTGCCGATAAATCTGCTTATCTAATGGGGCTGAACTCTGC
TGACCTCATCAAAGGCTGTGCCATCCAGAGTCAAGGTAGGAAATGAAT
ACGTGACAAAAGGCCAAAGTGNNGATCAGGTCTACTACCCAACAAGGAGG
CCTTCAAGTGTGAAGAGTGTGGGAAGCACTACAACACCAAGCTGGGATAT
AAGCGCCATGTAGCCATGCACTCTGCAACGGCAGGGGATCTCACCTGTAA
AGTGTGCATGCAGACCTACGAGAGCACGCCTGTGCTGTTGGAGCACCTCA
AGAGCCACTCTGGGAAGTCTTTCAGGTGGCACCAAGGAGAAGAAACACCCA
TGTGACCACTGTGACCGTCGTTTCTACACACGAAAGGATGTGAGACGGCA
CATGGTGGTCCACACGGGCCGAAAGGACTTCCTGTGCCAGTACTGTGCC
AACGCTTCGGCAGGAAGGACCATCTGACACGCCATGTGAAGAAGAGCCAC
TCACAGGAGCTGCTAAAGATCAAGACGGAGCCTCCTGATATGTTAGGTCT
TTTAGCTTCCGGGTCACCACCCTGCTCTGTGAAGGAGGAGCTCAGCCCCA
TGATGTGCGGTATGGGTCCCAACAAAGACCCCATGATGGGAAAACCATTT
CCCAGTGGGGCCCCCTTTTCCAATGGGCATGTACAACCCCCACCAT-----
-CTCCAGGCCATGTCCAATTCTGGGGTGGGTCAACCA-----CACCTT
CCCTGATGCCAGTTCCTTGTCTGCAGCTATGGGTATGGGCTGTCACATG
GAATATCTCATCTACGCCTCTTTTTTCATTCATGGGATGTTTACAAATTAG
TGAYGGATCAAATATYGTGAATCTGCTGGCTAGTAACTCTCCGAGTGTTT
CCTATGCTCTGACCCAGCAAAAATACTTCAAGTAACTACAGTCCCCTGATT
GGGTTTTACATTTATGAGCCCATCGAGTACTGGAACCTAACGGTGCAGGA
GCACNNAAGACTNTGAGTCAATGGCTTCAACAAGATCTCCTGGATGGACAACCTT
TTTCCACTATTTGCGGGTGGTGAATGTGAGTGGTCAACCAAGGGTGACT
TCATCACCATCCTCAAGGGCTCTTTCCTGCGCAGCCCGGAGTACCAGCAC
TTCACTGAGGACATCATATTCTCCAAGA---ACCGTGAGACTG-----A
TGAGTATGACATTATCGCCTCACGGATGTACTTAGTGGCACGGACGACAG
AGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTAGAAAAGCTTCGTCCGTTG
ATGCTAATCAACAGCATCAAATTCATTGCCTTCAATCCTACGTTTGTGTT
CATGGACCGCTACAGCTCTTCTGTCTCCTCNCCATCCTGACCTCAGGATT

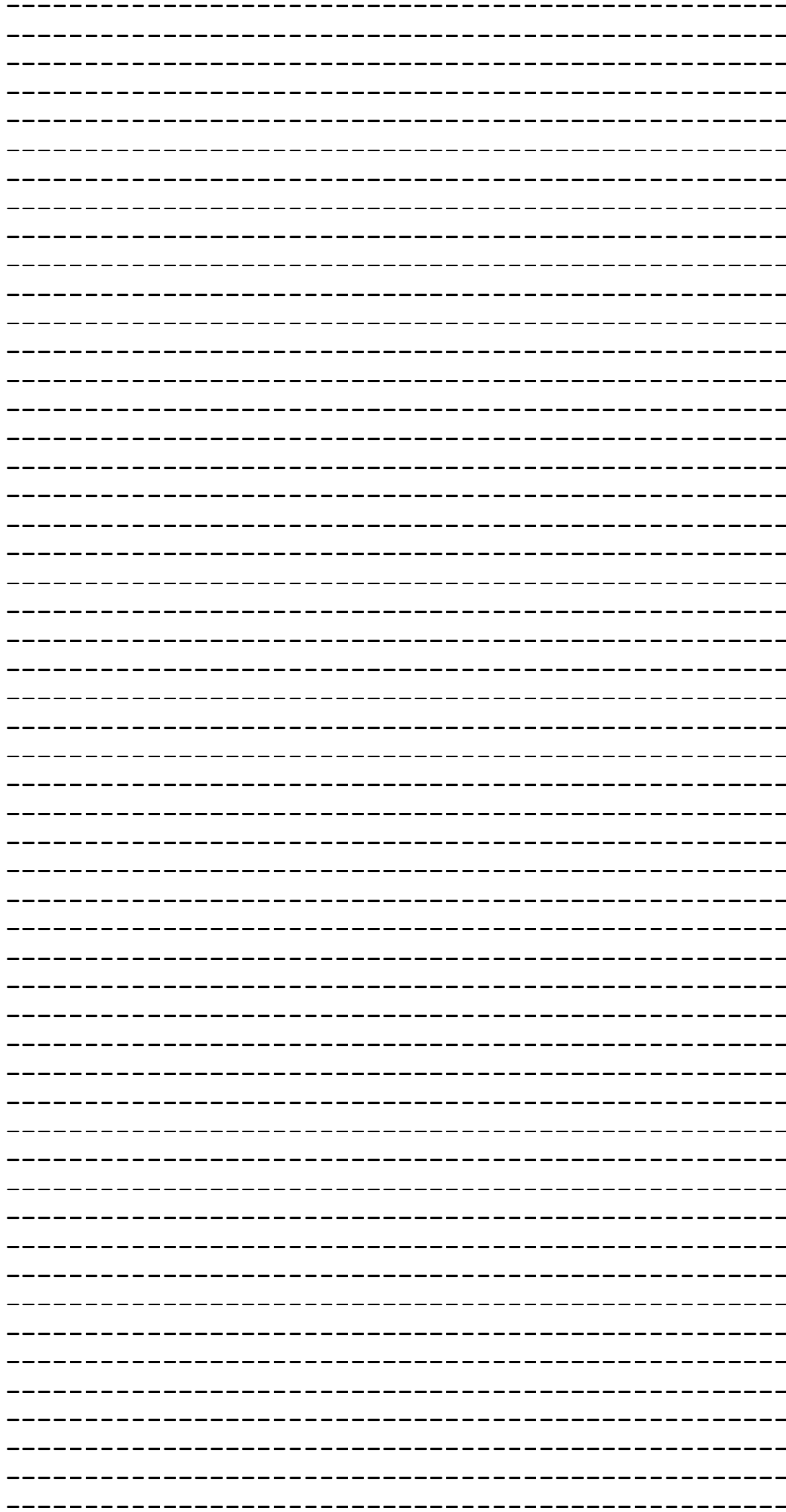
CAGCGTACTCACAATCCTCATCCTCACTTTCTTCTTGGTCATCAACCCCT
TGGGTAACCTTCTGGCTCATTCTCACTGTAACGTCCGTGGAGCTGGGCGTC
TTGGGTTNNNNNNNNNNNNNNNNNNNNNNNTGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAATG
TTG
GCATTATTAATGGGCTCGCTGGATGGGCTTCTCAGTGGATGATTCCCCA
GCTGACACCATCACTCGGCGGTTTCGCTATGATGTGGCACTTGTGTCAGC
TTTAAAGGACCTGGAGGAGGACATCATGGAGGGCTGAAAGAGAGTGGGA
TGGAAGACAGTGCTTGCACCTCAGGCTTCAAGTGCATGATCAAAGAATCT
TGTGATGGCATGGGCGATGTCAAGTGAAGACCGTGGAGGACCAGTTGT
TCCCGAGAAGGCTGTACGTTTCTCTTCACTATTATGTCTGTCTCTGTCC
TAGCAGACGAGGAGGAG-----GAA
GAGGTTACCATCTTACAGAGCCAAAGCCAAACTCAGAACTCTCCTGTAA
GCCCCTTTGCCTGACATTTGTAGATGAGTCAGACCATGAGACACTCACAG
CCATCCTGTGGCCTATCGTTGCAGAGCGTAACGCAATGAAAGAGAGTAGG
CTTATCCTACCCATAGGTGGACTACCTCGCTCTTCCGCTTTCCTTTCAG
AGGCACAGGATATGATGAGAAGATGGTACGTGAGATGGAGGGCCTCGAAG
CCTCAGGGTCCACCTACATCTGCACTCTTTCGACTCCAGTCGGGCAGAG
GCCTCTCAAAATATGGTGTACTACTCCGTCACCCGCAGTCATGAAGAGAA
CTTAGAACGTTATGAAATATGGCGAACCAACCCCTTTTCTGAGTCTGTAG
AGGAGCTGCGAGAGAGAGTCAAAGGGGTTTCTGCCAAGCCTTTCATGGAA
ACACACCCACACTGGATGCATTACACTGTGACATAGGCAATGCCACTGA
GTTCTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTATGAAAAGGT--
-CAAC--CCAGCCGGGAGGAGCGACGCAGTTGGAGGGCAGCCCTAGAT
AAACAGCTGAGAAACAAGATGAAGCTTAAACCGGTAATGAGGATGAATGG
GAACTACGCCCGCCGGCTAATGACCATGGAGGCTGTGGAGATAGTGTGTG
AGCTCGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGG
CTCTACTTGCAGATGAAGCCTGTGTGGCGGCCACCTGCCAGCCAAGGA
GTGCCCTGACCAGCTGTGCCGCTACAGTTTTAACTCCAGCGCTTTGCCG
ACCTCCTCTCCTCTGCCTTTAAATATAGGTACAATGAAAGATAACCAAT
TACCTGCACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGG
ATCTATAGGAGCCTGGGCCAGCGAGGGGAATGAGTCTGCAAACAAATCGT
ACACCATTGAGATGGTCCCATGGGGCCAGGTGGAAGGAGAGCCCAAA
CCTTCTCCTGCTCCATCGAAGACCCAACGAAACAGACAAAGTTCAAGGG
CATCAAGACGTACATATCGTACCGGTCACACCAAGCCACACAGCGCATC
CTGTCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTG
CACAAGTTCACTGTGATCTCTGTGCCACCTGCCTGAGAAGCAGGCCAC
GGGGCGATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGACGACTTATAC
TGTGGATGAACCACATGACCAGTCACCCGGTCTCTCCAGTATGAAGGC
TTCGAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAAACTGGGCAA
GAGACGGGCRGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCC
TGCAGATCCCTAACGAGCACCAGGACCTTCAAGATGTAGAGGAGCGGATC
GACTCCTTCAAGTCTTTGCTAAGAAGATGGATGACAGCGTGTATGCAGCT
CACACATGTTGCCTCAGAGCTTGTGCGTAAGCACCTGGGTGGGTTTCAGGA
AGGAGTTCCAGCGCTGGGGAATGCCCTCCAGTCTGTAAGCCAGGCGTTC
ATGCTGGACCCACCCACAGCTCAGAGACCTTCAACAACGCCATCTCCCA
TNNNNNNNNNNNNNNNNCTCAAACCTGACCTCTCTGGGTTTCATCATTTGGAGTCGGTGTGGTTGGAA
ACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACAGAGCA
CCCTACTATTTCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCAGC
CATCTGCTTCCCTTTGTCTTACCTCGGTCAARAATGGATCTGCCCTGGA
CCTATGGCACGCTGACCTGCAAAGTGTATCGCCTTCTCGGTGTGCTCTCC
TGTTTCCACACAGCGTTTATGCTCTTCTGTGTCAAGTGTACACGCTACCT
GGCCATCGCACATCATCGTTTCTACACCAAGAGGCTGACCTTCTGGACCT
GTCTAGCTGTATCTGCATGGTGTGGACGTTGTCAAGTAGCTATGGCATTC

CCGCCGGTGCTGGACGTAGGGACGTACTCTTTTATCCGGGAGGAGGACCA
GTGCACATTCCAGCACCGTTCCCTCAGGGCGAATGATTCGCTGGGCTTCA
TGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAG
CTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCCTGTCCAGTTCGT
GCCTGCTGTAGCCAGA ACTGGACCTTTCACGGGCCAGGGCCAGCGGGC
AGGGCGCGGCCAACTGGCTGGCTGGATTTGGTCGAGGCCCCACCCCGCCT
ACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCAGGCCGCAGGCGTCT
ACTGGTGTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTCT
ACATCATGACGTTTTTCTTCCCTGGCACTCTGGGGGCCATATCTGGTCGCC
TGCTACTGGCGGGTGTGTTGCAAGGGGCCCGTTGGTCCCTGGGGGCTACCT
GACGGCAGCCGTGTGGATGAACTTTGCCAGGCTGGGGTCAATCCTTTCA
TCTNNNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCATGGGGACTGGTCCTGGCACGGA
GC---GCAGCGTCCCACCTCGGCAACAGCTTGCTATCCCCGCAGCAAACCG
AGGAGCCCCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CT
GCCAACAAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT-----
----GATTTCCGCCGTAACGCGGCCACCTTGCTGTCTTACGCAGCGGCCG
GAGTGAAGGCTC-----TTCCCTGCCGACTGCAGGCTGCTCCAACCGG
CCTCTTGGCTATTACGCAGACCCGTCAG---GCTGG---GGAGGACGCAC
GCCGCCGCAGTACTGTGGTGTAAATAGCAAACCCAGCTCGGTCTTTTCT
GCTGGCCACTA ACTCTATCGGTGGCAGAGCTAGTA---CC---A ACTAC
CTGG-----CCGAGGA---GGGA---GACTC---CATCCCGACAGA
GAGATCACCG---AT---CGGCGGCACAGAGGAG---ACCAAACCCAAAG
ACATGAC---ATCAGA---GTGCAACTGGATAGAG---ACGCCGTCCTCC
ATTAAGTCCATTGATTCAAGCGATTCTGGTATCTTTG---AACAGGCCAA
AAGGAGAAGGATCTCACCTTCTGCCACGCCG-----GTGTCAGAGA
CAGTGTCCCCGTTAAAATNNNNNCATCACTCAACAGGCGAAGTCACAGAGAGAGA
AGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAAA
TAAACCACAGCTCCCATGATATTGGCTCCGG---ACAAACGGCGTTTTCC
TCCCAGGCG---CCCGGCTAC---GCGGCAGCCGCCCTGGGA---CACCA
TCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTT
TCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGATTTCGGGGACGCC
ACCGG-----CGCGCAGCACAGTTTGTTCGCCTC-----
CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATGCAGCGG
GGCACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCGGCGAGCCATGCG
TCTTCCAATGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACAT
GTACGGACGGGCGYACCAGTACGGCCACGTTACAAGCCCGCGGT---CCG
ACCCTATGCTTCGACCCAGCTGCACGGCTACGGCCCCATGAACATGAAT
ATGGCCGCA---CATCATGGAGCAGGGGCCCTTCTTTCGATACATGAGGCA
GCCGATCAAACAAGAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGCTGA
CGAATCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTC
GTGACCCATCTGACGGTGGAGCATGTGGGAGGACCGGAGCAAACGAACCA
CATCTGCTTCTGGGAGGAATGCGCCAGAGAAGGAAAGCCATTCAAAGCCA
AATACAACTTGTAATCATATCAGAGTACACACCCGGAGAAAAGCCGTTT
CCGTGTCCGTTCCCGGGCTGTGGCAAA

>Apogon lateralis

GTGGGAAGCACTACAACACCAAGCTGGGATATAAGCGCCATGTGGCCATG
CACTCTGCCACTGCAGGGGATCTCACTTGTAAAGTGTGCATGCAGAGCTA
CGAGAGCACACCTGTGCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAAT
CCTCAGGTGGCGCCAAGGAGAAAAAACCCCATGTGACCACTGTGACCGC
CGATTCTACACGAGGAAGGATGTGAGGCGGCACATGGTGGTCCACACGGG
CAGGAAGGACTTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGG
ACCACCTGACACGCCACGTAAAGAAGAGCCACTCACAGGAGCTGCTGAAG
ATCAAAACAGAGCCTCCAGATATGTTAGGTCTATTAGCGTCTGGGTACC
TCCTTGCTCTGTGAAGGAGGAGCTTAGTCCCATGATGTGTGGCATGGGT
CCAACAAGACCCTATAATGGGAAAACCGTTCCCCAGTGGAGCCCCCTTT
CCTATGGGCATGTACAACCCCCACCAT-----ATCCAGGCCATGTCTAA
TTCTGGTGTGGGTACCCA-----CACCTTCCCATAATGCCAGTTCCT
TGCTGTCAGCTATGGGCATGGGTGTGCATGTGGATNNNNNNNNNNNTGCATCTTTTTTCATT
CATGGGATGTTTACAAATTAGTGATGGATCCAATATTGTGAACCTGCTTG
CTAGTAACTCTCCGAGTGTTCATATGCTCTGACCCAACAGAAATACTTC
AGTAACTACAGTCCCTGTGATTGGGTTTTATATTTATGAACCCATCGAATA
CTGGAACCTCAACAGTGAAGAGCACCTAAAGACACTGAGTCATGGTTTCA
ACAAGATCTCCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAAT
GTGAGCGCATCAACCAAAAGCGACTTCATCACTATCCTCAAGGGCTCCTT
TCTGCGCAGCCAGGAGTACCAGCACTTCACTGAGGACATCATATTTCTCCA
AGA---ACCGTGAGACCA-----ACGAGTATGACATTATTGCCCTCACGC
ATGTACTTAGTGGCCCGAACCACCGAGAAGAAGCGTGAGGAGGTTGTGGA
GCTTTTGGAAAAGCTTCGCCCATTGATGTTGATCAACAGCATCAAGTTCA
TTGCCTTCAATCCCAGTTTTGTGTTTCATGGACCGCTACAGTTCCCTGTGC
ATCTCTCCCATTCTGACCTCAGGCTTCAGTGTGCTCACCATCCTCATCCT
CACTTCTTCTCGGTTCATCAACCCCCCTGGGAAACTTCTGGCTCATCCTGA
CGGTAACATCCGTCGANNNNNNNNNNNNNNNNNNNNNNGGCTTTCACCAGTTTGAATGGCAGCCAGCTCT
CA
AGAATGTGTCTGCATCTTGCAATGTTGGCATTATTAATGGGCTTTCTGGA
TGGACTTCTACAGTGGACGAGTCCCCGGCTGACACAATCACACGGCGCTT
TCGCTATGATGTGGCAGTGGTATCAGCATTAAAGGATCTGGAGGAGGACA
TCATGGAAGGGCTGCAAGAGAGTGGGATGGAAGACAGTGCATGCACCTCG
GGCTTCAGTGTATGATCAAAGAAATCGTGTGATGGCATGGGTGATGTCAG
CGAGAAGCATGGCGCAGGACCTGTTGTTCCCGAGAAGGCTGTTTCGTTTCT
CTTTCACGATTATGTCTGTGTCTGTCAAGGCAGAAGGAGAGGAG-----
-----GAGGTTACCATCTTCACAGAGCC
GAAGCCAAACTCAGAACTGTCTTGTAAAGCCCCTCTGCCTCACATTTGTGG
ATGAATCAGACCACGAGACGCTCACAGCTGTCTTGGGGCCGATAGTTGCA
GAGCGCACTGCAATGAAAGAGAGCAGACTCATCGTATCCATAGGTGGCCT
CCCTCGATCCTTCCGCTTYCACTTCCGAGGCACAGGATATGATGAGAAGA
TGGTCCGTGAGATGGAGGGCCTTGAGGCTTCGGGTTCCTCTTACGTCTGC
ACGCTGTGTGACACCAGTCGAGCAGAGGCCTCTCAGAATATGGTGTGCA
CTCAGTCACCCGCAGTCATGATGAAAACCTAGAACGCTATGAAATTTGGA
GAACCAACCCTTTTTTCAGAGTCTGCAGATGAACTGAGAGACAGAGTCAA
GGGGTCTCCGCTAAACCTTTCATGGAGACCCAGCCTACAATAGATGCATT
GCACTGTGACATTGGTAATGCCATTGAGTTCTACAAAATCTTTCAGGATG
AAATAGGTGAGATGTATCAAAAGGT---CAAC---CCCAGCCGGGAGGAA
CGACGCAGCTGGAGGGCAGCTTTAGATAAACAGCTGAGGAAGAAGATGAA
GCTTAAACCAGTAATGAGGATGAATGGGAACTATGCCCGCAAGCTAATGA
CCCAGGAGACTGTGGAGGTGGTGTGTGAGTTGGTGCCCTCTGAGGAAAGG
AGGGAGGCCCTGAGGGAGCTGATGAGGCTCTACCTGCAGATGAAACCTGT
GTGGCGTGCCACCTGCCCTGCAAAAAGAAATGCCCTGACCAACTGTGCCGCT
ACAGCTACAACCTCCAGAGCTTTGCTGACCTTCTTTCCTCTACATTTCAA

TACAGGTACAATGGAAAGATAACCAACTACCTGCACAAGACCTTGGCTCA
CGTTCTGAAATCATAGAGAGAGATGGATCCATAGGAGCCTGGGCCAGTG
AGGGAAACGAGTCAGCAAACAAATCATATACTATAGACATGGGCCCTTG
GGACCCGGCTGGAAGGAGAGCCCACAGCCTTTCTGCTGCTCCATTGAAGA
CCCCACAAAACAACTAAGTTCAAAGGCATCAAGACGTACATTTTCGTACC
GTGTGACGCCGAGCCACACAGGGCGTCCCCTACAGACGCTACAAACAC
TTTGACTGGCTGTACAACCGCTGCTGCACAAATTTACTGTGATCTCTGT
TCCTCACCTGCCTGAGAAGCAGGCCACCGGGCGATTTGAGGAAGACTTCA
TTGAAAAGCGCAAAAAGACGACTGATACTATGGATGAACCACATGACCAGT
CACCCAGTACTCTCCAGTATGAAGGCTTTGAGCACTTTCTGATGTGTGC
TGACGACAAGCAATGGAAACTGGGCAAGAGACGAGCCGAGAAGGACGAGA
TGGTGGGCGCTCACTTCATGCTGACGCTTCAGATTCCGAACGAGCACCAG
GACCTTCAGGATGTAGAGGAGCGTGTGGACTCCTTCAAGTCCTTTGCTAA
GAAAATGGACGACAGTGTGATGCAGCTCACACATGTTGCATCAGAGCTGG
TGCGTAAACATTTGGGTGGATTACAGGAAGGAGTTCAGCGGCTGGGAAAT
GCCTTCCAGTCCATCAGCCAGGCCCTTATGCTTGACCCTCCTCATAGCTC
TGAGGCCCTCAACAACGCCATCTCCACNNNNNNNNNNNTTCCCAAACCTGACCTCTCTGG
GTTTCATCATTGGAGTCGGTGTGGTTGGGAACCTCCTGATCTCCATCCTG
CTGGTTAAAGACAAGAGCCTGCACAGAGCGCCCTACTATTTCCCTGCTGGA
CCTGTGCGCCTCTGATATCCTGCGTTCTGCCATCTGCTTCCCCTTTGTCT
TCACCTCRGTTAAGAATGGATCTGCCCTGGACCTACGGCACGCTGACCTGT
AAAGTGATTGCCTTCCCTGGGGGTGCTCTCCTGTTTCCATACGGCATTTCAT
GCTATTCTGTGTCAGTGTACCCGCTACCTGGCCATAGCACATCATCGTT
TCTACACCAAGAGGCTAACCTTCTGGACCTGTCTGGCTGTCTGTATG
GTCTGGACGTTGTCTGTTGCTATGGCATTCCCGCCGGTGTAGATGTAGG
GACGTACTCTTTTATACGGGAGGAGACCAATGCACATTCCAGCACCGCT
CCTTTAGGGCGAATGATTCGCTGGGCTTCATGCTCCTGCTGGCGCTTATC
CTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCACGA
TCGTCGAAAGATGAAACCAGTCCAGTTCGTGCCTGCAGTCAGCCAGA
GGACCTTCCACGGGCCAGGGCCAGCGGGCAGGCAGCGGCTAACTGGCTG
GCTGGATTTGGTTCGAGGCCCCACCCCGCTACTTTGCTGGGCATCAGGCA
GAACAGCAACCGCAGCGGGCCGAGGCGTCTACTGGTGTGGATGAGTTCA
AAACGGAGAAGAGAAATAGTAGGATGTTCTACATCATGACGTTTTTCTTC
CTGGCTCTGTGGGGGCCCTATCTGGTAGCCTGTTACTGGAGGGTGTTC
AAGGGGCCCGTTGTCCCTGGGGGCTACCTGACAGCGGCCGTGTGGATGA
GCTTTGCCCAGGCTGGGGTCAATCCTTTTCATCTGCNNNNNNNNNNNNNNNGCCAAATCTCGCTTT
CACCTGGCGTGGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCACT
CGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCCACTGTTGCCA
CCCCCCGACAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGT-----GATTTCCGCCGGTAA
CGCGGCCACCTTGCTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCAACCGGCTCTTGGCTATTACGCA
GACCCGTGAG---GCTGG---GGAGGACGCACGACGCCGAGTACTGTGG
CGTAAATACAAATCCAGCTCGGTCTTTTCGTGCTGGCCCCGCTAACTCTC
TCGGCGGACAGCAGGCC---CC---AACTACCTGG-----CCGAG
GA---GGGA---GACTC---GATCCCGACGGAGAGGTCACCG---AT---
CGGCGGCTCGGAGGAG---ACCAAACCCAAGGACAT-----GTCAGA--
-ATCCAGCTGGATAGAG---ACACCGTCTTCTATTAAGTCCATTGATTTCG
AGTGATTCTGGGATCTTTG---AACAGGCCAAAAGGAGAAGGATCTCACC
TTCTGCCACACCA-----GTTTCAGAGACAGTGTCCCCATTA
CGGAGNNNNNNNNNNNNNNNNNNNNNACAGAGAGAGAAGTGGCGTTGGGGATAAAATCCATTCCGGGATGG
G
ATGGGCGCCTTCAAATAAACCACAGCTCCACGATATTGGCTCCGG---



CCACATTCTTTGACCC-----

-----TTCTAGAGAGGAATCTTCACCCATCCAACCTGCCCTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCCGCTATTTGCAAGACCGAGGAT
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGGCTGGTTTATGAAGCTGCCCTCAACTGGA
TCAACTATGACCTGGAAAAGAGACACTGTAACCTTCCAGAGCTCCTGAGA
ACAGTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAATGTATC
TACAGAAGAGCTGATCAACGCACAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGGTGAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAAC
AGCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAAGCTGACATCCCTAGCCCAAGGAAAGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGCGGGA--GAGGCTC-
AGAGAATGGCGTTTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
ATTGGTCAAAGGCGGCACCAATGCTCATCGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACCGCAGCGAC
TGGCTGCCTCCCGCCTCTCCGTCTGGATGAATACATTGTTGTGTTTAGT
CGTTCAGCGACGAGGCTGATACTGAATGAAGCAGAGCTAATCATGGCGCT
GGCCAGGAGTTCAGATGAGAGTGGTACCGGTATCACTGGAGGAACAGT
CCTTACCAGCATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCCCTCTTCCCTCCCAGAGGAGCTGC
TGTGGTGGAGCTGTACCCTTTTGTCTGTTAACCCAGAGCAATACACCCAT
ATAAAACCTTGCCTCCCTTCCAGGTATGGACCTTCACTATATCTCCTGG
AGGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGG
CTAGCAAAGATGTCCCCAGGCACCTTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGCACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTAAAGAA---GT
CAAAGCCGGCCAGCACAGTCCATCCAGGCCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAGAGACACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCCGCCTGGAGGCCTTCGGCAACGCCAAAACACTGAG
AAACGACAACCTCGTCTCGTTTTGGTAAATTCATAAGAATTCACCTCGGTA
CGAGCGGCAAGCTGTCTGCTGCCGACATCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTGAAGGCTGAGAGGAACTACCACATATTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCAAGGAGAGGTAACAGTC
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACCGACAGCGCCTTCGA
TGTACTCGGCTTCACTGCAGACGAGAAGATGGGCGTCTATAAACTGACAG
GCGCCATCATGCACTACGGTAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCGGAGCCGGACGGGACGGAGGCTGCTGATAAATCGGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCACCCAGAG
TCAAGGTAGGAAACGAATACGTCAACAAAGGACAAAGTGTGGACCAAGTC
AACTACCCTAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CAGGGGATCTCACCTGTAAAGTTTGCATGCAGACCTATGAGAGCACACCT
GTACTCCTGGAGCACCTCAAGAGCCACTCTGGGAAGTCTTCTGGTGGCGC

CAAGGAGAAAAACACCCATGCGACCACTGTGATCGGCGTTTCTATACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACAGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACACG
TCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAAC
CTCCTGATATGTTAGGTCTTTTAGCCTCAGGGTCACCACCTTGCTCTGTG
AAGGAGGAGCTCAGTCCCATGATGTGCGGAATGGGTCCCAACAAAGACCC
AATGATGGGCAAACCATTTCCCAGTGGGGCCCTTTTTCGATGGGCATGT
ACAACCCCAACCAT-----CTGCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCCTTGCTGCAGCTAT
GGGCATAGGCTGTCACATGGAATATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAATCAGTGACGGATCAAATATTGTGAACCTGCTGGCA
AGTAACTCTCCAAGTGTTCCTTACGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGTCCCCTAATTGGTTTTTACATTTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCATTACCTGCGAGTGGTGAATGT
GAGTGCATCAACCAAAAAGCGACTTCATCACCATCCTGAAGGGCTCCTTCC
TGCGCAGCCAGAGTACCAGCACTTCACTGAGGACATCATATTTTCCAAA
A---ACCGTGAGACTG-----ATGAGTACGACATTATCGCCTCACGCAT
GTACTTGGTGGCAAGGACAACCGAGAAGAAGCGTGAAGAGGTGGTGGAGC
TTCTGGAAAAGCTTCGCCCGTTGATGCTGATTAACAGTATCAAGTTCATT
GCCTTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGAAACTTCTGGCTCATCCTCACG
GTAACCTCTGTGGAGCTGGGCGTCTTGGGTTTGATGNNCTTTCACCAGTTTG
AATGGCAGCCAGCTCTTAAGAATGTGTCTACATCGTGCAATGTTGGCATT
ATTAATGGGCTTTCTGGATGGGCTTCCCTCGGTGGATGACGCTCCAGCTGA
CACTATCACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCATTAA
AGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAA
GACAGTGCTTGCACCTCAGGCTTCAATGTGATGATCAAGGAATCTTGTGA
TGGCATGGGTGATGTCAGCGAGAAGCACGGTGGAGGACCAGTTGTTCCCTG
AGAAGCTGTACGTTACTCTTTTACTGTTATGAGTGTCTCTGTCTGCTGGAA
GACGGTGAGGAG-----GAAGAGGT
TACCATCTTACCCGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAGCCCC
TTTGCCTGACCTTTGTGGATGAGTCCGACCATGAGACACTCACAGCTGTC
CTGAGCCCTATAATTGCAGAACGTAAGGCAATGAAAGAGAGCAGGCTCAT
CCTGTCCATGGGTGGACTAGCTCGCTCCTTCCGCTTCCACTTCAGAGCCA
CAGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCTCA
GGGTCCACCTATATCTGCACTCTTTGTGACTCCAGTCCGGCAGAGGCCTC
TCAAAACATGGTGCTACACTCTGTCAACCCGACGTCATGAAGAGAACCCTAG
AACGCTATGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGCGGATGAG
CTGCGAGACAGAGTCAAAGGTGTCTCTGCCAAGCCCTTCATGGAGACCCA
GCCACACTGGATGCATTACACTGTGACATCGGAAATGCCACTGAGTTTT
ACAAAATCTTCCAGGACGAGATTGGGGAGGTGTACCAAAGGT---CAAC
---CCCAGCCGTGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACA
GCTGAGGAAGAAGATGAAGCTTAAACCGGTGATGAGGATGAATGGGAACT
ATGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGCGGTGTGTGAGCTG
GTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTGTGAGGCTCTA
CCTCCAGATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAAGAGTGCC
CTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGAGCTTTGCCGACCTC
CTCTCCTCTACTTTCAAATACAGGTACAATGGAAAAGATAACCAATTACCT
CCACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGGATCCA
TAGGAGCCTGGGCTAGCGAAGGGAACGAGTCAGCAAACAANTCATACACCA
TCGATATGGGTCCCTTGGGTCCCCGGTGGAAAGGAGAACCCACAGCCTTTT

TCCTGCTCCGTTGAAGACCCACAAAACAGACAAAAGTTCAAGGGCATCAA
GACTTACATTTTCGTACCGGGTGACGCCGAGCCACACAGGGGATCCCGTCT
ACAGGCGGTACAAACACTTTGACTGGCTATAACAACCGCTTACTGCACAAG
TTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCYACGGGGCG
ATTTGAGGAAGATTTTCATCGAGAAGCGTAAGAGACGACTGATTCTGTGGA
TGAACCACATGACCAGTCACCCAGTCCTCTCCCAGTATGAAGGCTTTGAG
CACTTTCTCATGTGTGCTGATGACAAGCAGTGGAAACTGGGCAAGAGACG
GGCGGAGAAGGACGAGATGGTGGGTGCCATTTTCATGCTGACCCCTCAGA
TCCCTAACGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGATCGACTCC
TTCAAGGCCTTTGCTAAGAAAATGGATGACAGCGTGATGCAGCTCACACA
TGTTGCCTCTGAGCTGGTGCCTAAGCACCTGGGTGGGTTCAGGAAGGAGT
TCCAGCGCCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCCTTCATGCTG
GACCCCTCCCCACAGTTCAGAAAACCTTCAACAACGCCATCTCCCATCCTCT
CGCCACGTTCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTAGGTG
TGGTTGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTG
CACCGAGCGCCCTACTACTTCTGTTGGACCTGTGTGCCTCTGATATCCT
GCGCTCCGCCATCTGCTTCCCTTTGTCTTACCTCTGTCAAGAATGGAT
CTGTCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTGGGT
GTGCTCTCTGTTTCCACACAGCGTTTATGCTGTTCTGTGTGTCAGTGTAC
GCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCT
TCTGGACCTGTCTAGCTGTCTATCTGCATGGTGTGGACATTGTGAGTGGCT
ATGGCGTTCCCGCCGGTGCTAGACGTAGGGACGTACTCTTTTATCCGGGA
GGAGGACCAGTGCACATTCAGCACCGTTCTTCAGGGCGAATGATTCGC
TGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTT
TACCTCAAGCTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCCTGT
CCAGTTCGTGCCTGCTGTGTCAGCCAGAAGTGGACCTTCCACGGGCCAGGCG
CCAGCGGCCAGGCGGCGGCAACTGGCTAGCCGGATTTGGTTCGAGGCCCC
ACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCG
CAGGCGTCTATTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTA
GGATGTTCTACATCATGACGTTTTTCTTCTCCTGGCACTGTGGGGGCCCTAT
CTGGTCGCTGCTACTGGCGGGTGTTCGCAAGGGGCCCTGTGGTCCCTGG
AGGCTACCTGACCGCAGCTGTGTGGATGAGCTTTGCCAGGCTGGGGTCA
ATCCTTTCATCTGCATCTTCTCCAACAGGGAGGCCAAATCTCGCTTTCAC
CCTGGCATGGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCACTCGG
CAACAGCTTGCTATCCCGCAGCAAAGCGAGGAGCCCACTGTTGCCACCC
CCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTT
GCTGCCTCGGCATACGACGCCGCT-----GATTTTGCCGGTAACGC
GGCCACCTTGCTGTCTACGCAGCCGCCGGAGTGAAGGCTC-----TTC
CCCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGAC
CCGTCAG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTGGCGT
AAATAGCAAATCCAGCTCGGTCTTTCTCTGCTGGCCCCGCTAACTCTATCG
GTGGCAGAGCGGGCA---CT---AACTACCTGG-----CTGAGGA-
--GGGA---GACTC---CATCCCGACAGAGAGGTCACCG---AT---CGG
CGGCTCGGAGGAG---ACCAAACCCAAAGACATAAC---GTCAGA---GT
CGAGCTGGATAGAG---ACGCCGTCTCCATAAAAATCCATTGATTCGAGC
GATTCTGGTATCTTTG---AACAGGCCAAAAGGAGAAGGATCTCACCTTC
TGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTAAAAATCTG
AGCATCACTCAACAGGCGAAGTCAACAGAGAGAGAAGTGGCGTTGGGGATA
AATCCGTTTCGAGATGGGATGGGCGCCTTCAAAAATAAACCACAGCTCCCA
CGATATTGGCTCCGG---ACAAACAGCGTTTTCTCCAGGCG---CCC
GCTAC---GCAGCAGCCGCTCTGGGA---CACCATCA-----CCACCCG
ACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGA
CTTTCTCTTCCGAAATCGGGGCTTCGGGGACGCCACTGG-----

--GGCGCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C---
---GCAGGGCCACATGGACACTCGGATGCAGCGGGGCACCTGCTCTTCCC
AGGGCTCCACGAG---CAAGCAGCGAGCCATGCGTCTTCCAACGTGGTCA
ACAGCCAGATGCGATTGGGCTTCTCGGGGGACATGTACGGACGCGCCGAC
CAGTATGGCCACGTTACAAGCCC GCGGT---CCGACCACTACGCTTCGAC
CCAGCTGCACGGCTATGGTCCCATGAACATGAATATGGCCGCA---CACC
ACGGAGCAGGGGCTTCTTTTCGATACATGAGGCAGCCCATCAAACAAGAG
CTCATCTGCAAGTGGGTCGAGCCGGAGCAGCTGACGAATCCCCAAAAGGC
GTGCAACAAAAC TTTTAGCACGATGCACGAGCTTGTGACCCATCTGACGG
TGGAGCATGTGGGGGACCGGAGCAGACCAACCACATCTGCTTCTGGGAG
GAATGCGCCAGAGAAGGAAAACCATTCAAAGCCAAATACAAACTTGTA
TCATATCAGAGTACACACCCGGAGAAAAGCCCTTTCCGTGTCCGTTC
GCTGTGGCAA

>Argentina silus

-----TTTCTGGAGAGAAACCTGCATCCGTCCAACCTGCCTGGG
GATGCTGCTGCTGTCGGATGCCACACGTGCACCAAGCTCTCCGAGCTCT
CCTGGGCGATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTGTCAGCTGCCCAAGGACATGGTGGTTCAGCTCCTGTCCCACGAGGA
GCTGGAGACTGAGGACGAGAGGCTGGTCTACGAGGCCGCTCTTAAC TGGG
TCAACTACGACCTGGAGAGGAGGCACTGCCACCTGCCGGAGATGCTGAGG
ACCGTCCGCCTGGCCCTGCTGCCCCGCATCTTCCCTCATGGAGAACGTGTC
CACGGAGGAGCTGATCAACGCCCAAGTCAAGAGCAAGGAGCTGGTGGACG
AGGCCGTCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGCCTGTGCGCCCCGCCAGGAAGACCAGCCACGCCCTCTTCCCTGTGGG
CGGCCAGACTTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATTATCCCCAAGGCAGACATCCCCAAGCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGATGTAAGGTCTACGTACGGGGGAA--GGGGCTC-
CGAGAACGGCGTGTCCAAGACGCTGTGGTCTATGACACCATCCAGGAGG
AGTGGTCCAAGGCAGCGCCCATGCTCATCGCCCGT TGGCCATGGCTCA
GCAGAGCTGAAACACTGCCTCTACGTGGTGGGGGGTCACACAGCTGCCAC
AGGCTGTCTGCCCGCCTCGCCATCTGGAGGAGTACATAGTGGTGTTCAGC
CGTTCCATTAAACAGGCTGATTCTTAATGAAGCAGAGCTGATTCTGGCCCT
AGCACAGGAGTTCAGATGAAGGTGTAAC TGTGTCTCTGGAGGAGCAGT
CCTTTGCCAGTATAGTGAAGATGGTCAGTGAGGCCCTCATGTTAGTCAGT
ATGCACGGAGCCCAACTGGTGTCTCTCTTCCCTGCCAGGGGGGGCCGC
AGTGGTGGAACTCTTCCCCTATGCAGTGAACCCAGAGCAGTACGCTCCCT
ACAAAACCTTGGCCCTACTCCCTGGCATGGACCTGCAGTATGTGGCCTGG

-----GCCAAATCTCG
CTTTCACCCTGGCGTAGGGACTGGTCCTGGCACAGACC---GCAGCGTCC
CACTTAGTAACAGCTTGCTATCCCCGCAACAAACCGAAGAGCACACAGTT
G---CTTCCCCGCAGCGATGGTTTGTACCC---CTGCCAATAACCGACT
GGACTTTGCCGCTCGGCATACGATGCCGCCGGCTGCTGATTTTGCCG
GTAACGCGGCCACCTTGCTGTCTACGCAGCGGCTGGAGTAAAAGCAC--
----TTCCCCTGCCACTGCTGGGTGTTCAAATAGACCTTTGGGTATTA
TGCCGACCCATCAG---GCTGG---GGCACCCGCACACCACCTCAGTACT
GT-----AGTAAATCCAGCTCAGTGCTCTCGTGCTGGCCACAAAT
GCTGTTGGAAGCAGAACAGGCA---CGTCCAATTACCTGA-----C
GGAGGA---TGGG---GACAC---CATCCCTACGGAGAGGTCTCCA---A
T---CGGAGTGCCAGAGGAG---ACAAAACCGAAAAGACTT-----GTCC
GA---ATCCAGCTGGATAGAG---ACGCCGTCTTCAATAAAGTCGATAGA
TTCAAGTGATTCTGGAATCTTTG---AGCAGGCCAAACGGAGAAGAATTT
CACCGTCTGCCACACCG-----GTTTCGGAGACAGTGTCCCCGCTG
AAATCAGAG-----ACAGGCGAAGTCACAGACAGAGAAGTGGCTTT
GGGGATAAATCCGTTTCGACAGACGGGATGGGCGCTTTTAAAATCAACCACA
GCTCTCATGATCTTGGCTCCGG---GCAAACGGCGTTTTCTCCAAGCG
---CCCGGCTAC---GCAGCCGCTGCCTTGGGA---CATCATCA-----
CCATCCGACCCATGTCAGCTCC---TACTCCACCGCCGCTTTCAATTCCA
CCCGGGACTTTCTTTTTCGAAATCGGGGCTTCGGAGACGCGACCAG----
-----CGCCCAACACAGTCTCTTCGCCTCCGC---AGCGGGAAGTTT
---T-----GCAGGGCCACATGGACACTCAGATGCCGCGGGACACCTGC
TCTTCCCAGGACTTCACGAG---CAAGCCGCGAGCCATGCGTCTCCAAT
GTTGTAAACAGTCAGATGCGATTGGGTTTTTTCGGGGGACATGTACGGGCG
GGCTGACCAATATGGCCATGTTACGAGCCACGTT---CCGACCCTACG
CTTCGACCCAGTTGCATGGCTATGGCCCCATGAACATGAATATGGCCGCA
---CACCACGGAGCAGGGCCTTCTTCCGTTACATGAGGCAGCCGATCAA
ACAAGAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGTTGTGCAACCCGA
AAAAGTCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGTGACCCAC
CTGACAGTGGAAACATGTGGGGGGACCAGAGCAGTCGAACCATATTTGCTT
TTGGGAAGAGTGTGCCGAGAAGGAAAACCATTCAAAGCTAAATACAAAC
TTGTAAATCATATCAGAGTACACACCCGGAGAAAAACCGTTCCCATGTCCA
TTCCCCGGCTGTGGCAA

>Argyropelecus affinis

AGCTTACTCATCCGGGCAGAACTGAGTCAACCTGGCGCCCTCATGGGCGA
TGACCAAATCTACAATGTCCTAGTTACAGCACATGCTTTTGTAATAATCT
TCTTCATAGTAATAACCCATCATAATTGGAGGTTTCGGAAACTGGTTAGTC
CCACTTATAATTGGTGCCTCAGATATGGCGTTTCCCGAATGAATAACAT
AAGCTTTTGACTCCTTCCTCCCTCCTTTCTTCTTCTACTTGCCCTTTCGG
GTGTTGAAGCTGGGGCCGGAACCGGGTGGACTGTTATCCCCCTCTTTCC
AGCAACTTAGCTCATGCAGGCGCTCCGTTGATTTGACCATCTTCTCCCT
TCACCTCGCCGGTATCTCCTCTATCCTTGGGGCCATTAACCTTTATTACCA
CAATTATTAATAAAAACCCAGCCATCTCTCAATACCAAACGCCCTT
TTCGTTTGATCTGTTCTTGTACCCGCGTACTTCTTCTTCTCCTTGCC
CGTCTTAGCCGCTGGTATTACAATACTTTTAAACAGATCGGAACCTAAACA
CAACCTTTTTTGACCCGGCAGGAGGGGAGATCCCATTCTCTACCAACAC
CTTTTCTGATTCTTTGGACACCCAGAAGTATATATCCTTATTCTCCAGG
CTTTGGTATAATTTCCACATTGTTGCATATTACTCAGGGAAAAAAGAAC

CCTTTGGATATATAGGAATAGTCTGAGCTATAATAGCCATTGGTCTCCTA
GGTTTTATTGTCTGAGCCCATCACATATTTACAGTTGGAATGGATGTGGA
CACCCGAGCTTNTTCTGGAGAGGAACCTGCACTCGTCCAACCTGCTGGGA
ATGCTGCTTCTCTCAGACGCCCATCAGTGTACCAAGCTGTCTGAGCTGTC
CTGGGGCATGTGCCTCAGCAACTTTCCCGCCATTTGCAAGACCGAGGACT
TCCTGCAGTTGCCCAAAGACATGGCGGTCCAGCTGCTGTCTCACGAGGAG
CTGGAGACGGAGGACGAGAGGCTGGTCTACGAGGCCGCCCTTAACTGGGT
CAACTACGACCTGGAGAGGCGGCACCTGCCACCTGCCGGAGCTGCTGAGAA
CTGTTTCGTCTGGCCTTGCTGCCTGCCATCTTCCCTCATGGAGAATGTCTCC
ACAGAGGAGCTGATCAATGCCAGACCAAGAGCAAGGAGTTGGTGGACGA
GGCCATCCGCTGCAAGCTGAGGATCCTGCAGAACGAGGGCGTGGTCAACA
GCCCCGCTGGCCCCGCCAGGAAGACCAGCCACGCTCTCTTCCCTGCTGGGT
GGGCAGACCTTCATGTGTGATAAACTCTACCTGGTGGACCAGAAGGCCAA
GGAGATCATCCCCAAGGCAGACATCCCTAGCCCCAGGAAGGAGTTCAGCG
CCTGCGCAATCGGCTGCAAGGTCTACATCACCGGAGGCA--GGGGCTC-T
GAGAACGGGGTCTCCAAAGATGTTTGGGTCTACGATACGTCCCATGAGGA
GTGGTCGAAGGCGGCTCCCATGCTCATCGCCGATTCGGCCATGGTTCYG
CAGAACTCAAACACTGCCTCTACGTGGTGGGCGGACACACGGCCGGCACA
GGCTGCCTCCCCGCGTCCCCCTCG-----

-----AAGAGGGATCCCAGCAAGGGAACCTTGGAGGATCAAATCA
TCCAAGCCAACCTGCCCTGGAGGCTTTTCGGTAACGCCAAAACATGAGA
AATGACAACCTCATCACGCTTTGGCAAATTCATTCGCATTTCATTTGGAAC
CAGTGGCAAGTTATCCTCTGCAGACATAGAGACTTACCTTCTGGAAAAGT
CACGTGTCACCTTTCAGCTCAAGTCAGAGAGGAACTATCACATCTTCTTC
CAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTTTTAATCAC
CAACAATCCCTACGACTACTCCTTCATCTCCAAGGAGAGGTAACAGTAG
CGTCCATCAATGATTCAGAGGAGTTGATAGCCACTGACAGTGCATTTGAC
GTGCTCGGCTTTACTCAAGAGGAGAAAATGGGGTCTACAAGTTGACAGG
TGCGATCATGCATTATGGCAACATGAAGTTCAAGCAAAGCAGCGCGAGG
AGCAGGCAGAACCTGATGGCACTGAGGCTGCTGACAAGGTAGCTTACCTA
ATGGGGCTGAACTCTGCAGATCTAGTGAAGGACTCTGTTCATCCAGGGT
GAAGGTCGGTAATGAGTTTGTCACTAAAGGGCAGAGTGTAGACCAAGTCA
ACTACCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTAC
AACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCGGCCACGGC
GGGCGACCTCACCTGCAAGGTGTGCCCTGCAGAGCTACGAGAGCACACCCG
CCCTGCTGGAGCATCTGAAGAGCCACTCCGGGAAGTCGTGGGCGGGGCC
AAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCCGTTTCTACACAG
CAAGGACGTGAGGCGCCACATGGTGGTGCACACCGGCCGCAAAGACTTCC
TGTGCCAGTACTGCGCCAGCGCTTGGCAGGAAGGACCATCTGACACGG

CACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAAGCGGAGCC
TCCGGATATGCTGGGGCTGCTGGGGTCTGGCTCGCCGCCCTGCTCTGTCA
AAGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCTCCAAGACCCC
CTGATGGCCAAGCCTTTCCCCAGCGGGACCCCTTCCCCATGGGCATGTA
CAACCCCCACCAC-----CTGCAGGCCATGTCCGGCCCTGGGGGGGGCC
AC-----CACCCTCCCTGATGCCCGGCTCCCTGTCTGCGGCTATG
GGCATGGGCTGCCACATGGAC-TACTGATCTACGCCCTCCTTCTCCTTCAT
GGGCTGCTTGCAGATCAGCGACGGGTCCAACGTGGTCAACCTGTTAGCCA
GCAACTCCCCGAGTGTGTCTACGCGCTGACCCAACAGAAGTACTTCAGC
AACTACAGCCCTGTGATCGGGTCTACATCTACGAGCCCATAGAGTACTG
GAACTCCACGGTGCAGGAGCACCTGAGGACACTGGGCCACGGCTTCAACA
AGATCTCCTGGATGGACAATACTTTACTACCTGAAGGCGATGAACGCG
ACCGCTCCACGAAGGCCGACTTTCATCAGCATCCTCAAGGGTTCGTTCCT
GAGGAGCCCGGAGTACCAGCACTTCACGGAGGACATCATCTTCTCGAAGA
---ACGGCG-----AGGAGTACGACATCATCGCGTCCCGGATG
TACCTGGTGGCGCGCACCACAGAGAAGACCCGGGAGGAGGTGGTGGAGCT
GCTGGAGAGGCTCCGCCCGCTTTCCCTCATCAACAGCATCAAGTTCATCG
TCTTCAACCCACCTTCGTGTTTATGGACCGCTACAGCTCCTCGGTCATT
TCACCCATCCTCACGTCAGGCTTCAGTGTCTCACCATCCTCATCCTCAC
CTTCTTCTCGTCATCAACCCCTCGGGAACTTCTGGTTGATCCTGACGG
TGACCTCGGTGGAACGGGCGTCTGGGCCTGATGGGCTACCACCCCTTT
GAGTGGCAGCCGCCCTCAAGAATGTGTCCACGTCCCGCAGGTGGGCAT
CATCAACGGGCTGTCAGGGTGGGCTGCCTCTGTAGATGACTCCCTTGTGG
AAACCGTCAACCGCGCTTCCGCTACGACGTGGCGCTGGTGTGAGCTCTG
AAGGACCTAGAGGAGGACATCATGGAGGGGCTGCGGGAGCGCGCCCTGGA
GGACAGCGCCTGCACCTCAGGCTTCAGCGTGATGATCAAAGAGTCCCGC
ACGGCATGGGGACGTCAGTGAGAAGCACGGCGGGGGCCGGCGGTGCCT
GAAAAGGCTGTGCGGTTCTCTTTCCACCATCATGTCTGTGTCTGTCCAGGC
TGAGGATGAGGAT-----GAGGCTG
TTACTGTCTTCAGGGAGCCCAAGCCCAACTCTGAGCTGTCTGCAAGCCT
CTCTGTCTGATGTTTGTGGACGAGTCTGATCATGAGACGCTGACAAGCAT
CCTTTGGCCTGTGGTGGCTGAGAGGAACGCCATGAAGAACAGCCGCCTCA
TTCTGTCTTGGGAGGTCTCCCTCGATCCTTCCGCTTCCACTTCAGGGGT
ACAGGCTATGACGAAAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTC
AGGTCCACATACATCTGCACTCTCTGTGACTCCACCCGGGCAGAGGCCT
CCCACAACATGGTGTCTCACTCCATCACTCGCAGCCACAACGAGAACCCTG
GAGCGCTATGAGATCTGGAGGACCAACCCCTACTCTGAGTCCGCAGATGA
GCTTCGGGATCGGGTGAAGGAGTCTCTGCCAAACCTTCATGGAGACCC
AGCCACCCTGGATGCTCTGCACTGTGACATTGGTAACGCCACTGAGTTC
TACAAGATATTTAGGATGAGATCGGGGAGGTGTACCGGAGGCC---GAA
C---CCAAGCAGGGAGGAGCGCCGGAGCTGGCGGGCTGCTCTGGACAAGC
AGYTGAGGAGGAAGATGAAGCTGAGGCCAGTGATGAGGATGAATGGGAAC
TATGCCCGCGGCTGATGACCAGCGAGGGGTGGAGGTGGTGTGTGAGCT
GGTACCCTCAGAACAGCGGGGGAGGCCCTCAGGGAACCTGATGGGGCT--

-----TCCTACAC
AATCGAAATGGGCCCAAAGGGCCTCAGTGGAAAGGAGAGCCCTCAGCCGT
TCTCTTGTCTGTTGAGGACCCTACCAAACAGACCAAGTTCAAAGGCATC
AAGACCTACATATCTTACCGGGTCAACCAAGCCACACCGGGCGACCTGT
ATACCGTCCGTACAAGCATTTTGATTGGCTATAACAACCGCMTGCTGCATA

AGTTCACTGTCATCTCTGTGCCTCACCTGCCGGAGAAGCAAGCCACAGGG
CGTTTCGAGGAGGACTTCATCGAAAAGCGCAAAGGAGGCTGATCCTCTG
GATGGACCACATGACCAGTCACCCAGTCCTCTCCCAATATGAGGGCTTTG
AGCACTTCCTCATGTGCGCTGATGACAAACAGTGGAAGCTGGGCAAGCGG
CGAGCGGAGAAGGATGAAATGGTGGGCGCCCACTTCATGCTGACCTTTCA
GATTCCCAAAGAGCACCAGGACCTGCAGGATGTGGAGGAGAGAGTGGACT
CCTTCAAGTCTTTTGCTAAGAAAATGGATGATAGTGTTCATGCAGCTGACT
CACGTGACCTCAGAACTGGTGGGAAACATCTAGGGGGTTTCAGAAAGGA
ATTCCAGCGTCTGGGGAACGCTTCCAGTCCATTAGTCAGGCATTCACGC
TGGACCCTCCTCACTGCTCTGAAGCCCTCAACAACGCCTTCTCACAC---

-----GCCAAGTCTCGCTTTC
ACCCTGGCGTAGGGACTGCCCTGGCAGCGACC---GCAGCATCCCCTT
AGTAACAGCTTGCTATCGCCCCAACAAACCGAAGAGCCCACGGTTG---C
TTCCCCGCAGCGATGGTTTTGTCAGCC---CTGCCAACAAACAGACTGGACT
TTGCCGCCTCGGCATACGATGCTGCTGCTGCTGCAGATTTTGCAGGAAAC
GCAGCCACCTTGTTGTCCTACGCAGCAGCTGGAGTGAAGGCAC-----T
CCCCCTGTCCACGGCTGGTTGCTCAAACAGACCTCTTGGGTACTATACTG
ACCCATCAG---GCTGG---GGCGCCCGCACACCACCACAGTACTGC---
-----AGCAAGTCCAGCTCTGTTCTCTCTTGCTGGCCCAAAATACTGT
TGGGGGCAGAACTGGCA---CCTCCAATTACCTGG-----CTGAGG
A---TGGG---GATGC---CCTCCCACAGAGAGGTCTCCA---AT---A
GGCACGTCAGACGAA---GCGAAACCAAAGACCT-----GTCGGA---
ACCCAACCTGGATAGAG---ACGCCGTCCTCAATCAAGTCGATTGATTCAA
GTGATTCCTGGTATCTTTG---AGCAGGCAAACGGAGAAGAATCTCTCCC
TCTGCCACACCA-----GTTTCAGA---TGTTTCCCCGTTGAAATC
CGAG-----

>Argyropelecus gigas

AGCCTACTTATCCGGGCAGAACTAAGCCAACCCGGCACCCCTCATAGGTGA
TGACCAAATCTATAATGTTCTCGTTACAGCACATGCTTTCGTAATGATTT
TCTTCATGGTAATACCTATTATAAATGGGGGCTTCGGAAACTGACTAGTC
CCATTAATAATTGGCGCCCCTGACATAGCATTTCACGAATAAACAATAT
AAGCTTCTGACTCCTCCCCCATCTTTCCTTCTTCTCCTTGCCCTCCTCAG
GCGTTGAAGCTGGGGCCGGGACAGGGTGAAGTGTTCACCCCTCTTTCC
AGCAACTTAGCACATGCAGGCGCTCAGTAGACTTAACTATCTTCTCCCT
ACATCTCGCAGGCATCTCTTCCATTCTAGGGGCAATCAACTTTATTACTA
CAATTATCAACATAAAACCTCCAGCCATCTCTCAATACCAAACACCTCTT
TTCGTGTGATCAGTTCTTGTAACTGCTGTACTTCTTCTCCTTTTCCCTTACC
AGTCCTAGCTGCCGTTATTACAATACTTTTAACTGACCGAAACCTAAACA
CAACATTCTTTGACCCCGCAGGAGGAGACCCCATCTTATAACCAACAC
CT-----

-----TTCCTGGAGAGGAACCTGCACTCGTCCAACCTGTCTGGG
AATGCTGCTTCTCTCAGACGCCATCAGTGTACCAAGCTGTCTGAGCTGT
CCTGGGGCATGTGTCTCAGCAACTTTCCCGCCATTTGCAAGACCGAGGAC
TTCCTGCAGTTGCCCAAAGACATGGCGGTCCAGCTGCTGTCTCACGAGGA
GCTGGAGACGGAGGACGAGAGGCTGGTCTACGAGGCTGCCCTTAACTGGG
TCAACTACGACCTGGAGAGGCGGCATGCCACCTGCCGAGCTGCTGAGA
ACTGTTCTGCTGGCCTTGCTGCCCGCCATCTTCCTCATGGAGAATGTCTC
CACAGAGGAGCTGATCAATGCCCAGACCAAGAGCAAGGAGTTGGTGGACG
AGGCCATCCGCTGCAAGCTGAGGATCCTGCAGAACGAGGGCGTGGTCAAC
AGCCCGCTGGCCCGGCCAGGAAGACCAGCCACGCTCTCTTCTGCTGGG
TGGGCAGACCTTCATGTGTGATAAACTCTACCTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCAGACATCCCTAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGCAAGGTCTACATCACCGGAGGCA--GGGGCTC-
TGAGAACGGCGTGTCCAAGATGTTTGGGTGTACGATACCTCCCATGAGG
AGTGGTTCGAAGGCGGCTCCCATGCTCATCGCTCGATTTCGGCCATGGTTCC
GCTGAACTCAAACACTGCCTCTAYGTGGTGGGAGGACAGACTGCCGCCAC
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----

CACCATCATGTCTGTGTCTGTCCAGGCTGAGGATGAGGAT-----
-----GAGGCTGTACTGTCTTCAGGGAGCCCAAG
CCCAACTCTGAGCTGTCGTGCAAGCCTCTCTGTCTGATGTTTGTGGACGA
GTCTGATCATGAGACGCTGACAGGCATCCTTGGGCCTGTGGTGGCTGAGA
GGAACGCCATGAAGAACAGCCGCCTCATTCTGTCTCTGGGAGGTCTCCCT
CGATCCTTCCGCTTCCACTTCAGGGGTACAGGCTATGACGAAAAGATGGT
GCGTGAGATGGAGGGCCTGGAGGCCTCAGGTTCCACATACATCTGCACTC
TCTGTGACTCCACCCGGGCAGAGGCCTCCCACAACATGGTGCTTCACTCC
ATCACTCGCAGCCACGACGAGAACCCTGGAGCGCTATGAGATCTGGAGGAC
CAACCCCTACTCTGAGTCCGCAGATGAGCTTCGGGATCGGGTGAAAGGAG
TCTCTGCCAAACCCTTCATGGAGACCCAGCCACCCTGGATGCTCTGCAC
TGTGACATCGGTAACGCCACTGAGTTCTACAAGATATTTTCAGGATGAGAT
CGGGGAGGTGTACCGGAGGCC---GAAC---CCAAGCAGGGAGGAGCGCC
GGAGCTGGAGGGCTGCTCTGGACAAGCAGCTGAGGAGGAAGATGAAGCTG
AGGCCAGTGATGAGGATG-----

-----TCCTACACAATCGAAATGGGCCCAAAGGGC
CTCAGTGGAAGGAGAGCCCTCAGCCGTTCTTGTCTGTTGAGGACCCT
ACCAAACAGACCAAGTTCAAAGGCATCAAGACCTACATATCTTACCGGGT
CACCCCAAGCCACACTGGGCGACCTGTATACCGTCGGTACAAGCATTTTG
ATTGGCTATAACAACCGCCTGCTGCATAAGTTCACTGTCATCTCTGTGCCT
CACCTGCCGGAGAAGCAGGCCACAGGGCGTTTCGAGGAGGACTTCATCGA
AAAGCGCAAAGGAGGCTGATCCTCTGGATGGACCACATGACCAGTCACC
CAGTCTCTCCCAATATGAGGGCTTTGAGCACTTCTCATGTGCGCTGAT
GACAAACAGTGGAAGCTGGGCAAGCGGCGAGCGGAGAAGGATGAAATGGT
GGGCGCCCACTTCATGCTGACCTTTCAGATTCCCAAAGAGCACCAGGACC
TGCAGGATGTGGAGGAGAGAGTGGACTCCTTCAAGTCTTTTGCTAAGAAA
ATGGATGATAGTGTTCATGCAGCTGACTCACGTGACCTCAGAACTGGTGCG
GAAACATCTAGGGGGTTTCAGAAAGGAATTCAGCGTCTGGGGAACGCTT
TCCAGTCCATTAGTCAGGCATTACAGCTGGACCCCTCCTCACTGCTCTGAA
GCCCTCAACAACGCCATCTCACAC-----

CATGCTGTTGCTGTCTGACGCCACCAGTGTACCAAGCTGTCAGAGCTCT
 CCTGGGCGCATGTGTCTAAGCAACTTCCCTGCTATTTGCAAGACAGAAGAT
 TTCCCTCCAAGTCCAAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
 GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCACTGAATTGGA
 TCAACTATGACCTGGAAAGGAGGCACTGCCATCTTCCAGAGCTCCTGAGA
 ACGGTCCGCCTCGCCCTGCTTCCCTGCCATCTTTTAATGGAGAACGTTTC
 GACAGAAGAAGTATCAATGCCAGGCAAAGAGCAAGGAAGTGGTGGACG
 AAGCTATTTCGCTGTAAGCTGAAGATCTTGCAGAATGATGGCGTCGTTAAC
 AGCCCTTGTGCTCGGCCAAGAAAAACCAGCCATGCCCTCTTTCTTCTTGG
 CGGGCAGACTTTTCATGTGCGACAAGTGTACCTGGTGGACCAGAAGGCCA
 AAGAGATAATTCCCAAAGCGGACATTTCCAGTCCCAGGAAGGAGTTCAGC
 GCCTGTGCCATTGGTTGTAAGGTGTACATCACTGGCGGAA--GAGGATC-
 GGAGAATGGTGTGTCCAAAGATGTGTGGGTCTACGATACGGTCCATGAAG
 AATGGTCAAAGGCTGCACCCATGCTCATCGCCAGGTTTGGCCATGGATCT
 GCAGAGCTAAAGCACTGCCTCTACGTCTGGGTGGACACACTGCGGCAAC
 TGGCTGCCTCCCGCTTCTCCGTCG-----

-----AAAAAAGACACCAGCAAGGGAACACTGGAAGATCAAATC
 ATCCAGGCGAACCCAGCACTGGAGGCCTTCGGCAACGCCAAGACGGTGAG
 AAACGACAATTCATCTCGCTTCGGAAAGTTCATCCGAATTCCTTTGGGA
 CAAGCGGGAAGCTGTATCAGCTGATATTGAGACGTACCTGCTTGAGAAG
 TCCCCTGTGACCTTTCAGCTCAAGGCTGAGAGGAACACCACATCTTCTA
 TCAGATCCTGTCCAATGAGAAGCCGGAGCTCCTGGACATGCTGCTCATCA
 CCAACAATCCATACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTT
 GCCTCCATCAATGACTCAGAGGAGCTGATAGCCACCGACAGCGCCTTTGA
 CGTGCTTGGCTTACCGCTGATGAGAAGATGGGTGTCTACAAACTGACTG
 GTGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGCGAA
 GAGCAGGCTGAGCCTGATGGGACTGAGGCTGCCGATAAATCGGCTTACCT
 GATGGGACTGAACTCCGCAGACCTCATCAAAGGCTCTGTCTCATCCCAGAG
 TCAAGGTGGGAAATGAGTATGTGACCAAGGGCCAAAGTGTGGATCAAGTC
 TACTATCCGAACAAGGAGGCCTTCAAGTGTGACGAGTGCGGGAAGCACTA
 CAACACCAAGCTGGGATAACAAGCGCCATGTGGCCATGCACTCTGCCACTG
 CCGGGGATCTAACCTGTAAGGTGTGCATGCAGAGCTACGAGAGCACGCCA
 GTCCCTGAGGACCTGAAGAGTCACTCGGGGAAATCTTCGGGCGGAGC
 CAAGGAGAAGAAGCACCTTGTGACCACTGTGACCGACGTTTCTACACCC
 GGAAGGACGTGAGACGGCACATGGTGGTGCACACAGGTCGTAAGGATTTCT
 CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAAGACCACCTGACGCG
 GCACGTGAAGAAGAGCCACTCTCAGGAGCTCCTGAAGATCAAGACAGAGC
 CTCCAGACATGTTGGGTCTGTTGGCGTCAGGGTCTTCTCCATGTCCCTGTC
 AAGGAGGAGCTCAGCCCCATGATGTGTGCCATGGCGCCCAACAAAGACCC

ATGAGATGGTGGGTGCCATTTTCATGCTGACCCTCAAATCCCCAATGAG
CACCAAGATCTTCAGGATGTTGAGGAGAGAGTTGACAACTTCAAGGTCTT
TGCCAAGAAAATGGATGACAGTGTGATGCAGCTTACTCATGTTGCCTCGG
AGCTGGTGCCTAAACATCTGGGTGGATTTAGGAAGGAGTTCCAGCGGCTG
GGAAATGCCTTCCAGTCTATAAGTCAGGCATTCCAACCTGGACCCTCCACA
TAGGTCAGACACCCTCAACAATGCCATNNNNNNNNNNNNNNNNNNCGTTCCTCAAACCTGACCTCTCTG
GGTTTCATCATTGGAGTCGGTGTGGTAGGGAACCTCCTGATCTCCATCTT
GCTGGTCAAAGACAAGAGCCTGCACCGAGCACCCTACTATTTTCTGTTGG
ATCTGTGTGCGTCTGACATCCTGCGCTCTGCCATCTGCTTCCCCTTTGTCT
TTCACTTCCAGTAAAGAATGGATCTGCCTGGACCTACGGCAGCTGACCTG
CAAAGTGATTGCCTTCCCTGGGTGTGCTTTCCTGTTTCCACACAGCATTCA
TGCTGTTTTGTGTGCTGAGTGTACCCGCTACCTGGCCATCGCTCATCACCGT
TTCTACACCAAGAGGCTGACTTTTTGGACGTGTCTAGCCGTCATCTGCAT
GGTGTGGACATTGTGCTGAGTGGCTATGGCATTCCCACCGGTGCTCGACGTAG
GGACGTACTCTTTTATCCGGGAGGAGGACCAGTGCACATTTTCCAGCACCGT
TCCTTCCAGGGCGAATGATTCACTGGGCTTCATGCTCCTGCTGGCGCTCAT
CCTCTTGGCCACACAGCTGGTTTACCTCAAACCTCATTTTCTTTCGTCCATG
ACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCCGTCAGCCAGAAC
TGGACCTTCCATGGGCGGGTGGCCAGCGGGCAGGCAGCAGCCAACTGGCT
GGCTGGATTTGGTTCGAGGCCCCACCCCTCCTACTTTGCTGGGGATCCGAC
AGAACAGCAACGCAGCGGGCCGACAGCTCTACTTGTATTGGATGAATTC
AAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTT
CCTGGCTCTGTGGGGCCCTACCTGGTTGCCTGCTACTGGCGAGTGTG
CAAGGGGCCCGTGGTCCCTGGAGGCTACTTGACAGCAGCTGTGTGGATG
AGCTTTGCCCAGGCTGGGGTCAACCCTTTCATCTGCATCTTCTCCAACNNNNNGC
CAAATCTCGCTTTCACCCTGGCATGGGACTGGTCTGGCACGGAGC---
GCAGCGTCCCACTCGGCAACAGCTTGTGTCCCCGCAGCAAACCGAGGAG
CCCCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAA
CAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT-----G
ATTTCCGCGGTAACGCGGCCACCTTGTGTCTTACGCAGCGGGCCGGAGTG
AAGGCTC-----TCCCCCTGCCGACTGCGGGCTGCTCCAACCGGCTCT
TGGCTATTACGCAGACCCGCTCTG---GCTGG---GGAGGACGCACGCCGC
CGCAGTACTGCGGCGTAAACACTAAATCCAGCTCGGTGTTTTCTGCTGG
CCCCCAACTCCATCGGTGGGAGAGCGGGCA---CC---AACTACCTGT-
-----CCGAGGA---GGGA---GACTC---CCTCGCCACGGAGAGGT
CGCC---AT---CGGTGGCTCGGAGGAG---ACGAAACCCAAAGACATG
AC---ATCCGA---GTCGAGCTGGATAGAG---ACGCCATCCTCCATTAA
ATCCATCGACTCGAGCGATTCTGGGATCTTTG---ACAAGCCAAACGGA
GGAGGATCTCACCTTCTGCCACACCG-----GTTTCAGAGGCAGTG
TCCCCGCTAAAATCTGAGNNNNNNNNNNNGGGGAAGTCACAGAGAGAGAAGTGGCGCTGGG
GATAAACCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAAACACAGTT
CCCACGACATCGGCTCCGG---ACAGACGGCGTTCCTCCTCCAGGCG---
CCCGGCTAC---GCGGCGGCTGCCCTGGGA---CACCACCA-----CCA
CCCGACCCACGTTGGCTCC---TACTCCACGGCGGCGTTCAACTCCACCA
GGGACTTTCTTTTCAGAAACAGGGGCTTCGGAGATGCCGCGG-----
-----GGCGCAGCACAGCCTGTTGCTC-----CGGAAGTTT---
C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCT
TCCCAGGGGCTGCACGAG---CAAGCGGCCAGCCACGCGTCTTCCAACGTG
GTCAACGGCCAGATGAGGCTGGGCTTCTCGGGGGACATGTACGGACGGGC
CGAGCAGTACGGCCACGTTACGAGCCCACGAT---CCGACCACTACGCT
CCACTCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCG---
CACCACGGAGCGGGGGCCTTCTTTCAGATACATGAGGCAGCCCATCAAACA
AGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAACCCCAAAA

AGTCGTGCAACAAAACCTTTTCAGCACGATGCACGAGCTGGTGACCCACCTG
ACTGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACGTCTGCTTCTG
GGAGGACTGCTCCAGAGAAGGGAAGCCCTTCAAAGCCAAATACAACTTG
TGAATCATATCAGAGTACACACCCGGAGAAAAACCTTTCCGTGTCCGTT
CCTGGTTGTGGCAA

>Assurger anzac

AGCCTCCTCATCCGAGCTGAACTGAGCCAACCAGGCTCTCTTCTCGGAGA
CGACCAGATTTATAATGTGATTGTTACGGCGCACGCGTTCGTAATAATTT
TTTTTCATAGTAATACCCGTTATGATTGGAGGGTTCGGAACTGACTCATC
CCTCTAATGATTGGGGCCCCAGACATGGCCTTCCCACGAATGAACAACAT
GAGTTTCTGGCTTCTGCCCTTCTTTCCTCCTCCTCCTGGCCTCCTCCG
GGGTAGAAGCTGGGGCTGGTACCGGTGAACCGTGTACCCTCCCTGGCA
AGCAACCTTGCCACGCAGGGGCTTCGTTGATTTAACTATTTTCTCCCT
TCACCTCGCAGGGATCTCCTCGATCCTGGGGCCATTAACCTTTATTACAA
CAATTGTTAACATAAAAACCCGCGACTATTACGCAATTCCAAACCCCGCTA
TTTGTGTGATCCGTCCTAATTACAGCTGTGCTCCTACTACTATCTCTGCC
GGTTCTTGAGCCGGAATTACAATACTCCTCACAGACCGCAACCTTAATA
CAACCTTCTTTGACCCAGCAGGAGGGGGCGATCCCATCCTCTACCAACAC
TTG-----

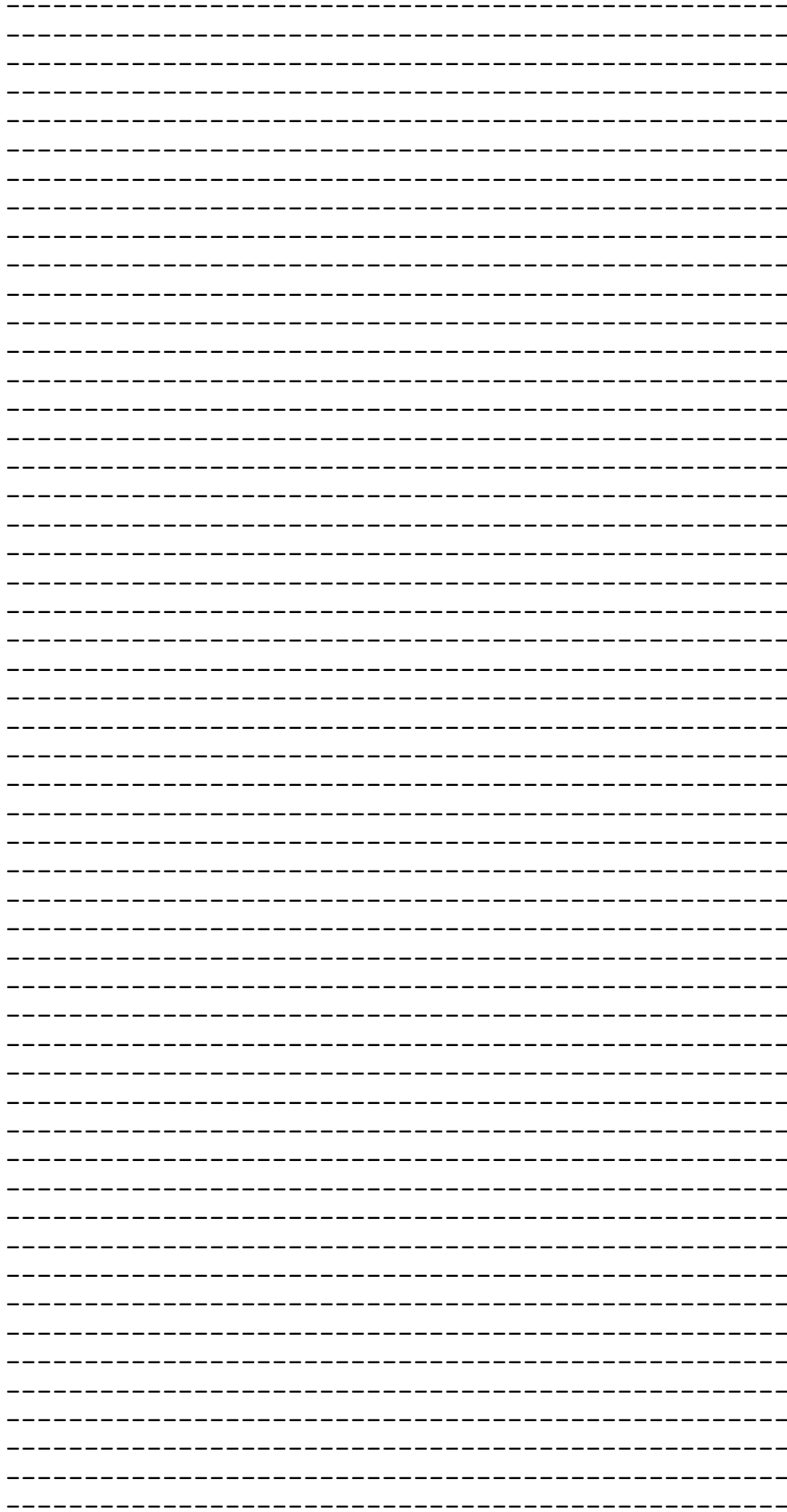
-----TTCTTAGAGAGAAACCTTCAACCGACTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTTT
CTTGGGCATGTGCCCTCAGCAACTTCCCCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGACATGGTGGTGCAGCTTTTGTACATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGACGCAGCCCTGAACGGGA
TCAACTATGACCTGGAAAGGAGGCACGTGTACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTTGGCCCTGCTGCCCGCCATCTTTCTAATGGAGAATGTCTC
AACAGAAGAGCTTATCAATGCCCAGGCCAAGAGCAAGGAGTTGGTGGATG
AGGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGACGGCGTCGTTAAC
AGTCCATGTGCTCGGCCAAGAAAAACAGCCATGCTCTCTTTCTCCTGGG
AGGGCAGACTTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCAAAGCGGACATTTCCAGTCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGCGTGTCCAAGACGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGCGGCGCCCATGCTCATCGCCAGGTTTGGTTCATGGCTCT
GCTGAGCTGAAACACTGCCTGTATGTGGTAGGAGGTCACACTGCGGCAAC
TGGCTGCCCTCCCCGTTCCTCCATCCAGATGAATACGTTGTTGTTTCAGT
CGTTCAACGACAAGGCTGATACTGAACGAAGCCGAGCTAATCATGGCTCT
GGCCCAGGAGTTCCAGATGAGAGTGGTCACAGTTTCCCTAGAGGAACAGT
CTTCTCAGCATGTCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCGCCTCACTTTCCTCCCCAGAGGAGCTAC
TGTAAGTGCAGCTGTTCCCTTTGCTGTGAACCTCAGAACAGTACACCCCAT
ATAAAACCTTGCCTCTCTTCCAGGCATGGACCTTCATTATGTTTCCCTGG
AGGAACACTCAGGAGGAGAACACCGTCCACCCATCCAGACAGACCCCTGGGA
ACAAGWGGCATTCACTCACTTGGAGAAGGAGGAGCAGGAGCGCATACTGT
CCAGCAAAGACGTCCCAGGCACCTGTGCTGCCCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACTTTGGTAGACATACCTTCCTTCTTGGAAAGT
TCTCAA---GGAGGGAATGAAG---ACCAAGCAAGTTTGAAGAA---GT
CCAAACAGCCAGTACAGTCCATCCGGGCCGGGTCCAGAGAAGCCAGTGT
CAGACCTCAGTACAAACCACCAACGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATACCTGAAAGTAAGAGAGGTGAAGTATGAGG

TGTGGATCCAGAAAAGAGACACCAGCAAGGGAACCTCTGGAGGATCAAATC
ATCCAGGCAAACCCAGCGCTGGAGGCCTTTGGAAATGCCAAAACGTTGAG
AAACGACAACCTCATCTCGGTTTTGGAAAATTCATCCGAATTCACCTTGGAA
CTAGCGGCAAGCTCTCGTCCGCTGATATCGAGACATACCTGCTGGAGAAG
TCTCGTGTACCTATCAGCTAAAGGCTGAGAGGGACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACTTGCTGTTAATCA
CTAACAAACCCATACGACTACTCGTACATCTCCCAAGGAGAGGTGACAGTC
GCCTCCATCAATGACTCGGAGGAGCTGATGGCCACTGACAGCGCCTTCGA
TGTGCTCGGATTCACTAATGAGGAGAAGATGGGCGTCTATAAACTGACCG
GTGCCATCATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGGGAG
GAGCAGGCCGAGTCTGATGGGACGGAGGCTGCTGATAAATCAGCTTACCT
GATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTACGTCACCAAAGGCCAGAATGTGGACCAAGTC
TACTATCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
TAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CGGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACACCT
GTTCTTCTGGAGCACCTTAAAGACCCTCGGGGAAGTCCTCTGGCGGAGC
CAAGGAGAAAAAGCACCCATGCGATCACTGCGACCGCCGTTTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAATACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTGACCCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGCTAGGTCTTTTAGCTTCGGGGTCACCACCTTGCTCTGTG
AAGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCATTTCCAGTGGCGCCCTTTTCCGATGGGCATGT
ACAACCCACCAC-----CTTCAGGCCATGTCTAATTCTGGGGTGGGT
CATCCA-----CACCCGTCCCTGATGCCAGCTCCCTGTCTTCAGCTAT
GGGCATGGGCTGTCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTACAGATCAGT
GATGGATCAAACATT
GTGAATCTTCTGGCTAGTAACTCTCCGAGTGTTCGTATGCTGTGACCCA
GCAGAAATACTTACGTAACCTACAGTCCCGTATTGGTTTTTACATTTACG
AGCCCATCGAGTACTGGAACCTCACGGTGCAGGAGCACCTGAAGACTCTG
AGTCACGGCTTCAACAAGATCTCCTGGATGGACAACCTTCTTCCACTATCT
GCGGGTGGTGAATGTGAGCGCCTCGACCAAGAGCGACTTCATCACCATCC
TCAAGGGCTCCTTCTGCGTAGCCAGAGTACCAGCACTTCACTGAGGAC
ATCATATTCTCCAAGA---ACCGTGAGACTG-----ATGAATACGACAT
TATTGCCTCACGCATGTATCTGGTGGCTCGGACCACAGAGAAGAAGCGAG
AGGAGGTGGTAGAGCTTCTGGAGAAGCTTCGCCCCGTTGATGCTGATCAAC
AGCATCAAGTTCATTGCCTTCAATCCCACATTTGTGTTTCATGGACCGCTA
CAGCTCCTCCGTATCTCGCCCATCTGACCTCAGGCTTCAGCGTGCTCA
CCATCCTCATCCTCACTTCTTCTTCTGGTTCATCAACCCCTTGAAAACTTT
TGGCTCATCCTCACGTTACGTCTGTGGAGCTGGTCTGCTTGGGGTTGAT
GNNNGTGTCTGCCTCTTGCAATGTTGGCATTATT
AATGGGCTCTCTGGATGGC
CTTCTCGGTGGATGACTCCCCAGCTGACACCATCACTCGGCGGTTCGCG
TATGATGTGGCACTAGTGTGAGCGTTAAAGGATCTGGAGGAGGACATCAT
GGAAGGGCTGAGAGATAGTGGGATGGAAGACAGTGCTTGCACATCAGGCT
TCAGTGTATGATCAAGGAATCTTGTGATGGCATGGGCGATGTCAGCGAA
AAGCACGGTGGAGGACCAGTTATTCTGAGAAGGTGTACGTTTCTCTAT
CACTATTATGTCTGTCTGTCCAGGCAGATGATGAGGAG-----
-----GARGCGTTACTATCTTCACAGAACCAAAG
CCAACTCAGAACTGTCCTGTAAGCCCCTTTGCCTGATGTTTGTGGATGA
ATCAGACCATGAGACACTCACAGCTCTCCTGGGGCCTGTAGTTGCAGAGC
GTAATGCAATGAAAGAGAGCAGGCTCATCCTTTCCATCGGCGGCCTGCCT

CGCTCCTTCCGCTTCCACTTCAGAGGCACAGGATATGATGAGAAGATGGT
GCGAGAGATGGAGGGCCTGGAGGCCTCAGGGTCCAGCTATGTCTGCACTC
TGTGTGATTCCAGTCGGGCAGAGGCATCTCAAAACATGGTGCTACTCA
ATCACCCGCAGCCACGAAGACAACCTTGAACGTTACGAAATATGGAGAAC
AAACCCCTTTTCTGAGACTGGAGAAGCGCTGCGGAGCAGAGTCAAAGGG
TCTCTGCCAAGCCCTTCATGGAGACCATTGCACACTGGATGCATTACAT
TGTGACATTGGCAATGCCATTGAATTCTACAAAATCTTCCAGGACGAAAT
TGGAGAGCTGTACCAAAAGGT---GAAT---CCCAGCCGGGAGGAACGAC
GCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGTTGAAGCTT
AAACCGTAATGAGGATGAATGGGAACATGCACGCAGGCTAATGACCCA
GGAGACTGTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGGGG
AGGCCCTGAGGGAGCTTATGAGGCTATACCTCCAGATGAAGCCTGTGTGG
CGTGCCACCTGCCAGCCAAGGAGTGCCCTGACCAGCTGTGCCGCTATAG
CTTTAACTCCCAGAGCTTTGCTGACCTCCTCTCCTCTACCTTCAAATATA
GGTACAATGGAAAGATAACCAATTACCTGCACAAGACCCTGGCCCATGTC
CCTGAAATCATAGAGAGAGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNT
CATAACCATCGACATGTGTCCCTGGG
ACCCAGTGGAAGGAGAGCCACAGCCTTTCTCCTGCTCCGTCGAAGACC
CCACAAAACAGACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTACCGG
GTCACGCCGAGCCACACCGGGCATCCCGTCTACAGGCGCTACAAACACTT
TGACTGGCTGTACAACCGCTACTGCACAAGTTCACTGTGATCTCCGTGC
CTCACCTGCCTGAGAAGCAGGCCACGGGAGATTTGAGGAAGACTTTATA
GAGAAGCGAAAGARGCGACTGATACTGTGGATGAACCACATGACCAGTCA
CCCTGTCTCTCCAGTATGAAGGCTTTGAGCACTTCTGTATGTGTGCCG
ACGACAAGCAATGGAAGCTGGGCAAGAGACGAGCTGAGAAGGACGAGATG
GTGGGCGCCATTTTCATGCTGACCCTCCAGATCCCTAACGAGCACCAAGA
CCTTCAGGATGTTGAGGAGAGAATCGACACCTTCAAGGCCTTTGCTAAGA
AAATGAGCAGACAGCGTCATGCAGCTCACACATGTTGCCTCGGAGCTCGTG
CGTAAGCACCTGGGTGGATTCCGGAAGGAGTTCAGCGGCTGGGATATGC
CTTCCAGTCTATTAGTCAGGCATTCATGCTGGACCCTCCCATAGCTCAG
AAACTCTCAACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNNGACCTCTCTGGGTTTTATCAT
TGG
AGTCGGTGTGGTTGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACA
AGAGCCTGCACCGAGCGCCCTACTACTTCCCTGCTGGACCTGTGCGCCTCA
GACATCCTTCGCTCCGCCATCTGCTTCCCCTTCGTCTTCACCTCGGTCAA
GAATGGATCTGCCTGGACCTATGGCAGCTGACCTGCAAAGTGATCGCCT
TCCTGGGTGTGCTCTCTGTTTTCCACACGGCGTTCATGCTATTCTGCGTG
AGCGTCACCCGCTACCTGGCCATCGCGCATCACCGTTTCTACACCAAGAG
GCTGACCTTCTGGACCTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGT
CGGTGGCTATGGCGTTCGCGCCGGTGTAGACGTAGGGACGTACTCTTTT
ATCCGGGAGGAGGACCAGTGCACATTCAGCACCGCTCCTTCAGGGCGAA
TGATTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATTCTCCTGGCCACAC
AGCTGGTTTACCTCAAGCTCATCTTCTTTGTCCACGACCGTCGAAAGATG
AAGCCTGTCCAGTTCGTGCCTGCTGTCAGCCAGAAGTGGACCTTCCACGG
GCCAGGCGCCAGCGGGCAGGCGGCGGCAACTGGCTGGCTGGATTTGGTA
GAGGCCCCACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCA
GCGGGCCGCAGGCGTCTACTGGTATTTGGATGAATTCAAAACAGAGAAGAG
GATTAGTAGGATGTTCTACATCATGACATTTTTCTTCTCCTGGCACTGTGGG
GGCCCTATCTGGTAGCCTGTTACTGGCGGGTGTGTGCAAGGGGCCCTGTA
GTCCCTGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGC
TGGGGTCAATCCTTTCATCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCACCTGGCGTGGGG
ACTGGTCCTGGCA
CGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTGTCCCGCAGCAA

-----CGATGATTATATTGTGGTTTTTAGTCGTGCGTCT
AACAGACTCATACTCAATGAAGCCGAGTTGATTCTAGCTTTGGCTCAGGA
GTTCAAGATGAGGACAGTCACTGTGTCCTTAGACGAGCAGCCATTCGATA
GCATAGTCCGGGTCATCAGTGGGGCATCCATGTTGGTCAGCATGCACGGA
GCCCAGCTGATCACCTCCATGTTTCTTCCGCGAGGAGCTGCTGTGATCGA
ACTCTTCCCGTATGCAGTCAACCCARAACAGTACACTCCGTACAAAACCC
TGGCCTCTTTACCAGGCATGGATCTCCAGTATATATCATGGAGAAACAAC
ATTGAGGAGAATTCCGTGACCTATCCTGACCGCCCTTGGGATCAGGGAGG
CATCACACACTTGGAGAAAGAGGAGCAGGAGCGTATCCTCACTAGCAAGG
AGGTACAAAGGCACCTCTGCTGCCGCAACCCTGAGTGGCTTTTCCGGATT
TATCAAGACACCATTGTGGACGTTCCGTCTTTTTTGAAGTCCTTAA---
AGAAGTCTAAAA---GTTAAGCCTAATCTGAAAA---GTCTAAGCCTG
CCAGCACAGTACATCCCGGTCGAGTCCGAGAACCCAAGTGTGACATCG
GTTCAAGCTNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGAAGGACGCAACAAGGGCACCCTGGAGGATCAAAT
CAT

CCAGGCAAATCCTGCACCTTGGAGCCTTTGGCAACGCCAAAACAGTAAGAA
ATGACAACCTCCTCTCGTTTTTGGAAAGTTTATCCGCATTCATTTTGAACA
AGTGGCAAACCTTCTTCAGCTGACATCGAAACATATCTGCTGGAAAAGTC
CCGAGTTACCTTTCAGCTAAAATCAGAAAGAACTACCACATCTTCTTTC
AGATCTTATCCAATGCCAAGCCAGAGCTGCTGGATATGCTTCTGATTACA
AACAATCCCTACGATTACTCTTACATCTCCCAAGGAGAAGTAACTGTTGC
AAGTATCAATGACAGCGAGGAGTTGTTAGCCACTGACAGTGCCTTTGATG
TGCTTGGTTTTACCCAGATGAGAAGATAGGAGTGTACAAATTGACTGGT
GCCATCATGCATTATGGGAACATGAAGTTCAAGCAAAGCAGCGTGAGGA
ACAGGCTGAACCTGATGGTAGCGAAGCTGCTGATAAATCTGCCTACCTAA
TGGGGCTAAACAGTGCAGATCTCCTGAAGGGACTCTGCCATCCGAGGGTC
AAGGTAGGAAATGAATATGTACAAAAGGTCAAGGTGTGGATCAAGTATA
CTACCCCAACAAAGAGGCCCTTCAAGTGTGAGGAGTGTGGCAAGCACTATA
ACACAAAGTTAGGTTATAAGCGCCACGTGGCCATGCACTCTGCCACAGCG
GGCGACCTGACCTGCAAGTTTTGTCTTCAGAGCTACGAGAGCACTCCTGC
CCTCCTGGAACACCTCAAGAGCCACTCTGGCAAATCTTCGGGCGGCACCA
AGGAGAAGAAACACCCTTGCACCCTGCGACCGCGCTTCTACACCCGC
AAGGATGTTCCGGGCACATGGTAGTCCACACAGGCCGCAAAGATTTCTT
GTGCCAGTACTGTGCCAGCGCTTTGGAAGGAAGGACCACCTCACGCGGC
ACGTTAAGAAGAGCCACTCTCAAGAGCTGCTTAAGATCAAGACAGAACCT
CCGGATATGTTGGGCTTGCTCGGGACTGGTTCTCCACCTTGTGCCGTGAA
GGAAGAGCTCAGTCTATAATGTGTGGTATGGGCCGAACAAGGACTCAA
TGATGACCAAGCCTTCCGCGAGTGGCACCCCTTTCCCAATGGGCATGTAC
ACTCCTCACCAC-----CTCCCGCCATGTCCAACCAGGGATGGGTCA
C-----CACCCGTCTTTGGTTCCTGGATCATTTGTCTGCTGCTATGG
GTATGGGATGCCCCATGGAGTACTTGATTTACGCTCTTTTTCTTTTATG
GGATGTTTACAAATCAGCGATGGCTACAATATAGTAAACCTATTAGCCAG



>Ateleopus japonicus

AGCTTACTAATTTCGAGCTGAATTAACCAACCCGGTCTTCTGGGAGA
CGACCAGATTTATAATGTAATTGTTACAGCACATGCCTTTGTAATAATCT
TCTTTATAGTCATACCTATCATAAATGGAGGTTTCGGCAACTGACTAATC
CCACTAATGATTGGTGCTCCTGACATAGCATTTCGCCGAATAAACACAT
AAGTTTCTGACTTCTACCCCTTCATTTCTGCTACTATTAGCTTCTTCTG
GGGTTGAAGCAGGGGCTGGAACAGGCTGAACTGTTTACCCCTTTAGCC
GGTAACTTAGCCCATGCTGGTGCCCTGTAGATTTAACAATCTTCTCACT
ACACTTAGCAGGGTCTCCTCTATCTTGGGTGCCATTAATTTTACTACTA
CTATTATTAATAAAAACCCAGCCGTCTCACAATATCAAACCTCCTTTA
TTTGTCTGATCTGTAATTATTACAGCTGTACTACTTCTTCTCTCTCCC
TGTGCTTGCTGCTGGTATTACAATATTACTCACAGACCGAAATTTAAATA
CGACATTTCTTGACCCTGCAGGAGGAGACCCAATCTTATAACCAACAC
TTATTTCTGGTTCTTCGGTCAACCCGAAGTTTATATTCTTATTCTCCCTGG
GTTTCGGCATGATCTCACACATTGTAGCCTACTACTCCGGCAAAAAAGAAC
CTTTTCGGATATATGGGCATGGTCTGAGCTATAATAGCCATCGGCCTCCTT
GGGTTTATCGTATGGGCTCACCATATGTTTACAGTAGGGATGGACGTAGA
CACACGAGNNNNTTCCCTAGAAAGGAACCTGCACCCATCCAACCTGCCTGGGCATG
CTGCTGTTGTCAGACGCTCACCAAGCTGTCAGAGCTGTCCCTG
GGGCATGTGCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAATTCC
TCCAACCTGCCCAAAGACATGGTGGTGCAACTATTGTGCGACGAGGAGCTA
GAGACCGAAGATGAGAGACTAGTGTACGAGACTGCCCTTAACTGGATCAA
CTACGACCTTGATAGGAGACTGCCATCTGCCAGAGCTGCTGAGAACGG
TTCGGCTGGCCCTGCTTCCTGCCATCTTCCTCATGAAAATGTCTCCACG
GAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAACCTGTGCGACGAAGC
CATCCGCTGCAAGCTGAAGATTCTGCAGAACGACGGCGTGGTAAACAGTC
CCTGTGCCCCGGCCAGGAAGACCAGCCATGCCCTCTTCCTTCTGGGAGGG
CAGACTTTTCATGTGCGATAAGCTTTACTTGGTGGACCAGAAGGCCAAAGA
GATCATCCCCAAGGCTGACATCCCCAGCCGAGGAAGGAGTTCAGTGCCT
GCGCCATCGGCTGTAAGGTCTATGTACAGGTGGGA--GGGCTC-AGAG
AACGGCGTTTCCAAAGATGTTTGGGTCTATGACACCGTTCACGAGGAGTG
GTCTAAGGCAGCCCCATGCTGATTGCCAGGTTTCGGCCATGGCTCTGCCG
AACTGAAACACTGCCTCTACGTGGTGGGAGGACACACGGCAGCCACTGGC
TGCCCTCCAGCCTCCCCCTCTGGACGAGTACATAGTGGTGTTCAGTCGCT
CCTCTACGAGGCTGATTCTGAACGAGCCAGAGCTAATCATGGTGTGGCG
CAGGAGTTTCAGATGAGGGTGGTCACGGTGTCTCTGGAAGAGCAATCCTT
CCCCAGCATCATCCAGGCATCAGCGGCGCCTCCATGCTGGTCAGTATGC
ACGGAGCTCAGCTTGTACCTCCCTCTTCCTCCCCAGAGGGGCTGCCATT
GTGGAGCTTTCCCTATGCTGTGAACCCAGAGCAGTATACTCCATACAA
AACCTTGGCGTCCCTCCCAGGCATGGATCTTCAATACGTTTCCCTGGAGAA
ACACAATCGAAGAGAACTCRGTTAGCCACCCGATAGGTCCTGGGACCAA
GGAGGCATTGCTCACCTGGACAAGGAAGAGCAGGAGAGAATTCTCGCCAG
CAAGGAGTCCCAGGCACCTGTGCTGCCGCAACCCCGAGTGGCTCTTCC
GAATCTACCAGGACACTCTGGTGGACATCCCCTCATTCCTCAAGACCCTC
AA---GGAGGGCCTAAAG---ACCAGGCCAGCTTGAAGAA---GTCCAA
GTCGGCCAACACKGTTACCCGGGTCGGGTACAGGGAAGCCAGTGCAGAA
CCTCGGTCCAGGACACCAACGAGGCTAAACTCACTGTCTCCTGGCAGATC
CCGTGGAATCTCAAGTACCTGAAGGTACGAGAGGTTAAGTACGAGGTCTG
GATCCAGAAGAAAGATTCAAGCAAAGGTACACTGGAGGATCAAATCATTC
AGGCAAACCCTGCACTGGAGGCTTTTGGTAATGCCAAAACAGTGAGGAAC
GATAACTCATCCCGCTTTGGGAAATTCATCCGAATTCACCTTTGGAACCAG

TGGCAAATTGTCTCTGCCGACATTGAGACTTATCTCCTGGAGAAGTCAC
GTGTCACCTTTTCAAGCTCAAGGCTGAGAGGAACTATCACATCTTCTCCAG
ATCCTGTCCAATCAAAAGCCAGAGCTGTTGGACATGATGTTGGTCACCAA
CAACCCATATGACTACTCCTTCATCTCCCAAGGAGAGGTAACAGTAGCAT
CCATCAATGATGCAGAGGAGCTGATTGCCACTGACAGTGCCTTTGATGTC
CTCGGCTTACCCAGGAGGAGAAGCTGGGAGTTTACAAGTTGACAGGTGC
GATCATGCACTATGGCAACATGAAGTTCAAGCAAAAGCAGCGTGAAGAGC
AGGCTGAGTCTGATGGCACAGAGGCTGCTGATAAGTCAGCTTATCTAATG
GGGCTGAATTCTGCCGACCTCATTAAGGGCTTTGCCATCCCAGAGTCAA
AGTAGGAAATGAGTACGTACCAAAGGCCAAGGTGTAGATCAGGCTACT
ACCCCAACAAGGAGGCCCTTCAAGTGTGAGGAGTGTGGTAAGCACTATAAC
ACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACGGCGGG
CGACCTCACCTGTAAAGTGTGTATGCAGAGCTACGAGAGCACGCCGGTCC
TCCTGGAACACCTCAAGAGCCACTCTGGGAAATCTTCTGGTGGAGCCAAG
GAGAAAAAGCACCCATGTGATCACTGTGACCGTTCGGTTCTACACCCGGAA
GGACGTGAGGCGGCACATGGTAGTCCACACGGGCCGAAAGGACTTCCTGT
GTCAATACTGCGCCAGCGCTTTGGCCGGAAGGATCACCTGACGCGACAC
GTGAAGAAGAGCCACTCGCAGGAGTTGCTGAAGATAAAGTCAGAGCCTCC
GGATATGCTGGGCCTCCTGGGCTCCGGCTCGCCGCTTGTGCAGTTAAGG
AGGAGCTTAGCCCCATGATGTGCAGCGTTGGTCCCAACAAAGACCCCATG
ATGGGGAAACCCTTCCCAGCGGGACCCCTTTCCCTATGGGTATGTATAA
CCCGCACCAC-----CTCCAGGCCATATCCAGCCAGGGGTGGGCCACC
CC-----CACCCCTCCCTGATGCCTAGTTCCCTGTCAGCGGCTATGGGC
ATGGGCTGTCAATATGGAATATCTCATTTACGCTTCCTTCTCCTTCATGGG
ATGTTTACAAATCACTGATGGGTGCAACATAGTGAATTTATTAGCTAGTA
ATTCTCTGAGCGTCTCATATGCTCTGACCCAGCAAAAGTATTTTCAAGTAAC
TATAGTCCCCTCATTTGGGTTTTACATCTACGAGCCTATTGAGTACTGGAA
CTCAACAGTGCAGGAGCACCTGAGGACACTGAGCGATGGTTTTCAACAAGA
TCTCTTGATGGACCACCTTCTCCACTACCTGCAGGTGGTGAATGTGAGC
GCGTCAACCAAGAATGACTTCATCGGCATCCTGAAAGGCTCCTTCTTGAG
GAACCCGGAGTACCAGCACTTCATGGAGGACATCATCTTCTCCAAGA---
ACCGGGAGAGCG-----ATGAGTACGACATCATCGCCTCACGCATGTAC
CTGGTGGCGCGCACCCACGGAGAAGAGGCGGAGGAGGTGGTTGAACCTCT
GGAGAAGTTGCGACCGCTGATGCTCATAAACAGCATCAAGTTCAATTGCTT
TCAACCCACCTTTGTCTTCATGGACCGCTACAGCTCCTCYGTCATCTCA
CCCATCCTCACCTCTGGCTTCAGCGTCCACCATCCTCATCCTCACTTT
CTTCTGGTCATAAACCCGTTGGGGAACTTTTGGCTCATCCTGACGGTCA
CATCTGTGGAGCTGGGAGTTTTGGGTTTAAATGGGTTTTACCAGTTTGGAG
TGGCAGCCTGCCCTCCAGAATGTGTCTCATCTGCCACGTGGGCATCAT
CAACGGACTCTCCGGCTGGGCCACCTCTGTAGATGACTCACCAGCCGACA
CGATCTCCCGGCGGTATCGCTACGATGTGGCCCTGGCATCTGCCCTTAAG
GACCTGGAGGAAGACATCGTGGAGGACTGGTAGAACACGGACTGCAGGA
CAGCGTTCTGACCTCGGAGTTCAGCGTTGTGATCAAGGAGTCTGCGACG
GCATGGGTGACGTTAGCGAGAAGCACGGAGGAGGGCCGGCGATTTCCCGAG
AAGGCGGTCCGCTTCTCCTTACCCTTATGTGAGTCTCTGTCCGGGTCTCA
AGGAACGGAA-----GAGGCGGTCA
CCGCTTTCAGGGAGCCGAAGCCCAACTCTGAATTGTCCTGTAAACCCCTC
TGTCTGATGTTTGTGGATGAGTCTGACCACGAGACCCTGACAGCCATTCT
GGGGCTCTGGTGGCCGAGCGGAATGCGATGAAGCAGAGCCGCTGATCC
TGTCATTTGGGCGGCTCCCGCGCTCTTCTCCTTCGAGTTCCGAGGCACG
GGCTACGACGAGAAGATGGTGGCAGAGTTGGAGGGCATGGAGGCTCTGG
TTCCACCTACGTCTGCACCCTGTGCGACTCCACCCGGGCGGAGGCTCTC
GAAACATGGTGTCTCCACTCCATCACCCGGAGCCACGGCGAGAACCCTGGAG

AGTCCCTGTGCCCCGCCAGAAAGACCAGCCATGCCCTCTTCCTGCTGGG
AGGACAGACCTTCATGTGTGATAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGCTGTAAGGTCTACGTACAGGTGGGA--GGGGCTC-
AGAGAACGGTGTCTCTAAAGACGTCTGGGTCTATGATACCGTCCATGAGG
AGTGGTCCAAGGCAGCACCCATGCTCATTGCTAGGTTTGGCCATGGCTCT
GCTGAGCTCAAACACTGCCTCTATGTGGTGGGAGGACACACAGCAGCCAC
TGGCTGCCTCCCAGCCTCTCCGTCTGGATGAGTACATTGTTGTGTTTCAGT
CGTTCAACAACAAGGCTGATTCTGAACGAAGCGGAGCTGATACTGGCACT
GGCCAAGAGTTTCAGATGAGGGTGGTTACAGTGTCCCTGGAGGAACAGT
CTTTCCCCAGCATCGTACAGGCCATCAGTGGGGCTCCATGTTGGTTAGT
ATGCATGGAGCTCAGCTCGTACCTCACTCTTCCCTCCCAGAGGAGCTGC
TGTAGTAGAGCTCTTCCCCTATGCTGTGAATCCGGAACAGTACACCCCAT
ACAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCCTGG
AGGAACACTATTGAGGAGAACACTGTCGCCCACCCAGACAGACCCCTGGGA
CCAAGGAGGCATTGCCCATTTGGAGAAAAGAAGAGCAGGAGAGAATCCTAG
CCAGCAAGGATGTCCCTAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTATGGTAGACATCCCCCTCCTTGCTGGAAGT
CCTCAA--GGAGGGCCTGAAG---ACCAGGCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTACCCGGGCCGGGTCCGAGAACCCAGTGC
CAGACTTCAGTCCAAGCCACCAACGAGGCTAAACTCACAGTATCCTGGCA
GATCCCATGGAACCTTAAGTACCTGAAGGTGCGAGAGGTCAAGTACGAGG
TGTGGATCCGGAAGAGGGATGCAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCACTGGAGGCTTTTGGTAATGCTAAAACACTGAG
GAATGACAACCTCCTCTCGCTTTGGGAAATTCATCCGAATTCACTTTGGAA
CCAGTGGCAAGCTGTCTCTGCAGACATTGAGACTTACCTGCTGGAGAAA
TCACGAGTCACCTTTCAGCTTAAGTCAGAGAGGAACTACCATATCTTCTT
CCAGATTTTGTCCAATCAAAGCCAGAGCTGTTGGACATGTTGCTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCCAAGGAGAGGTAACGTGA
GCATCCATCAATGATTCGGAGGAGTTGATGGCCACGACAGTGCATTTGA
TGTGCTTGGCTTCACTCAAGAGGAGAAGATGGGCGTCTACAAGCTGACAG
GGGCTATTATGCACTATGGCAACATGAAGTTCAAGCAAAGCAACGTGAG
GAGCAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTACCT
AATGGGGCTGAATTCAGCTGACCTCATCAAAGGACTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGATGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCCGCTACCG
CCGGGGATTTAACCTGCAAGGTGTGCATGCAGAGTTACGAGAGCACGCCG
GTTCTCTTGGAGCACCTCAAGAGCCACTCGGGGAAGTCTTCGGGTGGGGC
CAAAGAGAAAAAGCACCCCTTGTGACCACTGCGACCCGACGTTTCTACACTC
GGAAGGATGTGAGACGGCATATGGTGGTCCACACAGGCCGCAAGGACTTT
CTCTGCCAGTACTGTGCCAGCGGTTTGGCAGGAAGGACCACCTGACACG
GCATGTGAAGAAGAGCCACTCGCAGGAGCTCCTAAAGATCAAGACAGAGC
CTCCAGATATGTTGGGCTTGCTAACGTCAGGGTCCCCGCCATGCCCTGTC
AAGGAAGAACTCAGCCCCATGATGTGTGGCATGGCACCCAACAAGACCC
CATGATGGGTAAATCCTTCCCCAGCGGGGCACCATTTCCCATGAGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCCAATTCTGGGGTGGCT
CACCCG-----CACCCCTCCCTGATGCCAGTTCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAA-----

>Aulostomus maculatus

AGTCTTATCATCCGGGCCGAGCTTAGCCAACCGGGGGTCTCCTGGGTAA
CGATCAACTTTACAATGTTGTTGTAACAGCCCACGCCTTCGTTATAATCT
TCTTTATAGTAATAACCAATTATAATTGGAGGCTTCGGAAATTGATTAATT
CCCTTAATGATCGGAGCCCCGACATGGCCTTCCCCGAATAAATAACAT
GAGCTTCTGGCTCCTGCCCCCTCCTTCCTCCTCCTCTTAACCTCCTCTG
CGGTAGAGGCCGGGTCCGGGACCGGATGGACGGTTACCCGCCCTGGCT
GGGAACCTGGCCCACGCCGAGCGTCCGTAGACCTGACCATCTTCTCGCT
TCACCTCGCCGGAATTTCCCTCCATCCTAGGAGCAATTAACCTTTATTACAA
CCATTATTAATAAAAACCCCTGCCACCTCCCCATACCAGCTCCCCCTG
TTCGTATGAGCTGTCTGGTTACTGCTGTGCTTCTCCTCCTTTCTCTCCC
AGTCTTAGCAGCTGGCATTACAATGCTGTTAACTGACCGAAACCTGAACA
CCACCTTCTTCGACCCTGCAGGGGGAGGCGATCCTATTCTATATCAGCAC

-----TTCCCTGGAGAGAAAACCTCCACCTTCTAACTGCCTTGG
CATGTTGTTGCTCTCTGATGCCACCAGTGTACCAAGTTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCCGCTATTTGCAAGACGGAGGAC
TTCCCTTCAACTACCCAAAGATATGGTGGTGCAGCTGTTGTACACGAAGA
GCTAGAAACCGAAGATGAAAGGTTAGTTTATGAGGCGGCCCTGAACTGGA
TCAACTACGACCTAGATAGGAGGCACGTGTACCTCCCGGAGCTCCTCAGA
ACCGTGCCTTAGCACTTCTGCCTGCCATCTTTCTAATGGAGAATGTCTC
GACTGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCTATCCGGTGCAAGCTGAAGATCCTTCAAAATGACGGTGTCTGTAAC
AGCCAGTGTGCTCGACCAAGAAAACCCAGCCATGCCCTCTTTCTTCTGGG
AGGACAGACTTTTTATGTGTGACAAGTTGTACCTGGTGGATCAGAAGGCCA
AAGAGATCATACCAAAGGCTGACATTTCCAGCCCCAGGAAGGAATTCAGC
GCCTGTGCCATCGGTTGTAAGGCTACATCACAGGAGGAA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTATGGGTCTATGACACCGTCCATGAAG
AATGGTCCAAGCAGCACCCATGCTCATTGCCAGATTTGGTCATGGCTCT
GCGGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCGAC
TGGCTGCCCTCCAGCTTCTCCATCTGGACGAATACATCGTTGTGGTCAGC
CGATCAACAACAAGGCTGATACTGAATGAAGCCGAGCTCATCATGGCGCT
GGCCAGGAGTTCAGGATGAGGGTGGTCACGGTTTCCCTGGAGGAACAGT
CTTTCCCAGCATCGCTCAGGTGGTCAGTGGTGCCTCCATGTTAGTCAGC
ATGCATGGAGCTCAACTCATCACCTCGCTCTTCCCTCCCAGAGGGGCTGC
TGTGGTGGAAATTGTTCCATTTGCTGTGAACCCAGAACAGTATACTCCAT
ACAAAACCTTGGTCACCCTTCAAGGCATGGACCTTCACTATGTGTCTGG
AGAAACACAAAGGAGGAGAACACTGTTACCCACCCAGACAGACCGTGGGA
ACAAGGAGGCATTGTTACCTGGAGAAGGAGGAGCAGGAGCGAATACTGG
CAAGCAAAGATGTCCCAGACACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCAGAATCTACCAGGACACACTGGTAGATATCCCTTCCTTCCCTGGAAGT
TCTGAG---AGAAGGCATGAAG---ACCAAGCCAGCTTGAAGAA---GG
CCAAGCCAGCCAGCGTGGTCCATCCAGGCCGGGTCAGAGAACCTCAGTGT
CAGACCTCAGTACAAACCACCAATGAGGCCAAACTCTCAGTTTCCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAAGTAAGAGAGGTGAAATATGAGG
TGTGGATCCAGAAAAGGACACCAGTAAAGGGACTCTGGAGGATCAGATT
ATCCAGGCGAATCCTGCGCTGGAGGCCTTTGGGAATGCCAAAACCTTGAG
AAATGACAACCTCTCTGTTTTGGAAAATTTATCCGAATTCATTTTGGAA
CAAGTGGGAAGCTGTCATCTGCTGACATCGAGACGTACCTGCTGGAAAAG

TCTCGTGTACCTTTCAGCTCAAGGCTGAAAGGAACTACCACATCTTCTA
TCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTAATCA
CGAACAAACCCGTACNACTACTCCTATATCTCGCAAGGAGAGGTGACAGTAG
CTTCCATTAATGACTCAAAGGAGCTGATGGCCACAGACAGTGCCTTCGAT
GTGCTCGGCTTTACTTCAAAGGAGAAAATGGGTGTCTACAACTGACCGG
CGCCATAATGACTATGGTAACATGAAGTTCAAGCAGAAGCAGCGTGAGG
AGCAGGCTGAGCCTGACGGGACAGAGGCTGCTGATAAGTCAGCTTATTTG
ATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGTTCATCCCAAAGT
TAAGGTAGGAAACGAGTACGTCACCAAAGGCCAGAGCGTGGACCAAGTCT
ACTACCAAACAAGGAGGCCTTCAAGTGTGAGGAGTGCGGGAAGCACTAC
AACACCAAGCTGGGATATAAACGCCATGTGGCCATGCACTCTGCCACAGC
AGGAGATCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACACCAG
TTCTCCTGGAGCACCTCAAGAGCCACTCTGGGAAGTCCTCAGGCGGAGCT
AAGGAGAAAAAACACCCATGTGACCCTGTGATCGCCGTTTCTATACACG
GAAGGATGTGAGGCGGCACATGGTGGTCCACACAGGCCGTAAAGACTTCC
TGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTAACTCGC
CATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGCC
TCCGGATATGTTGGGTCTGTTAGCTTCTGGGTACCTCCTTGCTCTGTGA
AGGAGGAGCTCAGTCCCATGATGTGTGGCATGGGTCCCAACAAAAGACCCC
ATGATGGGCAAACCGTTCCCCAGTGGGGCCCCTTTTCCAATGGGCATGTA
CAACCCCCACCAT-----CTTCAGGCCATGTCTAATTCTGGGGTGGGT
ATCCA-----CACCGTCCCTGATGCCAGTTCTCTGTCTGCAGCTATG
GGCATGGGTTGTACATGGAANNNNNNNNNNNNNNNNNNCTTCTCATTCATGGGATGTTTACAAATCA
GTGATGGTTCAAACATTTGTAACCTTCTGGCTAGTAACTCTCCAAGTGT
TCATATGCTCTGACTCAGCAGAAATACTTCAGCAACTACAGCCCAGTAAT
TGGTTTTTACATTTATGAGCCTATTGAGTACTGGAACCTCCACAGTGCAGG
AGCACCTCAAGACTCTGAGTCATGGTTTTCAATAAGATCTCCTGGATGGAC
AACTTTTTCCACTACCTGCGGGTGGTGAATGTCAGTGCATCCACCAAGGG
TGACTTCATCACCATCCTCAAGGGCTCTTTCCTGCGGAGTCCTGAGTACC
AGCACTTCACTGAGGACATCATATTTCTCCAAGA---ACCGCGAGACAG--
----ACGAATATGACATTATCGCCTCACGCATGTATTTAGTGGCACGGAC
CACAGAGAAGAAGCGTGAGGAGGTGGTGGAGCTTCTAGAGAAGCTTCGCC
CTTTGATGCTGATCAACAGCATCAAGTTCATTGCCCTTCAATCCCACATTT
GTGTTTCATGGACCGCTACAGCTCCTCTGTTCATATCGCCATACTGACCTC
AGGCTTCAGTGTACTCACCATCCTTATACTCACTTTCTTCTTCTGGTCATCA
ACCCCTTGGGGAATTTCTGGCTCATCCTCACAGTAACATCCGTGGAGCTG
GGTGTCTGGGTTTGGTGGGTTTTACCAGTTTGAATGGCAGCCAGCTCT
CAAGAATGTGTGAGCATCTTTCAATGTTGGCATTATTAATGGCCTCTCTG
GATGGGATTCGTCCGTGGATGACTCACACCTGACACCATTACTCGGCCGA
TTTCGCTATGATGTGGCTCTAGTATCAGCATTAAAGGATCTGGAAGAGGA
CATAATGGAAGGGCTCAGAGAGAGGGGGATGGAAGACAGTGTTCACCT
CAGGCTTCAGTGTATGATCAAAGAGTCTGTGATGGCATGGGCGATGTC
AGCGAGAAGCATGGTGGAGGACCAGTTGTTTCTGAGAAAGCTGTTCGTTT
CTCTTTCACAATTATGTCTATCTCTATCCTGGGTGATGATGATGAA----
-----GATAAGGTTACTATATTTCACTGAG
CCAAAGCCAAACTCAGAAGTGTCTGTAAGCCCCCTTTGTCTGATGTTTGT
GGATGAATCTGATCATGAGACCCTCACAGCTGTACTGGGGCCTATTTTTA
CGGAGCGTAATGCAATGAAGGAAAGTAGACTGATCCTCTCCATTGGTGGT
CTGCCTCGCTCTTTCCGTTTTCCACTTTAGAGGCACGGGATATGATGAGAA
GATGGTGCAGAGATGGAGGGCCTGGAGGCCTCAGGCTCCACCTATATCT
GCACTCTGTGTGACTCAGGTCGGATGGAGGCCTCTAAAAACATGGTACTA
CATGCCATCACACGCAGCCACGATGAAAACCTAGAACGTTATGAAGTATG
GGAGGACCACCCCTTTTTTGGAGTCTGTAGATGAGCTACGGGACAGAGTCA

AAGGGGTCTCTGCCAAGCCATTTGCTGAGACCCATCCCACACTGGATGCA
TTACATTGTGACATCGGCAATGCCACTGAATTCTACAAAATCTTTCAGGA
TGAAATTGGGGAGGTGTACCAGAAGGT---CAAT---CCCTGCCGGGAGG
AGCGACGCAGCTGGAGGGCAGCTCTAGATAAGGAGCTGAGGAGGAAGATG
AAGCTTAAACCAGTAATGAGAATGAATGGCAACTATGCGCGGAAGCTAAT
GACCTTGTAGGCTGTGGAGGTTGTGTGTGAGCTGGTGCCATCTGAGGAGA
GGAGGGAGGCCTTGAGGGAGCTTATGAGGCTCTACCTTGAGATGAAGCCT
GTATGGCGTGCCACCTGCCCAGCAAAGGAGTGCCCTGACCAGTTGCACCG
CTACAGCTTCAACTCCCACCGTTTTTCTGACCTCCTCCTCCACCTTCA
AATACAGGTACAATGGCAAGATAACCAATTACCTGCACAAGACTTTGGCC
CATGTCCCTGAGATCATTGAGAGAGACGGATCTATTGGAGCCTGGGCTAG
TGAGGGGAAGGAGTCAGCAAACAAAANNNNNNNNNNNNNNNNNNNNNNCTCTCGGGCCCCAGTGGAAAGGAG
AG

CCCACAGCCTTTCTCCTGCTCCATTGAAGATCCCACAAAACAGACAAAAT
TCAAAGGCATCAAGACATACATTTTCATACCGGGTCACGCCGTCTCACACG
GGCCGTCCCCTGTACAGACGCTACAAACACTTCGACTGGCTGTACAACCG
GCTGCTGCACAAGTTCACTGTGATCTCCGTGCCGCACCTGCCTGAGAAGC
AGGCCACGGGGCGGTTTCGAGGAAGACTTTTATCGAGAAGCGTAAGAGACGA
CTGATACTGTGGATGAATCACATGACCAGTCACCCAGTCCTCTCCCAGTA
TGAAGGCTTTGAGCACTTTCTGATGTGTGCTGACGACAAGCAGTGGAAAGC
TGGGCAAGAGACGGGCGGAGAANGANGAGATGGTGGGTGCCCACTTCATGCT
GACCTTCCAGATCCCCAACGAGCACCAGGACCTTCAGGATGTAGAGGAGA
GGGTGGACTCCTTTAAGGCCTTTGCCAAGAAAATGGACGACAGTGTTCATG
CAGCTCACACATGTTGCCTCTGAGCTGGTGCCTAAACACCTGGGTGGGTT
CAGGAAGGAATTCAGCGACTGGGAAATGCCTTCCAGTCCATCAGCCAGT
CATTCATGCTGGACCCCCCCACAGTTCAGAGACCCTCAACAACGCCATC
TCCCATNNNNNNNNNNNNNNNNNNNNNNACTGACCTCTCTGGGTTTTATTATTGGTGTGGTGTGGTGGGA
ACCTCCTGATTTCTATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCA
CCCTACTATTTCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCAGC
CATCTGCTTCCCCTTTGTCTTCACCTCAGTCAAGAATGGCTCCGCCCTGGA
CATACGGCACGTTAACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTGTCC
TGTTTCCACACTGCATTCATGCTATTCTGTGTTAGTGTACACGCTACTT
GGCCATTGCACATCACCGCTTCTATACTAAGAGGTTGACCTTCTGGACCT
GTCTGGCTGTTCATCTGCATGGTGTGGACATTGTTCAGTCGCTATGGCATTC
CCACCAGTGTAGACGTAGGGACGTATTCTTTTATCCAAGAGGAGGATCA
GTGCACATTCAGCACCGCTCCTTCAGGGCAAATGATTCACTGGGCTTCA
TGCTCCTGCTGGCTCTCATTCTCCTGGCCACACAGCTGGTTTTACCTCAAG
CTCATCTTCTTCGTCCACGACCGCCGAAAGATGAAGCCCGTCCAGTTTGT
GCCTGCTGTTCAGCCAGAACTGGACTTTCATGGTCCAGGTGCCAGCGGGC
AGGCAGCAGCCAACCTGGCTAGCCGGATTTGGTTCAGAGGCCACCCACCT
ACTTTGCTGGGAATCCGACAGAACAGCAATGCAGCGGGCCCGCTCGCCT
ACTGGTATTGGATGAGTTCAAACAGAGAAGAGGATTAGTAGGATGTTCT
ACATCATGACGTTTTCTTCTCCTGGCTCTGTGGGGGCCCTATCTGGTAGCC
TGCTACTGGCGGGTGTGTTGCAAGGGGGCCCCGTGGTTCCTGCAGGCTACCT
CACAGCAGCCGTGTGGATGAGTTTTGCCCAGGCTGGGGTCAATCCTTTCA
TCTGCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGCGTGGGGACTGGTCTGGCACAGA
GC---GCAGCGTACCAC
TCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTGCC
ACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGA
CTTTGCAGCCTCGGCATACGAGGCCGCT-----GATTTCCGCCGTA
ACGCGGCCACCTTGTGTCTACGCAGCGGCCGGAGTGAAAGCTC-----
-TTCCCCTGCCGACTGCAGGCTGTCCAACCGGCCCTTTGGCTATTACGC
AGATCCGTACG---GTTGG---GGAGGACGCACGCCGCCGAGTACTGTG

CGGTCAATAGCAAATCAAGCTCGGTGTTTTCTGCTGGCCCGCAAACCTCT
ATCGGCGGCAGAGCAGGCA---CC---AACTGCCTGG-----CGGA
GGA---GGGA---GACTC---CATCCCGACAGAGAGGTCACCG---AT--
-C---GGATCAGAGGAG---ACCAAATCTAAAGACATGAC---GTCAGA-
--GTCGAGCTGGATAGAG---ACGCCGTCCTCCATTAAGTCCATCGATTC
AAGCGACTCTGGGATCTTTG---AACAGGCCAAACGGAGGAGAATCTCCC
CGTCTGCAACGCCG-----GTACCAGAGACAGTGTCCCCGTTAAAA
TCCGAGATCACTCAACAGGGCGAAGTCACAGAGAGAGAAGCGGCGTTGGG
GATAAATCCGTTTGCAGATGGGATGGGCGCCTTCAAATAAAACCACAGCT
CCCACGATATTGGCTCCGG---ACAAACGGCGTTTTCTCCCAGGCG---
CCCGGCTAC---GCAGCAGCCGCCCTGGGGCACCACCACCA-----CCA
CCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTTAACTCCACGA
GGGACTTTCTCTTCAGAAATCGGGGTTTTCGGGGACGCCACCGG-----
-----GGCGCAGCACAGTTTTGTTCCGCCTC-----CGGAAGTTT---
C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCT
TCCCCGGGGCTCCACGAG---CAGGCGGCGAGCCATGCGTCTTCCAACGTG
GTCAACAGCCAGATGCGACTGGGCTTCTCGGGGGACATGTACGGAAGGGC
CGACCAGTACGGCCACGTTACGAGCCCACGCT---CCGA---TTATGCCT
CGACCCAGTTGCATGGCTACGGCCCCATGAACATGAATATGGCCGCG---
CACCACGGAGCAGGGGCCCTTCTTTTCGATACATGAGGCAACCCATCAAACA
AGAGCTTATCTGCAAGTGGGTGCAACCGGAGCAGCTGACGAATCCCAAAA
AGTCATGCAACAAAACCTTTTAGTACAATGCACGAGCTGGTGACCCATCTG
ACGGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACATCTGCTTCTG
GGAGGACTGCTCCAGAGAAGGGAAACCTTCCAAGCCAAATACAAACTTG
TGAATCATATCCGAGTTCACACCGGAGAAAAGCCCTTTCGTTGCCCGTTC
CCCGGCTGTGGCAA

>Aulotrachichthys prosthemi

AGCCTACTCATCCGAGCAGAGCTAAGCCAACCTGGGGCCCTCCTAGGTGA
TGATCAAATTTATAACGTTATTGTTACAGCGCATGCCTTTGTAATAATTT
TCTTTATAGTAATACCAATCATAATTGGTGGCTTCGAAACTGACTTATT
CCCCAATGATCGGAGCCCTGATATAGCATTTCCTCGAATAAATAATAT
AAGCTTCTGACTTCTCCCACCATCATTCCTCCTCCTCCTCGCTTCTTCCG
GAGTTGAAGCAGGGGCGGACAGGATGAACAGTATACCCGCCCTTGCA
GGAAACCTAGCTCACGCAGGAGCTCCGTAGATCTAACCATTTTCTCCCT
ACATTTAGCAGGTGTTTCCCTCCATCCTGGGGGCCATCAATTTTATTACAA
CCATTATTAATATGAAACCCCTGCTATTTCTCAGTACCAAACCCCTTA
TTTGTCTGAGCCGTTTAAATTACAGCAGTTCTTCTTTACTCTCCCTTCC
CGTTCTCGCAGCCGGCATTACTATGCTCCTCACAGATCGAAACTTAAATA
CTACCTTCTTTGACCCAGCAGGAGGAGGAGACCCAATTCTTTATCAACAC
TTATTC-----

-----NNNNNNNNNNGAACCTTACCCATCTAACTGCCTGGGCATGCTGTTGC
TGTCCGATGCACACCAGTGTACCAAGCTATCAGAGCTCTCCTGGGGCATG
TGCTCAGCAACTTCCGGCCATTTGCAAGACAGAGGACTTCCCTCCAGCT
GCCAAAGACATGGTGGTGCAGCTTCTATCCCACGAGGAGCTGGAGACAG
AAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGGTCAATTATGAC
CTGGAAAGGAGGCACTGCCATCTGCCAGAGCTGCTGAGAACAGTTCGCCT
GGCCCTGCTACCTGCCATCTTCCCTCATGGAGAATGCTCTCCACAGAAGAGC
TGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTAGATGAGGCCATCCGC
TGCAAGCTAAAGATCTTGCAGAATGACGGCGTGGTTAACAGCCCTGCGC
TCGGCCGAGAAAACAGCCACGCCCTTTTTCTGTTGGGAGGGCAGACCT

TCATGTGTGACAAGCTGTATCTGGTGGACCAGAAAAGCGAAAGAGATCATC
 CCAAGGCGGACATCCCAGCCCTAGGAAGGAGTTCAGTGCCTGCGCCAT
 CGGCTGTAAGGTCTACATCACAGGCGGGA--GAGGCTC-AGAAAACGGCG
 TGTCTAAAGACGTATGGGTCTATGACACCGTCCACGAGGAATGGTCCAAG
 GCAGCACCCATGCTCATTGCCAGATTTGGTCACGGCTCTGCTGAGCTGAA
 AACTGCCTTTACGTNNNGGATGA
 CTACGTTGTAGTGTTCAGCCGTTCAACAA
 CAAGGCTGATTCTGAACGAAGCGGAGCTCATCATGACGTTGGCCCAGGAA
 TTTCAGATGAGAGTGGTTACAGTCTCCCTAGAGGAGCAAACCTTCCCCAG
 CATCGCCAGGTGATCAGTGGTGCCTCCATGTTAGTCAGCATGCATGGAG
 CTCAGCTTGTACCTCACTCTTCCCTGCCAGAGGAGCTGCTGTGGTGGAG
 CTGTTCCCCTATGCTGTCAACCCAGAACAGTACCCCCATATAAAAACCCT
 CGCTCCCTTACCAGGCATGGATCTTCAATATGTTTCCCTGGAGGAACACTA
 TAGAGGATAAAGCTGTTACCCACCCAGACAGACCCCTGGGAAGAAGGAGGC
 ATCGCCCATTTGGAAAAGGACGAGCAGGAGCGAATACTGGCCAGCAAGGA
 TGTCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCCGAATCT
 ATCAGGACACTTTGGTCGACATCCCTTTCATTCGTGGAAGTCCTCAA---A
 GAGGGCTGAAG---ACCAGGCCAGCTTGAAGAA---GGCCAAGCTGGC
 CAGCACGGTACATCCAGGCCGGGTGAGAGAACCCAGTGCCACACCTCGG
 TCCAAGCCACCAACGAGGCTAAACTCACGGTTTCCCTGGCAGATCCCATGG
 AATCTGAAATACCTGAAGGTGCGAGAAGTGAAGTACGAGGTGTGGATCCG
 GAAGAAGGATACCAGCAAGGGGACACTGGAGGATCAAATCATCCAGGCAA
 ACCCAGCGCTGGAGGCTTTTTGGTAATGCCAAAACAGTGAGGAATGACAAC
 TCATCTCGTTTTGGAAAATTTCATCCGAATTCACTTTGGAACCAGTGGCAA
 GCTGTCTCTGCTGATGTTGAAACCTACCTATTGGAGAAGTCACGTGTCA
 CCTTTCAACTCAAGGCTGAAAGGAACCTACCACATCTTCTTCCAGATATTG
 TCCAATCAGAAGCCGGAAGTGTGGACATGCTGTTGATCACCAACAATCC
 ATATGACTACTCTACATCTCCAAGGAGAGGTAACAGTAGCATCCATCA
 ACGACTCAGAGGAGCTGATGGCCACTGACAGCGCCTTTGACGTGCTTGGC
 TTTACTCTTGACGAGAAGATGGGAGTATATAAACTGATTGGTGCCATTAT
 GCACTATGGCAACATGAGATTTAAGCAGAAGCAGCGTGAAGAGCAGGCTG
 AGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCTTACCTTATGGGGCTG
 AACTCTGCAGACCTCATCAAAGGGCTATGCCATCCAGAGTCAAGGTAGG
 AAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTCTACTACCCCA
 ACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTACAACACCAAG
 CTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGGCGGGGATCT
 CACCTGCAAAGTGTGCATGCAGACCTATGAGAGCACGCCGGTGTCTCTGG
 AGCACCTTAAGAGTCACTCGGGGAAGTCCTCGGGTGGCACCAAGGAGAAG
 AAACACCCGTGCGACCACTGTGACCGCCGCTTCTACACGCGCAAGGATGT
 GAGACGGCACATGGTGGTCCACACGGGCCGGAAGGACTTCCTGTGCCAGT
 ACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCGCCACGTGAAG
 AAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGCCTCCAGATAT
 GTTAGGTCTTTTAGCTTCTGGCTCACCAACCCTGCTCTGTGAAGGAGGAGC
 TCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCCATGATGGGC
 AAACCCTTCCCCAGCGGGACCCCTTTCCCCATGGGCATGTACAACCCCA
 CCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTCAACCA----
 --CACCCATCCCTGATGCCAGTTCCTTGTCTGCAGCTATGGGCATGGCC
 TGTCACATGGAG-----

TTTCCACACGGCGTTCATGCTATTCTGTGTCAGCGTCACTCGCTACCTGG
CTATTGCGCATCACCGTTCTACACCAAGAGGCTGACCTTCTGGACCTGT
CTAGCCGTCATCTGCATGGTGTGGACGTTGTCAGTAGCCATGGCTTTTCC
CCCGGTGCTGGACGTAGGGACGTACTCCTTCATCCGGGAGGAGGACCAGT
GCACATTCAGCACCGTTCTTTTTCAGGGCCAATGACTCACTGGGCTTCATG
CTCCTGCTGGCACTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCT
CATCTTCTTTGTCCACGACCGTTCGGAAGATGAAGCCCGTCCAGTTCGTGC
CCGCCGTCAGCCAGAACTGGACCTTCCATGGGCCAGGCCAGTGGGCAG
GCGGCGGCTAACTGGCTCGCTGGATTGTTGGGAGAGGCCCCACCCCGCCTAC
CTTGCTGGGCATCCGGCAGAACAGCAACGCGGGCCGCGAGGCGTCTGC
TGGTGTGGATGAGTTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTAC
ATCATGACGTTTTTCTTCTGGCGTTGTGGGGGCCCTATCTGGTAGCCTG
CTACTGGCGGGTGTGTTGCAAGGGGCCCGTAGTCCCTGGGGGCTACCTGA
CGGCAGCCGTGTGGATGAACTTTGCCAGGCTGGGGTCAATCCCTTCATC
TGCATCTTNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGGTCCTGGC
ACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCATCCCCGCAGCA
AACCAGGAGGCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC
---CTGCCAACACCGACTGGACTTTGCTGCCTCGGCATACGACGCTGCC
-----GATTTGCGCCGTAACGCGGCCACCTTGTGTCTACGCAGC
GGCCGGAGTGAAGGCTC-----TTCCTTGCCTCGGCTGCAGGCTGCTCCA
ACCGGCCGCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GGCGGA
CGCACGCCGCCGAGTACTGTAGCGTAAACAGCAAACCGAGCTCGGTCTT
TTCTGTTGGCCCTCCAACCTCTGTGCGGCGCAGAGCGGGCC---CC---A
ACTACCTGG-----CCGAGGA---CGGA---GACGC---CATCCCG
ACGGAGAGATCCCCG---AT---CGGTGGCTCCGAGGAG---ACGAAACC
CAAGGACCT-----GTCGGA---GTCGAGCTGGATAGAG---ACGCCGT
CCTCCATAAAGTCAATCGATTCAAGCGATTCTGGGATCTTCG---AACAG
GCCAAAAGGAGGAGAATCTCGCCCTCTGCCACGCCG-----GTTTC
AGAAACTGTGTCCCCGTTAAATCTGAGCATCACTCAACAGGCGAAGTCA
CAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTGCGGACGGGATGGGC
GCCTTCAAAATCAACCACAGCTCCCACGATATTGGCTCCGG---ACAGAC
GGCGTTTTCTCCAGGCG---CCCGGCTAC---GCAGCGCCGCCCTGG
GA---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCC
ACGGCGGCTTTCAACTCCACCCGGACTTTCTCTTTAGAAATCGGGGCTT
CGGAGACGCCACTGG-----GGCGCAGCACAGTTTGTTCGCCT
C-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCA
GATGCCCGGGACACCTGCTCTTCCAGGACTCCACGAG---CAAGCAGC
GAGCCACGCGTCTTCTAATGTGGTCAACAGCCAGATGCGACTGGGCTTCT
CGGGGGACATGTACGGTTCGGGCCGACCAGTATGGCCACGTTACAAGCCCA
AGGT---CCGACCACTATGCTTCGACCCAGTTGCACGGCTATGGCCCAT
GAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCCTTCTTTCGAT
ACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCG
GAGCAACTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACGAT
GCATGAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGC
AGTCCAACCACATCTGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAACCA
TTCAAAGCCAAATACAACTTGTGAATCATATCAGAGTACACACCCGGAGA
GAAACACTTTCATGTCCGTTTCCCGGCTGTGGCAAA
>Aulotrachichthys sajademalensis

-----TTTCTAGAGAGAAAACCTTCATCCATCTAACTGCCCTGGG
CATGCTGTTGCTGTCCGATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCGGCCATTTGCAAGACAGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGG
TCAATTATGACCTGGAAAGGAGGCACTGCCATCTGCCAGAGCTGCTGAGA
ACAGTTGCTGGCCCTGCTACCTGCCATCTTCCCTCATGGAGAATGTCTC
TACAGAAGAGCTAATCAATGCCAGGCCAAGAGCAAGGAGCTGGTAGATG
AGGCCATCCGCTGCAAGCTAAAGATCTTACAGAATGACGGTGTGGTTAAC
AGCCCCTGCGCTCGGCCGAGAAAAACCAGCCACGCCCTTTTTCTGTTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGACCAGAAAGCGA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGCGGGA--GAGGCTC-
AGAAAACGGCGTGTCTAAAGACGTATGGGTCTATGACACCGTCCAYGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCAGATTTGGTCACGGCTCT
GCTGAGCTGAAACACTGCCTGTACGTAGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCCAGCCTCTCCCTCCGGATGACTACATTGTAGTGTTCAGC
CGTTCAGCAACAAGGCTGATTCTGAACGAAGCGGAGCTCATCATGACGCT
GGCCAGGAATTTTCAGATGAGAGTGGTTACAGTCTCCCTAGAGGAACAAA
CCTTCCCCAGCATCGCCCAGGTGATCAGTGGTGCCCTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTGTCACTCACTCTTCCCTGCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTATGCTGTCAACCCAGAACAGTACACCCCAT
ATAAAACCCTCGCCTCCTTACCAGGCATGGATCTTCAATATGTTTCCCTGG
AGGAACACTATAGAGGATAACACTGTTACCCACCCAGACAGACCCCTGGGA
AGAAGGAGGCATCGCCCATTTGGAAAAGGACGAGCAGGAGCGAATACTGG
CCAGCAAGGATGTCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTATCAGGACACTTTGGTGGACATCCCTTCATTTCGTGGAAGT
CCTCAA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GG
CCAAGCTGGCCAGCACGGTACATCCAGGCCGGGTGAGAGAACCCAGTGC
CACACCTCGGTCCAGGCCACCAACGAGGCTAAACTCACGGTTTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGCGAGAAGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGATACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCAGCGCTGGAGGCTTTTGGTAACGCCAAAACAGTGAG
GAATGACAACACTCATCTCGTTTTGGAAAATTCATCCGAATTCACTTCGGAA
CCAGTGGCAAGCTGTCTCTGCTGATGTTGAAACATACCTATTGGAGAAG
TCACGTGTCACCTTCAACTCAAAGCTGAAAGGAACTACCACATCTTCTT
CCAGATATTGTCCAATCAGAAGCCGGAAGTGTGGACATGCTGTTGATCA
CCAACAATCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAACGACTCAGAGGAGCTGATGGCCACTGACAGCGCCTTTGA
CGTGCTTGGTTTTACTCTTGACGAGAAGATGGGAGTATATAAACTGATTG
GTGCCATTATGCACTATGGCAACATGAGATTTAAGCAGAAGCAGCGTGAA
GAGCAGGCTGAGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCTTACCT

TATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTATGCCATCCCAGAG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTC
TACTACCCAAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACGCCG
GTGCTCCTGGAGCACCTTAAGAGTCACTCGGGGAAGTCCTCGGGCGGCGC
CAAGGAGAAGAAACACCCGTGCGACCACTGCGACCGCCGCTTCTACACGC
GCAAGGATGTGAGGCGGCACATGGTGGTCCACACGGGCGGAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCAGATATGTTAGGTCTTTTAGGTTCTGGCTCACCGCCATGCTCTGTC
AAGGAAGAGCTTAGCCCTATGATGTGCAGCATGGGTGCCAACAAGACCC
CATGATGGGCAAACCTTCCCCAGCGGGACCCCTTCCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAATTCC-----CCC
CACCCC-----CATCCCTCTCTGATGCCTGGCTCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAGTATCTCATCTATGCCTCTTTCTCATTCA
TGGGATGTTTACAAAATCAGTGATGGCTCAAACATTTGTGAACTTGCTGGCT
AGTAATTTCTCCGAGTGTTCATATGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGTCTGTGATTGGATTTTACATTTACGAGCCCATTGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACACTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCACTACCTGCGGGTGGTGAACGT
GAGTGCCTCAACCAAGAATGACTTTATCAGCATTCTCAAGGGCTCTTTCC
TGCGTAGCCCGGAGTACCAGCACTTCACTGAGGACATCATCTTCTCCAAG
A---ACCGCAGAGTG-----ATGAGTATGACATTATTGCCTCGCGCAT
GTACCTAGTGGCGCGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TTCTGGAGAAACTGCGTCCACTGATGCTGATCAATAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTTTTTCATGGACCCTACAGCTCCTCAGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCTGCTCATCAACCCCTTGGGAACTTCTGGCTCATCCTCACA
GTTACTTCTGTGGAGCTGGGTGTCTTGGGTTAATGNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNTGCCATGTGGGCAT
TATTAATGGGCTCTCTGGATGGGCTTCCTTGGTGGATGACTCTCCAGCTG
ACACCATTACTCGACGGTATCGCTACGACGTGGCCCTGGTATCAGCCTTA
AAGGATCTGGAGGAGCACATCATGGAGGGACTGAAAGAGTGTGGGCTGGA
AGACAGCGCTTGCACCTCAGGCTTCAGTGTTATGATCAAGGAATCTTGTG
ATGGCATGGGAGATGTCAGCGAGAAGCACGGGGGAGGACCAGCGGTCCCC
GAGAAGGCTGTACGCTTCTCTATTACTGTTATGTCTGTCTCTGTCTGTCG
AGATGGAGAGGAA-----GAGGCGG
TTACCATCTTTCTTGAGCCAAAGCCCAACTCAGAACTGTCCTGTAAGCCC
GTAAGCCTGATGTTTGTGGATGAGTCAGACCATGAGACACTCACTGCTGT
CCTGGGACCTTTAGTGGCAGAGCGTAATGCAATGAAACAGAGTCGACTCA
TCCTATCTATGGGTGGCCTCCCTCGTTCCTTCCGCTTCCACTTCCAGAGCC
ACAGGATATGATGAGAAGATGGTGCCTGACATGGAGGGCCTGGAGGCCTC
AGGTTCACCTACGCTCTGCACTCTGTGTGATTCCAGTCGAGCAGAAGCGT
CTCACAACATGGTGTACTTCCATCACCCGCAACCATGATGAGAACATG
GAGCGTTATGAAATATGGAGGACCAATCCCTTTTCTGAGTCTGTGGAAGA
GCTGCGAGACCGGGTCAAAGGAGTCTCTGCTAAGCCGTTTATGGAGACCC
AGCCCACTATTGATGCATTGCATTGTGACATTGGTAATGCCACAGAGTTC
TACAAAATCTTCCAGGATGAGATCGGGGAGGTGTACCAGAGGGC---CAA
C---CCCACCCGGGAGGAACGGCGAAGGTGGCGAGCAGCCCTAGATAAGC
AACTGAGGAAGAAGATGAAGCTTAAACCAGTGTGAGGATGAATGGGAAC
TATGCCCGGAGGCTCATGACCCTGGAGGCCGTGGAGGTGGTTTTGTGAGCT
GGTACCCTCAGAAGAAAGGCGAAAGGCCCTGAGGGAGCTTATGGGGCTCT

ATATTCAGATGAAGCCTGTGTGGCGCTCGACCTGCCAGCCAAGGAATGC
CCTGATGAGCTGTGCCGCTACAGCTTTAACTCCCAGCACTTTGCCGATCT
CCTCTCCACTACCTTCAAATATAGGTACAATGGAAAGATCTCCAATTACC
TGCATAAGACCCTCGCCCATGTCCCTGAAATCATTGAAAGAGATGGCTCT
ATAGGAGCCTGGGCCAGCGAGGNNNNNNNNNNNNNNNNNNNTCGTACACCATTGAGATGGCTCCGAAGG
GCCCCAGTGAAGGAGAGTCTCAGCCTTTCTCTGCTCCATTGAAGAC
CCCACCAAGCAGACCAAGTTCAAAGGCATCAAGACCTACATTTCTACCG
GGTACGCCGAGCCACACGGGCCGCCCCGTCTACCGGCGCTACAAACT
TTGACTGGCTGTACAACCGCTTGCTGCACAAGTTCCTGTGATCTCGGTG
CCCCACCTGCCGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCAT
CGAGAAGCGAAAAGACGGCTGATCCTGTGGATGAACCACATGACCAGCC
ACCCGGTCTCTCCAGTACGAGGGGTTTCGAGCACTTCCTGATGTGCGCC
GACGACAAGCAGTGAAGCTGGGCAAGAGGGCGGGCGGAGAAGGACGAGAT
GGTGGGCGCCACTTCATGCTGACCTTCCAGATTCCTAACGAGCACCAGG
ACCTCCAGGACGTGGAGGAGCGGGTGGACTCCTTCAAGTCCTTCGCCAAG
AAGATGGACGACAGCGTCATGCAGCTCACGCACGTCGCCTCGGAGCTGGT
CCGCAAGCACCTGGGCGGCTTCCGGAAGGAGTTCAGCGGCTCGGGAACG
CCTTCCAGTCCATCAGCCAGGCCTTCATGCTGGAACCCCCCACAGCTCC
GACGGCCTCAACAACGCCATCTCCACNTCTCTCGCACGTTCTCAAACCTG
ACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTCGGGAACCTCCTGAT
CTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGCGGCCCTACTACT
TCCTGCTCGACCTGTGCGCCTCCGACATCCTGCGCTCTGCCATCTGCTTC
CCCTTTGTCTTACCTCTGTCAAGAATGGATCCGCCTGGACCTATGGCAC
GCTCACCTGCAAAGTGATCGCCTTCTCGGCGTGTCTCCTGTTTCCACA
CGGCGTTCATGCTATTCTGTGTACGCTCACTCGCTACCTGGCTATTGCG
CATCACCGCTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCCGT
CATCTGCATGGTGTGGACGTTGTGTCAGTAGCCATGGCTTTTCCCCCGGTGC
TGGACGTAGGGACGTACTCCTTCATCCGGGAGGAGGACCAGTGCACATTC
CAGCACCGTTCTTTCAGGGCCAATGACTCACTGGGCTTCATGCTCCTGCT
GGCACTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCT
TTGTCCACGACCGTCGGAAGATGAAGCCCGTCCAGTTCGTGCCCGCCGTC
AGCCAGAACTGGACCTTCCATGGGCCAGGCGCCAGTGGGCAGGCGGCGGC
TAACTGGCTCGCTGGATTTGGGAGAGGCCCCACCCCGCTACCTTGCTGG
GCATCCGGCAGAACAGCAACCGGGCGGGCCGACGGCGTCTGCTGGTGTGCTG
GATGAGTTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGAC
GTTTTTCTTCTGCGCTTGTGGGGGCCCTATCTGGTAGCCTGCTACTGGC
GGGTGTTTGAAGGGNCCCAGTCCCTGGGGCTACCTGACGGCAGCCG
TGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCCTTCATCTGCATCTTC
TCTAACAGGGAGGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGGTCC
TGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCGC
AGCAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTGTC
ACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATAACGACGC
TGCC-----GATTTCCGCCGGTAACGCGGCCACCTTGCTGTCTACG
CAGCGGCCGAGTGAAGGCTC-----TTCCTCTGCCGGCTGCAGGCTGC
TCCAACCGGCCGCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GG
CGGACGCACGCCCGCCGAGTACTGTAGCGTAAACAGCAAACCGAGCTCGG
TCCTTTCCTGCTGGCCCTCTAACTCTGTGCGGCGGCAGAGCGGGCC---CC
---AACTACCTGG-----CCGAGGA---CGGA---GACGC---CAT
CCCGACGGAGAGATCCCCG---AT---CGGTGGCTCCGAGGAG---ACGA
AACCAAGGACCT-----GTCCGA---GTCGAGCTGGATAGAG---ACG
CCGTCTCCATAAAGTCAATCGATTCAAGCGATTCTGGGATCTTCG---A
ACAGGCCAAAAGGAGGAGAATCTCGCCCTCTGCCACGCCG-----G
TTTCAGAAACTGTGTCCCCGTTAAAATCTNNNCATCACTCAACAGGCGAAGTC

ACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTGCGGGACGGGATGGG
CGCTTCAAATCAACCACAGCTCCCACGATATTGGCTCCGG---ACAGA
CGGCGTTTTCTCCCAGGCG---CCCGGTAC---GCAGCGGCCGCCCTG
GGA---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTC
CACGGCGGCTTTCAACTCCACCCGGGACTTTCTCTTTAGAAATCGGGGCT
TCGGAGACGCCACTGG-----GGCGCAGCACAGTTTGTTCGCC
TC-----CGGAAGTTT---C-----GCAGGGCCACATGGACTC
AGATGCCGCGGGACACCTGCTCTTCCCAGGACTCCACGAG---CAAGCAG
CGAGCCACGCGTCTTCTAATGTGGTCAACAGCCAGATGCGACTGGGCTTC
TCGGGGGACATGTACGGTCGGGCCGACCAGTATGGCCACGTTACAAGCCC
AAGGT---CCGACCACTATGCTTCGACCCAGTTGCACGGCTATGGCCCCA
TGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCCTTCTTTCGA
TACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCC
GGAGCAACTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACGA
TGCATGAGCTGGTGAACCATCTGACGGTGGAGCATGTGGGGGGACCAGAG
CAGTCCAACCACATCTGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAACC
ATTCAAAGCCAAATACAACTTGTGAATCATATCAGAGTACACACCCGGAG
AGAAACCCTTTCCATGTCCGTTCCCCGGCTGTGGANN

>Avocettina infans

AGCCTGCTAATCCGGGCGGAGCTGAGTCAACCCGGAGCCTTTTTGGGAGA
CGACCAAATTTATAACGTCATCGTTACAGCACACGCTTTCGTGATAATTT
TCTTTATGGTAATACCAATCATGATTGGAGGCTTTGGAAACTGGCTAGTT
CCCCAATGATCGGAGCCCCAGACATGGCCTTCCCACGAATAAACAACAT
AAGCTTTTGGTTGTTACCCCCTTCATTTCTTCTATTGTTATCCTCCTCGG
GAGTTGAAGCCGGGCGGAACAGGATGAACGGTCTACCCCCTCTTGCT
GGCAATTTAGCTCATGCCGGAGCATCAGTAGACCTAACCATCTTTTCTCT
ACACTTAGCAGGTGTCTCATCAATCTTGGGGCAATCAACTTTATTACCA
CAATTATTAACATGAAACCACCAGCCATCTCACAATACCAAACCCCTG
TTTGTGTGATCAGTGCTTATCACTGCAGTGCTATTATTATTATCACTCCC
AGTTTTAGCTGCGGGCATTACCATGCTCCTTACAGATCGAAACTTAAATA
CAACCTTCTTTGACCCGGCAGGAGGGGGACCCAATTTTATATCAACAT
TTATTTGGTTCTTCGCCCACCCCGAAGTATATATTCATTATTCTCCAGG
GTTTGGTATAATTTACACATCGTCGCATACTATGCCGGGAAAAAAGAAC
CATTTGGCTATATAGGAATAGTCTGAGCCATGATGGCCATTGGACTCCTC
GGGTTATTGTCTGAGCACACCACATGTTTACAGTGGGTATAGACGTAGA
CACACGAGCCTA-----

-----TGACGAGTATATTGTGGTCTTCAGC
CGCTCTCTTAACCGGCTTATCCTGAACGAGGCAGAGCTGATCCTGGCACT

AGCGCAGGAGTTCCAAATGAAGGTTGTTACCGTGTCCTGGAGGAGCAGT
CCTTTGCAGACATCGTCCGAGTCCTCAGCAGGGCGTCGATGCTGGTCAGT
ATGCATGGGGCCCAGCTGGTCACCTCTCTCTTCCCTCCTCGTGGGGCAGC
TGTGGTGGAGCTGTACCCATATGCAGTCAACCCAGAGCATTATGCTCCGT
ATAGGACGCTGACCTCGCTGCCGGCATGGACCTGCAGTATGTGGCCTGG
AGGAACACCAAAGAGGAGAACTCTGTGACCTTCCCTGAGCGTGCCTGGGA
CCAGGGTGGCATTGCACACTTGGAGAAGGAGGAGCAGGAACGTATCATGA
AGAGCAAGGAGGTGCCGCGACACCTGTGCTGTGCGAACCCGGAGTGGCTC
TTCCGCATCTACCAGGACACCAATGTGGATGTTGCGTCTCTTCTGGAAGC
CCTGCG---CCAGGGACTGACC---TCCAGGCCAGGGCCCAAGAG---GG
CTAGGCCCGCCAGCACAGTCCACCCAGGCAGGGTGAGGGAGCCCAAGTGC
CAGACCTCCGTCCAGGCAACCAACGAG-----G-----

-----AAGAAAGATACCAGCAAGGGAACACTGGAGGATCAAATT
ATCCAGGCAAACCCAGCGCTGGAGGCTTTTGGCAAATGCCAAGACTTCGAG
GAATGACAACCTCCTCACGTTTTTGGGAAATTTATTCGTATTCATTTTCGGAA
TAAGTGGCAAGCTGTCTCTGCTGACGTAGAAACCTACCTACTCGAGAAA
TCCCGTGTACCTATCAGCTAAAAGCTGAGAGGAACTATCACATTTTCTA
CCAGATCACATCCAACAAAAGCCAGAATTAAGTGGACATGCTGTTGATCA
CCAACAACCCGTATGATTATGCTTATGTCTCCCAAGGAGAGGTGACGGTT
GCATCCATCGATGACTCAGAGGAACTGATCGCCACAGACAGTGCCTTCGA
TGTGCTGGGCTTACGCCGAGGAGAAGATGGGTGCTTACAAGCTGACGG
GTGCCATCATGCATTACGGAACATGAAATTCAAGCAGAAGCAACGTGAG
GAGCAGGCCGAGCCTGATGGCTCTGAGTCTGCTGACAAGTCAGCCTTCCT
GATGGGGCTGAACTCGCCGACCTTCTCAAGGGACTGTGCCATCCACGGG
TCAAAGTTGGAAATGAGTATGTACCAAAGGTCAAATGTGGATCAAGTC
TACTATCCCAACAAAGAGGCCTTCAAGTGCGAAGAGTGCAGCAAGAACTA
CAACACCAAGCTGGGCTACAAGCGCCACGTGGCCATGCACGCAGCCACCA
GCGGCGACCTCACCTGCAAGGTGTGTCTGCAGAGCTACGAGAGCACGCCT
GTGCTGTTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCCGGTGGGGC
CAAGGAGAAAAGCACCCCTGCGACCACTGCGACCGCCGCTTCTACACGC
GCAAGGACGTGCGACGCCACATGGTGGTGCACACCGCCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTCGGCCGAAAGGACCACCTGACCCG
GCATGTGAAGAAGAGCCACTCGCAAGAGCTGTGAAGATCAAGACAGAGC
CGCCGACATGTTGAGCCTGTGCGGTTCCGGCTCTCCACCCTGCTCTGTA
AAAGAGGAGCTCAGCCCCATGATGTG---TATGGGCCCCCTCAAGGACTC
CCTGATGGGCAAGCCCTTCCCTGGTG-----CTTCCCCATGGGCATGT
ACAACCCCCAC-----CTGCAGGCTATGTCCAACCTCAGGGGTGTCC
-----CACCCTCTCTGGTGTCTGGGTCACCTGTCTGCTGCCAT
GGGAATGGGCTGCCACATGGAGTACCTGATCTACGCTTCGTTTTTCGTTCA
TGGGATGTTTACAAATCAGCGACGGGTCGAACGTGATCAACCTCCTGGCC
AGCAACTCCCCGAGCGTACCTACGCTCTGACCCAGCAGAAGTACTTCAG
CAACTACAGTCCGGTCATCGGGTCTACATCTACGAACCCATCGAGTACT
GGAACGCCACGGTTCAAGAGCACCTGAGGACGCTGGGCCACGGTTTCAAT
AAGATTTTCGTGGATCGACAACCTTCTTTCAGCATCTGAAGGTGGTGAACGT
CAGCGTGTGACCAAAAAGCGAATTCATAACCATCCTCCAGACGTCCCTCC
TGAGGAGCCCAGAGTACCAGCACTTCAAGGACGACATCATATTTTACAAA
A---TTAGGG-----ACGAGATGGAGATCATGGCATCCCGGAT
GTATCTGGTGGCCGAACCATGGAGAAGACTCGAGAGGAGGTGGTGGAGC
TACTGGAGAGGCTGAGGCGCTCTCTCTCGTCAACAGCATCAAATTCATC
GTCTTCAACCCACCTTCGTCTTCATGGATCGGTACAGCTCGTCCGGTCAT
CTCCCCATCCTCACTTCGTGCTTCAGCGTCCCTGATCGTCCCTGATCCTGA
CCTTCTTCCCTGGTCATCAACCTCTGGGAAACTTCTGGCTGATACTGACA

GTCACCTCGGTGGAGCTGGGAGTCCTGGGCCTAATG-----

-----TCCTACA
CTATTGAAATGGGATCCTGGGGGCCCCAGTGGAAGGAGAGCCCCAGCCA
TTCTCCTGCTCCATAGAGGACCCACCAAGCAGACCAAGTTCAAGGGCAT
AAAGACTTACATCTCATACCGTGTGACACCCAGCCACACAGGCCGGCCTG
TGTACCGCCGCTACAAGCATTGACTGGCTGTACAACCGGTTGCTGCAC
AAGTTCACCGTCATCTCTGTCCCTCACCTGCCTGAGAAGCAGGCCACAGG
TCGCTTCGAGGAGGACTTCATTGAGAAGCGCAAGCGGGGCTCATCCTAT
GGATGAACCACATGACCAGTCACCCGGTGCTCTCGCAGTATGAGGGTTTC
GAGCACTTCCTGATGTGCGCTGATGACAAGCAGTGGAAGCTGGGAAAGCG
GCGGGCAGAGAAGGACGAGATGGTGGGCGCGCACTTCATGCTCACCTTCC
AGATTCCCAATGAGCACCAGGACCTGCAGGACGTGGAGGAGAGGGTGGAC
TCTTTCAAGGCCTTTGCCAAAAAGATGGATGACAGCGTACTGCAGCTCAC
GCACACGGCCTCCGAGCTGGTGCGCAAGCATCTGGGAGGCTTCCGGAAGG
AATTCCAGAAGCTGGGGAATGYCTTCCAGTCCATCAGCCAGGCGTTCACT
CTGGATCCTCCCCACTGCTCTGATGCCCTCAACACCGCTTAT----C--

-----NNNNNNNNNGAAACCTTCACCCATCTAACTGCCTTGGCATGCTGTTG
CTGTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCTGGGGCAT
GTGCCTCAGCAACTTCCAGCTATTTGCAAGACAGAGGACTTCTCCAAC
TGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGAGCTAGAGACA
GAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGATCAACTATGA
CCTGGAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGAACGGTCCGCC
TGGCCCTGCTGCCATCTTTCTCATGGAGAATGTTTCTACAGAAGAG
CTGATCAATGCCCAGGCCAAGAGCAAGGAGCTGGTGGATGAAGCTATCCG
CTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAACAGTCCATGTG
CTCGACCAAGAAAAACCAGCCATGCTCTCTTTCTTCTGGGAGGGCAGACT
TTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCAAAGAGATCAT
CCCCAAAGCTGACATTCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCA
TCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAATGGT
GTGTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGGAATGGTCGAA
GGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTGCGGAGCTGA
AACACTGCCTCTACGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
AATACATTGTTGTGTTTAGTCGTTCAACAA
CGAGGTTGATACTGAATGAAGTGGAGCTAATCATGGCGCTGGCCCAAGAG
TTCCAGATGAGAGTGGTACGGTATCCCTGGAGGAACAGTCTTTCCCAG
TATCGTCCAGGTGATCAGTGGTGTCTCCATGTTAGTCAGTATGCATGGAG
CTCAGCTTATCACCTCACTCTTCTCCAGAGGAGCTGCTGTGGTGGAG
CTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGTATAAAACCC
TGCCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCTTGGAGGAACACTA
AGGAGGAGAACACCATCACCCACCCAGACAGACCCGGAACAAGGGGGC
ATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCGAGCAAAGA
TGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCCGGATCT
ACCAGGACACTTTGGTGGACATCCCTTCTTCTGGAAGTCCTCAA---A
GAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GTCAAAGCCGGC
CAGCACAGTCCATCCGGGCCGGGTGAGAGAACCCCAATGTCAGACCTCAG
TACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCAGATCCCCTGG
AATCTGAAATACCTGAAAGTGAGAGAGGTCAAATACGAGGTG-----
-AAAAAGACACCAGTAAGGGGACCCGAGGATCAAATCATTGAGGCGA
ACCCGCGCTGGAGGCCCTTCGGCAACGCCAAAACGTTGAGAAAACGACAAC
TCGTCTCGTTTTGGAAAATTCATCCGAATTCCTTCGGTACGAGTGGCAA
GCTGTGCTGCTGACATCGAGACGTACCTGCTGGAGAAGTACAGTGTCA
CCTTTCAGCTCAAGGCTGAGAGGAACACCACATCTTCTACCAGATCCTG
TCCAATCAGAAGCCAGAGCTCCTGGACATGCTGCTGATCACCACAACCC
GTACGACTACTCCTACATCTCCAAGGAGAAGTAACGGTTCGCCTCCATCA
ATGACTCAGAGGAGCTGATGGCCACCGACAGCGCTTCGATGTGCTCGGC
TTCACTCCAGACGAGAAGATGGGTGTCTATAAACTGACTGGCGCCATCAT
GCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAAGCGG
AGCCGGATGGGACGGAAGCTGCTGATAAATCAGCTTACCTAATGGGGCTG
AACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAGTCAAGGTAGG
AAATGAATACGTCACCAAAGGCCAAAGTGTGGACCAAGTCTACTACNNNNNN
NNNNNNNNNNGGAA
GCACTACAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTG

CCACGGCAGGGGATCTTACCTGTAAAGTGTGCATGCAGACCTACGAGAGC
ACACCCGTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGG
TGGTACCAAGGAGAAAAACACCCGTGCGACCACTGTGACCGTCTTTCT
ACACACGGAAGGATGTGAGACGCCACATGGTGGTCCACACGGGCCGAAAG
GACTTCCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCT
GACACGGCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGA
CGGAGCCTCCTGATATGTTAGGTCTTTTAGCGTCTGGGTCAACCCTGC
TCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACA
AGACCCCATGATGGGCAAACCGTTCCCAGTGGGGCCCTTTCCCGATGG
GCATGTACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCGGG
GTGGGTCACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGC
AGCTATGGGCATGGGCTGCCACATGNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNTCGTGAACCTGCTGGCTAGTAACTC
TCCGAGTGTTTTCTTACGCTCTGACCCAGCAGAAATACTTTCAGTAACTACA
GTCCCGTGATTGGGTTTTTACATTTACGAGCCATCGAGTACTGGAACCTCA
ACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTC
CTGGATGGACAACCTTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCT
CAACCAAGAGCGACTTTCATCACCATCCTCAAGGGGTCCTTCTGCGCAGC
CCGGAGTACCAGCACTTCACCGAGGACATCATATTCTCCAAGA---ACCG
CGAGACTG-----ATGAGTACGACATTATCGCCTCACGGATGTACTTGG
TGGCGCGGACGACAGAGAAGAAGCGCGAAGAGGTTGGTGGAGCTTCTGGAG
AAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCCTTCAA
TCCTACGTTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCTATCTCGCCCA
TTCTGACCTCAGGCTTCAGCGTACTCACAATCCTCCTCATCTTCTTTC
CTGGTCAACACCCCTTGGGAAACTTCTGNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNTCTTGCAATGTTGG
CATTATT
AATGGGCTCTCTGGATGGGTTTTCTCGGTGGATGACTCCCCAGCTGACAC
CATCACTCGTCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCAATAAAGG
ATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGAC
AGTGCGTGCACCTCAGGCTTCAGTGTTCATGATCAAGGAATCTTGTGACGG
CATGGGCGATGTGAGGAGAAAGCAGCGGTGGAGGACCAGTGTTCCTGAGA
AGGCTGTACGTTTTCTTCTTACTGTATGTCTGTCTCTGTCTGCGCAGAC
GATGAGGAC-----GAAGAGGTTAC
CATCTTCACCGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAGCCTCTTT
GCCTGACATTTGTGGATGAGTCAGACCATGAGACGCTCACAGCCGTCCTG
GGCCATATAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCT
ATCCATGGGTGGACTACCTCGCTCCTTCGGCTTTCACTTCAGAGGCACGG
GATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCTCGGG
TCCTCCTATATCTGCACTCTTTGTGACTCCAGTCGGGCAGAAGCCTCTCA
GAACATGGTGTACTACTCCGTACCCGCAGTCATGAAGAGAACCTAGAAC
GTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAGCTG
CGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCCATCC
CACGCTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGTCTTACA
AAATCTTCAGGACGAGATCGGGGAGGTGTACCAAAAAGGT---CAAC---
CCCAGCCGGGAGGAACGGCCTAGCTGGAGGGCAGCCCTAGATAAAACAGCT
GAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAACATG
CCCCGAGGCTAATGACCCAGGAGACTGTGGAGGTGGTGTGTGAGCTGGTG
CCCTCAGAGGGGAGGAGGGAGGCCCTGAGGGCGCTTATGAGGCTCTACCT
CCAGATGAAGCCTGTGTGGCGGCCACCTGCCAGCCAAGGAGTGCCCCG
ACCAGCTGTGCCGCTACAGCTTTAACTCCAGCGCTTTGCCGACCTCCTC
TCCTCTACCTTCAAAATATAGGTACAAAGGATAACCAATTACCTGCA
CAAGACCTGGCCATGTGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

CCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGCTCT---T
ACTCCACGGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGG
GGTTTCGGGGACGCCACCGG-----GGCGCAGCACAGTTTGTT
CGCCTC-----CGGAAGTTT---C-----GCAGGGCCACATGGAC
ACTCAGATGCAGCGGGGACCTGCTCTTCCCAGGGCTCCACGAG---CAA
GCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGG
CTTCTCGGGGGACATGTACGGACGGGCGGACCAGTACGGCCACGTTACAA
GCCCCGGGT---CCGACCACTATGCTTCGACCCAGCTGCACGGCTATGGC
CCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCTTCTT
TCGATACATGAGGCAGCCGATCAAAACAAGAGCTCATCTGCAAGTGGATCG
AGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAACTTTTAGC
ACGATGCACGAGCTTGTGACCCATCTGACGGTGGAGCATGTGGGGGGACC
AGAGCAGACCAACCACATCTGCTTCTGGGAGGACTGGGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN

>Barathronus maculatus

-----TTTCTAGAGAGAAACCTTACCCCTCTAACTGCCTCGG
CATGCTGTTGCTATCTGATGCCCATCAGTGCACCAAGCTATCAGAGCTGT
CCTGGGGCATGTGCCCTCAGTAACTTTCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACACTACCCAAAGACATGGTGTTCAGCTTTTGTACATGAGGA
GCTCGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAGGAGGCACTGCCACCTCCAGACCTTCTGAGA
ACGGTCCGCCTGGCCCTGCTTCCCTGCCATCTTCTCATGGAGAATGTCTC
GACAGAAGAGCTGATCAATGCCAGGCAAGAGCAAGGAGCTAGTTGATG
AGGCCATCCGCTGTAAGCTGAAGATCCTACAGAATGATGGCGTAGTTAAC
AGCCCTTGTGCCAGACCAAGAAAACCAGCCATGCACTCTTCTGCTGGG
AGGGCAGACTTTCATGTGTGACAAACTGTACCTGGTAGATCAGAAAGCCA
AAGAGATCATTCCCAAAGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATTGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAAAATGGTGTGTCCAAGATGTATGGGTCTACGACACCATCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNGGATGA
ATACATGTTCTGTTTAGCCGTTCAACAACAAGGCTGATACTGAATGAAG
CTGAGCTAATCATGGCGCTGGCCCAGGAATTTCAAATGAGAGTGGTTACG
GTCTCCCTGGAGGAACAATCTTCCCAAGTATTGTCCAGGTGATCAGTGG
TGCTTCTATATTGATTAGTATGCATGGAGCTCAGCTTATCACCTCGCTTT
TCCTCCCCAGAGGAGCTGCTGTGGTGGAGCTGTTCCCTATGCTGTAAAC

TGGAGGGATTGAGAGATTGTGGGTGGAAGACAGCACTTGCACCTCAGGC
TTCAGTGTATGATCAAGGAATCTTGCGATGGCATGGGCGATGTCAGCGA
GAAGCATGGCGGAGGACCACCGGTCCCCGAGAAGGCTGTACGTTTCTCTT
TCACTATTATGTCTGTCTCTGTCTGGCAGATGACAAGGAG-----
-----GAGGCGGTTACCATCTTTACAGAGCCAAA
GCCAAACTCAGAGCTGTCCTGCAAACCCCTTTGCATCACATTTGTGGATG
AGTCAGATCACGAGACTCACAGCTGTCCTGGGCCCCGTAGTTGCAGAG
CGTGATGCAATGAAAAGAGAGTAGACTCATTCTTTCCATGGGAGGCTGCC
TCGCTCCTTCCGCTTCCACTTCCAGAGGCACAGGTTATGATGAGAAGATGG
TGCGTGAGATGGAGGGCCTAGAGGCTCAGGCTCTACCTATATCTGCACT
CTGTGCGACTCCAGTCGGGAGGCTTTCGCACAACATGGTGTGCACTC
CGTACCCGTAGTACGAAGAGAACCCTAGAGCGTTACGAAATATGGAGAA
CCAATCCCTTTTCTGAGTCTGTAGAGGAGCTGCGGGACCGAGTCAAAGGG
GTCTCTGCCAAGCCCTTTATGGAGACCAGCCAACAATGGATGCTTTGCA
CTGTGACATTGGTAATGCCACTGAGTTCTACAAAATCTTCCAGGATGAGA
TTGGGGAGGTGTACCAAAAAGGT---CAAC---CCCCACGGGAGGAACGG
CGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAAATTAAGCT
TAAACCGATAATGAGGATGAATGGGAACCTATGCCCCGGAAGCTAATGACCA
TGGAGGCTGTGGAGGTGGTGTGTGAGCTGGTGCATCAGAAGAGAGGAGG
GAGGCCCTGAGGGAGCTCATGAGGCTCTACCTTCAGATGAAACCTGTTTG
GCGTGCCTCCTGCCAGCCAAGGAATGCCCTGACCAGCTGTGCCGCTACA
GCTTCAACTCCAGAGCTTTGCTGATCTCCTCTCCCTCAATAT
CGCTACAATGGAATAACAATACTTGCACAAGACCCTGGCTCATGT
CCCCGAGATTATTGAGAGAGATGGATCCATAGGAGCTTGGGCCAGTGAGG
GGAATGAGTCAGCAAACAAA-----

-----CCTCTCGCCACGTTCTCAAACCTGA
CCTCTCTGGGCTTCATCATCGGAATCGGTGTGGTTCGAAACCTCCTGATC
TCCATCCTGCTGGTTAAAGACAAGAGCCTGCACCGCGCCCTACTACTT
CCTGCTGGACCTGTGCGCCTCTGACATCCTGCGTTCTGCTATCTGCTTCC
CCTTTGTCTTACCTCTGTCAAGAATGGATCTGTCTGGACCTACGGCACG
CTCACCTGCAAAGTGATCGCCTTCTGGGCGTGCTCTCCTGTTTCCACAC
AGCGTTCATGCTCTTTGTGTGAGTGTGACCCGCTATCTGGCCATCGCAC
ATCACCGTTTCTACACTAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTC
ATCTGCATGGTGTGGACGTTGTGAGTGGCCATGGCTTTCGCCGCGGTGCT
AGACGTAGGGACGTACTCTTTTCACTCCAGGAGGAGGACCAGTGCACATTC
AGCACCATTCCTTCCAGGGCGAACGACTCCCTGGGCTTCATGCTCCTGCTG
GCACTCATCCTCCTGGCCACGCAGCTGGTTTACCTCAAGCTCATCTTCTT
CGTCCATGACCGTTCGGAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTCA
GCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGCGCGGCC
AAGTGGCTGGCTGGATTTGGTAGAGGTCCACACCTCCTACTTTACTGGG

CATCCGGCAGAACAGCAATGCAGCAGGCCGCAGGCGTCTACTGGTGCTGG
ATGAATTCAAACAGAGAAGAGGATTAGCAGGATGTTCTACATCATGACG
TTTTTCTTCCTGGCACTGTGGGGCCATATCTGGTAGCCTGCTACTGGAG
GGTGTGGTGAAGGGGTCCTGTAGTCCCGTGGGCTACCTGACAGCAGCCG
TGTGGATGAGCTTTGCCCAGGCAGGGTCAATCCTTTCATCTGCATCTTC
TCCAACAGGGAGGCCAAGTCTCGCTTTCACCCTGGCGTGGGGGCTGCGCC
TGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCGC
AGCAAAGTGAAGGAGCCACTGTGCGCACCCCCCGCAGCGATGGTTTGTC
ACCC---CTGCCAACAACCGACTGGACTTTGCTGCCCGCATACGACGC
GGCT-----GATTTTGCCGGTAACGCGGCCACCTTGCTGTCTACG
CAGCGGCCGGAGTGAAGGCTC-----TTCCCCTGCCGGCCGCAGGATGC
TCCAACCGGCCTCTTGCTATTACGCTGACCCGTCGG---GCTGG---GG
AGGGCGCACGCCGCCGAGTACTGTGGTGTAAATAGTAAATCCAGCTCGG
TCTTTTCTCTGCTGGCCCGCTAACTCTATCGGGGGCAGAGCAGGCG---CC
---CACTACCTGG-----CCGAGGA---GGGA---GACTC---CGT
CCCCACGGAGAGGTCACCG---AT---CAGCGGCTCCGAGGAG---ACCA
AACCAAGGACAT-----ATCAGA---GTCGAGCTGGATAGAG---ACA
CCTTCTCCATTAAGTCCATCGATTCAGCGATTCTGGGATCTTTG---A
ACAGGCCAAAAGGAGAAGAATCTCACCTTCTGCCACGCCG-----G
TTTCAGAGGCAGTGTCCCCGTTTTTTTTTTTTCATCACTCAACAGGCGAAGTCACAGAGAG
AGAAGTGGCGTTGGGGATAAATCCTTTCGCGGACGGGATGGGCGCCTTCA
AAATAAACCACAGCTCCCATGATATTGGCTCCGG---ACAAACGGCGTTT
TCCTCTCAGGCG---CCCGGCTAC---GCAGCGGCCGCCCTGGGA---CA
CCATCA-----CCACCCGACCCAGTGGCTCT---TACTCCACGGCGG
CTTTCAACTCCACCAGGACTTTCTCTTTCAGAAATCGGGGTTTTTGAGAC
GCCACCGG-----GGCGCAGCACAGTTTGTTCGCCTC-----
---CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATGCAG
CGGGGCACCTGCTCTTCCAGGGCTCCACGAG---CAAGCAGCGAGCCAT
GCGTCTTCCAACGTGGTCAACAGCCAGATGCGACTGGGCTTTTCGGGGGA
CATGTACGGTCCGGCCGATCAGTACGGCCACGTTACAAGCCCGAGGT---
CCGACCCTACGCTTCGACCCAGTTGCACGGTTATGGCCCATGAACATG
AATATGGCCGCA---CACCACGGAGCAGGGGCCCTTCTTTTCGATACATGAG
GCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGY
TGACAAATCCCAAAAAGTCTTGCAACAAAACTTTGTAGCACCATGCATGAG
CTTGTGACCCACCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGACCAA
CCACATCTGTTTCTGGGAGGAGTGCGCCAGAGAAGGAAAACCATCAAAG
CCAAATACAAACTTGTAATCATATCAGAGTACACACCCGGAGAAAACCC
TTTCCGTGTCCGTTCCAGGCTGTGGCAA

>Barbourisia rufa

AGCCTTCTCATCCGAGCAGAGCTAAGCCAGCCAGGTGCCCTTTTAGGGGA
CGATCAAATCTACAACGTCATTGTTACAGCGCACGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGGGGGTTGGAAATTGATTAATT
CCCCAATGATTGGAGCCCCAGACATAGCATTCCCTCGAATAAATAATAT
GAGTTTTTGGCTCCTACCTCCATCCTTCTTACTGCTCCTGGCCTCTTCTG
GGGTAGAAGCAGGCGCTGGGACAGGATGAACAGTTTATCCGCCACTTGCG
GGCAATCTTGCCACGCAGGAGCCTCAGTAGACCTAACTATTTTCTCCCT
CCACTTAGCAGGAGTCTCTTCAATTCAGGGGCTATTAACCTTTATTACAA
CTATTATTAACATAAAACCCCGCAATTTCCCAATATCAAACCCCTG
TTTGTGTGATCTGTACTAATTACAGCCGTTCTTCTCCTCCTCCTTACC
CGTCTTGACGCCGCATCACCATACTATTAACCGACCGTAACCTAAACA
CGACCTTCTTTGACCCCTCAGGAGGAGGTGATCCCATCCTATATCAACAC
CTATTTTGATTCTTCCGGCCACCCA-----

-----TTTCTAGAGAGGAACCTTCACCCATCTAACTGCCTTGG
AATGCTGTTGCTGTCTGACGCCCACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCTGCTATTTGTAAGACAGAGGAC
TTTCTCCAACCTGCCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGG
TCAACTATGACCTGGAAAGCAGGCACTGCCAYCTGCCAGAGCTGCTGAGA
ACGGTCCGCCTGGCCCTGCTACCCGCTATATTCCTCATGGAGAATGTCTC
CACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCGCTGTAAGCTGAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCCGTGTGCTCGACCGAGAAAAACCAGCCATGCCCTCTTTCTGCTGGG
AGGCCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGATCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGTCATGGCTCT
GCTGAGCTGAAACACTGCCTCTATGTGGTAGGAGGTCACACAGCAGCAAC
TGGCTGTCTCCAGCCTCTCCCTCCGGATGAATACATTTGTCGTGTTTCA
CGTTCAACAACAAGGCTAATTCTGAACGAAGCGGAACATAATCATGGCGCT
GGCCAGGAATTTTCCAGATGAGAGTGGTTACAGTATCCCTGGAGGAACAAA
CTTTTCGCCAGCATCGTCCAGGTGATCAGCAGGGCCTCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTGTACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTATGCTGTGAACCCAGAACAGTACACCCCAT
ATAAAAACCTCGCCTCCCTACCAGGCATGGACCTTCAATATGTTTCCTGG
AGGAACACTATGGAGGAGAACACCATCACCCACCCAGACCGACCTGGGA
ACAAGGAGGTATCTCCATTTGGAAAAGGATGAGCAAGAGCGAATACTGG
CGAGCAAGGATGTCCCCAGGCACCTGTGCTGCCCGACCCAGAGTGGCTC
TTCCGAATCTATCAGGACACTTTGGTGGACATCCCTTCATTCTTGGAAGT
CCTCAA---AGAGGGCCTGAGG---GCTAGGCCAGCTTGAGGAA---GG
CCAAGCCAGCCAGCACGGTTCATCCAGGCCGGGTAAGAGAACCCAGTGC
CATACTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTTTCTGGCA
GATCCCCTGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTATGAGG
TGTGGATCCAGAAGAGGGATAACCAGCAAGGGAACACTGGAGGATCAAATC
ATCCAGGCAAACCCCTGCACTGGAAGCCTTTGGTAACGCCAAAACAGTGAG
GAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGAATTCACCTCGGAA
CCAGTGGCAAGCTGGCGTCTGCTGACATTGAGACTTACCTGCTAGAGAAG
TCGCGTGTACCTTCAGCTCAAGTCTGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGTTGATTA
CCAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
CAATCCATCAACGACTCAGAGGAACTGATGGCCACTGACAATGCCTTCAA
TGTGCTTGGCTTCACTCAAGAGGAGAAGATGGGAGTCTATAAGCTGACCG
GTGCCATTATGCACTACGGCAACATGAAATTTAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCTGATGGAACGGAGGCTGCTGATAAGACAGCTTACCT
AATGGGGCTGAACTCTGCAGACCTTATCAAAGGGCTGTGCCATCCCAGAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTC
TACAACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTTACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCG
GTGCTCCTGGAGCACCTCAAGAGCCACTCAGGGAAGTCCTCAGGTGGCAC
CAAGGAGAAAAACACCCATGCGACCACTGCGACCGTTCGCTTCTACTC
GGAAGGATGTAAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTGACACG

GCACGTAAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCGGATATGTTAGGTCTTTTAGGTTCTGGCTCGCCGCCTTGCTCCGTC
AAGGAGGAGCTTAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCCCAGCGGAACCCCTTCCCGATGGGCATGT
ACAACCCCCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGT
CACCCC-----CACCCCTCCCTGATGCCTAGTTCCTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAAATCAGTGATGGGTCAAACATTGTGAACTTGCTGGCT
AGTAATTCTCCGAGCGTTTCATACGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGTCCCGTGATTGGGTTTACATTTACGAGCCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCATCTGAAGACACTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGAGGGTGGTGAACGT
GAGCGCGTCGAACAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCAGAGTACCAGCACTTCACTGAAGACATCATCTTCTCCAAG
A---ACCGTGAAAGTG-----ATGAGTATGACATTATTGCCTCACGCAT
GTACCTGGTGGCGCGGACCACGGAGAAAAAGCGGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAATTCATC
GCCTTCAACCCACCTTTGTTTTTCATGGACCGCTACAGCGCCTCTGTTCAT
CTCACCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATYCTCA
CTTTTTTCTCCTGGTTCATCAAYCCCTTGGGAACTTCTGGCTCATCCTGATG
GTTACTTCTGTGGAGCTGGGCGTCTTGGGTTTAAATGGGCTATCACCTATT
CGAGTGGCAGCCGGCCCTCAAGAATGTGTCTGCATCCTGTCATGTGGCA
TTATTAATGGGCTCTCTGGATGGACTGCCTCAGTGGATGATTCCCCAGCT
GACACCATCACTCGCGGATTTTCGCTATGATGTGGCCCTGGTGTGAGCCTT
AAAGGATCTGGAGGAGGACATCATGGAGGGACTGAGAGAGTGTGGGCTGG
AAGACAGTGCTTGCACCTCAGGCTTCAGTGTTCATCAAGGAATCTTGT
GACGGCATGGGAGATGTGAGCGAGAAGCATGGCGGAGGGCCAATGGTCCC
TGAGAAGGCTGTGCGTTTTCTCTTTTACTATTATGTCTGTCTCTGTCTTGG
CAGACGGAGAGGAG-----AAGGCG
GTTACCATCTTCAGGGAGCCAAAGCCCAACTCTGAACTGTCCTGTAAGCC
CCTATGCCTGATGTTTGTGGATGAGTCAGACCACGAGACACTCACTGCTG
TCCTGGGGCCTGTAGTTGCAGAGCGTAATGCAATGAAGCAGAGTCGACTC
ATCCTATCTATGGGTGGCCTGCCTCGCTCCTTCCGCTTCGAATTCAGAGG
CACAGGATATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCT
CAGGTTCACCTACATCTGCACTCTGTGTGACTCCAGTCGGGCAGAGGCC
TCTCACAACATGGTGTGCACTCCATCACCCGCAGTCACGATGAGAACCT
GGAGCGTTATGAAATATGGAGGACCAATCCTTTTTCTGAGTCTACCGAGG
AGCTGCGAGACCGGGTCAAAGGGGTCTCCGCCAAGCCCTTTATGGAGACC
CATCCACTCTGGATGCATTACACTGTGACATTGGTAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATTGGGGAGGTGTCCAAAAGGT---CA
AC---CCCACCCGGGAGGAACGGCGGAGATGGAGGGCAGCCCTAGACAAG
CAGCTGAGGAAGAAGATGAAGCTTAAACCGGTGATGAGGATGAATGGGAA
CTTTGCCCGGAGGCTAATGTCCCAGGAGACTGTGGAGGTGGTGTGTGAGC
TTGTGCCCTCAGAAGAGAGGAGGGAGGCCCTGAGGGAGCTTATGGGGCTC
TACCTCCAGATGAAGCCTGTGTGGCGCACCACTGCCAGCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGATC
TCCTCTCCACTACCTTCAAATATAGGTACAATGGAAAAATCACCAATTAC
CTGCACAAGACCCTGGCCCATGTCCCAGAAATCATAGAGAGAGATGGCTC
CATAGGAGCCTGGGCCAGTGAGGGGAATGAGTCAGCAAACAAATCGTACA
CCATTGAGATGGGCCCAAGGGGCCCAATGGAAGGAGAGCCCGCAGCCT
TTCTCCTGCTCCATTGAAGACCCACGAAACAGACCAAGTTCAAGGGCAT
CAAGACCTACATTTTCGTACCGGGTCACGCCGAGCCACTCAGGGCGTCCCG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTGCTGCAC

CGCGTCTTCCAACGTGGTCAACGGCCAGATGCGACTGGGCTTCTCGGGGG
 ACATGTACGGTTCGGGCCGATCAGTACGGCCACGTTACGAGCCCGAGGT--
 -CCGACCACTACGCATCGACCCAGTTGCACGGCTATGGCCCCATGAACAT
 GAATATGGCCGCG---CACCACGGAGCAGGGGCCCTTCTTTTCGATACATGA
 GGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAG
 CTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACGATGCACGA
 GCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGGCCGGAGCAGTCCA
 ACCACATCTGCTTCTGGGAAGACTGCTCCAGAGAAGGGAAACCATTCAAA
 GCCAAATACAACTTGTGAATCATATCAGAGTACACACCCGGAGAAAAGCC
 CTTCCCGTGTCCNNNNNNNNNNNNNNNNNNNN

>Bathyclupea gracilis

 -----GGATGAATACATTGTTGTGTTTAGT
 CGTTCAACAACGAGGCTGATACTAAATGAAGCGGAGCTAATCATGGCGCT
 GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTATCCCTGGAGGAACAGC
 CTTTCCCCAGTATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGT
 ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
 TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
 ATAAAACCCTTGCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGG
 AGGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCCTGGGA
 ACAAGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGG
 AGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC

-----TCGTACA
CCATCGACATGGGCTCCTTGAGGCCCGGTGGAAGGAGAGCCACAGCCT
TTCTCCTGCTCCATTGAAGACCCCACAATACAGACAAAGTTCAAGGCAT
CAAGACGTACATTTTCGTACCGGGTCACACCGAGCCACACAGGGCGTCCCG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACGTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGTAAGAGGCGACTGATACTGT
GGATGAACCACATGACCAGTCACCCAGTCCTCTCCAGTATGAAGCCTTT
GAGCACTTTCTGATGTGCGCTGATGACAAGCAGTGGAAGCTGGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTGGGTGCCCATTTTCATGCTGACCCTCC
AGATCCCTAATGAGCACCGAGACCTTTCAGGATGTAGAGGAGCGGGTCGAC
TCCTTCAAGGCCTTTGCTAAGAAAATGGATGACAGCGTGATGCAGCTCAC
ACATGTTGCCTCGGAGCTGGTGGTAAAGCACCTGGGTGGGTTCAGGAAGG
AGTTCCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCCTTCATG
CTGGACCCTCCACACAGCTCAGAAACCTTCAACAACGCCATCTCCAC--
-----CTGACCTCTCTGGGTTTCATCATTGGCGTCG
GTGTGGTTGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTGCACCGAGCGCCCTACTATTTCCCTGCTGGACCTGTGCGCCTCTGATAT
CCTGCGCTCCGCCATCTGCTTCCCCTTTGTCTTTCACCTCGGTCAAGAATG
GATCTGCCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCCCTG
GGTGTGCTCTCCTGTTCCACACGGCGTTTTATGCTGTTCTGTGTCAGTGT
CACGCGCTACCTGGCCATCGCACACCACCGTTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTAGCTGTCTATCTGCATGGTGTGGACGTTGTCAGTG
GCCATGGCGTTCCCGCCAGTGCTAGACGTAGGGACGTACTCTTTTATCCG
AGAGGAGGACCAGTGCACATTCAGCACCAGCTCCTTCAGGGCGAATGATT
CGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTG
GTTTACCTCAAGCTCATTCTTTCGTCCACGACCGTTCGAAAGATGAAGCC
TGTCAGTTTCGTGCTGCTGTCAGCCAGAAGTGGACCTTCCACGGGCCAG
GCGCCAGCGGGCAGGCGGCAGCCAACTGGCTGGCCGATTTGGTTCGAGGC
CCCACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGG
CCGCAGGCGTCTACTGGTATTGGATGAGTTCAAAACAGAGAAGAGGATTA
GTAGGATGTTCTACATCATGACGTTTTTCTTCCCTGGCTCTGTGGGGGCC
TATCTGGTGCCTGTTACTGGCGGGTGTGTTGCAAGGGGCCCTGTGGTCCC

TGGGGGCTACCTGACGGCAGCTGTGTGGATGAGCTTTGCCAGGCTGGGG
TCAATCCGT-CATCTGC-----GCCAAATCTCGCTTT
CACCTTGGCATGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCACT
CGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTGCCA
CCCCCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGCT-----GATTTCCGCCGGTAA
CGCGGCCACCTTGCTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCCAACCGGCTCTTGGCTATTACGCA
GACCCGTGAG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGG
TGTAATAGCAAATCCAGCTCGGTCTTTTCCTGCTGGCCCCGCTAACTCTA
TCGGTGGCAGAGCAGGCA---CC---AACTACCTGG-----CGGAG
GA---GGGA---GACTC---CATCCCGACAGAGAGGTCACCG---AT---
CGGCGGCTCGGAGGAG---ACCAAACCCAAAGACCTGAC---ATCAGA--
-GTCGAGCTGGATAGAG---ACGCCGTCCTCCATTAAGTCCATTGATTCA
AGCGATTCTGGTATCTTTG---AACAGGCCAAAAGGAGAAGAATCTCACC
TTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTTGAAAT
CGGAGCATCACTCAACAGGCCAAGTCACAGAGAGAGAAGTGGCGTTGGGG
ATAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAAACACAGCTC
CCACGATATCGGCTCCGG---ACAAACGGCGTTTTCCTCCAGGCG---C
CCGGCTAC---GCAGCAGCCGCCCTGGGG---CACCATCA-----CCAC
CCGACCCACGTTGGCTCT--TACTCCACGGCGGCTTTCAACTCCACCAG
GGACTTTCCTTTCAGAAATCGGGGTTTCGGGGACGCCACCGG-----
----GGCGCAGCACAGTTTTGTTCCGCTC-----CGGAAGTTT---C
-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTT
CCCGGGGCTCCACGAG---CAAGCGCGAGCCATGCGTCTTCCAACGTGG
TCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCC
GACCAGTACGGCCACGTTACAAGCCCGCGGT---CTGACCACTACGCTTC
GACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA---C
ACCACGGAGCTGGGGCCTTCTTTTCGATACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCCAAAAA
GTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTGGTGACCCATCTGA
CGGTGGAGCATGTAGGGGGACCGGAGCAGACCAACCACATCTGCTTCTGG
GAGGACTGCGCCAGAGAAGGAAAGCCATTCAAAGCCAAATACAAACTTGT
AAATCATATCAGAGTACACACCGGAGAGAAGCCCTTCCATGTCCGTTCC
CCGGCTGTGGCAAG

>Bathylaco nigricans

AGCCTCCTAATTTCGAGCCGAACCTAAGCCAGCCCCGGGGCCCTTCTAGGCGA
CGACCAAATTTATAACGTCATCGTACAGCACACGCATTCGTAATAATCT
TCTTTATAGTAATAACCCATCATGATCGGGGGCTTTGGAAACTGGCTGCTC
CCCCAATACTGGGGGCCCCGATATAGCATTCCCCCGAATAAAATAACAT
AAGCTTCTGGCTTCTTCCCCCTCACTTCTCCTCCTGTCGTCTCAG
GAGTTGAAGCCGGGGCAGGAACAGGCTGAAGTGTCTACCCCCCATTAGCC
GGTAACCTGGCCCACGCCGGCGCTCCGTAGATCTCGCTATCTTCTCCCT
CCACCTAGCAGGCGTATCCTCAATCCTGGGCTCAATTAATTTTATTACTA
CAATCACCACATGAAACCCCCAGCCATCTCCCAGTACCAAACACCTCTG
TTTGTGTGATCTCTGCTCGTCACAACGTCTCCTGCTTCTCCTGTCACTTCC
AGTCTGGCCGAGCTATTACCATACTCCTCACAGATCGTAACCTCAACA
CAACATTCCTTTGACCCAGCCGGAGGAGGGGACCCCATCCTGTACCAACAC
CTATTCTGATTCTTTGGCCACCCAGAAGTCTACATCTTAATCTTACCCGG
ATTTGGCATGATCTCACATGTGCTCGCCTACTACGCCGGTAAAAAGAGC
CGTTCGGCTACATAGGCATGGTCTGAGCCATGATGGCTATCGGGCTCCTG
GGGTTTATTGTCTGAGCCACCACATGTTTACAGTCGGGATAGACGTAGA
CACTCGTGCCTA-----

TTTGAGCACTTCTTCATGTGCGGTGATGATAAACAGTGGAAAGCTGGGCAA
GCGGAGGGCGGAGAAGGATGAGATGGTGGGGGCCACTTCATGCTCACCT
TCCAGATCCCCAACGAGCACCAGGACCTGCAGGATGTGGAGGAGCGGGTG
GACTCCTTTAAGGCCTTTGCCAAGAARATGGACGACAGCGTCATGCAGTT
AACACATGTGGCCTCCGAGCTGGTGCGCAAACACCTGGGAGGGTCCGCA
AAGAGTTCCAAAGGCTGGGGAACCTCCTCCAGTCCATCAGCCAGGCTTTC
ATGCTGGACCCCCCTACAGCTCTGATGCCCTGAATAATGCCATCTCCCA
C-----

-----GCCAAATCCCGC
TTTCACCATGGCGTCGGCACGGGGCCTGGCACGGACC---GCAGCGTCCC
ACTC---AACAGCTTGCTATCCCCGCAACAAACCGATGAGACCGCAGTGG
---CCTCCCCGAGCGATGGTTTGTACCC---CTGCCAACAATCGACTG
GACTTTGCCGCCTCGGCATACGATGCCGCCGCTGCAGCTGATTTTGCCGG
TAACGCGGCCACCCTTCTGTCTACGCAGCTGCCGGAGTGAAAGCGC---
---TCCCACTGCCCACTGCAGCCTGCTCCAACAGAGCCCTGGGCTATTAC
GCGGAGCCGCCAG---GGTGG---GGCACACGCACTCCACCGCAGTACTG
T-----AGTAAATCAAGCGCGGTTCTTTCATGCTGGCCCGCCAATT
CCATTGGGAGCAGAACATCCA---CCTCCAATTACCTGG---TTGGCTTG
GACGA---CGGG---GACGC---TATCGCACCTGAGAGGTCACCT---CT
---CGGGGTGGCAGACGAA---GCCAAGCCAAAAGACCT-----GTCGG
A---ATCAAGCTGGATAGAG---ACCCCGTCTTCAATTAAATCAATCGAC
TCAAGTGATTCTGGGATCTTTG---AACAGGCCAAACGGAGGAGAATTC
GCCATCTGCTACACCG-----GTTTCAGAGACGTCGTCCCCATTAA
AATCAGAA-----

-----TCCTACA
CCATCGAGATGGGCACCAAAGGGCCTCAGTGGAAAAGAGAGTCCCCAGCCT
TTCTCTTGCTCCATCGAAGACCCCACCAAGCAGACCAAGTTTAAAGGCAT
CAAGACCTACATATCGTACCGGGTGACCCCAGCCACCTGGGGCGGCCCG
TGTACCGGCGCTACAAGCACTTTGACTGGCTGTACAGTCGCCTGCTGCAC
AAGTTCACGGTCATCTCCGTGCCCCACCTCCCGGAGAAGCAGGCCACAGG
GCGCTTCGAGGAGGACTTCATCGAGAAGCGCAAGAGGCGGCTGGTCCTCT
GGATCAACCACATGACCAGCCACCKGTCCTGTCCAGTACGAGGGGTTTC
GAGCACTTCCTGATGTGCGCCGACGACAAGCAGTGAAGCTGGGCAAGCG
GCGGGCGGAGAAAGACGAGATGGTGGGCGCCCACCTTCATGCTCACCTTCC
AGATCCCCACGGAGCACCAGGACCTGCAGGACGTGGAGGAGCGCGTGGAC
AACTTCAAGTCCTTCGCCAAGAAGATGGATGACAGTGTTCTGCAGCTGAC
GCACGTGGCGTCGGAGCTGGTGCAGGAAAGCACGTGGGAGGGTCCGGAAGG
AGTTCAGCGGCTGGGGAACGCCTTCCAGTCGGTCAGCCAGGCCTTCATG
CTGGACCCCCCCCACAGCTCGGACGCCCTCAACAATGCCATCTCTCAC--

-----GCCAAATCTCGCTTT
CACCTGGCGTAGGGACTGGTCCTGGCACAGACC--GCAGCGTCCCCT

TAGTAACAGCTTGCTGTCCCCGCAACAAACCGAAGAGCACACAGTTG---
CTTCCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGAC
TTCGCCCGCTCGGCATACGACGCCCGCGGCTGCTGATTTCCGCCGTAA
CGCGGCCACCTTGCTGTCTTACGCAGCTGCTGGAGTAAAAGCCC-----
TTCCCTGCCCCTGCTGGCTGCTCCAACAGACCTTTGGGTTATTATGCC
GACCCATCCG---GCTGG---GGCGCCCGCACACCGCCTCAGTACTGC--
-----AGTAAATCCAGCTCGGTGCTTTCGTGCTGGCCCACAAATGCTG
TTGGAAGCCGAACAGGCA---CGTCCAATTACCTGC-----CGGAA
GA---CGCG---GACAC---CATCCCCACGGAGAGGTCTCCG---AT---
CGGAGTGCCAGAGGAG---ACCAAACCAAAGACTT-----GTCCGA--
-GTCAGCTGGATAGAG---ACGTCGTCTTCAATAAAGTCGATAGATTCA
AGTGATTCTGGGATCTTTG---AGCAGGCCAAACGGAGAAGAATTTACC
GTCTGCCACACCG-----GTTTCGGAGACAGTTTCCCCGCTGAAAT
CAGAG-----

-----CGGCGTTTTCTCCCAAGCT---C
CGGGCTAC---GCGGCCCGCGCTGGGA---CACCACCA-----CCAC
CCGACCCATGTAGCTCC---TACTCCACCGCCCTTCAACTCCACCCG
GGACTTTCTTTTTCGAAATCGGGGCTTCGGAGACGCGACCAG-----
----CGCCCAACACAGCCTGTTTCGCTCCGC---AGCGGAACTTT---C
-----GCAGGGCCCCACGGACACTCCGATGCGGGGGACACCTGCTCTT
CCCGGGACTTACAGAG---CAAGCCGCGGGCCACGCGTCTCCAACGTGG
TAAACAGTCAGATGCGCTTGGGCTTTTCGGGGGACATGTACGGACGGGC
GACCAGTACGGCCATGTGACGAGCCCGCGAT---CCGACCACTACGCGTC
GACCCAGTTGCACGGTTATGGCCCCATGAACATGAATATGGCCGCA---C
ACCACGGAGCAGGGGCCCTTCTTCCGTTACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTGAGCCGGAGCAGTTGTGCAACCCGAAAAA
GTCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTGGTGACCCACCTGA
CCGTGGAGCATGTGGGGGGACCGGAGCAGTCCAACCATATTTGCTTTTGG
GAAGAGTGCTGCCGAGAAGGAAAACCTTCAAAGCTAAATACAAACTTGT
AAATCATATCAGAGTACACACCGGAGAGAAACCTTCCCGTGTCCGTTCC
CCGG-----

>Bathymaster signatus

AGCCTCCTCATTTCGAGCAGAGCTAAGCCAGCCCCGGCGCCCTCTTAGGAGA
CGACCAAATTTATAATGTAATTGTTACAGCACATGCATTCGTAATAATTT
TCTTTATAGTAATAACCAATCATGATCGGAGGTTTCGGAACTGACTTATT
CCTCTAATGATTGGAGCCCCAGACATGGCATTCCCCGGATAAAATAATAT
GAGTTTTTGACTTCTTCCCTCCTTTCCTCCTTTCCTTGCCCTTTCAG
GTGTAGAGGCGGGAGCCGGAACAGGGTGAACAGTTTATCCCCCTCTTGCT
GGCAATTTAGCCCATGCAGGAGCTTCTGTTGATTTAACAATCTTTCCCT
TCATTTAGCAGGAATTTCTTCAATCCTAGGGGCAATTAATTTCAATTACAA
CTATTATTAACATGAAACCCCTGCCATTTCCCAATACCAAACACCCCTT
TTCGTTTGATCAGTACTCATTACCGCAGTTCTTCTACTTCTTTCTCTTCC
AGTTCTTGACAGCTGGTATTACCATGCTACTAACAGACCGTAATCTTAACA
CCACTTCTTTGATCCTGCCGGGGGAGGAGATCCAATTTCTTTACCAACAT
TTA-----

-----TTCTAGAGAGAAACCTTACCCGTCTAATTGCCCTGG
CATGCTCTTGCTGTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAATTTCCCCGCTATTTGCAAGACAGAAGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA

GCTAGAGACAGAAGATGAGAACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGG
ACTGTCCGCCTGGCCCTGTTGCCCGCCATCTTTCTCATGGAGAATGTTTC
GACAGAAGAGCTGATCAATGCCAGCCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGATGTAAGCTGAAGATCCTGCAGAATGATGGTGTCTTAAC
AGTCCGTGTGCCCGACCAAGAAAGACCAGCCATGCCCTATTTCTCTG
AGGGCAGACGTTTCATGTGTGACAAGTTGTACCTTGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCAAGAGG
AATGGTGAAGGCGGCGCCCATGCTCATTGCCAGGTTCCGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCAGCTTCTCCGTCTGGAGGATTACGTCTGGTGTTCAGT
CGCTCAGCGACAAGGCTGATACTGAATGAGGTGGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAAAGTGGTACAGTGTCCCTAGAGGAACAGT
CTTTCCCCAGTATCGTCCAGGTGATCAGCGGCGGTCCGTGTTGGTTCAGT
ATGCACGGCGCTCAGCTCATTACCTCACTCTTCCCTCCCCAGAGGAGCTGC
AGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
ATAAAACCTCGCCACCCTTCCAGGCATGGACCTTCACTATGTCTCCTGG
AGGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGA
GCAAGGGGCATCGTTCACCTGGAGAAGGAGGAGCAGGAGCGTATACTGG
CGAGCAGAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCCTTCCCTGAAAC
CCTTAA---AGAGGGCTTGAAG---ACAAAGCCCAGCGTGAAGAA---GT
CAAAGCCGGCCAGCACAGTCCACCCGGGCCGGGTCAGACAACCCAGTGT
CAGACCTCGGTGCAAACCACCAACGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTAAAATACTTGAAGGTGCGAGAGGTGAAGNNNNNNNNN-----
--AAAAGAGATGCTAGCAAGGGGACGCTGGAGGACCAGATCATCCAGGCC
AACCCGGCGCTGGAGGCTTTTCGGCAACGCCAAAACGNTGAGAAACGACAAC
TCGTCTCGCTTTGGAAAATTTCATCCGAATTCACCTCGGCACGAGCGGGAA
GCTGTCTGTCTGCCGACGTCGAGACTTACCTGCTGGAGAAGTCCCGGTGCA
CCTTTCAGCTCAAGGCTGAGAGGAACACCACATCTTCTACCAGATCCTG
TCCAATCAGAAGCCAGAGCTGCTGGACATGCTGATCACCAACAACCC
CTATGACTACTCCTACATCTCCCAAGGGGAGATAACGGTTCGCTCCATCA
ACGACTCCGAGGAGCTGCTGGCCACCGACAGTGCCTTCGATGTGCTCGGC
TTCACTCCGGAAGAGAAGATGGGCGTGTACAAGCTAACCGGTGCCATCAT
GCACTACGGCAACATGAAGTTCAAACAAAAGCAGCGGAGGAGCAGGCCG
AGCCGGACGGGACGGAGGCTGCCGATAAAAACCGCATACCTAATGGGGCTA
AACTCTGCCGACGTCATCAAGGGGCTGTGTATCCAGAGTCAAGGTAGG
AAATGAATTTGTACCAAAGGACAAAGTGTGGACCAAGTCTACTACCCCA
ACAAGGAGGCCTTCAAGTGTGAGGAGTGCAGGAAAGCACTACAACACCAAG
CTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGTCAGGAGATCT
CACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACACCCGTGCTCTTGG
AGCACCTCAAGACCCACTCGGGGAAGTCTTCGGGCGGCACCAAGGAGAAA
AAGCACCCGTGCGACCACTGTGACCGTCGTTTCTACACGCGCAAGGATGT
GAGACGGCACATGGTGGTCCACACGGGTGAAAGGACTTCCTCTGCCAGT
ACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACACGTCACGTGAAG
AAGAGCCACTCGCAGGAGCTGCTGAGGATCAAGACGGAGCCTCCGGATAT
GTTGGGTCTTTTAGCGTCCGGGTACCACCTTGCTCTGTGAAGGAGGAGC
TCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAAGACCCCATGATGGGC
AAACCGTTCCCCAGCGGGGCCCTTTTCCGATGGGCATGTACAACCCCA
CCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTACCCG----
--CACCCGTCCCTGATGCCAGTCCCCTGTCTGCWGTATGGGCATGGGC

AAGAAGATGGACGACAGCGTGATGCAGCTCACGCACGTCGCCTCGGAGCT
GGTGCGCAAGCACCTGGGCGGGTTCAGGAAGGAGTTCAGCGGGCTGGGAA
ATTCTTCCAGTCCATCAGCCAGGCGTTCATGCTGGACCCTCCCCACAGC
TCGGAGGCCCTCAACAANNNNNNNNNNNN-----

----GCCAAATCTCGCTTTCACCCCTGGCGTGGGGACTGGTCCTGGCACGG
AGC---GCAGCGTCCCACTCGGCAACAGCTTGCTGTCCCCGCAGCAAACC
GACGAGCCCCTGTTGCCACCCCGCAGCGATGGTTTGTACCC---C
TGCCAACAACCGACTGGACTTTCGCTGCCTCGGCATACGACGCGCT----
-----GATTTCCCGGTAACGCGGCCACCTTGCTGTCTACGCAGCGGCC
GGAGTGAAGGCTC-----TTCCTCGCGACTGCAGGCTGCTCCAACCG
GCCTCTTGGCTATTACGACAGCCCGTACG---GCTGG---GGAGGACGCA
CACCGCCGAGTACTGTGGTGTAAACAGCAAATCCAGCTCGGTCTTTTCC
TGCTGGCCCACTAACTCTATCGGTGGCAGAGCGGGCA---CC---ACTA
CCTGG-----CCGAGGA---GGGA---GACTC---CATCACGACGG
AGAGGTCGCCG---AT---CGGCGGCTCGGATGAG---ACCAAACCCAAA
GACATGAC---ATCCGA---GTCGAGCTGGATAGAG---ACGCGTCCTC
CATTAAGTCAATTGATTCGAGCGATCTGGTATCTTTG---AACAGGCCA
AAAGGAGAAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGAG
ACAGTGTCCCGTTAAAATNNNNNNNNNNNNNNNCAGGCCAAGTCACAGAGAGAGAAGTAGCGTT
GGGGATCAATCCGTTCGCGGATGGGATGGGCGCCTTCAAATAAAACCACA
GCTCCACGATATCGGCTCCGG---ACAAACGGCGTTTTCTCCAGGCC
---CCCGCTAC---GCGGCAGCCGCCCTGGGA---CACCATCA-----
CCACCCGACCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCA
CCAGGGACTTTCCTTCAGAAATCGGGTTTTCGGGGACGCCACCG---
-----GGCTCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT
---C-----GCAGGGCCACATGGACACTCGGATGCAGCGGGGCACCTGC
TCTTCCCGGGGCTCCACGAG---CAAGCGGCAGCCATGCGTCTTCCAAC
GTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTACGGACG
GGCCGACAGTACGGCCACGTTACGAGCCACGGT---CCGACCACTACG
CGTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCG
---CACCACGGAGCAGGGGCTTCTTTCGATACATGAGGCAGCCGATCAA
GCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCCA
AAAAGTCGTGCAACAAAATTTTATGACAGATGCACGAGCTCGTGACCCAT
CTGACGGTGGAGCATGTGGGGGGACCAGAGCAGACCAACCACATCTGCTT

CCCGTTTTGGAAAGTTCATCCGAATTCACCTTTGGAACCAGTGGTAAACTG
TCCTCTGCGGACATTGAGACCTACCTGCTGGAGAAGTCAAGGGTCACCTT
TCAGCTTAAGTCAGAGAGGAACTATCACATCTTCTTCCAAATCTTGTTCCA
ATCAAAAAGCCAGATCTGTTGGACATGCTGTTGATCACCAACAACCCTTAT
GACTACTCCTACATCTCCCAAGGAGAAGTAACCGTACCATCCATCAATGA
TTCAGAGGAGCTGATAGCCACTGACAGTGCCTTCGATGTGCTTGGCTTCA
CTCAAGAGGAGAAGATGGGAGTCTACAAGTTGACAGGGGCCATTATGCAC
TATGGCAACATGAGGTTCAAGCAAAAAGCAGCGCGAGGAACAGGCTGAGTC
TGACGGTACAGAGGCTGCTGATAAGTCAGCTTATCTAATGGGGCTGAATT
CAGCAGACCTAATCAAAGGTCTCTGCCATCCCAGAGTCAAGGTAGGAAAT
GAGTATGTACTAAAGGCCAGGGTGTAGATCAAGTCTACTACCCCAACAA
GGAGGCCTTCAAGTGTGAAGAGTGTGGCAAGCACTACAACACCAAGCTGG
GATACAAGCGCCATGTGGCCATGCACTCTGCCACGGCAGGGGACCTCACC
TGCAAGGTGTGCATGCAGAGTTATGAAAGCACACCGGTGCTCCTGGAACA
CCTCAAGAGCCACTCGGGGAAGTCTCGGGTGGCGCCAAGGAGAAGAAAC
ACCCGTGCGACCACTGCGACCGTCGTTCTACACGCGGAAGGATGTCAGG
CGGCACATGGTTGTCCACACGGGCCGAAAGGACTTCCTGTGCCAGTACTG
TGCCAGCGCTTCGGCAGGAAGGATCATCTGACACGGCACGTGAAAAAGA
GCCACTCGCAGGAGCTGCTGAAGATTAAGACGGAGCCTCCGGATATGTTG
GGTCTCCTGGGCTCTGGCTCACCGCCTTGCTCTGTCAAGGAGGAGCTTAG
CCCCATGATGTGCAGCATGGGTCCCAATAAAGACCCCATGATGGGCAAAC
CCTTCCCCAGCGGGACCCCTTCCCCATGGGCATGTACAACCCCCACCAC
-----CTCCAGGCCATGTCAAATCCCGGCGTGGGTCAACCC-----CA
CCCCCTCTCTGATGCCGGTTCCCTGTCTGCAGCTATGGGCATGGGCTGTC
ATATGGAATATCTCATCTACGCCTCCTTCTCCTTCATGGGATGTTTACAA
ATCAGCGACGGGTGGAACATTGTGAATTTGTTGGCCAGTAACTCTCCGAG
CGTCTCGTACGCCCTGACGCAGCAGAAGTACTTCAGTAACTATAGCCCTG
TGATCGGGTTTTTATATCTACGAGCCCATAGAGTACTGGAACTCCACGGTG
CAGGAGCACCTGAGGACACTGAGCCACGGCTTCAACAAGATCTCCTGGAT
GGACAATTTCTACCACTACCTGCGGGTGGTGAACGTGAGCGCGTCGACCA
AGGCCGACTTCATCGCCGTCTCAAGGGCTCCTTCTGCGGAGCCCGGCG
TACCAGCACTTCACCGAGGACATCATCTTCTCCAAGA---GCCGGGACAA
CG-----ACGAGTACGACATCATCGCCTCGCGCATGTACCTGGTGGCGC
CCACCACCGAGACGCGCGGACGATGTGGTGGAGCTGCTGGAGAAGTTG
CGGCCGCTCATGTGATCAACAGCATCAAGTTCATCGCCTTCAACCCAC
CTTCGTCTTCATGGACCGCTACAGCTCCTCGGTCACTCGCCTATCCTCA
CCTCTGGCTTCAGCGTGCACCATCCTCATCCTCACCTTCTTCTGGTC
ATAAACCCGCTGGGTAACCTGTGGCTCATCCTGACGGTCACGTCCGTGGA
GCTGGGCGTGTGGGTCGANN-----

-----GAGAAGCACGGTGGAGGGCCAGCGATGCCTGAGAAGGCTGTGCCT
TTCTCTATACCGTCATGTCTGTCTCTGTCCAGGCTACGGAGAGGAG--
-----GAGGCGGTGTTCATCTTCAGGG
AGCCAAAACCAACTCTGAGCTGTCCGTGAAGCCCCGTGCCTGATGTTT
GTGGATGAGTCTGACCACGAGACACTACTGCTGTCCCTGGGGCCTTTGGT
AGCAGAGAGGAATGCGATGAAGCAGAGCCGACTCATCCTTTCAGTTGGTG
GCCTCCCCGCTCTTCCGCTTCCACTTCAGAGGCACAGGCTATGATGAG
AAGATGGTGCAGAGATGGAAGGGCTGGAGGCTCAGGCTCCACCTATAT
CTGCACTCTTTGTGACTCCACTCGGGCAGAAGCCTCTCACAACATGGTGC

TCCACTCTGTACCCGCAGCCATGATGAGAACCTGGAGCGCTACGAGATA
TGGAGGACCAACCCCTTCTCAGAGTCTGCCATGGAGTTGCGAGACCGGGT
CAAGGGGGTCTCTGCCAAACCATTTATGGAGACCCACCCGACTCTGGATG
CATTACACTGTGACATAGGTAACGCCACTGAATTCTACAAAATCTTCCAG
GATGAGATTGGGGAGGTGTTCCGGAAGGC---CAAC---CCTAGCCGGGA
GGAACGGCGCAGCTGGAGGGCAGCTCTCGATAAGCAGTTGAGGAAGAAGA
TGAAGCTGAGACCAGTGATGCGGATGAATGGGAACTTTGGCCGAAGGCTG
ATGACCCAGGAGGCTGTGGAAGTGGTGTGTGAACTGATTCCCACAGAAGA
GAGGCGGGAGGCCCTGAGGGAGCTGATGGGGCTCTATGTCCAGATGAAGC
CTGTGTGGCGTGCTACCTGCCAGCCAAGGAGTGCCCTGACCAGCTGTGC
CGCTACAGCTTTAACTCTCAGCGCTTTGCTGATCTCCTCTCCTCCAACTT
TAAATACAGGTATGATGGAAAGATCACCAACTACCTGCACAAGACCCTGG
CCCATGTCCTTGAATTTATAGAGAGAGATGGCTCCATTGGAGCCTGGGCC
AGCGAGG-----TCATACACCATCGAGATGGGCC
CAAAGGGCCCAATGGAAAGAGAATCCTCAGCCTTTCTCTTGCTCCATTG
AAGACCCACAAAAACAGACCAAGTTCAAGGGTATCAAGACGTACATATCC
TACCGGGTCACCCCTAGCCACATTTGGGCGACCCGTTACAGACGCTACAA
ACACTTTGACTGGCTGTATAATCGCCTGCTGCACAAGTTCACTGTGATTT
CTGTGCCTCACCTGCCCAGAGAGCAGGCCACGGGGCGCTTTGAGGAGGAC
TTCATTGAGAAGCGCAAAAGACGACTGGTCCTCTGGATGAACCACATGAC
GAGTCACCCGGTCTCTCCAGTATGAGGGGTTGAGCACTTCCCTCATGT
GCGTCGACGACAAGCAGTGAAGCTGGGTAAGAGGCGGGCTGAGAAGGAC
GAAATGGTGGGAGCCCATTTCATGCTGACGTTCCAGATCCCCAACGAGCA
CCAGGACCTGCAGGACGTCGAGGAGCGGTCGACACCTTCAAGTCCTTCG
CCAAGAAAATGGACGACAGTGTCTATGCAGCTCACGCACGTGGCCTCGGAA
CTGGTGCICAARCACCTGGGAGGATTCAGGAAGGAGTTCCAGCGGCTTGG
GAAYGCCTTCCAGTCCATCAGTCAGGCGTTTCATGCTGGACCCTCCCCACA
GCTCAGAAGCCCTCAACAACGCCNNNNNNNNN-----

-----GCCAAGTCTCGCTTTCACCCTGGCGTAGGGACTGGTCCTG
GCACGGACC---GCAGCGTCCCCTCAGCAACAGCTTGCTATCCCCGCAA
CAAACCGAAGAGCCCACAGTAG---CTTCCCCACAGCGATGGTTTGTCAC
CC---CTGCCAACAACCGACTGGACTTTGCAGCCTCGGCATACGATGCCG
CT-----GATTTCCGCGGTAACGCAGCCACCTTGCTGTCTACGCA
GCGGCTGGAGTGAAGGCAC-----TGCCCTGCCACTGCAGGTTGCTC

CAACAGGCCTCTTGGGTATTACGCAGACCCATCAG---GCTGG---GGCG
CACGCACATCACCACAGTACTGTAGT-----AGTAAATCCAGCTCAGTC
CTTTCTTGCTGGCCACTAATTCTGTTGGTGGCAGANNNNNNN---NNNNNNNNNNNN-----
-NNNNNN---NNNN---NNNN---NNNNNNNNNNNNNNNNNNNNNN---NN---
NNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN---NNNNNN---NNNNNNNNNNNNNNNN---
NN---
NN---
NN---
--ACAGGGGAAGTCACAGAGAGAGAAGTGGCTTTGGGGATMAATCCGTTC
GCAGACGGGATGGGCGCCTTCAAAATCAACCACGGCTCTCATGACATCGG
CTCCGG---GCAGACGGCGTTTTCTCCAGGCG---CCCGGTTAC---G
CAGCGGCCCGCCTTGA---CACCACCA-----CCACCCGACCCACGTC
AGCTCT---TATTCCACGGCGGCTTTCAACTCCACCCGGGACTTTCTCTT
CAGAAATCGGGGCTTCGGAGACGCCACCGG-----CGCGCAGC
ACAGTTTGTTTCGCTCTGC---CGCGGGGAGTTT---C-----GCAGGG
CCGCACGGACACTCGGATGCCGCCGACACCTGCTCTTCCCGGGGCTCCA
TGAG---CAAGCTGCGAGCCACGCGTCTAACGTGGTAAACAGCCAGA
TGCGACTGGGCTTTTCTGGGGACATGTACGGGCGGGCCGACCAGTACGGC
CACGTCACAAGCCCGAGGT--CCGAACACTACGCGTACCCAACTGCA
CGGCTATGGCCCCATGAACATGAACATGGCCGCT---CACCACGGCGCAG
GGGCTTCTTTTCGCTACATGAGGCAGCCGATCAAACARGAGCTCATCTGC
AAGTGGATCGAACCGGAGCAGCTGACGAATCCTAAAAAGTCGTGCAACAA
AACTTTTAGCACCATGCACGAGCTCGTGACCCATCTGACGGTGGAGCACG
TGGGGGGTCCGGAGCAGTCGAACCACATCTGCTTCTGGGAGGACTGGCCC
C-----

--

>Bathysaurus ferox

AGTCTTCTCATTTCGAGCAGAAGTCTAGTCAGCCGGGGGCCCTCTTAGGCGA
CGACCAAATTTATAATGTTATCGTTACCGCACATGCTTTCGTTATAATTT
TCTTTATAGTAATACCAATTATGATCGGCGGGTTCGAAACTGGCTGGTC
CCCCAATGATCGGGGCCCTGATATGGCCTTCCCCGAATGAATAATAT
GAGTTCTGACTTTTACCCCCCTCCTTCCTTCTCCTGCTGTCTTCTCCG
GGGTAGAGGCTGGAGCTGGGACAGGTTGAACAGTTTATCCGCCCTTGCC
AGCAACTTAGCACATGCCGGGCCCTCTGTAGACTTGACTATTTTTTCACT
TCACTTAGCAGGGGTGTCCTCAATTCTTGGGGCCATTAACCTTCACTACTA
CTATTATTAACATAAAACCCCGCCATCTCTCAGTATCAAACCCCTTA
TTTGTCTGATCCGTCCTTATTACAGCTGTTCTGCTACTACTATCCCTCCC
TGTCCTCGCAGCAGGTATTACTATACTTCTGACAGATCGAAACCTAAACA
CAACCTTTTTTGACCCGGCAGGAGGTGGGGATCCAATTCTGTACCAGCAC
CTATTCTGATTCTTCGGGCACCCAGAGGTATATATTTCTTATCCTCCCCG
GTTTGAATAAATTTACACATTGTTGCCTACTATTCAGGTAATAAGGAAC
CCTTTGGCTATATGGGTATGGTTTGGGCTATGATGGCAATTGGCCTTCTT
GGCTTTATTGTCTGAGCCCACCATGTTTACCGTCGGAATAGATGTGGA
CACCCGAGCCTATTTCTTGAGAGGAACCTGCACCCATCCAACCTGCTTGG
CATGCTGCTACTGTGATGCTCAGCAACTTCCCTGCCATTTGCAAGACGGAGGAC
TTCCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTACGACGCTGCCCTTAACGGG
TCAACTACGACCTGGAGAGGAGACACTGCCACCTGTCAGAGCTGCTGAGA
ACCGTGCGCCTGGCCTTGCTTCCCAGCATCTTCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAAGCAAAGAGCAAGGAGTTGGTGGACG
AGGCGATCCGCTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTCAAC

AGTCCCTGTGCCCCGCCAGAAAGACCAGCCATGCCCTCTTCCCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTCTACTTGGTGGATCAGAAGGCCA
AGGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGCTGTAAGGTCTACGTCACGGGCGGGA--GAGGCTC-
AGAGAATGGCGTGTCTAAAGATGTGTGGGTCTATGACACCATCCATGAGG
AGTGGTCTAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTCAAACACTGCCTCTATGTGGTTGGAGGACACACAGCAGCCAC
TGGCTGCCTCCCAGCCTCTCCGTCTGGATGAGTACATTGTGGTGTTCAGT
CGTTCTACAACAAGGCTGATTCTAAACGAAGCAGAGCTGATCCTGGCACT
GGCCAAGAGTTTCAGATGAGGGTGGTTACAGTGTCCCTGGAGGAGCAGT
CTTTCCCCAGCATCGTCCAGGTGATCAGCGGGGCTCCATGTTGGTTAGT
ATGCACGGAGCTCAGCTCGTACCTCACTCTTCCCTCCCTAGAGGAGCTGC
TGTAGTGGAGCTCTTCCCCTATGCTGTGAATCCAGAACAGTACACCCCAT
ACAAAACCTCTAGCCTCCTTACCAGGCATGGACCTTCAATATGTTTCCCTGG
AGGAACACTATTGAGGAGAACACTATTGCCACCCAGATAGACCTTGGGA
CCAAGGAGGCATTGCCATTTGGAGAAAAGAAGAGCAGGACAGAATCCTAG
CCAGCAAGGATGTCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATCCCCCTCGTTCCCTGGAAGT
CCTCAA--GGAGGGTCTGAAG---ACAAGGCCGAGCTTGAAGAA--GT
CCAAGCCGGCCAGCACGGTTTCATCCGGGCGGGTCCGAGAACCCAGTGC
CAGACATCAGTCCAAGCCACCAACGAGGCTAAGCTCACGGTATCCTGGCA
GATCCCCTGGAACCTTAAGTACCT-AATGTGCGGGA-GTGAAGTACGAGG
TGTGGATCACA AAAAGAGATAACAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCGCTGGAGGCTTTTGGTAATGCCAAAACATCGAG
GAACGATAAATCCTCCCCTTTTGGAAAATTCATCCGAATTCACTTTGGAA
CCAGCGGTAAACTGTCTCTGCGGACATTGAGACCTACCTGCTGGAGAAG
TCCCCTGGTACCTTTTTCAGCTCAAGTCAGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAACCCCTTATGACTACTCCTTCATCTCCAAGGAGAAGTAACCGTA
CCATCCATCAATGATTTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
CGTGCTTGGCTTCACTCAAGAGGAGAAGATGGGAATCTACAAGTTGATTG
GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCTAAAGCAGCGAGAG
GAACAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
CATGGGGCTGAATTCAGCAGACCTCATCAAAGGACTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTACCAAAGGCCAGAGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAAGAGTGTGGGAAGCACTA
CAATACCAAGCTGGGATAACAAGCGCCATGTGGCCATGCACTCTGCCACCG
CCGGGGATTTACCTGTAAAGTGTGCCTGCAGAGTTACGAAAGCACCCCG
GTGCTCCTGGAACACCTCAAGAGCCACTCTGGGAAGTCCCTCGGGTGGCAC
CAAAGAGAAAAAGCACCCCTTGCAGCCACTGCGACCCGTCGTTTCTACTC
GGAAAGATGTCAGGCGGCACATGGTTGTCCACACAGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGAAAGGATCATCTGACACG
GCATGTGAAAAAAAACCCCTCCCAAGAACTGCTGAAGAATAAGAACGAGC
CTCCGGATATGTTGGGCTTCCCTGGGATCTGGGTGCGCCGCTTGTCTGTC
AAGGAAGAGCTTAGCCCCATGATGTGTGGTATGGGTCCCAATAAAGACCC
CATGATGGGCAAATCCTTCCCCAGTGGGACCCCTTCCCATGAGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGCT
CACCCC-----CACCCCTCCCTGATGCCAGTTCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAATATCTCATCTATGCTTCCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGACGGGTGCAACATCGTGAATTTGCTGGCC
AGTAACTCTCCGAGCGTCTCGTACGCCCTGACACAGCAGAAGTACTTCAG
TAACTACAGCCCCGTGATCGGGTTTACATCTACGAGCCCATTGAGTACT
GGAACCTCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC

NN
NNNNNNNNNNNNATGCTTTCGTGATAATCTTTTTTATAGTAATGCCGGTTATGATCGGCGGG
TTCGGAAGACTGACTTATCCCCCTAATGATCGGGGCCCTGACATAGCCTT
CCCCGAATAAATAATATAAGCTTCTGACTCCTCCTCCTCCTCCTCCT
TCCTCCTGGCCTCCTCTGCAGTAGAAGCGGGTGCCGGCACAGGATGAACA
GTATATCCACCTCTCGCTAGTAACCTTGACATGCGGAGCCTCCGTTGA
CTTAACTATTTTTTCACTCCACCTGGCAGGAATCTCCTCTATCTTAGGTG
CTATTAATTTTATTACAACCTATTATTAACATAAAAACCCCTGCCATTACC
CAGTATCAAACCCCTATTTGTATGAGCTGTTCTGATTACTGCCGTACT
TCTCTACTATCCCTACCTGTCTTAGCGGCCGGCATTACAATGTTACTGA
CAGACCAGAAATTTAAATAACAACCTTCTTCGACCCCTGCAGGAGGAGGTGAC
CCAATCCTCTACCAACATCTATTTCTGATTCTTTGGTCACCCAGAAGTTTA
TATTCTCATCCTTCCCGGCTTTGGGATAATCTCCACATTGTTGCCATT
ATTAGGAAAAGAACCTTTCGGCTACATGGGCATGGTATGAGCCATG
ATAGCAATCGGCCCTTCTCGGGTTTTATTGTCTGAGCCACCATATGTTTAC
AGTCGGGATAGACGTAGACACACGTGNNNNNTTCTCGAGAGGAACCTGCACCCA
TCCAACCTGCCTGGCATGCTGGTACTGTGATGCCCACCAGTGACCAA
GCTGTTAGAGCTGTCCTGGGGTATGTGTCTTAGCAACTTCCCTGCCATCT
GCAAGACAGAGGACTTCTCCAGCTTCCCAAAGACATGGTGGTGCAGCTC
CTGTCCCATGAAGAGCTGGAGACGGAAGATGAGAGACTGGTTTATGAGGC
TGCCCTTAACTGGGTCAACTATGACCTGGAGAGGAGACTGCCACCTGC
CAGAGCTGCTGAGAACCGTACGCCGGCCTGCTTCCCGCCATCTTCCTC
ATGGAGAACGTCTCCACAGAGGAGCTGATCAATGCCAGGCAAAGAGCAA
GGAGTTGGTGGACGAGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAATG
ACGGTGTGGTCAACAGTCCCTGTGCCCGGCCAGAAAGACCAGCCAGCC
CTTTTCTGCTGGGAGGCCAGACCTTTCATGTGTGACAAGCTGTACTTGGT
GGACCAGAAGGCCAAAGAGATCATCCCCAAGACGGACATCCCCAGCCCCA
GGAAGGAGTTCAGCGCCTGTGCCATTGGCTGTAAGGCTACGTACAGGC
GGGA--GAGGCTC-AGAGAACGGCGTATCTAAAGACGTGTGGGTCTATGA
CACCGTCCATGAGGAGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGGT
TTGGCCATGGCTCTGCTGAGCTCAAACACTGCCCTTATGTGGTTGGAGGA
CACACAGCAGCCACTGGCTGCCTCCCAGCCTCTCCATCTGGATGAGTACA
TTGTAGTGTTCAGTCGTTCCACGACGAGGCTCATTTCTGAACGAAGCAGAG
CTGATACTGGCACTGGCCAAAGAGTTTCAGATGAGGGTGGTCCAGTCTC
CCTGGAGGAACAGTCTTTCCCAGCATCGTACAGGTCCATCAGTGGAGCCT
CCATGTTGGTTCAGTATGCACGGAGCTCAGCTCGTCCCTACTCTTCCTC
CCTAGAGGAGCTGCTGTGGTAGAGCTTTCCTTACGCTGTGAACCCGGA
ACAGTACAGCCCATAAAAACCCTAGCCTCCCTACCAGGCATGGACCTTC
AATATGTTTCTGAGGAACACTGTTGAGGAGAACACTGTCACCCACCCA
GACAGACCCTGGGACCAAGGAGGCATTTGCCATTTGGAGAAAGAGGCA
GGAGAGAATCCTAGCCAGCAAGGATGTCCCAGGCACCTATGCTGCCGCA
ACCCAGAGTGGCTCTTTCAGGATCTACCAGGACACTCTGGTAGACATCCCC
TCCTTCTTGAAACCTCAA---GGAGGGCCTAAAG---ACGAGGCCGAG
CTTGAAGAA---GTCCAAGCCGGCCAGCACGGTTCCACCCAGGCCGGGTCA
GAGAACCCAGTGGCAGACTTCCGGTCCAAGCCACCAACGAGGCTAAACTC
ACAGTATCCTGGCAGATCTCGTGCACCTTAAGTACCTGACG-----
-----AAAAGGATACAAGCAAGGGAACCC
TGGAGGATCAAATCATTCAGGCAAACCTGCACTGGAGGCTTTTGGCAAT
GCCAAAACATTGAGGAACGATAATTCCTCCCGTTTTGGAAAATTCATCCG
AATCCACTTTGGAAACAGTGGTAAACTGTCTCTGCGGACGTTGAGACCT
ACCTGTGGAGAAAGTCACGGGTCATTTTCAGCTTAAGGCAGAGAGGAAC
TACCACATCTTTTTCCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGA
CATGATGTTGATCACCACCAACCCCTATGACTACTGCTACATCTCCAAG

GAGAAGTAACCGTAGCATCCATCAATGATTTCAGAAGAGCTGATGGCCACT
GACAGTGCCTTTGATGTGCTTGGCTTCACGCAAGAGGAGAAGATGGGAGT
CTACAAGTTGATAGGGGCCATTATGCACTATGGCAACATGAGGTCAAGC
AAAAGCAGCGTGAGGAACAGGCTGAGTCTGATGGTACAGAGGCTGCTGAT
AAGTCAGCTTATCTAATGGGGCTGAATTCAGCAGACCTAATCAAAGGACT
CTGCCATCCCAGAGTCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGG
GTGTAGATCAAGTCTACTACCCCAACAAGGAGGCCCTCAAGTGTGAAGAG
TGTGGCAAGCACTACAACACCAAGCTAGGATACAAGCGCCATGTGGCCAT
GCACTCTGCCACAGCGGGGATCTCACCTGCAAAGTGTGCATGCAGAGTT
ACGAGAGCACCCCGGTGCTCCTGGAACACCTCAAGAGCCACTCGGGGAAG
TCCTCGGGTGGCGCAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCG
TCGCTTCTACACGCGGAAGGATGTCAGGCGGCACATGGTTGTCCACACGG
GCCGAAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAG
GATCATCTGACACGGCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAA
GATTAAGACGGAGCTCCGGATATGTTGGGTCTCCTTGGCTCTGGCTCGC
CGCCTTGCTCTGTCAAGGAGGAGCTGAGCCCCATGATGTGCAGCATGGGT
GCCAATAAAGACCCCATGATGGGCAAACCCTTCCCCAGCGGGACCCCTT
CCCCATGGGCATGTACAACCCCCACCAC-----CTCCAGGCCATGTCTA
ATCCTGGGGTGGGCCACCCC-----CACCCCTCCCTTATGCCTGGGTCC
CTGTCTGCAGCTATGGGCATGGGCTGTCAATATGGAATATCTTATCTACGC
TTCCCTTCTCCTTCATGGGATGTTTACAAATCAACGACGGGTGCAACATCG
TGAATTTGCTGGCCAGTAACCTCTCCGAGCGCCTCGTACGCCCTGACACAG
CAGAAGTACTTCAGTAACATAAGCCCCGTGATCGGGTTTTTACATCTACGA
GCCCCATCGAGTACTGGAACCTCACGGTGCAGGAGCACCTGAAGACGCTGA
GCCACGGCTTCAACAAGATCTCCTGGGTGGACAATTTTCGTCCACTACCTA
CGGGCGGTGAACGTGAGCGCGTCTACCAAGGCCGACTTCGTACCGTTCT
CAAGGGCTCCTTCTGCGGAGCCCGCGTACCAGCACTTCACCGAGGACA
TCATCTTCTCCAAGA---GCCACGAGAACA-----GCGAGTACGACATC
ATCGCCTCGCGCATGTACCTGGTGGCGCGCACCCACGAGAAGAGGCGCGA
GGACGTGGTGGAGCTGCTGGAGAAGCTCCGGCCGCTGATGCTGATCAACA
GCATCAAGTTCATCGCCTTCAACCCACGTTTCGTCTTCATGGACCGCTAC
AGCTCCTCGGTTCATCTCGCCATCCTCACCTCGGGCTTCAGCGTGTCTAC
CATCCTCATCCTCACCTTCTTCTCCTGGTTCATCAACCCGCTGGGGAACTTGT
GGCTCATCCTGATGGTACGTCACGTCGGTGGAGCTGGGCGTGTGGGTCTGATG
GGCTACCACACATTTGAGTGGCAGCCAGCCCTCAAGAATGTGTCCCATC
CTGCCACGTGGGTATCATCAATGGGCTTTCGGGTGGGCCGCTCGGTGG
ATGACGTCCCCTGCCGACATCATCACCCGTCGGTTTCGCTATGATGTGGCC
CTTGATCAGCCCTGAAGGACCTAGAGGAGGACATCATGGAAGGACTGAG
GGAGCGGGGCTGGAAGACAGCGCTTGCACCTCAGGCTTCAGTGTATGA
TCAAGGAATCCTGTGATGGCATGGGAGATATCAGCGAGAAGCACGGTGA
GGGCCAGCGATGCCTGAGAAGGCTGTGCGTTTTCTCTATCACCGTCATGTC
TGTCTCTGTCCAGGCCGACGGAGAGGAG-----
-----GAGGCGGTTGTTCATCTTCAGGGAGCCAAAGCCCAACTCTGAA
CTGTCTGTAAAGCCCTGTGCCTGATGTTTGTGGATGAGTCTGACCACGA
GACACTACTGCTGTCTGGGGCTTTGGTAGCAGAGAGGAATGCGATGA
AGCAGAGCCGACTCATCCTCTCAGTGGGTGGCCTCCTCCGCTCTTTCCAC
TTCCACTTCAGAGGCACAGGCTATGACGAGAAGATGGTGCAGAGATGGA
AGGCTTGGAGGCTCAGGCTCCACCTATATCTGCACTCTTTGTGACTCCA
CTCGGGCAGACGCTCTCACAACATGGTGTCTCCACTCTGTACGCGCAGC
CACGATGAGAACCTGGAGCGCTACGAGATATGGAGGACCAACCCCTTCTC
AGAGTCTGTTCATGGAGCTGCGAGATCGGGTCAAAGGGGTCTCTGCCAAAC
CATTTATCGAGACCCATCCGACTATGGATGCATTACATTGTGACATAGGT
AATGCCACTGAATTCACAAAATCTTCCAGGATGAGATTGGGGAGGTGTT

-----GGATGAGTACATCGTAGTCTTCAGT
CGCTCAACGACGAGACTCATTCTCAACGAAGCAGAACTGATTATGGCACT
GTCCCAGGAGTTTCAGATGAGGGTGGTCACAGTGTCCCTTGAAGAGCAGT
CTTTCCCCAGTATAGTCCAGTTTATCAGTGGTGCCTCAATGTTGGTCAGT
ATGCATGGGGCTCAGCTCGTCACCTCACTCTTCCCTCCCCAGAGGAGCTGT
GGTGGTGGAGCTCTTCCCTATGCTGTGAACCCAGAACAGTACACCCCTT
ATAAGACCCTCGCCTCCTTACCGGGGATGGACCTGCAGTATGTTTCCTGG
AGGAATATGATGGAGGAAAACACCATCACCCACCCAGATAGATCCTGGGA
CCAAGGAGGCATCGCCCACCTGGAAAAGGACGAGCAAGAGCGAATCCTTG
CCAGCAAGGATGTCCCAGGCACCTGTGTTGCCACAACCCAGAATGGTTC
TTCCGAATCTACCAGGACACTCTGGTGGACATCCCCTCATTCTGGAGGT
TCTCAA---AGATGGCCTGAAGATCACCCAGACCAAGCTTAAAAAA---GG
CCAAGCCGGCCAGCACAGTGCATCCAGGCCGGGTGAGGGAAGCACAGTGT
CAAACCTCAGTCCAAGCCACCAACGAAGCTAAACTTACGGTCTCCTGGCA
GATCCCATGGAACCTTGAATACCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAG-----

-----TATCTGATCTACGCTTCATTCTCCTTCA
TGGGATGTTTACAAATCAGCGATGGGTCAAACATTGTGAACCTGCTGGCG
AGTAACTCTCCAAGTGTGTCTTTTGCRACACCCAGCAGAAGTACTTCAG
TAACTACAGCCCTGTATTGGGTCTACATTTATGAACCCATTGAGTACT
GGAATGCCACGGTGCAGGAGCACCTGAAGACACTGAGTCACGGCTTCAAC
AAGATCTCCTGGATCGACAACCTTCTCCACTACCTGCGGGTGGTAAACGT
GAGCGCGTGCACCAAGAACGACTTCATCACCATCCTGAAGGGCTCCTTCC
TACGCAGCCCGGAGTACCAGCACTTCACAGAGGACATCATCTTCTCCAAG
A---ACCGCGAGAGCG-----ACGAGTACGACATCATCGCCTCGCGCAT

GTACCTGGTGGCGCGCACCACCGAGAAGAAACGCGAGGAGGTGGTGGAGC
TGCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTCGTCTTCATGGACCGCTACAGCTCGTCGGTCAT
ATCGCCATCCTTACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CGTTCTTTCTCGTCATCAACCCACTGGGGAACCTTCTGGCTCATTCTGACG
GTGACGTCTGTGGAGCTGGGCGTGTGGGTCTGATGGGCTACCACCCTTT
TGAATGGCAGCCAGCCCTCAAGAGCGTGTCCCCCTCTTGCCATGTGGGCA
TCATCGACGGGCTCTCTGGCTGGGCCGACTCGGTGGATGACTCACCAGCG
GACACAATCAGCCGAGGTTTCGCTATGATGTGGCCCTTGTGTCTGCCTT
GAAGGACCTGGAAGAGGAAGTGATGGAGGGACTGAGAGAATGCGGGCTAG
ATGACAGCGCGTGCACCTCAGGCTTCAGAGTATTGATCAAGNAGTCTGCG
ATGGCATGGGAGANGTCAGTGAGAAACATGGCGGGGGGCCGCGGTTCTG
AGAAAGCGGTCCGTTTCTCTTTACCCTTATGTCCATCTCTGTGATGCCG
GATGGGAAAACG-----GAGGCGGT
GACCATCTTACAGAGCGAGAGCCCAACTCCGAACTGTCCTGTAAGCCCA
TGTGCNTGATGTTTGTGGATGAGTCGGACCACGAGATGCTCACTGCCGTTT
TGGGGCCCGTGGTTCGACAGAGCGCAGGGCAATCACAGAAAGCCGGCTCATC
CTGTCCATGGGTGGCCTCCCCCGCTCGTTCGCTTCTACTTCAGAGGCAC
AGGCTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCATCAG
GCTCTGCCTATGTCTGCACTCTGTGCGACTCCACCCGGGCGGAGGCCTCT
CGCAACATGGTGTCTCCATTCCGTCACCCGACCCAGGCGAGAACCCTGGA
GCGCTACGAGATATGGCGGAGCAACCCCTTTGCGGAGTCTGTGAGGAGC
TGCGAGATCGAGTGAAGGGGGTCTCCGCCAAGCCCTTCATGGAAACCCAG
CCCCTCTGGATGCATTGCACTGTGACATTGGTAACGCCACTGAGTTCTA
CAAAATATTCCAAGACGAGATCGGGGAGGTGTTCCAGAAAGC---CAAG-
--CCCAGCCGCGAGGAAAGGCGAGGCTGGAGGGCTGCTCTCGACAAGCAG
CTGAGGAAAAAACTCAAGCTCAAGCCGGTGTGAGGATGAATGGGAACTA
CGCTCGGAGACTGATGTCCGAGGAGACCATGGATGTGGTGTGCGAACTGG
TGCCCTCAGAGGAAAGGCGGGAGGCTCTGAGGGAGCTAATGGGGCTTTAC
CTCCAGATGAAACCTGTGTGGCGTGCCAGCAACCCAGCCAAAGAATGCC
TGACCAACTGTGTGCTACAGTTTCAACTCCAGCGCTTTGCGAGATCTCC
TCTCCACTACCTTCAAATACAGGTATGACGGAAAGATTACCAATTACCTG
CACAAGACCTTGGCCACGTACCTGAAATAGTAGAAAGAGACGGCTCTAT
TGGAGCATGGGCCAGCGAGGGGAACGAGTCCGCAAACAATCGTACACCA
TCGAGATGGGCCCCAAAGGGCCATTGTGGAAGGAGAGCCCGCAGCCCTTC
ACCTGTTCCATCGAGGACCCCACTAAACAGACCAAGTTCAAGGGCATCAA
GACGTACATCTCTACCGGTCACGCCGAGCCACACMGGTCATCCTGTGT
ACAGGCGTACAAGCACTTTGACTGGCTGTACAACCGCTTGTGTCACAAG
TTCACCGTGATCTCCATCCCACACTTGCCAGAAAAACAGGCAACTGGGCG
TTTCGAGGAGGACTTCATAGAAAAGCGCAAGAGGCGGTTGATCCTCTGGA
TAAACCACATGACCAGTACCCTGTCTCTCCCAGTACGAGGGGTTGAA
CACTTCTGATGTGTGGCGACGACAAGCAATGGAAGCTGGGCAAGCGGCG
AGCAGAGAAGGATGAAATGATCGGTGCCACTTCATGCTGACCTTCCAGA
TCCCCAACGAGCACCAGGACCTGCAGGATGTGGAGGAGCGCGTAGACTCC
TTCAAGGCGTTTGCCAAGAAGATGGATGACAGTGTGATGACAGCTGACTCA
TGTGGCCTCGGAACTCGTGCAGAACACCTTGGTGGATTCCGTAAGGAGT
TCCAGCGGCTGGGTAATGCCTTCCAGAACATCAGCCAGGCCTTCATGCTT
GACCCGCCACATAGCTCGGACGGCCTCAACAACGCCATCTCACAC-----

-----GCCAAGTCCCGCTTTCAC
CCTGGCGTGGGGAGCGCTGCTGGCACGGAGC---GCAGCGTCCCACTCAG
CAACAGCTTGCTCTCTCCGCAACAAACCGAGGATCCCGCCGTCG---CCT
CCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTC
GCAGCCTCGGCATACGACGCCGCT-----GATTTGCGCCGGTAACGC
GGCCACCTTGCTGTCGTACGCCGCGGCCGGAGTGAAGGCTC-----TCC
CCCTGCCGACCGCGGCCTGCTCCAACAGACCTCTGGGTTATTACGCGGAC
CCGTCGG---GCTGG---GGCGCGGCACGCCGCCAGTACTGC-----
---AGCAAGTCGACCTCGGTCTTTCTTGCTGGCCCCGGAACCTCTGTGCG
GGAGCAGAACGGGCA-----CGAACTACCTAG-----TGGAGGA-
--CGGGTCGGACGC---CATCCCGACGGAGAGGTCGCCGATTAT---TAA
TGGCTCGGAGGAG---GTGAAAGCCAAAGACTT-----GTCCGA---GT
CTAGCTGGATAGAG---ACGCCGCTTTCGATCAAATCGATTGACTCAAGT
GATTCTGGCATTCTTTG---AGCAAGCAAAGCGGAGACGGATTTTACCAGTC
TGCCACACCA-----GTTACAGAGACGGTGTCTCCGTTGAAATCTG
AA-----GCAGGCGAGGTCTCCGAGAGGGAGGTGGCGTTGGGGATC
AACCCGATCGCGGACGGCATGGGCGCTTCAAAATAAACACGGCTCCCA
CGACATCGGCTCCGG---ACAGACGGCGTTCCTCGCAGCCGGGCCGCCG
GCTAC---GCGGCCGCCGCCCTGGGA---CACCACCA-----CCACCCG
ACGCACGTCAGCTCG---TACAGCACGGCAGCCTTCAACTCCACGCGGGA
CTTTCTGTTTCAAAAATCGGGGCTTCGGAGACGCCACCAG-----
-CGCGCAGCACAGCTTGTTTCGCTCCGC---CGCGGGAAGTTT---C---
---CGGGGGCCACATGGACACTCGGATGCCGCGGGGCACCTGCTCTTCCC
CGGCTTGCACGAA---CAAGCCGCAGCCACGCGTCTCCAACGTGGTCA
ACAGCCAGATGCGACTGGGCTTTTTCGGGGACATGTACGGCCGGGCCGAC
CAGTATGGCCACGTCACGAGCCCGAGGT---CCGACCACTACGCGTCCAC
GCAGCTGCACGGCTACGGACCCATGAATATGAACATGGCCGCG---CACC
ACGGAGCCGGGGCTTCTTTCGGTACATGCGGCAGCCATCAAGCAGGAG
CTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCGAACCCCAAGAAGTC
GTGCAACAAAACCTTTCAGCACCATGCACGAGCTGGTGACCCACCTGACGG
TGGAACACGTTGGGGGGCCCCGGAGCAGTCCAACCACATATGCTTCTGGGAG
GAGTGCGCCCGGGAAGGGAAGCCGTTCAAAGCCAAAATACAAACTGGTGAA
TCATATCAGAGTTCACTGGAGAAAAGCCCTTTCCGTGTCCCTTCCCGG
CNN-----

>Beryx decadactylus
AGCTTCTTGATCCGAGCAGAACTAAGCCAGCCGGGGGCCCTTCTGGGAGA
TGACCAGATCTACAACGTCATTGTTACTGCACACGCCCTTTGTAATAATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGATTTGGAAACTGACTAATT
CCCTAATGATTGGAGCACCCGACATGGCATTCCCCCGAATAAATAACAT

GAGCTTCTGACTTCTTCCTCCCTCCTTCCTCCTTCTCCTGGCCTCTTCTG
GAGTAGAAGCAGGGGCAGGAACAGGGTGAAGTGTATACCCACCCCTTGCC
GGGAATCTTGCACACGCAGGAGCCTCGGTTGACCTTACAATCTTCTCTCT
TCACCTGGCAGGTGTCTCCTCAATCTAGGGGCCATTAACCTTATTACAA
CCATCATCAACATGAAACCCCCAGCCATTTACAATACCAAACACCCCTG
TTTGTGTTGAGCAGTGCTGATTACGGCTGTCCTCCTTCTTCTTTCCCTGCC
CGTACTTGCAGGATACGATACTACTAACAGATCGCAACCTAAACA
CCACCTTCTTTGACCCCGCAGGAGGAGGTGATCCAATTTCTTACCAACAC
CTG-----

-----TTTCTAGAGAGGAACCTCCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTCT
CCTGGAGCATGTGCCCTCAGCAACTTTCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGG
TCAACTACGACCTGGAAAGGAGGCACTGCCACCTGCCAGAGCTGCTGAGA
ACAGTCCGACTGGCCCTGCTTCCCTGCCATATTCCCTCATGGAGAATGTCTC
CACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTCGATG
AGGCCATCCGCTGCAAGCTGAAGATCTTGCAGAATGACGGTGTGCTTAAT
AGCCCCGTGTCTCGACCGAGAAAACCAGCCATGCCCTCTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACAAAAGGCCA
AAGAGATCATCCCCAAGGCGGACATCCAAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCGTGCGCTGTAAGGTCTACATCTCAGGAGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGTCATGGCTCT
CCTGAGCTGAAACACTGCCTGTACGTGGTAGGAGTCCACACAGCAGCAAC
TGGCTGCCTCCCAGCCTCTCCCTCGGGAAGAATACATTGTGCTGTTTCACT
CGTTCAACGACAAGGCTGATTCTGAACGAAGCGGAGCTAATCATGGCGCT
GGCCAGGAATTTTCAAGATGAGAGTGGTTACGGTATCCCTGGAGGAACAAA
CTTTTGCCAGCATTGTCCAAGTGTGATCAGTGGGGCCTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTGTACCTCACTCTTCCCTCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTATGCTGTGAACCCAGAACAGTACACCCCAT
ACAAAACCCTTGCCCTCCCTACCAGGCATGGACCTGCAATACGTTTCCTGG
AGGAACACTATGGAGGAGAACCACATCACCCACCCAGACCGACCCCTGGGA
ACAAGGAGGAATCGCCCATTTGGAAAAGGACGAGCAAGAACGAATACTGG
CCAGCAAGGATGTCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTGGACATCCCGTCATTGGTGGAAAGT
CCTCAA---AGAGGGTCTGAGG---GCCAGGCCAAGCTTGAAGAA---GG
CCAAGCCGGCCAGCACGGTTCACCCGGGCGGGTCAGAGAACCCAGTGC
CACACCTCAGTCCAAGCCACCAACGAGGCAAAACTCACGGTTTCTTGGCA
GATCCCGTGGAAATCTGAAGTACCTGAAGGTGCGAGAAGTGAAGTAYGAGG
TGTGGATCCAGAAGAGAGATACCAGCAAGGGAACACTGGAGGATCAAATC
ATCCAGGCAAACCCTGCCCTGGAGGCCTTTGGTAATGCCAAAACAGTGAG
GAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGAATTCACCTTCGGAA
CCAGTGGTAAGCTGTGCTGCTGACATTGAGACTTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAACTCAAGTCTGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTATTGATTA
CCAACAACCCATATGACTACTCTTACATCTCCCAGGGAGAGGTAACAGTA
CAATCCATCAACGACTCAGAGGAACTGATAGCCACTGACAGCGCCTTCGA
CGTGCTTGGCTTCACTCAAGACGAGAAGATGGGAATCTATAAGCTGACCG
GTGCCATTATGCACTATGGCAACATGAAGTTTAAAGCAGAAGCAGCGTGAA

GAGCAAGCTGAGCCTGACGGAACGGAGGCTGCTGATAAGTCAGCTTACCT
GATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAAGGTAGGAAACGAATATGTCACCAAAGGCCAGGGTGTAGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGC GGCAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGTGGCGC
CAAGGAGAAGAAACACCCGTGCGACCACTGCGACCGTCGCTTCTACTC
GAAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGACCACCTGACGCG
GCACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGATATGTTAGGTCTTTTAGGTTCTGGCTCGCCGCCTTGCTCCGTC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCCCTTCCCCAGCGGGGCCCTTCCCGATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAATACTGGGGTGGGT
CACCC-----CACCCATCCCTGATGCCAGTCCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAATATCTCATCTACGCCCTTTTCTCGTTCA
TGGGATGTTTACAAAATCAGTGATGGATCAAACATTGTGAATTTGCTGGCT
AGTAACTCTCCGAGCGTTTCATACGCTCTGACCCAGCAGAAATACTTCAG
TAACTATAGTCCCGTGATTGGGTTTTACATTTACGAGCCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCATCTGAAGACACTGAGTCACGGTTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGT
GAGCGCGTCGACCAAGAGTGACTTTATTACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATCTTCTCCAAG
A---GCCACGAGAGCG-----ATGAGTATGACATTATTGCCTCACGCAT
GTACCTGGTGGCACGGACCACGGAGAAAAGGCGYGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTTTTTATGGACCCTACAGCTCCTCGGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCTGGTTCATCAACCCCTTGGGAACTTCTGGCTCATCCTGACG
GTTACTTCTGTGGAGCTGGGCGTCTTGGGTTTAAATGNNNNNNNNNNNNNNNNNNNNGCAGGCCGGCCCTC
AAGAATGTGTCTGCATCGTGCCATGTGGGCATCATTAATGGGCTCTCTGG
ATGGGCTGCCTCAGTGGACGATTCCCCAGCTGACACCATCACTCGGCGAT
TTCGCTATGATGTGGCCCTGGTGTGAGCCTTAAAGGATCTGGAGGAGGAC
ATCATGGAGGGACTGAAAGAGTGTGGGCTGGAGGACAGCGCTTGCACCTC
AGGCTTCAGTGTATGATCAAGGAATCTTGTGACGGCATGGGAGATGTCA
GCGAGAAGCACGGCGGAGGCCGATGGTCCCTGAGAAGGCTGTACGTTTC
TCTTTTACTGTTATGTCTGTCTGTCTTGGCAGAAGGAGAGGAG-----
-----AAGGAGGTTACCATCTTTAGGGAGC
CAAAGCCTAACTCGGAACTGTCTGTAAGCCCTATGTCTGATGTTTGTG
GATGAGTCAGACCATGAGACACTCACTGCTGTCTTGGGGCCTGTAGTTGC
AGAGCGTAATGCAATGAAGCAGAGTCGACTCATCCTATCTGTGGGTGGCC
TGCCTCGCTCCTTCCGCTTCCATTTTCCAGAGGCACAGGATATGATGAGAAG
ATGGTGCCTGATTTGGAGGGCCTGGAGGCCTCAGGCTCCACCTACATCTG
CACTCTGTGTGACTCCAGCCGGGCAGAGGCCTCTCACAACATGGTGTGTC
ACTCCATCACCCGCGGTTCATGATGAAAACCTGGAGCGTTACGAAATATGG
AGGACCAATCCTTTTTCTGAATCCGCCGAGGAGCTGCGAGATCGGGTCAA
AGGAGTCTCCGCCAAGCCCTTCATGGAGACCCACCCCACTCTGGATGCAT
TGCATGTGACATTGGTAATGCCACTGAGTTCTACAAAATCTTCCAGGAT
GAGATAGGGGAGGTGTACCGGAAGCC---CAAT---CCCACTCGGGAACA
ACGGCGGAGCTGGAGAGCAGCTCTAGACAAGCAGCTGAGGAAGAAGATGA
AGCTTAAACCGGTGATGAGGATGAATGGGAACTATGCCCGGAAGCTAATG
ACCGAGGAGGCTGTGGAGGTGGTATGTGAGCTGGTGCCTCAGAAGAGAG

CGATCAACAACAAGGCTTATTTTAAATGAAGCTGAGCTTATCTTGGCACT
GGCTCAGGAGTTCCAAATGAAAGTCGTCACAGTATCTATGGAGGAACAAT
CTTTTCCTAGCATTGTTGAGGTGATCAGTGGTGCTTCTATGTTAGTCAGC
ATGCACGGAGCTCAACTCATCGCTTCGCTTTTCCCTCCCAGAGGAGCTGC
TGTTGTGCGAGCTGTTCCATTTGCTGTGAATCCAGAGCAGTACACCCCAT
ATAAACTCTTGCATCCCTTCCAGGCATGGATCTTATTATATCTCTTGG
CAAAACAGTAAGGAGGACAACACTATTATTCACCCAGACAGGCCATGGGA
GCAAGGTGGCATTGCTCACTTAGAGAAGGAGGAACAAGAAAAATCCTGG
CCAGTAAAAATGTTCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTT
TTCAGGATCTACCAGGACACTTTAGTAGACATCCCTTCCTTTTTTGGAAGT
TCTCAA---AGTGGGCATGAAA---ACTAAGCCTAGCTTAAAGAA---AG
CAAGACCTTCTACAACGTCCACCCAGGCCGGGTGAGAGAACCTCAGTGT
CAGACATCAGTACTAACTCCTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTAAAATACCTAAAGGTAAGAGAAGTGAAATATGAGG
TTTGGATCCAGAAGAAAGACACCAGCAAGGGGACCTTGGAGGATCAGATC
ATACAGGCAAATCCTGCTCTCGAAGCCTTCGGCAATGCCAAAACACTGAG
GAATGACAACCTCGTCCCGTTTTTGGAAAATTCATCCGAATCCATTTTCGGTA
CAAGTGGCAAGTTGTCGTCTGCTGACATTGAAACATACCTACTGGAGAAG
TCACGCGTGACTTTTTCAGCTAAAGGCTGAAAGGAACTATCACATCTTCTA
CCAGATTCTGTCCAATCAGAAGCCGGAAGTCTGGATATGCTGCTGATCA
CCAACAACCCATATGACTACTCCTACATCTCCCAGGAGAGGTAACAGTT
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACAGACAGTGCCTTCGA
TGTGCTGGGTTTTCACCCCAGAGGAAAAGATGGGTGCTATAAACTAATTG
GTGCCATCATGCACTATGGCAACATGAAGTTTAAGCAGAAGCAGCGCGAG
GAGCAGGCGGAACCAGATGGCACCCAGGCTGCTGATAAATCAGCATAACCT
GATGGGGCTGAACTCTGCTGACCTCATCAAAGGCCGTGTGCCATCCGAGAG
TCAAGGTAGGAAACGAATATGTGACCAAAGGCCAGAGTGTGGACCAGGTC
TACTAT-----

-----TATCTCATCTATGCCTCTTTCTCATTCA
TGGGATGTTTACAAATCAGCGATGGATCAAATATTGTGAACCTGTTGGCT
AGTAACTCACCAAGTGTTCATATGCTCTGACCCAGCAGAAGTATTTTAG
TAACTACAGTCCAGTGATCGGGTTTACATTTATGAGCCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCACCTAAAGACTCTAAGTCATGGCTTCAAC
AAAATTTTCATGGATGGACAACCTTTTCCATTACCTTCGGGTAGTGAATGT
GAGTGCATCTACTAAGAGTGACTTCATCAACATCCTTAAGGGATCTTTCC
TAAACAGTCCAGAGTACCAGCACTTCACCCAGGACATCATTTCCTCCAAG
A---ACCGTGAGACTG-----ATGAGTACGACATCATAGCCTCGCGGAT
GTACTTGGTGGCACGAACTACAGAGAAGAAGCGCGARGAAGTGGTGGAGC
TCCTAGAAAACTTCGGCCCTTGATGCTAATCAACAGCATCAAATTCATT
GCCTTCAATCCCACATTTGTGTTTATGGACCGCTACAGCTCCTCCGTCAT
CTCGCCTATTCTGACCTCAGGCTTCAGTGTGCTCACTATCCTCATCCTCA

AGGAGCTGCTGTGGTGGAGCTGTTCCCCTTCGCTGTAAACCCAGAGCAAT
ACACCCCATATAAAAACCTGGCCTCCCTTCCAGGCATAGACCTCCACTAT
GTCTCCTGGAGGAACACCATGGAGGAGAACACCATCACCCACCCAGACAG
ACCTGGGAACAAGGAGGAATCGCTCACTTGGAGAAGGAGGAGCAACAGC
GAATACTTTCCAGCAGAGATGTCCCAGGCATCTGTGCTGCCGCAACCCA
GAATGGCTCTTCCGAATCTACCAGGACACTTTGGTGGACATCCCGTCATT
CATGGAAGTCCTCAA---AGAGGGCCTGAAG---ACCAGGCCTAGCTTAA
AGAA---GGCCAAGCCGGCCAGCACCGTCCACCCAGGCCGGGTGAGAGAA
GCCCAGTGTGACACCTCAGTGCAAACCAGCAGTGAGGCTAAACTCACGGT
TTCTGGCAGATAACCGTGAATCTGAAGTACCTGAAGGTGAGAGAAGTGA
AGTACGAGGTG-----AAGAAAAGACACCAGCAAGGGGACACTGGAA
GATCAAATCATCCAGGCAAACCCAGCACTGGAGGCCCTTCGGTAATGCCAA
AACATTGAGAAAACGACAACCTCCTCTCGTTTTGGAAAATTCATTGGAATTC
ACTTTGGAACCAGTGGTAAGCTGTCATCCGCTGACGTTGAGACATATCTG
CTGGAGAAGTCACGTGTTACCTTTCAGCTCAAGGCTGAGAGGGACTATCA
CATCTTCTACCAGATCCTGTCCAAACAGAAGCCAGAGCTTTTGGATATGC
TGCTGATCACAAAACCCCGTATGACTACTCCTACATCTCCCAAGGAGAA
GTGACAGTTGCATCCATCAATGACGCAGAGGAGCTGATGGCCACCGATAG
TGCCCTCGACGTGCTCGGCTTCACTTCAGAGGAGAAGATGACTGTCTATA
AGCTGACTGGCGCCATCATGCACTATGGCAACATGAAGTTTAAAGCAGAAG
CAGCGTGAGGAGCAGGCTGAACCTGATGGGACAGAGGCTGCTGATAAATC
AGCTTACCTGATGGGTCTGAATTCTGCAGACCTCATCAAAGGGTTGTGCC
ATCCAGAGTCAAGGTAGGGAATGAATATGTCACAAAAGGCCAAAGTGTG
GACCAAGTCTACTATCCCAACAAGGAGGCCCTTCAAGTGTGAGGAGTGTGG
CAAGCACTACAACACCAAGCTGGGATATAAGCGACATGTTGCCATGCACT
CTGCCACAGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGATCTACGAG
AGCACACCGGTGCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCTTC
GGGTGGCACCAAGGAGAAAAAACCCCGTGTGACCCTGTGATCGTCGTT
TCTACACACGGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGG
AAGGACTTTCTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCA
CCTGACACGTACGTGAAGAAGAGCCACTCTCAGGAGCTGCTGAAGATCA
AGACGGAGCCCCCGGATATGTTA---CTTTTAGGATCGGGGTCACCACCT
TGCCCTGTGAAGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCAAA
CAAAGATCCCATGATGGGAAAACCTTTCCCAAGTGGGGCCCCCTTTCCGA
TGGGCATGTACAACCCCCACCAT-----CTCCAGGCCATGTCCAATTCT
GGGGTGGGCCACCCC-----CACCCCTCCTTGATGCCTAGTACCCTGTC
TGCAGCTATGGGTATGGGCTGTACATGGAATATCTCATCTATGCCCTCTT
TCTCATTCATGGGATGTTTACAAATCAGTGATGGATCAAACATCGTGAAC
CTGCTGGCTAGTAACTCTCCAGTGTTCATACGCTCTGACTCAGCAGAA
ATACTTCAGCAACTACAGTCCCCTTATTGGTTTTTACATTTATGAGCCCA
TTGAGTACTGGAACCTCCACGGTGCAGGAGCATCTGAAGACTCTGAGTCAC
GGCTTCAACAAGATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGT
GGTGAATGTGAGCGCATCGACCAAGAGTGATTTTATCACCATCCTCAAGG
GCTCTTCTTACGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATC
TTCTCTAAGA---ACCGTGAGACTG-----ATGAGTATGACATAATTGC
CTCACGCATGTACTTGGTGGCGAGGACCACAGAGAAGAAACGTGAGGAGG
TGGTGGAGCTGCTGGAAAAGCTACGTCCATTGATGCTGATTAACAGCATC
AAGTTCATTGCCTTCAATCCCCTTTTGTGTTTTCATGGACCGCTACAGTTC
GTCTGTCAATTTACCCATCCTGACCTCAGGCTTTAGTGTGCTCACTATCC
TCATTTCACTTTCTTCCCTGGTCATCAATCCCTTAGGGAACCTTCTGGCTC
ATTCTGACAGTTACATTTCTGGGAGCTGGGCGTCTTGGGTTTGANNNGTTTTTC
ACTTATTTGAATGGCAGCCAGCTCTCAAGAATGTGTCTGTATCCTGCAAT
GTTGGTATTATTAATGGGCTCCCTGGATGGGCTGCCACTGTGGATGACTC

CCGTCAGCCAGAACTGGACCTTCCACGGGCCTGGCGCCAGCGGGCAGGCG
GCGGCCAACTGGCTGGCTGGATTTGGTAGAGGTCCACGCCTCCTACTTT
GCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTGCTGG
TGCTGGACGAGTTCAAAACAGAGAAGAGGATTAGCAGGATGTTCTACATC
ATGACGTTTTTCTTCCCTGGCACTGTGGGGGCCATATCTGGTAGCCTGCTA
CTGGCGGGTGTGGCAAGGGGCCCTGTAGTCCCCGTGGGCTACCTGACAG
CAGCCGTGTGGATGAGCTTTGCCAGGCAGGGGTCAACCCTTTCATCTGC
ATCTTCTCCAACAGGGAG-----

-----CATCACTCAACA
GGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCTTTCGCGGA
CGGCATGGGCGCCTTCAAAATAAACCACAGCTCCCATGATATTGGTTCCG
G---ACAACCGGCGTTTCTCTCAGGCG---CCCGCTAC---GCAGCG
GCCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGCTC
T---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAA
ATCGGGGTTTTGGAGACGCCACCGG-----GGCTCAGCACAGT
TTGTTTCGCCCTC-----CGGAAGTTT---C-----GCAGGGCCACA
TGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCAGGGCTCCACGAG-
--CAAGCAGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGA
CTGGGCTTCTCGGGGACATGTACGGTCCGGGCCGATCAGTACGGCCACGT
TACAAGCCCCGAGGT---CCGACCACTATGCTTCGACCCAGTTGCACGGTT
ATGGCCCCATGAACATGAATATGGCCGCA--CACCACGGAGCAGGGGCC
TTCTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTG
GATCGAGCCGGAGCAGCTGACAAATCCCAAAAAGGCGTGCAACAAAACCTT
TTAGCACGATGCATGAGCTTGTGACCCACTTGACAGTGGAGCATGTGGGG
GGACCAGAGCAGACCAACCACATCTGCTTCTGGGAGGAGTGCGCCAGAGA
AGGAAAACCATTCAAAGCCAAATACAAACTTGTAATCATATCAGAGTAC
ACACCGGAGAAAAACCTTTCGGTGTCCGTTCCCAGGCTGTGGCAAA

>Brotula multibarbata

AGCCTACTAATCCGAGCAGAACTCAGTCAACCAGGAGCCCTTCTTGGAGA
TGACCAAATTTATAATGTCATTGTTACAGCCCATGCTTTCGTAATGATTT
TCTTTATAGTAATAACCAATTATGATTGGGGGCTTTGGAAACTGGTTAATT
CCACTTATGATTGGAGCCCCAGACATGGCATTCCCCCGAATGAACAACAT
AAGCTTCTGGCTTCTTCCCTCCCTCATTCCTTCTTCTGCTGGCCTCATCAG
GAGTTGAAGCCGGGGCTGGTACTGGGTGAACTGTATATCCGCCCCCTTGCT
GGAAACTTAGCCCATGCAGGAGCATCTGTAGATCTTACTATCTTCTCCCT
TCATCTGGCAGGGGTATCATCTATTC TAGGGGCCATTA ACTTCAATTACAA
CAATTATTAACATGAAACCCCCGCAATTTGCAATACCAAACACCTTTA
TTCGTATGAGCCGTTCTAATTA CTGCAGTACTTCTTCTTCTTTTACC
AGTCCTTGCTGCAGGAATTACAATGCTTCTAACAGATCGAAACCTTAACA
CCACTTCTTTGACCCCGCTGGAGGAGGTGATCCTATCTTATAACCAGCAC

CTA-----

NNGGCATGCTATTGCTGTCTGACGCCCATCAGTGTA
CCAA

GCTGTCAGAGCTCTCCTGGGGCATGTGCCTCAGCAACTTTCCCGCTATCT
GCAAGACGGAGGACTTCCTCCAATTGCCCAAAGACATGGTGGTGCAGCTG
CTGTACACGAAGAGCTGGAGACAGAAGACGAGAGACTGGTCTACGAAGC
GGCCCTGAACTGGATCAACTATGACCTGGAGAGGAGGCACTGCCATCTTC
CAGAGCTCCTGAGAACAGTCCGCCCTGGCCTTGCTGCCTGCCATCTTCCTC
ATGGAGAACGTCTCGACGGAAGAGCTGATCAACGCCCCAGGCCAAGAGCAA
GGAGCTGGTGGACGAGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAACG
ACGGCGTGGTCAACAGCCCGTGTGCCCGGCCGAGAAAAACCAGCCACGCC
CTCTTTCTGCTGGGAGGGCAGACTTTCATGTGCGACAAGCTGTACCTGGT
GGACCAGAAAGCCAAAGAGATCATCCCCAAAGCCGACATCCCCAGCCCCA
GGAAGGAGTTCAGCGCCTGTGCCATCGGCTGCAAGGTGTACATCACAGGT
GGGA--GGGGTTC-GGAGAACGGGGTGTCCAAAGACGTGTGGGTCTACGA
TACCGTCCACGAGGAATGGTCCAAGCGGGCGCCCATGCTCATTGCCAGGT
TCGGCCACGGTTCCGCCGAGCTGAAACACTGCCTGTACGTGGTGGGAGGT
CACACGGCAGCCACCGTTCCTCCCGCCTCCCCCTCGGGATGAATACA
TAGTTGTGTTTTCAGTCGCTCAACAACAAGGCTGATCCTGAATGAAGCAGAG
CTGATCATGGCACTGGCCCAAGAGTTTCAGATGAGAGTGGTTACTGTATC
CCTGGAGGAACAGTCTTTTCCCAGTATTGTCCAGGTGATCAGCGGTGCTT
CCATGTTGGTTAGTATGCATGGGGCACAGCTCATTACGTGCTCTTCCTC
CCCAGAGGAGCTGCTGTGGTGGAGCTTTTCCCCTTTGCTGTGAACCCGGA
GCAGTACACCCCATACAAAACCCCTGGCCTCCCTTCCAGGCATGGACCTGC
ACTATGTCTCCTGGAGGAATGCCATGGAGGAGAACACGGTCACCCACCCA
GACAGACCCTGGGAGCAGGGGGGCATTTGTTTACCTGGAGAAGGAGGAGCA
GGAGCGAATACTTACCAGCAAAGATATCCCAAGGCACCTGTGCTGCCGCA
ACCCGGAGTGGCTCTTCCGAATCTACCAGGACACTTTGGTGGACATCCCT
TCGTTCCTGGACGTCGTCAG---AGAGGGCTTGAAG---ACCAAGCCTAA
CTTGAGGAA---GAACAAGCCGGCCAGCACAGTTTACCCCGGTTCGGGTCA
GAGAAGCACACTGTACAGCTCAGTGCAAACCAGCAGCGAGGCTAAACTC
ACAGTTTCCCTGGCAGATCCCGTGAATCTGAAGTACCTGAAGGTGAGAGA
GGTGAAGTATGAGGTGTGGATCANNNAAGAAAGACACCAGCAAGGGGACGCTGG
AAGATCAAATCATCCAGGCCAACCCGGCATTGGAGGCCTTCGGTAACGCT
AAAACCTTAAGAAATGACAACCTCATCACGTTTTGGGAAATTCATCCGAAT
TCACTTTGGAAACAGTGGCAAGTTGTGCTCCGCTGACATTGAGACATATT
TGCTGGAGAAGTCACGCGTCACCTTTCAGCTCAAGGCTGAGAGGAATTAC
CACATCTTCTACCAGATCCTGTCCAATCAGAAACCAGAGCTGTTGGACAT
GCTGTTGGTCAAAAACAACCCATACGACTACTCCTACATCTCTCAAGGAG
AAGTAACGGTTCGATCAATCAATGACTCTGAGGAGCTGATGGCCACYGAC
AGTGCTTTCGATGTGCTCGGCTTTACMCGGAAGAAAAAATGGGCGTTTA
TAAGCTGACTGGCGCCATCATGCATCACGGCAACATGAAGTTTAAGCAGA
AGCAACGTGAGGAGCAAGCCGAACCTGATGGGACGGAGGCTGCGGATAAA
TCAGCCTATCTGATGGGTCTGAACTCTGCAGACCTCATAAAGGGGCTGTG
CCATCCCAGAGTGAAGGTAGGGAATGAGTTTGTACTAAAGGCCAAAGTG
TGGACCAGGTCTACTACCCCAACAAAGAGGCCTTCAAGTGTGAGGAGTGT
GGCAAGCACTACAACACCAAGTTGGGATACAAGCGGCATGTGGCCATGCA
CTCCGCCACAGCAGGGGATCTCACCTGTAAAGTTTGCATGCAGAGCTACG
AGAGCACACCAGTGCTCCTGGAACACCTCAAGAGCCACTCTGGGAAGTCC

TCGGGCGGCACCAAGGAGAAAAACACCCGTGTGATCACTGCGATCGACG
TTTCTACACGCGGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCC
GGAAGGACTTTCTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGAC
CACCTGACACGTACGTGAAGAAGAGCCACTCTCAGGAGCTGCTGAAGAT
CAAAACGGAGCCCCCGGATATGTTAGGTCTTTTAGCTTCCGGGTGCGCCAC
CTTGCTCTGTGAAGGAGGAGCTTAGCCCCATGATGTGTGGCATGGGTCCA
AACAAAGACCCCATGATGGGGAAACCGTTCCCAAGTGGGGCCCCTTTCC
GATGGGCATGTACAACCCCCACCAC-----CTCCAGGCCATGTCCAATT
CTGGAGTGGGCCACCCC-----CACCCCTCCTTGATGCAGAGCACCCCTG
TCTGCTGCTATGGGTATGGGCTGTCACATGGAGTATCTCATCTATGCCTC
TTTTCTATTTCATGGGATGTTTACAAATCAGCGACGGATCCAACATTGTGA
ATCTGTTGGCGAGTAACTCTCCGAGCGTGTGCTACGCCGCCACCCAGCAG
AAATACTTTAGCAACTACAGTCCAGTGATTGGGTTTTACATTTACGAGCC
CATTGAGTACTGGAATTCTACGGTGCAGGAGCATCTGAAGACTCTGAGTT
ACGGCTTCAATAAGATCTCCTGGATGGACAACCTTTTTCCATTACCTGCGG
GTGGTGAACGTGAGCGCTTCAACCAAGAGCGATTTTTATCACCATCCTCAA
GGGTTCTTTCTTGACAGCCCGGAGTACCAGCACTTCACCGAGGACATCA
TTTTCTCTAAGA---ATCACGAGACTA-----ACGAGTATGACATTATT
GCCTCGCGATTGTACTTGGTGGCGAGGACCACCGAGAAGAAGCGTGAGGA
GGTGGTGGAGCTTCTGGAAAAGCTTCGTCCGTTGATGCTGATTAACAGCA
TCAAGTTCATTGCCTTCAACCCACCTTTGTGTTTCATGGACCGCTACAGC
TCCTCTGTAATCTCACCCATACTGACCTCAGGCTTTAGCGTGCTCACTAT
CCTCATCCTCACTTTCTTCTCGTCATCAACCCCTTAGGGAACCTTCTGGC
TCATCCTGACAGTGACATCCGTGGAGCTGGGTGCTTGGGTCTGATGGGT
TTTCATTTCATTTGAATGGCAGCCAGCTCTCAAAAATGTGTCTGCGTCCTG
CAACACAGGCATTATTAACGGGCTCTCAGGGTGGGCCTCTACGGTGGATG
ACGCCCCAGCTGAGACAATCACTCGCCGCTTCCGCTACGATGTGGCGCTG
GTGTCAGCATTAAAGGATCTGGAGGAGGACATTATGGACGGACTGAGAGA
GTGTGGGCTGGAAGACAGCGCTTGTACCTCAGGCTTCAACGTTATGATCA
AGGAGTCTTGTGACGGCATGGGGGATGTCAGCGAGAAACACGGCGGAGGA
CCGGCGGTTCTGAGAAGGCTGTACGTTTTCTCTTTCACTGTTATGTCTGT
CTCCGTCCAGGCGAGCGGAGACGAG-----
-----GAGGCGGTTACCATCTATACAGAGCCCAAGCCAAACTCAGAACTG
TCCTGCAAGCCCTCTGCCTCATGTTTGTGGATGAGTCAGACCACGAAAC
TCTCACAGCTGTCTTGGGCCCATCGTTGCAGAGCGAAGAGCAATGAAAG
AGAGCAGACTCATCTCTCCATCGGGGGCCTGCAGCGATCCTTCCGCTTC
CACTTCAGGGGCACCCGGGTACGACGAGAAGATGATGCGTGAGATGGAGGG
CCTGGAGGCGTCCGGTTCGACCTACGTCGCACTCTCTGCGACGCGAGTC
GGGCAGAAGCCGCGCAGAACAAGGTGYTGCCTCCATCACCCGCGGACAC
GAAGAGAACTTAGAACGCTACGAGATTTGGAGAACCAACCCCTTTTCGGA
GTCCACAGAGGAGCTGCGCGATCGAGTCAAAGGGGTCTCTGCCAAACCCT
TTCTGGAGACGCACCCCAATGGACGCTTTGCACTGCGACATCGGAAAT
GCCACTGAGTTCTACAAAATCTTCCAGGACGAGATAGGGGAGGTGTTCAA
AAAGGT---CAAT---CCCACGCGGGAGGAGCGGCGGAGCTGGAGGGCAG
CACTAGACAAACAGCTGAGGACGAAGATGAAGCTTAAGCCGGTAATGAGG
ATGAACGGGAACTACGCCCCGAAAGTTAATGACCCTGGAGGCCGCGGAGGT
TGTGTGTGAGCTGGTGCCATCGGAGGAGCGCAGGGAGGCGTTGAGGGAGC
TCATGAGGCTGTACCTTCAGATGAAGCCCGTTTTGGCGCGCCACCTGCCCC
GCCAAAGAATGCCCCGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCA
CTTCGCCGACCTCCTCTCCTCTACGTTTACGTTACCGCTACAACGGAAAA
TAACCAATTATTTGCACAAAACCTGGCCACGTCCCCGAAATCATTGAG
AGAGATGGATCCATCGGAGCCTGGGCCAGCGAGGGGAACGAATCGGCCAA
CAAAATCATACTGTATTGAGATGGGAGCCCTGGGGCCCCAGTGGAAGGAGA

GCCCCAGCCTTTCAACTGCTCAGTGGAAAGATCCGACGAAACAGACAAAG
TTCAAGGGCATCAAGACCTACATTTCCCTACCGGGTCACGCCGAGCCACAT
AGGACGCCCGTCTACAGACGCTACAAACACTTTGACTGGCTGTATAACC
GCTTACTGCACAAGTTCACTGTGATCTCCGTACCCACCTGCCTGAGAAG
CAGGCCACTGGCCGATTTGAGGAAGACTTCATCGAGAAGCGCAAAAGACG
GCTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTCTCCAGT
ACGAAGGCTTTGAGCACTTTTTGATGTGTGCCGATGACAAGCAGTGGAAA
CTGGGCAAGAGGCGAGCCGAGAAGGACGAAATGGTGGGTGCCATTTTCAT
GCTGACCCTCCAGATTCCTAACGAACACCAGGACCTTCAGGATGTTGAGG
AGCGAGTTGACGCCTCAAGTCCTTTGCAAGAAAAATGGATGATAGCGTC
CTGCAGCTCACTCACGTTTTCTCAGAGCTGGTGCGCAAACACATCGGTGG
ATTCGGGAAGGAGTTCCAGCGGCTTGGAAATGCATTCAGTCCATCAGCC
AAGCCTTCATGCTGGACCCTCCCCACTCCTCAGAACCCCTCAACAACGCC
ATCTCCCATNNNNNNNNNCGTTTTCTCAAACCTGACCTCTCTGGGGCTTCATCATCGGCCTC
GGCGTGGTTCGGCAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAG
CCTGCACCGCGCGCCCTACTACTTCCCTGCTGGACCTGTGCGCCTCGGACA
TCCTGCGTTCCGCTATCTGCTTCCCTTTTGTCTTCACCTCGGTCAAGAAT
GGCTCTGCCTGGACCTACGGCACGCTCACCTGCAAAGTGATCGCCTTCCT
GGGCGTGTCTCTGTTTTCCACACGGCGTTCATGCTGTTTTTGCGTCAGCG
TGACACGCTACTTAGCCATCGCGCATCACCGTTTCTACACGAAGAGGCTG
ACCTTTTGGACCTGCCTGGCCGTCATCTGCATGGTGTGGACGTTGTCCGGT
GGCCATGGCTTTCCCGCCGGTGTAGACGTAGGGACGTACTCGTTCATCC
GGGAGGAGGACCAGTGCACATTCAGCACCGCTCCTTCAGGGCCAATGAC
TCCCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCT
GGTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGCCGGAAGATGAAAC
CTGTCCAGTTTCGTGCCTGCCGTCAGCCAGAACTGGACCTTCACGGGCCG
GGCGCCAGCGGGCAGGCGGCCAAGCTGGCTGGCCGGATTTGGTCGCGG
TCCCACCCCTCCTACTTTACTGGGCATCCGGCAGAACAGCAACGCAGCAG
GCCGCCGGCGTCTACTGGTGTGGATGAATTCAAACAGAGAAGAGGATT
AGTAGGATGTTTCTACATCATGACGTTTTTCTCCTGGCACTGTGGGGCCC
GTATCTGGTTCGCTACTGCGGGTGTGTTGCTAGGGGCCCGTGGTCC
CTGGGGTTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGG
GTCAATCCTTTCATCTGCATCNNNNNNNNNNNNNNNN-----

-----CATCACTCA
ACAGGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCTTTTCGC
GGACGGCATGGGCGCCTTCAAATCAACCACAGCTCCCACGATATTGGCT
CCGG---ACAGACGGCGTTTTCTCCAGGCG---CCCGGTAC---GCA
GCGGCCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGG
CTCT---TACTCCACGGCGGCTTTCAACTCCACCAGGACTTTCTGTTC
GAAATCGGGGTTTCGGGGACGCGGCCGG-----CGCGCAGCAC

AGGAGGAAAACACTGTCACCTTACCCAGRCAGGCCATGGGAACAAGGAGGC
ATCGCTCACTTGGAGAAGGCAGAGCAGGAGCGAATACTCAACAGCAGAGA
CGTTCCAGGCACTTGTGCTGCCGCAACCCAGAGTGGCTGTTCCGAATTT
ACCAGGACACTTTAATAGACGTTCCCTTCATTCTAGCTGTCCTCAA---G
GAGGGCATAAGG---ACCAAGCCCAGTGCGAAGAA---GTCCAAAATAGC
TAGCATGGTTCATCCAGGCCGCGTTAGGGAAGCTCGGTGTCAAACCTCAG
TACAGACCAGCAGTGAGGCCAAACTGTTAGTTTCTGGCAGATCCCATGG
AACCTTAAATTCTTAAAAGTCAGAGAGGTGAAGTACGAAGTTTGGATTCA
AAAAAAGACACCAGCAAAGGCACCCGAGGATCAAATCATAACAGGCCA
ATCCCGCACTGGAGGCCCTTGGCAACGCAAAAACACTTCGGAACGACAAC
TCTTCCCGTTTTCGGAAAATTTATCCGGATACACTTTGGCACCAGCGGAAA
GTTGTGCTGCGGACATTGAGACATACTTGCTGGAAAAGTCACGTGTTA
CTTTTCAGCTGAAGGCTGAGAGAACTACCACATATTCTACCAGATCCTG
TCCAATCAGAAGCCGGAGCTTCTCGACCTGCTGCTCATCACCAACAATCC
ATACGATTACCCGTACATCTCCAGGGTGAGGTGACAGTCGCCTCCATCA
ATGATGCCGATGAGTTGATGGCCACTGACAGTGCCTTTGATGTGCTGGGC
TTCACCCCTGAGGAGAAAATGGGCGTTTACAAGCTCACCGGCGCCATCAT
GCACCATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAGGAGCAGGCTG
AGCCGGATGGAACCGAAGCTGCCGACAAGGCTGCGTATCTGATGGGGCTG
AACTCTGCCGACCTCATCAAAGGGCTGTGCCACCCTCGGGTGAAGTTCGG
AAATGAGTTTGTACCAAAGGTCAGAGTGTGGACCAAGTCTACTATCCCA
ACAAGGAGGCTTTCAAGTGCAGGAGTGCGGGAAGCACTACAACACCAAG
CTTGATATAAGCGCCATGTGGCTATGCACTCCGCTACCGCTGGTGACCT
CACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCTGTTCTCCTGG
AGCACCTCAAGAGCCACTCTGGCAAGTCTCAGGTGGAGCCAAGGAGAAG
AAACACCCATGTGACCACTGTGACCGGCGTTTCTACACACGAAAGGATGT
GAGAAGACACATGGTGGTGCACACAGGCCGGAAGGATTTCTGTGCCAGT
ATTGTGCCAGCGCTTCGGCAGGAAGGATCACCTGACACGCCATGTGAAA
AAGAGCCACTCGCAGGAGCTGCTGAAAATWAAGACTGAGCCTCCGGACAT
GTTAGTCTTTTAGCTTCAGGGTCACCGCCTTGTTCTGTGAAAGAGGAGY
TAAGCCCCATGATGTGCGCCATGGGTACCAATAAAGACCCCATGATGGGT
AAAGCTTTCCCTAGTGGTGGCCCATTTTCAATGGGCATGTACAACCCCA
CCAT-----CTTCAGGCCATGTCAAATTCTGGGGTGGCTCATCCA----
--CACCCGACCCTGATGCCTGGCTCCCTGTCTGCAGCAATGGGCATGGGC
TGTCACGTGGACTATCTCATCTACGCCTTTTTTCATTCATGGGATGTTT
ACAAATCAGCGATGGCTCAAATATGTAAATCTCCTCGCCAGTAACTCAC
CAAGTGTTCATACGCGCTGACACAGCAGAAATACTTCAGCAACTACAGT
CCTGTGATCGGATTTTACATTTATGAGCCCCCTCGAGTACTGGAATCCAC
AGTGCAGGAGCACATAAAGACTCTGAGTCACGGTTTCAACAAGATCTCCT
GGATGGACAATTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCGTCG
ACAAAGAGTGATTTTATCTCGATTCTGAAGGGCTCCTTCCTGCGGAGCCC
CGAGTACCAGCACTTCACCGAGGACATCATATTTTCRAAGA---ACCATG
AAACTG-----ATGAATACGACATCATCGCCTCGCGCATGTACCTGGTG
GCGCGGACCACCGAAAAGAAGCGGGAAGAAGTGGTGGAGCTTCTGGAGAA
GCTGCGCCCGTTGATGCTCATCAACAGCATCAAGTTCATTGCCTTCAACC
CCACGTTTGTTTTTATGGACCGCTACAGTTCCTCCGTCATTTTCGCCATA
TTAACCTCAGGCTTTAGTGTCTAACTATTCTCGTCCCTCACGTTATTCCT
CGTCATCAACCCCTTGGGGAACCTTGGGCTCATCTCACAGTTACATCCG
TGGAATCGGTGTCTGGGTCTGATGNNNNNNNNNCAGTTTGAATGGCAGCCGTCGCTT
AAGAAATGTCTCCGCGGATTGGGGCGTCGGCATTATCAATGGACTCTCCGG
ATGGACTTCCTCCGTGGATGAGTCTCCAGCTGCCACCATCACTCGACGCT
TCCGCTATGATGTTGCCCTGGTGTGAGCGCTAAAGGATATGGAGGACGAG
ATCTTAGAGGGACTGAGGGAGAATGGAATCGAAGACAGTGCTTGCACAGC

CGGCTTCAGTGTCTTGATAAAAGAGTCTTGTGATGGCAGTTGGGAGACGTCA
GTGAAAAGCATGGGGGGGGACCGGCCATCCCAGAGAAGGCCGTGCGCTTC
TCCTTCACTCTGATGTCATTTCTCTGTCAAAGACAACGGCGAG-----
-----AAAGACGTCAACATTTTACAGAAC
CCGGGCCCAACTCAGAACTGTCTGCAAGCCCTTTGTTTGGATGTTTCGTC
GATGAATCGGATCACGAGACCCTCACTGCAGTGCTGGGGCCAATCGTTGC
TGAGCGTAACGCGATGAAGGAAAGCCGGCTCATCTCTCCATCGGAGGGC
TTCAACGCTCGTTCGCTTCCACTTTCAGAGGGACGGGGTACGATGAAAAG
ATGGTGAGAGAAGTGGGAGCCTCGAATCCTCAGGGTCCGCCTATATTTG
CACTCTGTGTGACTCCAGTCGAGCGGAAGCCTTAGAAACATGGTGCTGC
ACGCCGTCACCCGCAGCCACGGTGAGAACCTGGAGCGTTATGAAATATGG
AGAACCAATCCGTTTTTCCGAGTCGGTAGAGGAACTACGAGATAGAGTCAA
GGGGGTCTCCGCTAAGCCCTTCATGGAAACTCAGTCCACACTAGACGCGC
TGCCTGTGACATCGGCAATGCCACAGAGTTATAACAAAATATTCCAGGAT
GAAAATCGGAGAGGTTTTTAAAAAGGT---CAAT---CCCAGCCGGGAGGA
GCGCGCAGCTGGAGGGCAGCGCTGGACAAAGAGCTGAGGAGGAAGATGA
AGCTGAAACCTGTGATGAGGATGAATGGGAACTATGCCCGAAAGCTAATG
ACTCTAGAGACAGTGGAGGTTGTGTGTAAGCTGGTGCCCTCAGCGGAGAG
GAGGGAGGCCCTGAGGGAGCTCATGCGGCTGTATCTCCAGATGAAGCCTG
TGTGGCGGGCAACCTGCCAGCCAAAGAATGCCCGACCAGCTGTGCCGC
TACAGCTTTAACTCGCAGCACTTTGCCGACCTCCTCGCCACCACATTTAA
ATATAGATACAACGGAAAGATAACCAATTACCTGCACAAAACCTGGCTC
ACGTGCCCGAAATCATAGAGAGAGACGGTTCCATCGGAGCGTGGCGGAGC
GAGNNNNNNNNNNNNNNNNNNNNNNNNNNNTCATATACTATTGAGATGTGCCAATAGGACCTAAGTGGAAGGAAA
G
CCCACAGCCCTTCTCCTGCTCAATTGAAGATCCTACAAAACAGACCAAGT
TTAAAGGAATAAAGACATACATATCCTACCGGGTACGCCAAGTCATACG
GGTCGACCTGTTTTACAGACGTTATAAACACTTTGACTGGCTATACAACCG
CCTGTTGCACAAGTTCACCGTGATCTCAGTGCCCTCACCTGCCAGAGAAGC
AGGCCACAGGGCGCTTTGAGGAAGACTTTTATTGAGAAAACGCAAGAGACGT
TTGATTTTTGTGGATGAACCACATGACAAGTCACCCAGTCTTTCTCAGTA
TGAAGGCTTTGAACATTTTCCTTATGTGTGCTGATGATAAACAAATGGAAGC
TGGGTAAAAGGAGAGCGGAGAAGGATGAGATGGTTGGGGCCCACTTTATG
CTGACTTTGCAAATTTCCAAACGAACACCAGGACCTCAGGATGTTGAGGA
AAGAGTGGACACTTTTAAGGCCCTTTGCAAAGAAAAATGGATGACAGTGTCT
TGCAGCTCACTCATGTGGCCCTCCGAGCTGGTGCGAAAGCATCTGGGTGGA
TTCAGGAAAGAGTTCCAACGCCTTGGAATTCTTCCAGTCCGTCAGTCA
GTCGTTTATGCTTGACCTCCTAACAGCTCTGAGGCCCTCAACAGCGCCNNNNNNNNNNNNNNNNNNA
CGTTCCTCAAATGACCTCACTTGGTTCATCATCGGCATCGGCCTGGTTC
GGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGTCTGCACCG
GGCGCCCTACTACTCTCCTGCTGGACCTCTGCGCCTCGGACATCCTTCGCT
CAGCCATCTGCTTTCCCTTCGTCTTACATCGGTCAAGAATGGTTCGGCG
TGGAGCTACGGCACGCTGACCTGCAAGGTGATCGCCTTCCTGGGCGTGT
GTCTTGCTTCCACACGGCGTTTATGCTCTTCTGTGTCAGCGTTACACGGT
ACCTGGCCATCGCCACCACCGCTCTACACCAAGAGGTTGACCTTCTGG
ACCTGCCTGGCCATCATCTGCATGGTGTGGACGCTGTGGGTGGCGATGGC
ATTCCCGCCGGTACTGGACGTGGGGACGTAACATTCATCCACGAGGAGG
ACCAGTGCCTTTCCAGCACCGGTTCGTTCCGGGGCAACGACTCGCTAGGC
TTCATGCTCCTGCTGGCGCTCATCCTTCTCGCCACACAGCTGGTTCCT
CAAGCTCATATTCTTTGTACACGACCGTCGGAAGATGAAGCCGGTCCAGT
TCGTACCCGCTGTGAGCCAGAATTGGACTTTCCATGGACCAGGGGCGAGC
GGGCAAGCCGCAGCCAACTGGTTAGCTGGATTTGGCAGAGGCCCCAACACC
ACCGACTTTGCTGGGAATCCGTCAAGAACAGCAATGCCGCCGGTTCGACGCC

GTCCTCTGGTTCTGGATGAGTTTAAAGACGGAGAAGAGGATTAGTAGGATG
TTCTACATCATGACGTTTTTCTTCTGGCTCTGTGGGGCCCGTACCTGGT
CGCCTGCTACTGGCGGGTGTGGCCAGGGGTCCGGTGGTCCCRGCGGGCT
ACCTGACGGCTGCCGTGTGGATGAGCTTTGCGCAGGCCGGGGTCAATCCT
TTCATCTGCATCTTCTCCAACCGAGAG-----

-----NNNNNCTC

AACAGGCGAAGTCACAGAGCGAGAAGTGGCGTTGGGGATCAATCCCTTCG
CAGACGGGATGGGCGCCTTCAAGATCAACCACAGTCCCACGACATCGGC
TCCGG---GCAGACGGCGTTTTCTCGCAGGCG---CCCGTTAC---GC
AGCAGCCGCCCTCGGG---CACCA---CCATCCGACCCACGTTG
GCTCC---TACTCCA-----CGTTCAACTCCACCCGGGAGTTTCTGTTC
AGGAATCGAGGCTTCGGGACGCAGCCGG-----AGCGCAGCA
CAGTTTGTTCGCCCTC-----CGGGAGTTT---C-----GCGGGC
CACACGGACACTCAGATGCGGCGGGGCACCTGCTCTTCCCCGGGCTCCAC
GAG---CAAGCGGCCAGCCACGCTACCTCCAATGTGGTCAACAGCCAGAT
GCGACTGGGCTTCTCGGGGACATGTACGGACGGGCGGACCAGTACGGTC
ACGTTACGAGTCCACGCT---CCGACCACTACGCGTCCACCCAGTTGCAC
GGCTACGGCCCCATGAACATGAACATGGCCGCG---CACACGGAGCCGG
GGCCTTCTTCAGGTACATGAGACAGCCATCAAGCAGGAGCTCATCTGCA
AGTGGGTCGAACCGGAGCAGCTGACGAACCCAAAAGTCGTGCAACAAA
ACTTTCAGCACGATGCATGAACTGGTGACCCATCTGACCGTGGAGCATGT
GGGGGGCCGGAGCAGACCAACCATATCTGCTTCTGGGAGGAATGTGCCA
GAGAGGGGAAGCCCTCAAAGCGAAATACAACTTGTGAATCATATCCGG
GTACACACGGGGGAGAAGCCCTTCCCCTGCCCCTTCCCAGGCTGTGGCAA

A

>Cantherhines pullus

AGCCTTTTAATTCGGGCGGAGCTAAGCCAGCCCCGGCGCCCTTCTGGGGGA
CGACCAAATTTATAATGTGATCGTCACAGCTCACGCTTTCGTAATAATTT
TCTTTATAGTAATGCCAGTCATGATTGGAGGCTTCGGAAACTGGCTTGTT
CCACTGATAATTGGGCGCCCCGACATGGCCTTTCCTCGAATGAACAATAT
GAGCTTCTGACTGCTCCCCCTTCTTCTTCTTCTCCTCGCTTCTTTCAG
GAGTTGAGGCTGGAGCCGGAAGTGGTGGACCGTATACCCCTCTAGCA
GGCAACCTTGCCCATGCAGGAGCATCCGTAGATTTAACAATTTTCTCTCT
GCATCTAGCGGGTATCTTCAATCCTTGGTGCAATTAATTTTATTACAA
CCATCATTAACATGAAACCTCCGACTATTTCCCAATATCAAACCCCTTTA
TTCGTATGAGCTGTCTAATTACAGCCGTAATCTTCTTCTCTCATTACC
TGTAATGCTGCTGGTATTACAATACTTTTAACTGACCGAAATTTAAATA
CCACCTTCTTCGACCCAGCCGGAGGGGAGACCCAATTTTATATCAACAT
TTATTC-----

-----TTTCTGGAACGGAACCTCCACCCAATAACTGCCTTGG
CATGTTGCTGCTGTCCGACGCCACCAGTGCACCAAGTTGTCTGAGCTTT
CTTGGGGCATGTGCCCTCAGCAACTTTCCGGCCATTTGCAAACTGAGGAT
TTCTCCAAGTCCCAAAGACATGGTGGTGCAGCTCCTGTCACACGAGGA
GCTGGAGACCGAAGACGAGAGGCTGGTTTATGAAGCCGCCCTTAACTGGA
TCAACTACGACCTAGAAAAGAGGCACTGCCACCTGCCCGAGCTCCTGAAA
ACCGTCCGTCTGGCTCTCCTGCCTGCCATTTTTCTCATGGAAAATGTTTC
CATGGAGGAGCTAATCAATGCCAGCCAAAAGCAAGGAGCTGGTGGACG
AAGCTATCCGATGCAAATTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGTCCGTGCGCTCGGCCGAGAAAAACCAGCCATGCGCTCTTTCTTCTGGG
CGGGCAAACATTCATGTGCGACAAGTTGTACCTGGTGGATCAAAAAGGCCA
AAGAGATCATCCCCAAGGCGGACATACCCAGCCCCAGGAAGGAGTTTAGT
GCCTGTGCCATCGGCTGCAAAGTGTACATCACTGGAGGGA--GAGGCTC-
AGAGAATGGCGTATCCAAAGACGTCTGGGTCTACGACACAGTCCATGAGG
AGTGGTCAAAAGCGGCGCCCATGCTCATCGCCAGGTTTGGCCATGGCTCC
GCAGAGCTCAAACACTGCCTTTACGTCGTTGGAGGTCACACTGCAGCCAC
TGGCTGCCTCCCGCCCTCGCCGTCTGGACGAATACATTGTTGTATTTCAGT
CGTTCGACGACAAGGCTGATMCTGAATGAAGCTGAGCTGATAATGGCTCT
AGCGCAAGAGTTTTCAGATGAGGGTGGTTACAGTATCTCTGGAGGAGCAGT
CGCTCCCCAGCATCGTTCAGGTGATCAGCGGCGCCACCATGTTAGTCAGT
ATGCACGGAGCTCAGCTCATCACCTCGCTCTTCCCTGCCAGGGGAGCCGT
TGTGGTGCAGCTCTTCCCTTTGCGGTGAACCCAGAGCAATACACCCCAT
ACAAAACCCTTACGTCCCTCCCAGGCATGGACCTTCACTACATTTCCCTGG
AGAAACACACTGGAGGAAAATACAATCACCCATCCAGACAGACCTTGGGA
GCAAGGGGGCATCGGCCACTTGGAGAAGGACGAGCAGGAGAGAATCCTGG
CAAGCAGAGACGTCCCTCGGCACCTGTGCTGCCGCAACCCTGAATGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATTCCATCCTTCTTGGACGT
CCTCAA---AGAGGGCTTAAAG---ACAAAGCCTGCTTTGAAAA---GT
CAAAGCCAGCCAGTTCTCTACACCCGGGCAGAGTCAGAGAGCCTCAGTGC
CAGACGTCGGTGCAGACCAGCAACGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATACCTAAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCGGAAGAGGGACACCAGCAAGGGGACTCTGGAGGACCAGATC
ATCCAGGCCAACC CGCCCTGGAGGCCTTCGGAAATGCCAAGACGCTGAG
GAACGACAACCTCGTCCCGGTTTGGAAAATTCATCCGGATCCACTTTGGCA
CCAGCGGCAAGTTGTCGTCAGCTGACATCGAGACGTACCTGCTGGAGAAG
TCCC GCTCACCTTTCAGCTCAAGGCCGAGAGGAACTACCACATCTTCTA
CCAGATCCTATCCAACCAGAAGCCGGAGCTGCTGGACCTGCTGCTGATCA
CTAACAACCCCTACGACTACTCCTACATCTCCCAAGGCGAGGTGACGGTG
GCCTCCATCAACGACGCCGAGGAGCTGCTGGCCACCGACAGCGCCTTCGA
CGTGTGGGCTTACGGCTGATGAGAAGGCCGGGCTCTACAAGCTGACCG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAAGCCGAGCCTGACGGGACCGAGGCCGCCGACAAATCGGCGTACCT
GATGGGCCTGAACTCGGCCGACCTCATCAAGGGCTTGTGCCACCCGCGGG
TTAAGGTGGGGAACGAGTACGTCACCAAAGGCCAGAGCGTGGACCAGGTC
TACTAC-----

-----NNNNNNNTCTACGCATCTTTCTCATTTCATGGGATG

TTTACAAATCAGTGACGGTTCAAATATTGTGAACCTGTTGTCTAGTAACT
CTCCAAGTGTTCATATGCTTTGACCCAGCAAAAATATTTTCAGTAACTAC
AGTCTGTATTGGGTTTTACATATACGAGCCTATTGAGTACTGGAATTC
CACGGTGCAGGAGCACCTTAAGACTCTGAGTCATGGCTTCAACAAGATAT
CCTGGATGGACAACCTTCTTCCACTACCTGAGGGTGGTAAATGTGAGCGCG
TCAACCAAGAGTGACTTCATTACCATCCTCAAAGGGTCTTTCTTGCGCAG
CCCAGAGTACCAACACTTCACTGAGGACATTATATTCTCCAAA---ACC
GAGACTG-----ATGAATATGATATTATTGCCCTCTCGGATGTACTTG
GTGGCTCGGACAACGGAGAAGAAGCGAGAAGAGGTAGTTGAGCTGTTGGA
GAAGCTCCGACCACTAATGCTGATAAACAGCATCAAGTTCATTGCTTTCA
ACCTACTTTTTGTCTTCATGGACCGCTACAGCTCCTCTGTCATTTTCGCCT
ATCCTGACCTCAGGATTCAGTGTACTAACAATCCTTATTCTCACTTTCTT
CCTGGTCATCAACCCCTGGGAAACTTTTTGGCTCATTCTAACTGTAACAT
CTGTGGAGTTGGGCGTATTGGGTTTGATGGGTTTTACCAGTTTGAATGG
CAGCCAGCTCTCAAGAATGTGTCCCGTCTGCGGCGTGGGCATCATTA
TGGACTGGCTGGATGCTCTTCCACCGTGGACGACTCGCCCGCTGACACCA
TCACTCGCCGCTTTCGCTACGACGTGGCGCTGGTGTGCGCTTTAAAGGAC
CTGGAGGAAGACATCGTGGACGGGCTGAGAGAGAACGAGATGGATGACAG
CGCTCCACGTCAGGCTTCAGCGTCATGATCAAAGAGTCTGTGACGGCA
TGGGGGACGTCAGCGAGAAGCACGGCGGAGGGCCGCTCGTTCCGGAGAAG
GTTGTGCGCTTCTCTTTCACTATCATGTCTGTCTCCATCCTGGCGGAAG
GAAAGAG-----GGCAAAGTCACCA
TCTACACAGAGCCAAAGCCAAACTCGGAGCTGTCTGCAAGCCCCGTGTC
CTGATGTCCGTCGATGAGTCTGACCACGAGACGCTCTCCGCCATCCTGAG
GCCCATCATTGCAGAGCGCAAAGCAATGAAAGAGAGCCGCCTCATCCTGT
CCATCGGTGGGCTGCCGCGCTCCTTCCGCTTTCACTTCAGAGGCACAGGG
TACGACGAGAAGATGGTGCGGGAGATGGAGGGTCTCGAGGGCTCTGGCTC
CACCTACATTTGCACGCTCTGCGATTCAGTCGCTGGAGGCCTCTCAGA
ACATGGTGCTGCATTCGTCACCCGCAGCCACGAGGAGAACCTGGAACGT
TACGAAACATGGCGAAGCAACCCCTTCTCCGAGTCTGCGGATGAGCTGCG
GGAACGGGTCAAAGGGGTCTCCGCCAAGCCCTTCATGGAACGCATCCCA
CGCTTGATGCCCTGCACTGCGACATAGGCAACGCCACTGAGTTTTACAAA
ATCTTCCAGGATGAGATCGGTGAGATGTACAAAAAGGT---CAGC---GC
CAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTGGATAAACAGCTGA
GGAAGAAGATGAAGCTCAAACCGGTGATGAGGATGAATGGGAACTACGCC
CGCCGGCTAATGACCCTGGAGGCTGCGGAGGTGGTGTGTGAGCTGGTGCC
CTCCGAGGAGAGGAGGGAGGTCTGAGGGAGCTGATGAGGCTCTATCTCC
AGATGAAGCCTGTGTGGCGGGCAACCTGCCCGGCAAGGAGTGCCCTGAC
CAGCTGTGCCGCTACAGCTTCAACTCTCAGCGCTTCGCCGACCTCCTCTC
CTCCAACTTGAAATACAGGTACAACGGGAAGATAACCAACTACCTGCACA
AGACCTGGCGCACGTGCCCGAAATCATCGAGAGGGACGGATCGATGGG
GCCTGGGCCAGCGAGGGAAACGAGTCAGNNNNNNNNNNNNNNNNNNNNNNNN
GCTGGAAGGAGAGTC
CTCAGCCTTTGTCTGCTCCGTGGAGGACCCACCAAGCAAACCAAGTTC
AAGGGCATCAAAACCTACATCTCGTACCGGGTACCCCCAGCCACACTGG
CCGGCCCGTCTACCGCCGCTACAAACACTTTGACTGGCTGTACAACCGTC

TGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGG
ACATGTACGGACGAGCCGACCAGTACGGCCACGTTACCAGCCCAGCGT--
-CCGACCACTATGCATCGACCCAGCTGCACGGCTACGGCCCCATGAACAT
GAATATGGCCGCG---CACCACGGAGCAGGGCCTTCTTTTCGATACATGA
GGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAG
CTGTCAAATCCCAAAAAGTCTGTGCAACAAAATTTTAGCACGATGCACGA
GCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGACCGGAGCAGACCA
ACCACATCTGCTTCTGGGAGGAGTGTCCCGAGAAGGAAAGCCATTCAA
GCCAAATACAACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNN

>Capros aper

AGTTTACTTATTTCGGGCCGAACCTAAGCCAACCTGGCGCCCTCTTAGGCGA
CGATCAAATTTACAACGTGATCGTTACGGCCCATGCCTTTGTAATAATTT
TTTTTATAGTAATACCCATTATAATTGGGGGCTTTGGAAATTGACTTATT
CCGTTGATAATCGGGGCCCGGATATGGCCTTCCCTCGAATAAAATAACAT
AAGCTTTTGGCTCCTCCCACCCTCCTTTCTCCTCCTCCTTGCCTCTTCAG
GTGTAGAGGCAGGTGCGGGAACAGGTTGAACAGTTTATCCCCCTCTGGCC
GGCAACTTAGCCCACGCCGGGCATCCGTCGATTTAACTATTTTTTCTCT
ACATTTAGCAGGAATCTCCTCTATCCTTGGGGCCATCAACTTTATTACAA
CAATTATTAATAAAAACCCCTGCAATTTCCCAATACCAGACCCCGCTT
TTTGTATGAGCCGTTTTAATTACAGCTGTTCTGCTTCTCCTATCCCTCCC
TGTCCTCGCCGCCGGGATTACAATGCTTCTAACAGACCGAAACCTAAATA
CTACTTTCTTTGACCCGGCAGGAGGGGATCCCATTTCTTTATCAACAC
CTC-----

NNNGCTGTTGCTGTCTGATGCCACCAGTGCA
CCAAGCTGT

CAGAGCTCTCCTGGGGCATGTGCCTCAGCAACTTCCCGCTATCTGCAAG
ACCGAGGACTTCCCTCAACTGCCCAAAGATATGGTGGTGCAGCTTTTGT
ACACGAGGAGCTAGAGACCGAGGATGAGAGACTGGTTTATGAGGCTGCC
TCAATTGGATCAACTATGACCTGGATAAGAGGCACTCTCACCTGCCGGAG
CTGCTGAGGACGGTTCGCCTGGCCCTACTGCCCGCCATCTTTCTCATGGA
GAACGTTTCTACGGAAGAGCTGATCAACGCCCAAGGCAAGAGCAAGGAGC
TGGTGGACGAGGCTATCCGCTGCAAGCTGAAGATCCTGCAGAATGATGGC
GTTGTTAACAGCCCGTGTGCTCGGCCAAGAAAACAGCCATGCCCTCTT
TCTCCTCGGCGGGCAGACCTTCATGTGCGACAAGTTGTACCTGGTGGACC
AGAAAGCCAAAGAGATCATCCCCAAAGCTGACATTCAGCCCAAGGAAG
GAGTTTAGCGCCTGCGCCATCGGCTGCAAGGTGTATATCACTGGCGGGA-
-GGGGCTC-GGAGAACGGCGTCTCCAAAGATGTGTGGGTCTACGACACCG
TCCACGAGGAATGGTCAAAGGCGGCGCCCATGCTCATCGCCAGGTTTGGC
CACGGTTCTGCTGAGCTTAAACTGCCTGTACGTGGTGGGAGGTCACAC
CGCCGCAACTGGCTGCCCTCCCGNNNNNNNNNNNTGACAATTACATGTTGTGTTAGTCGT
TCAACAACGAGGCTAATACTGAATGAACCAGAGCTTATCATGGCCCTGGT
CCAGGAGTTCAGATGAGAGTAGTCACTGTATCCCTGGAGGAGCAGTCTC
TCCCCAGCATCGTCCAGGTGATCAGCGGAGCTGCCATGTTGGTCAGCATG
CATGGAGCTCAGCTCATCACCTCACTCTTCCCTCCCCAGAGGAGCTGCTGT
GGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTATACCCCATATA
AAACCTGGCCTCCCTTCCAGGCATGGACCTTCACTACATATCCTGGAGG
AACACGAAGGAGGAGAACACCGTCCGCCACCCAGACAGACCCTGGGAACA
AGGAGGCATCACTCACCTGGAGAAGGAGGAGCAAGAGCGAATATTGGCGA

GCAAAGATGTCCCAAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTTTTC
CGGATCTACCAGGACACTTTGGTGGACATCCCTTCCTTCCCTGGAAGTCCT
CAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GTCAA
AGCCGGCCAGCACACTTCACCCGGCCGGGTGAGAGAACCTCAGTGTCAG
ACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCAGAT
CCCCTGGAATTTAAAATACCTGAAGGTGAGAGAGGTCAAATACGAAGTG-
-----AAAAAAGACACGAGCAAGGGGACGCTGGAGGATCAAATCATC
CAGGCCAACCCGGCGCTGGAGGCCCTTCGGAAACGCCAAAACCCTGAGGAA
CGACAACCTCGTCTCGCTTTGGGAAATTCATCCGAATCCACTTTGGTACCA
GCGGGAAGTTGTGCTGCTGACATCGAGACGTACCTGCTGGAGAAGTCA
CGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTACCA
GATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACCA
ACAACCCCTATGACTACTCCTACATCTCCAAGGAGAGGTGACCGTCGCC
TCCATCAACGACTCAGAGGAGCTGATGGCCACAGACAGCGCCTTCGACGT
GCTGGGCTTCACTCCGGACGAGAAGATGGGCGTCTACAAACTGACGGGCG
CCATCATGCACTACGGAACATGAAGTTCAAACAGAAGCAGCGGGAGGAG
CAGGCTGAGTCGGATGGGACCGAGTCTGCGGATAAATCGGCCTACCTCAT
GGGGCTGAACTCTGCAGACCTCATCAAGGGGCTCTGCCACCCAGAGTCA
AGGTGGGAAACGAATATGTGACCAAAGGCCAAAGTGTGGATCAAGTCTAC
TANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGGGATATAAGC
GCCATGTGGCCATGC
ACTCAGCCACGGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTAT
GAGAGCACGCCCGTGCTGTTGGAACACCTCAAGAGTCACTCTGGGAAGTC
CTCAGGTGGCACCAAGGAGAAAAAACCCATGCGACCACTGTGATCGGC
GTTTCTACACACGAAAGGATGTGAGCGGCATATGGTGGTCCACACAGGC
AGAAAGGACTTCCCTGTGCCAGTACTGTGCCAACGCTTTGGCAGGAAGGA
CCATCTGACGCGCCATGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAAA
TCAAGACGGAGCCACCCGATATGTTAGGTCTTTTAGCTTCAGGGTCACCA
CCGTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCC
CAACAAAGACCCCATGATGGGTAAACCATTCCCCAGTGGGGCTCCTTTTTC
CCATGGGCATGTATAACCCACCCT-----CTCCAGGCCATGTCTAAT
TCTGGGATGGGTACCCA-----CACCCGTCCCTGATGCCCAGTTCCTT
GTCAGC-----
NNGGTGAATC
TGCTGGCTAGTAACTCTCCAAGTGTATCATATG
CTCTCACCAACAAAAGTACTTCACTAGTAACTACAGCCCTGTGATTGGGTTT
TACATTTATGAGCCCATCGAGTACTGGAACCAACAGTGCAGGAGCACCT
GAAGACTCTGAGTCATGGCTTCAAACAAGATTTCCCTGGATGGACAACTTTT
TCCACTACCTGCGGGTGGTGAATGTGAGCGCGTCTACCAAGAGTGACTTC
ATCACCATCCTCAAGGGCTCCTTCTACGCAGCCCGAGTACCAGCACTT
CAATGAAGACATCATATTCTCCAAGA---ACCACGAGACTG-----ACG
AGTACGACATTATCGTCTCACGGATGTACTTAGTGGCAGGACGACAGAG
AAGAAGCGCAAGAAGTGGTGGAGCTTTTGGAAAAGCTTCGTCCATTGAT
GCTGATTAACAGCATCAAGTTCATGCTTCAATCCTACGTTTGTTTCA
TGGACCGCTACAGCTCCTCTGTTCATCTCGCCCATCTGACCTCAGGATTC
AGCGTGCTCACAATCCTCATCCTCACTTCTTCTGCTCATCAACCCCTT
GGGAACTTCTGNN
NN
CGGGCTCT
CGGGATGGACGTCCTCATTGGATGACGCCC
CCGCTGACACCATCACTCGACGTTTCGCTATGATGTGGCACTGGTGTGCG
GCATTAAGGATCTGGAGGAGGACATCATGGAAGGGCTGAGAGAAAGTGG
GATGGAAGACAGCGCTTGCACCTCCGGCTTTAGTGTGATCATGATCAAGGAGT
CTTGTGACGGCATGGGTGATGTGAGTGTGAGAAACACGGTGGAGGACCTGCT

ATTCTGAGAAGGCTGTGCGCTTCTCCTTCACCGTTATGTCTATCTCTGT
CCTGGCTGAAGATGCAGAA-----A
AACCAGTTACCATCTTCACTGAGCCGAAACCAAACCTCAGAGCTGTCCTGT
AAGCCCCTTTGCGTGTGTGTTGTTGGATGAGTCAGACCACGAGACACTCAC
AGCCATCCTGTGGCTGTAATTGCAGAGCGCAACGCAATGACAGAGAGCC
GGCTCATCGTATCCATCGGTGGACTGCCTCGCTCCTTCCGCTTTCCTTC
AGAGGTACGGGATACGATGAGAAGATGGTGCCTGAGGTGGAGGGCCTCGA
GGCTTCTGGATCCAGCTATGTCTGCACTCTGTGCGACTCGAGTCGGGCGG
AGGCCTCTCAAAACATGGTGCTACACTCCATCACCCGCAGTCACGAAGAG
AACCTAGATCGCTACGAGATATGGAGAACCAACCCCTTTTCTGAGTCTGC
AGATGAACTGCGAGACAGAGTCAAAGGGGTCTCTGCGAAGCCCTTCATGG
AGACCCATCCCACGCTGGACGCTTTACTACTGCGACATAGGCAATGCCACA
GAGTTCTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTTCCAAAAGGT
---CAAC---CCGACTCGGGAGGAACGGCGCAGCTGGAGGGCCGCCCTAG
ATAAACAGCTGAGGAAGAAGATGAAGCTCAAACCGATAATGAGGATGAAT
GGGAACTATGCCCGCCGGCTAATGACCCTGGAGGCTGTGGAGGTGGTGTG
CGAGCTGGTGCCTCAGAGGATAGGAGGGTGGCCCTGAGGGAGCTCATGA
GGCTCTACCTCCAGATGAAGCCCGTGTGGCGCGCCACCTGCCCTGCCAAA
GAATGCCCGACCAGCTGTGCCGCTACAGCTTTAACTCTCAACACTTCGC
TGACCTCCTCTCCTCGACCTTCAAATATAGGTACAATGGAAAGATAACCA
ATTACCTGCACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGAT
GGATCCATCGGAGCGTGGGCCAGCGAGGGGAACGAGTCGGCAAACAAA--

NN
NN
NN
NN
NNNNNNCTTCTGTGTGTCAGTGTACGCGCTATCTGGCCATCGCACATCACCGT
TTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGTCTATCTGCAT
GGTGTGGACGTTGTCAGTGGCTATGGCGTTCCCAGCTGCTAGACGCTAG
GGACGTAATCTTTATCCGGGAGGAGGACCGTGCACATTCACGACCGT
TCCTTCAGGGCGAATGATTGCGTGGGCTTTCATGCTCCCTGCTGGGCGTCAT
CCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCCGTTCCAG
ACCGTCGAAAAATGAAGCCTGTCCAGTTCGTGCCTGCCGTGAGCCAGAAC
TGGACCTTCCATGGACCAGGCAGCCAGCGGGCAGGCGGCAAGCAACTGACT
GGCAGGATTCGGTTCGACGCCCCACCCGCCTACTCTGCTGGGCAATCCGGC
ATAACAGCAACGCACCAGGTGCAAGCATCTACTGGTATTGGATGAGTTC
AAAACAAAGAACAGGATTAGTACGATGTTCTACATCATGACTTTTTTCTT
CCTGGCACTGTGGGGGCCCTACCTGGTGCCTGCTACTGGCGCGTGTTCG

CCTGGGGCATGTGCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAAGTGCACAAAGATATGGTGTATCCAGCTTTTATCTCATGAGGA
GCTAGAGACAGAGGATGAGAGACTGGTGTATGAAGCTGCCCTTAAGTGA
TCAACTATGACCTGGAGAGAAGGCACAGCCACTTCCAGAGCTTCTGAGA
ACGGTCCGCCTTGCCCTGCTGCCTGCCATCTTTCTGATGGAGAACGTCTC
AACAGAGGAGCTGATCAATGCCAGGCCAAGAGCAAGGAACTGGTAGATG
AAGCCATCCGCTGTAAGCTGAAAAATCCTGCAGAATGATGGCGTTGTTAAC
AGCCCATGTGCTCGACCTAGAAAAACCAGCCATGCCCTGTTTCTTTTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTATCTGGTGGACCAGAAGGCCA
AAGAAATCATCCCCAAGGCAGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTCTACATCACTGGAGGGA--GAGGCTC-
AGAGAAATGGTGTGTCCAAAGATGTATGGGTTTACGACACTGTCCACGAGG
AATGGTCCAAAGCAGCTCCCATGCTCATTGCMAGGTTTGGCCATGGCTCC
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACTGCAGCAAC
TGGCTGCCTCCCGGCTTCTCCATCAGGATGATTACATTGTTGTGTTTCACT
CGCTCATCAACAAGGCTGATACTTAATGAGGCTGAGCTAATCATGATGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCCAGTGTCCCTGGAGGAACAGT
CTTTTCCCAGTATTGTCCAGGTCATCAGTGGTGCATCTATGTTAGTCAGC
ATGCATGGAGCTCAGCTCATAACCTCACTCTTCCCTCCCCACAGGAGCTAC
TGTGGTGGAACTGTTCCCTTTGCTGTGAACCCAGACCATTACACCCCAT
ATAAACTCTGGCCTCACTACCAGGCATCGACCTTCACTATATCTCTTGG
AGGAACACTAATGAGGAAAACACCATCACCACCCAGACAGACTCTGGGA
ACAAGGAGGTATTGTTCACTTGGAAAAGGAGGAACAGGAGCGGATACTGG
CAAGTAAGGACGTCCCCAGGCACCTCTGCTGCCGCAACCCTGAGTGGCTC
TTCCGGATCTACCAGGACACTTTAGTGGACATCCCTTCCCTTCCCTGGAAGC
CCTCAA---AGAGGGCATGAAG---ATGAAACCCAGCTTGAAGAA---GT
CAAAGCCAGCCAACATGGTCCACCCAGGCCGAGTCAGAGAACCCAGTGT
CAAACCTCAGTACAACTACTCACGAAGCCAACTTACAGTGTCTTGGCA
GATCCCATGGAATCTTAAAGTACCTGAAGGTGAGAGAAGTAAAGTATGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGGGACGCTGGAGGATCAGATC
ATCCAGGCGAACCTTGCACTTGGAGCCTTTCGGCAAAGCCAAAACACTGAG
AAATGACAACCTCGTCTCGCTTTGGAAAATTCATCCGAATTCACTTTGGTA
CAAGTGGCAAACCTGTCTGCGGACATCGAGACCTACCTTCTGGAGAAG
TCACGTGTCACCTTCCAGCTAAAGGCTGAGAGAAAACACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCATATGACTACTCCTACATCTCGCAAGGAGAGGTAACAGTT
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTGCAGAGGAGAAGATGGCCGTCTACAACTGACTG
GCGCCATCATGCACCATGGCAACATGAAATTCAAAACAGAAGCAACGTGAG
GAGCAGGCTGAACCTGATGGGACTGAAGCTGCTGATAAGTCTGCTTATCT
CATGGGACTGAACCTGCTGACCTCATCAAAGGCTGTGTACCCCTAGAG
TCAAAGGTAGGAAATGAGTACGTCACTAAAGGCCAAAGTGTGGACCAAGTC
TACTATCCCAACAAGGAAGCCTTTAAGTGTGAAGAGTGTGGGAAGCACTA
CAACACCCAGCTGGGATATAAGCGTCATGTGGCCATGCACTCCGCCACGT
CTGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACACCT
ATTCTCCTGGAGCACCTCAAGAGCCACTCTGGGAAGTCTTTCGGGTGGCAC
CAAGGAGAAGAAGCACCCGTGCGACCACTGTGACCCGACGTTTCTACACAC
GGAAGGATGTGAGACGACACATGGTGGTCCACACGGGCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGTTTCGGCAGGAAGGACCACCTGACACG
CCACGTAAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCAGAYATGTTAGGTCTTTTAGCCTCAGGATCACACCTTGTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
TATGATGGGCAAACCGTTCCCCAGTGGGGCCCTTTTCCAATGGGCATGT

ACAACCCCCACCAT-----CTACAGGCGATGTCTAATACTGGGGTGGGT
CACCCG-----CACCCGCCCTAATGCCAGTTCTTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTTTCATTCA
TGGGATGTTTACAAATCAGTGATGGGTCAAATATTGTCAACCTGCTGGCT
AGTAACTCTCCAAGTGTTCCTATGCTCTGACTCAGCAGAAATATTTTCAG
TAACTACAGCCCTGTGATCGGGTTTACATTTATGAGCCCATCGAGTACT
GGAACCTCCACGGTGCAGGAGCACCTGAAGACCCTTAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTACGTGTGGTCAACGT
GAGCGCGTCAACTAAAAGCGACTTCATCACCATCCTCAAAGGTTTCGTTCC
TGCGCAGCCAGAGTACCAGCACTTCACCGAGGACATCATATTTCTCCAAG
A---ACCGCGAGACTG-----ATGAATATGACATCATTGCCTCACGGAT
GTACTTGGTGGCGGGACAACCTGAGAAGAAGCGGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTTCGTCCATTGATGCTAATCAACAGCATCAAGTTCATT
GCCTTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCAGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTACTCACTATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGAAACTTCTGGCTCATCCTCACG
GTCACGTCCGTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCACCATCTTGCAATGTTGGCA
TTATTAATGGTCTCTCTGGATGGGCTTCCTCAGTGGATGACTCCCCGGCT
GACACCATCACTCGGCGCTTTCGCTATGATGTGGCACTGGTGTGAGCATT
AAAGGATCTGGAGGAGGACATCATGGAGGGACTGAGAGAGAAAAGAAATGG
AAGACAGTGCTTGCACCTCAGGCTTTACTGTCATGATCAAGGAATGTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGCGGAGGACCAGCTGTTCC
TGAGAAAGCTGTACGTTTCTCCTTCACTGTTATGTCTGTCTCCGTCCTGA
CAGAGG---AGGGG-----GAGGAG
GTTACTATCTTACCAGAAACAAGGCCAAACTCAGAGCTGTCCTGTAAGCC
CCTGTGCTTGATGTTTGTGGATGAGTCAGACCACGAGACACTCACAGCTC
TCCTGGGGCCTGTGGTTGCAGAGCGCAATGCAATGAAAGAGAGCAGGCTC
ATCCTATCCATAGGTGGCCTCTCTCGCTCCTTCCGCTTCCACTTCAGAGG
CACCGGATAYGATGAGAAGATGGTGCAGAGACATGGAAGGTCTGGAGTCCT
CGGGGTCCACGTACGCTCTGCACCCCTGTGTGACTCCAGTCGGGCCGAGGCC
TCTCAAACATGGTGCTACACTCCGTCACTCGCAGTCATACGGAGAACCT
AGAACGGTATGAAATATGGAGAACAACCCTTTCTCCGAGTCAGCAGACG
AACTGCGAGACAGAGTCAAAGGGGTCTCTGCAAAGCCCTTCATGGAGACC
CAGCCCACAATTGATGCATTACACTGTGACATCGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGACGAGATTGGGGAGGTGTATAAGAAGGT---CA
AC---CCCAGCCGGGAGGAGAGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGATGAAGCTTAAACCGGTAATGAGGATGAATGGTAA
CTACGCCCCGAGGCTAATGACCCTAGAGACTGTGGAGGTTGTGTGTGAAC
TGGTGGCCTCAGAGGAGAGGAAAGAGGCCCTGAGGGAGCTCATGAGGCTC
TATCTCAGATGAGGCCGTGTGTGGCGGCCACCTGCCAGCCAAGGAATG
CCCCGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCACTTTGCTGACC
TCCTGTCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTAC
CTTCAAGACTTTGGCCCATGTGCCGTAATCATAGAGAGAGATGGATC
CATAGGCGCCTGGGCCAGTGAGGGGAACGAGTCGGCAAACAAATCCTACA
CCATTGAGATGGGTCCCTTGGGGCCCAAGTGGAAAGGAGAACCCGCAACCT
TTCTCCTGCTCCATCGAAGACCCCAAAAACAGACAAAGTTCAAGGGCAT
CAAGACCTACATTTACATACCGGGTGACGCCGAGCCACATAGGACGCCAG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCCCATCTGCCCCGAGAAGCAGGCCACGGG
GCGGTTTGAGGAAGACTTCATTGAGAAGCGTAAGAGACGACTGATACTGT
GGATGAACCACATGACCAGTCAACCAGTCTCTCCAGTATGAAGGCTTT
GAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAACCTGGGAAAGAG

TGGTTAAAGACAAGAGCCTGCACCGCGGCCCTACTACTTCCTGCTGGAC
CTGTGCGCCTCTGACATCCTGCGTTCGTCTATCTGCTTCCCCTTTGTCTT
CACCTCTGTCAAGAATGGATCTGTCTGGACCTACGGCAGCTCACCTGCA
AAGTGATCGCCTTCTGGGCGTGCTCCTGTTCCACACAGCGTTCATG
CTATTTTGTGTGACGCTGACCCGCTATCTGGCCATCGCACATCACCGTTT
CTACACTAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTCATCTGCATGG
TGTGGACGTTATCAGTGGCMATGGCTTTCCCACCGGTGCTAGACGTAGGG
ACGTACTCTTTTATCCAGGAGGAGGACCAGTGCACATTCAGCACCATTC
CTTCAGGGCGAACGACTCCCTGGGCTTCATGCTCCTGCTGGCACTCATCC
TCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCACGAC
CGTCGGAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTCAGCCAGAACTG
GACCTTCCACGGGCCAGGGGCCAGCGGGCAGGCGGGCCAACTGGCTGG
CTGGATTTGGTAGAGGTCCCACACCTCCTACTTTACTGGGCATCCGGCAG
AACAGCAATGCAGCAGGCCGAGGCGTCTACTGGTGCTGGATGAATTCAA
AACAGAGAAGAGGATTAGCAGGATGTTCTACATCATGACGTTTTTCTTCC
TGGCACTGTGGGGCCGTATCTGGTAGCCTGCTACTGGAGGGTGTTTGCA
AGGGGCCCTGTAGTCCCCTGTGGGCTACCTGACAGCAGCCGTGTGGATGAG
CTTTGCCCAGGCAGGGGTCAATCCTTTCATCTGCATCTTCTCCAACAGGG
AGGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGCGCCTGGCACGGAG
C---GCAGCGTCCCCTCGGCAACAGCTTGCTATCCCCACAGCAAACCTGA
GGAGCCCCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTG
CCAACAACCGACTGGACTTTTGTGCTCGGCATACGACGCGGCT-----
---GATTTCCGCGGTAACGCGGCCACCTTGTCTTACGCAGCGGCCGG
AGTGAAGGCTC-----TTCCCCTGCCGGCCGAGGCTGCTCCAACCGAC
CTCTTGGCTATTACGCTGACCCGTCGG---GCTGG---GGAGGGCGCACG
CCGCCGAGTACTGTGGTGTAAATAGTAAATCCAGCTCGGTCTTTTCCTG
CTGGCCCCTAATCTATCGGGGGCAGAGCAGGCG---CC---CACTACC
TGG-----CCGAGGA---GGGA---GACTC---CGTCCCCACGGAG
AGGTCACCG---AT---CAGCGCTCCGAGGAG---ACCAAACCAAGGA
CAT-----ATCAGA---GTCGAGCTGGATAGAG---ACACCTTCTCCA
TTAAGTCCATCGATTCAAGCGATTCTGGGATCTTTG---AACAGGCCAAA
AGGAGAAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGAGGC
AGTGTCCCCGTTANNNNNNNNNNCACTCAACAGGCGAAGTCACAGAGAGAGAAGTGG
CTTTGGGGATAAATCCTTTTCGCGGACGGGATGGGCGCCTTCAAAATAAAC
CACAGCTCCCATGATATTGGCTCCGG---ACAAACGGCGTTTTCTCTCA
GGCG---CCCGGCTAC---GCAGCAGCAGCCCTGGGA---CACCATCA--
----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAAC
TCCACCAGGGACTTCTCTTTCAGAAATCGGGGTTTGGAGACGCCACCGG
-----GGCGCAGCACAGTTTGTTCGCCTC-----CGGAA
GTTT---C-----GCAGGGCCACATGGACACTCAGATGCAACGGGGCAC
CTGCTCTTCCCAGGGCTCCACGAG---CAAGCAGCGAGCCATGCGTCTTC
CAACGTGGTCAACAGCCAGATGCGACTGGGCTTCTCGGGGGACATGTACG
GTCGGGCCGATCAGTACGGCCACGTTACAAGCCCGAGGT---CCGACCAC
TATGCTTCGACCCAGTTGCACGGTTATGGCCCCATGAACATGAATATGGC
CGCA---CACCACGGAGCAGGGGCCCTTCTTTCGATACATGAGGCAGCCGA
TCAAACAAGAGCTTATCTGCAAGTGGATCGAGCCGGAGCAGCTGACAAAT
CCAAAAAGTCTTGAACAAAACCTTTTAGCACGATGCATGAGCTTGTGAC
CCACCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGTCCAACCACATCT
GCTTCTGGGAAGAGTGCCCCAGAGAAGGAAAACCAATCAAAGCCAAATAC
AAACTTGTAATCATATCAGAGTACACACCGGAGAAAAACCTTTCCGTG
TCCGTTCCCAGGCTGTGGCAA
>Centropomus undecimalis
AGCCTACTCATTTCGAGCGGAACCTTAGTCAACCTGGCGCCCTACTAGGAGA

CGACCAAATTTACAATGTTATTGTACGGCACACGCCTTCGTAATAATTT
TCTTCATAGTGATGCCAATCATAATTGGAGGCTTCGGAAACTGACTCATC
CCTCTAATAATTGGAGCTCCAGACATGGCATTTCCTCCGAATAAATAATAT
AAGCTTCTGACTTCTCCCTCCTTCTCCTGCTACTTCTAGCCTCCTCTG
GAGTAGAAGCCGGTGCCGGAACAGGATGAACAGTTACCCCCCTCTAGCT
GGTAATCTCGCCCACGCCGGAGCATCGGTAGACCTCACCATCTTTTCACT
ACACTTAGCCGGAATCTCTTCAATTCCTGGAGCTATCAACTTTATCACAA
CCATTATCAATATAAAACCAGCCTCAACCTCTATATACCAAATTCCCCTA
TTCGTTTGATCTGTCCATAATTACGGCCGTCCTTCTCCTCCTTTCCCTCCC
CGTCTAGCCGCCGGGATCACAATGCTCCTAACCAGCCGAAACTTAAACA
CCTCATTTCTGACCCAGCCGGAGGTGGAGACCCCATTTCTTTACCAACAC
CTA-----

-----TTCCCTCGAGAGAAACCTCCACCCGTCTAACTGCCTTGG
CATGTTGTTGCTGTCTGACGCCACCAGTGTACCAAGCTGTCCGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGA
GCTAGAGACAGAAGACGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGA
TCAACTATGACCTGGAAAGGAGGCACCTGCCACCTTCCAGAGCTTCTGAGA
ACGGTCCGCCTCGCCCTGCTGCCTGCCATCTTTCTGATGGAGAATGTCTC
GACGGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAAATCCTGCAGAATGATGGTGTCTGTTAAC
AGCCTGTGTGCTCGACCAAGGAAAACCAGCCACGCCCTCTTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAAATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAACGGCGTGTCCAAGACGTATGGGTCTACGACACCGTCCACGAGG
AATGGTCCAAGCGGCTCCAATGCTCATTGCCAGGTTTGGCCACGGCTCT
GCGGAGCTGAAACATTCGCTCTATGTGGTCCGAGGTCACACTGCAGCAAC
CGGCTGCCTCCCGGCTTCTCCGTCAGGATGATTACATTGTTGTGTTTCACT
CGTTCCACAACGAGGCTGATACTTAATGAAGCAGAGCTAATCATGGCACT
GGCCAGGAGTTCCAGATGAGAGTGGTAACTGTATCTCTGGAGGAACAGT
CTTTCCCCAGTATCATCCAGGTGATCAGCCGTGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
AGTGGTGGAACTGTTCCCTTTGCTGTGAACCCTGAGCAGTACACCCCAT
ATAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTTCATTACATCTCCTGG
AGGAACACTAAGGAGGAAAACACCATCACCCACCCAGACAGACCCCTGGGA
ACAAGGGGGCATCACTCACTTGGAGAAGGAGGAACAGGAGCGAATACTGG
CCAGTAAGGATGTCCCAGGCACCTCTGCTGCCGCAACCCTGAGTGGCTC
TTCCGGATTTACCAGGATACTTTGGTGGACATCCCTTCCTTCCCTGGAAAT
CCTCAA---AGAGGGCATGAAG---TCCAAGCCAGTGTGAAAAA---GT
CAAAGCTGGCCGGCATGGTCCACCCGGGCGCGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATTTGAAATACTTGAAGGTAAGAGAGGTGAAGTATGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCTGCACTGGAGGCCTTTGGCAACGCCAAAACATTAAG
AAACGACAACCTCGTCACGTTTTGGAAAATTCATTTCGAATTCACCTTCGGGA
CAAGTGGCAAACCTGTCATCTGCTGACGTGAGACGTACCTGCTAGAGAAG
TCACGCGTCACCTTTCAACTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATTCTGTCCAATCAGAAGCCAGAGTTGCTGGACATGCTGCTGATCA
CCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTC

GCCTCCATCAACGACTCAGAAGAGCTGATGGCCACCGACAGCGCCTTCGA
TGTGCTCGGCTTCACTCCAGAGGAGAAGATGGGCGTCTATAAGCTGACCG
GTGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAACAGCGCGAG
GAGCAGGCTGAACCTGACGGGACGGAGGCTGCTGATAAATCGGCATACCT
AATGGGGCTGAACTCCGCTGACCTCATCAAAGGCCGTGTGCCACCCCAGAG
TCAAGGTAGGAAATGAATACGTCACCAAAGGCCAAAGTGTGGACCAAGTC
TACTATCCCAATAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGTACACCA
GTTCTCCTGGAGCACCTCAAAGCCACTCTGGGAAGTCTTCGGGTGGCGC
CAAGGAGAAAAAACACCCGTGTGACCCTGTGACCGTCGTTTCTACACGC
GGAAGGATGTCAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACACG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAACGGAGC
CTCCGGATATGTTAGGTCTTTTAGCTTCTGGATCACCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGTGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCATTCCCCAGTGGGGCTCCTTTTCCAATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCGATGTCTAATACTGGGGTGGGT
CACCCA-----CACCCGTCCCTAATGCCAGTTCATGTCTGCAGCTTT
GGGCATGGGCTGTCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGTTTACAGATCAGT
GATGGATCGAATAT
CGTCAACCTGTTGGCTAGTAACTCTCCAAGTGTTCGTATGCCCTGACCC
AGCAGAAATACTTCAGTAACTACAGTCCTGTGATTGGGTTTTACATTTAC
GAACCCATCGAGTACTGGAACCTCCACGGTGCAAGAGCACCTGAAGACTCT
GAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACTTTTTCCACTACC
TGCGGGTGGTGAACGTGAGTGCCTCAACCAAGAGCGACTTCATCAGCATC
CTAAAAGGCTCCTTCTGCGCAGCCCTGAGTACCAGCACTTCACTGAGGA
CATCATATTTCTCCAAGA---ACCGCGAGACTG-----ATGAGTACGACA
TCATTGCCTCACGGATGTACTTGGTGGCACGGACGACTGAGAAGAAGCGC
GAGGAGGTTGTGGAGCTACTGGAAAAGCTTCGTCCATTGATGCTAATAAA
CAGCATCAAGTTCATTGCCTTCAACCCACATTTGTGTTTCATGGACCGCT
ACAGCTCCTCCGTATCTCGCCCATCTGACCTCAGGCTTCAGCGTACTC
ACTATCCTCATCCTCACTTTCTTCTTCTGGTCATCAACCCCTTGGNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGCTTTC
ACCAGTTTGAATGGCAGCCGGCTCTCAAGAATGTGTCCACATCTTGCAAT
GTTGGCATTATTAATGGGCTCTCTGGATGGACTTCCTCGCTGGATGACTC
CCCGGCTGACACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGT
CAGCCTTAAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGT
GGGATGGAAGACAGCGCTTGCACCTCAGGCTTTAGTGTGTCATGATCAAGGA
GTGTTGTGATGGCATGGGCGATGTCAGCGAGAAGCACGGCGGAGGACCAG
CTGTTCTGAGAAGGCTGTGCGTTTCCTTCACTATTATGTCTGTCTCG
GTCCTGGCAGAAGAGGAGGAG-----
-GAGGAGTTACCGTCTTCACCGAGCCAAAGCCAAACTCAGAACTGTCCT
GTAAGCCCCTTTGCTGATGTTTGTGGATGAGTCAGACCATGAGACGCTC
ACAGCTGTCCTGGGGCTATAATTGCGGAGCGTAACGCAATGAAAGAAAG
CAGGCTCATCCTGTCCATTGGCGGCTGCCTCGCTCCTTCCGCTTCCACT
TCAGAGGCACGGGATACGATGAGAAGATGGTGCAGACATGGAGGGCCTG
GAGGCTCGGGGTCCACCTATATCTGCACTCTGTGCGACTCCAGCCGGGC
AGAGGCTCTCAAAAATATGGTGTCTCACTCCATCACTCGCTGTGATGAAG
AGAACCTAGAACGTTACGAAATATGGAGAACCAACCCCTTCTCTGAGTCT
GTAGACGAGCTGCGAGACAGAGTGAAAGGGGTCTCTGCCAAGCCCTTCAT
GGAGACCCAGCCACACTGGATGCATTACACTGTGACATTGGCAATGCCA
CTGAGTTCTACAAAATATTCCAGGATGAGATCGGGGAGGTGTACAAAAG

GT---CAAC---CCGACCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCT
AGATAAACAGCTGAGGAAGAAGATGAAGCTTAAGCCCGTAATGAGGATGA
ATGGGAACTACGCCCGCAGGCTAATGACCCTGGAGGCTGTGGAGGTGGTG
TGTGAGCTGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTAT
GAGGTTCTACCTCCAGATGCGGCCCTGTGTGGCGGCCACCTGCCCGGCCA
AGGAATGCCCCGACCAGCTGTGCCGCTACAGCTTAACTCCCAGCACTTT
GCCGACCTCCTCTCTCTACCTTCAAATATAGGTACAATGGAAAAGATAAC
CAATTACCTTACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGGG
ATGGATCCATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCGGCAAACAAA
TCGTACACCATCGAGATGGGTCCCCCTGGGGCCCCGGTGGAAAGGAGAACCC
ACAGCCTTTCTGCTGCTCCATTGAAGACCCCAAAAACAGACGAAGTTCA
AGGGCATCAAGACCTACATTTTACATACCGGGTACCGCCGAGTCACACAGGG
CGTCCCCTTACAGGCGTTACAAAACACTTTGACTGGCTTTACAACCGCTT
GCTGCACAAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGG
CCACGGGACGATTTGAAGAAGACTTCATCGAGAAGCGCAAGAGACGACTG
ATACTGTGGATGAACCACATGACCAGTCACCCAGTCTCTCCCAGTATGA
AGGCTTTGAGCACTTTCTGATGTGTGCTGACGACAAGCAGTGGAAACTGG
GGAAGAGGCGGGCAGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTG
ACCTCCAGATCCCTAACGAGCACCAGGACCTTCAGGATGTGGAGGAGCG
GGTCGACTCCTTCAAGGCCTTTGCTAAAAAATGGACGACAGCGTGATGC
AGCTCACACACGTTGCCCTCGGAGCTGGTGCGCAACACCTGGGTGGGTTT
AGGAAGGAGTTCCAGCGGCTGGGGAATGCCTTCCAGTCCATCAGCCAGGC
GTTTCATGCTGGACCCCTCCACAGCTCAGACGCCCTCAACAACGCCATCT
CCCATNNNNNNNNNNNNNTCCTCAAACCTGACCTCTCTGGGTTTCATCATCGGAGTCGGTGTGG
TCGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCAC
CGAGCGCCCTACTATTTTCTGCTGGACCTGTGCGCCTCCGACATCCTGCG
CTCCGCCATCTGCTTCCCATTTGTCTTACCTCGGTCAAGAATGGATCTG
CCTGGACCTACGGCAGCTGACCTGCAAAGTGATCGCCTTCTGGGTGTG
CTCTCCTGTTTTCCACACGGCGTTCATGCTCTTCTGCGTCAGCGTCACCCG
CTACCTGGCCATCGCGCATCACCGTTTCTACACCAAGAGGCTGACCTTCT
GGACCTGCCTGGCCGTCTGTCATGGTGTGGACGTTGTGCGGTGGCTATG
GCGTTCGCGCCGGTCTAGACGTGGGGACGTACTCTTTTATCCGGGAGGA
GGACCAGTGCACGTTCCAGCACCGCTCCTTCCAGGGCGAACGACTCGCTGG
GCTTCATGCTCCTGCTGGCCCTCATCCTCCTGGCCACACAGCTGGTTTAC
CTCAAGCTCATCTTTTTTGTCCACGACCGTCCGAAAGATGAAGCCCGTCCA
GTTTCGTGCCTGCTGTGTCAGCCAGAACTGGACCTTCCACGGGCCTGGCGCCA
GTGGGCAGGCGGCGGCAACTGGCTGGCCGGATTTGGTTCGAGGCCCCACC
CCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGCAG
GCGTCTACTGGTATTGGATGAGTTCAAACAGAGAAGAGGATTAGTAGGA
TGTTCTACATCATGACGTTTTTCTTYCTGGCACTGTGGGGGCCCTATCTG
GTCGCTGCTACTGGCGGGTGTGTTGCAAGGGGCCAGTAGTCCCTGGGGG
GTACCTGACGGCGGCCGTGTGGATGAGCTTTGCCAGGCCGGGGTCAATC
CTTTCATCTGCATCTTCTNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGAC
TGGTCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTAT
CCCCGAGCAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGG
TTTGTACCC---CTGCCAACAAACCGACTGGACTTTGCTGCCTCGGCATA
CGACGCCGCT-----GATTTGCGCCGGTAACGCGGCCACCTTGCTGT
CCTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCCCTGCCGACTGCA
GGCTGCTCAACCGGCCTCTTGGCTATTACGCAGACCCGTCCG---GCTG
G---GGAGGACGCACGCCCGCCGAGTACTGTGGCGTAAATAGCAAATCCA
GCTCGGTCTTTTCTGCTGGCCCGCAACTCTCTCGGCGGCAGAGCGGGC
A---CC---AACTACCTGG-----CCGAGGA---GGGA---GACTC
---CATCCCAGCGGAGAGATCACCG---AT---CGGGGGCTCGGAGGAGA

CCACCAAACCCAAAGACATGAC---ATCTGA---GTCGAGCTGGATAGAG
---ACGCCGTCCTCCATTAAGTCCATTGATTTCGAGCGATTCTGGTATCTT
TG---AACAGGCCAAAAGGAGGAGAATCTCACCTTCTGCCACGCCG----
-----GTTTCAGAGACAGTGTCCCCGTTAAAATCTGAGCATCACTCAACA
GGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCATTCGCGGA
TGGGATGGGAGCCTTCAAATAAAACCACAGCTCCCACGATATTGGCTCCG
G---ACAGACGGCGTTTTCCTCCCAGGCA---CCCGGCTAC---GCAGCA
GCCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGCTC
T---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAA
ATCGGGGTTTTCGGGGACGCCACCGG-----CGCGCAGCACAGT
TTGTTGCGCTC-----TGGAAGTTT---C-----GCAGGGCCACA
TGGACACTCAGATGCAGCGGGGACCTGCTCTTCCCAGGGCTCCACGAG-
--CAAGCAGCGAGCCATGCCTCTTCCAACGTGGTCAACAGCCAGATGCGA
CTGGGCTTCTCGGGGACATGTACGGACGTGCCGATCAGTATGGCCACGT
TACGAGCCCACGGT---CCGACCACTACGCTTCGACCCAGCTGCACGGCT
ATGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCC
TTCTTTTCGATACATGAGGCAACCGATCAAACAAGAGCTCATCTGCAAGTG
GATCGAGCCGGAACAGCTGACGAATCCCAAAAAGTCGTGCAATAAACTT
TTAGCAGATGCACGAGCTCGTGACCCATCTGACGGTGGAGCATGTGGGG
GGACCGGAGCAGACCAACCACATCTGCTTCTGGGAGGACTGCTCCAGAGA
AGGGAAGCCATTCAAAGCCAAATACAACTTGTAATCATATCAGAGTAC
ACACCGGAGAAAAGCCCTTTCCTGTCCGTTCCCCGGCTGTGGCAA

>*Cephalopholis argus*

AGCCTATTAATTTCGAGCTGAATTAAGCCAGCCAGGTGCTCTTCTGGGCGA
TGATCAGATTTATAATGTTATTGTACGGCACACGCTTTCGTAATAATCT
TCTTCATAGTAATGCCAATTATAATTGGCGGTTTCGAAACTGACTTATC
CCCCTAATAATTGGTGCTCCTGACATAGCATTCCCCGAATAAATAACAT
GAGCTTCTGACTTCTTCCCCATCTTTCCTACTTCTGCTGGCCTCCTCTG
GAGTAGAAGCAGGTGCTGGAACCTGGCTGAACAGTTTACCCCCCTCTAGCT
GGCAACTTAGCCCATGCAGGCGCATCTGTTGACCTAACCATTTTCTCCCT
GCATTTAGCAGGTATTTTCATCAATCCTAGGGGCGATTAATTTTATCACAA
CCATTATTAACATGAAACCTCCAGCTATTTCCCAATATCAAACGCCCTG
TTTGTATGAGCTGTTCTAATTACAGCTGTTCTTCTTCTCCTCTCTCTTCC
TGTCCTTGCTGCCGGCATTACAATACTTCTAACAGATCGAAATCTAAATA
CCACCTTCTTTGACCCAGCTGGCGGAGGAGACCCAATTCTTTATCAGCAC

-----TTCTGGAGAGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCTCACCAAGCTGTCAGAGCTCT
CCTGGGGTATGTGCCCTCAGCAACTTCCAGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGATCTGGAAAAGAGGCACATGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACCGAAGAGCTGATCAACGCCAGCCAAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGTTGTAAGCTGAAGATCCTGCAGAACGATGGCGTCGTTAAC
AGCCCATGTGCTAGACCAAGAAAGACCAGCCATGCCCTCTTTCTTCTG
AGGGCAGACGTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGCAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTATGACACCGTCCAYGAGG

AATGGTCGAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACAGCAGCAAC
TGGCTGTCTGCCAGCCTCTCCGTCCGGATGAATACATTGTTGTGTTTCAGT
CGTTCAACAACAAGGCTGATACTGAATGAAGCAGAGCTAATCATGGTGCT
GGCCAGGAGTTCCAGATGAGAGTGGTGACAGTATCCCTGGAGGAACAGT
CTTTCCCCAGTATTGTCCAGGTGATCAGTCGTGCTTCTGTGTTAGTCAGT
ATGCACGGAGCTCAGCTGATCACCTCACTCTTCCCTCCCCAGAGGAGCTGT
TGTGGTGGAGCTATTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCAT
ATAAAAACCTTGCCACCCTTCCAGGCATGGACCTTCACTATATCCCCTGG
AGGAACCTAAGGAGGAGAACCATCACCCACCCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCACCTGGAGAAGGAGGAGCAAGAGCGAATACTAG
CAAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCCTTCCCTGGAAGT
CCTTAA---AGAGGGCATGAAG---ATGAAGCCAGCATAAAGAA---AT
CAAAGCTGGCTAGCACAGTCCACCCGGGCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCTAACGAGGCCAAGCTCACTGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGGCACGCTGGAGGATCAAATC
ATCCAGGCGAACCCCGCGCTGGAGGCCCTTCGGCAACGCCAAAACGTTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTTGGGA
CGAGCGGCAAGCTGTCTGCTGACATCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTGACAGTT
GCCTCCATCAATGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGA
TGTGCTCGGCTTCACTGCAGACGAGAAGATGGGTGCTTACAAACTGACCG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCGGACGGGACGGAGGCTGCTGATAAATCGGCCTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAATACGTCACCAAAGGTCAAAGTGTGGACCAGGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACAAAGCTTGGATATAAGCGCCATGTGGCCATGCACTCCGCCACGG
CAGGAGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACGCCT
GTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCCGGGTGGCGC
CAAGGAGAAAAACATCCGTGCGACCCTGTGACCGTTCGTTTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTATTGTGCCAGCGCTTTGGCAGGAAGGATCATCTGACACG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTACTGAAGATTAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCATCTGGGTCACCCCTTGTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCGTTTCCCAGTGGGGCCCCCTTTCCGATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTCCCTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTGATCTATGCCTCTTTCTCATTCA
TGGGATGTTTACAAATCAGTGATGGATCAAATATTGTGAACCTGCTGGCT
AGTAACTCTCCAAGTGTTCATATGCTCTGACCCAGCAGAAATACTTCA
TAACTACAGTCTGTAATCGGATTTTACATTTATGAGCCCATCGAGTACT
GGAACTCCACAGTGCAAGAGCACCTGAAGACTCTGAGTCATGGCTTCAAT
AAGATCTCTTGGATGGACAACCTTTTCCACTACCTGCGGGTAGTGAATGT
GAGTGCATCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTTC
TGCGCAGCCAGAGTACCAGCATTTCACTGAGGACATCATATTCTCCAAG
A---ACCGTGAGACTG-----ATGAGTACGACATCATCGCCTCACGGAT
GTACTTGGTGGCACGGACAACAGAGAAGAAGCGCGAAGAGGTGGTGGAGC

TTCTGGAAAAGCTTCGTCCATTGATGCTGATTAACAGCATCAAGTTCATT
GCATTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCAT
CTCACCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCCCTAGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTTACG
GTAACATCTGTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTT
TGAATGGCAGCCGGCTCTCAAAAATGTGTCCACATCGTGCAGTGTGGCA
TTATTAATGGGCTCTCTGGATGGGCTTCCTCGGTGGATGACATCCCAGCT
GACACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCATT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAAAGAGTGTGGGATGG
AAGACAGTACTTGCACCTCAGGCTTCAGTGTGATGATCAAGGAATCCTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGGGGAGGACCAGTTGTTCC
TGAGAAGGCTGTGCGTTCCTTTCACTATTATGTCGTCTGTCCTGG
CAGACGAGCAGGAG-----AAAGAG
GTTACCATCTTCACTGAGCCAAAGCCAAACTCAGAAATGTCCTGTAAGCC
CCTTTGCCTGATGTTTGTGGATGAGTCAGACCACGAGACACTCACAGGTG
TCCTGGGGCCTATAGTTGCGGAGCGTAATGCAATGAAAGAGAGCAGACTC
ATCCTATCCCTGGGTGGACTCCCTCGCGCCTTCCGCTTTCACTTCAGAGG
CACGGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CAGGATCCACCTATGTCCTGCACTCTTTGTGACTCCACTCGGGCAGAGGCC
TCCAAAACATGGTGTCCACTCCATCACCCGCAGTCATGAAGAGAACCCT
AGATCGTTATGAAATATGGAGAACCAACCCTTTTTTCTGAGTCTGCAGAAG
AGCTGCGAGACAGAGTCAAAGGAGTCTCTGCCAAGCCTTTCATGGAGACC
CAGCCCACGCTGGATGCATTACACTGCGACATTGGCAATGCAGCAGAGTT
CTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTACCAAAGGT---CA
AC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCTTAGACAAA
CAGCTGAGGAGGAAGCTGAAGCTTAAACCAGTGATGAGGATGAATGGTAA
CTACGCTCGCAGGCTAATGACCCAGGAGGCTGCGGAGGTGGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGAAGGGAGGCCCTGAGGGAGCTCATGAGGATC
TACCTCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCCTGCCAAGGAGTG
CCCCGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACC
TTCTCTCCTCTACATTCAAATACAGGTACAATGGTAAAATAACCAATTAC
CTGCACAAGACCCTGGCCCATGTGCCCTGAAATCATAGAGAGAGAAGGATC
CATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCAGCGAACAAG-----

-----NNNNNNNNNNNNNNNNNNNNNAC

TGACCTCTCTGGGTTTTATCATCGGAGTCGGTGTGGTTGAAACCTCCTG
ATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCATCGGGCGCCCTACTA
TTTCTGCTGGACCTGTGCGCCTCTGACATCCTGCGCTCCGCCATCTGCT
TCCCCTTTGTCTTACCTCGGTCAAAAATGGATCTGCGTGGACCTATGGC
ACGCTGACCTGTAAGGTGATCGCCTTCCTGGGTGTGCTGTCCTGTTCCA
CACGGCGTTTTATGCTGTTCTGTGTCAGCGTCACTCGCTACCTGGCCATCG

CGCACCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGCTTAGCT
GTCATCTGCATGGTGTGGACGTTGTCAGTGGCTATGGCGTTCCCACCGT
GCTAGACGTAGGGACGTACTCTTTTATCCGGGAGGAGGACCAGTGCACGT
TCCAGCACCGTTCCCTCAGGGCGAATGATTTCGCTGGGCTTCATGCTCCTG
CTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTT
CTTCGTCCAYGATCGTCGGAAGATGAAGCCTGTCCAGTTCGTGCCTGCTG
TCAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGCGGCG
GCCAACTGGCTGGCTGGATTTCGGTCGAGGCCCCACCCCGCCTACCTTGCT
GGGCATCCGGCAGAACAGCAACGCAGCGGGCCGTAGGCGTCTACTGGTAT
TGGATGAATTCAAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACGTTTTTCTTCTGGCACTGTGGGGGCCATATCTCGTTGCCTGCTACTG
GCGGGTGTGCAAGGGGCCCTGTAGTCCCTGGAGGCTACCTGACGGCAG
CCGTGTGGATGAGCTTGGCCAGGCTGGGGTCAATCCTTTCATNNNNNNNNNNNNNNNNNNNNNGCCAA

AT

CTCGCTTTCACCCTGGCGTGGGGACTGGTCCTGGCACGGAGC---GCAGC
GTCCCCTCGGCAACAGCTTGCTGTCCCGCAGCAAACCGACGAGCCAC
TGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACCAACC
GACTGGACTTTGTGCTCGGCATACGACGCCGCT-----GATTTT
GCCGGTAACCGGCCACCTTGCTGTCCCTACGCAGCGGCCGGAGTGAAGGC
TC-----TTCCCTGCCACTGCAGGCTGCTCCAACCGGCCTCTTGCT
ATTACGCAGACCCGTCAG--GCTGG---GGAGGACGCACGCCGCCGCGAG
TACTGTGGCGTAAACAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCGC
TAACTCTATCGGTGGCAGGGCGGGCA---CC---AACTACCTGG-----
---CTGAGGA---GGGG---GACTC---CATCCCGACAGAGAGGTCACCG
---AT---CGGCGCTCGGAGGAG---GCCAAACCAAAGACATGAC---
ATCAGA---GTCGAGCTGGATAGAG---ACCCCGTCTCCATTAAGTCCA
TTGATTTCGAGTGATTCTGGTATCTTTG---AACAGGCCAAGAGGAGAAGA
ATCTCACCTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCC
GTTAAAATCTGAGCATCACTCAACAGGCGAAGTACAGAGAGAGAAGTGG
CGTTGGGGATAAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAAC
CACAGCTCCACGACATTGGCTCCGG---ACAAACGGCGTTTTCTCCCA
GGCG---CCCGCTAC---GCAGCAGCCGCCCTGGGA---CATCACCA--
----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTCAAC
TCCACCAGGGACTTCTCTTCAGAAATCGGGGTTTCGGGGACGCCACCGG
-----GGCGCAGCACAGTTTGTTTCGCCTC-----CGGAA
GTTT---C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCAC
CTGCTCTTCCCAGGGCTCCACGAG---CAAGCGGCAGCCATGCGTCTTC
CAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACG
GACGGGCCGACCAGTACGGCCACGTTACAAGCCCACGGT---CCGACCAC
TATGCTTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGC
CGCA---CACCACGGAGCAGGGGCCCTTCTTTCGATACATGAGGCAGCCGA
TCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAAT
CCAAAAAAGTTCGTGCAAAAAACTTTTAGCACGATGCACGAGCTCGTGAC
CCATCTGACGGTGGAGCATGTGGGGGGACCAGAACAGACCAACCACATCT
GCTTCTGGGAGGACTGCGCCAGAGAAGGAAAGCCATTCAAAGCCAAATAC
AAACTTGTAATCATATCAGAGTACACACCCGGAGAAAAGCCCTTTCACGT
GTCCGTCCCCGGCNNNNNNNN

>Ceratias holboelli

AGCTTGCTTATCCGGGCCGAACCTAAGCCAACCAGGCGCACTCTTAGGGGA
CGACCAAATCTACAACGTTATTGTAACAGCACATGCCTTTGTAATAATCT
TTTTTATGGTTATGCCCATCATGATCGGGGGCTTTGGGAACTGACTAATC
CCACTAATAATCGGAGCCCCTGACATAGCATTTCGCCGATGAATAATAT
GAGCTTCTGACTTCTCCCCCATCTTTTCTTCTTCTACTCGCCTCCTCAG

GGGTCGAGGGGGGGCGGGGACTGGCTGAACGGTTACCCTCCCCTAGCA
GGCAACCTGGCACATGCGGGAGCTTCTGTAGACCTCACAATTTTCTCACT
CCACCTGGCAGGAGTGTTCGTCAATTTTAGGGGCCATTAACCTTATCACAA
CAATCATTAATATGAAGCCCCCAGCTATCTCCCAATACCAAACACCCTTA
TTCGTGTGATCCGTTTAAATTACCGCGGTCTTACTTTTACTATCCCTGCC
CGTTCGCTGCGGCATTACCATGCTCCTCACGGACCGAAATCTAAACA
CAACATTTCTTTGACCCTGCAGGAGGGGGAGACCCGATTTCTCTACCAACAC
CTA-----

-----GGATGAATACATTGTTGTGTTTAGT
CGTTCAACAACAAGACTAATACTGAATGAAGCGGAGCTAATAATGGCACT
GGCTCAGGAGTTCCAGATGAGAGTGGTCAAGTATCCCTGGAGGAACAGT
CATTCCCTAGTATCATCCAGGTGATCAGCAGTGCTACCATGTTAGTCAGT
ATGCATGGAGCTCAACTTATCACCTCACTCTTCCCTCCCAGAGGAGCTGT
TGTGGTGGAGCTGTTCCCCTTGTGTGTAACCCAGGCAGTACACCCCAT
ATAAAACCCTTGCCCTCCCTTCCGGGCATGGACCTGCATTATATCTCCTGG
AGGAACACTAAGGAGGATAACACCATCACCCACCCAGACAGGCCCTGGGA
ACAAGGGGGTATTGCTCATTGGATAAGGAGGAGCAAGAACGAATACTGA
TGAGTAAAGATGTGCCCAGGCATCTGTGCTGCCGAAACCCAGAGTGGCTC
TTCCGGATCTATCAGGATAACATTGGTGGACATTCTTCCCTCCTGGAAGT
CCTCAA---AGAGGACATGAAG---ACAAAGCCCAACTTGAAGAA---GT
CAAAGGGGGCCAGCACACTCCACCCGGGCCGGGTGAGAGAACCTCAGTGT
CAGACTTCAGTTCAAACCAGTAATGAGGCTAAACTCACAGTGTCTGGA
GATAACCGTGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAATATCAGG
TG-----AAAAAGACACCAGCAAGGGGACCCCTGGAGGATCAAATC
ATCCAAGCGAACCCCTGCATTGGAGGCGTTTGGCAACGCCAAAACAGTAAG
AAATGACAACCTCTCCCGTTTTGGAAAGTTCATCCGAATTCACCTTGGTA
CAAGCGGCAAGCTTTCGTCTGCTGACATCGAAACGTACCTGCTGGAGAAG
TCCCGTGTACCTTCCAGCTCAAGGCTGAGAGAAAATTATCACATCTTCTA
CCAGATCCTGTCAAAATCAGAAACCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAATCCCTATGACTACTCTACATCTCCCAAGGAGAGGTAACCGTC
GCCTCCATCAACGACTCAGAGGAGCTGCTGGCCACGGACAGCGCCTTCGA
TGTGCTCGGCTTCACTCCCGATGAGAAGATGGGCGTCTATAAACTCACAG
GTGCCATCATGCACTACGGCAACATGAAATTCAAAACAAAAGCAGCGCGAG
GAGCAGGCTGAGCCGGACGGGACCAGGCTGCCGATAAATCGGCTTACCT

>Cetostoma regani

AGCCTTCTTATTTCGAGCAGAATTGAGCCAGCCTGGAGCCCTCCTGGGGGA
TGACCAAATTTACAATGTAATTGTTACAGCACATGCC'TTCGTGATAATTT
TCTTTATAGTAATACCAATTATAATTGGAGGATTTGGAAATTGGTTGGTT
CCTTTAATAATTGGGGCCCTGATATAGCATTTCCCCGAATAAATAACAT
AAGTTTTTGGCTCCTTCCCCATCCTTTTTACTACTTTTAGCTTCCTCTG
GAGTTGAAGCAGGCGCTGGGACAGGCTGAACAGTTTACCCCTCTTGCA
GGAAACCTTGCCACGCAGGGGCTCAGTGGATTTAACCATCTTTTCCTT
ACACTTAGCAGGCGTATCCTCAATCTAGGGGCTATTAAC'TTTATTACAA
CTATTATTAATATAAAAACCCAGCCATCTCACAATACCAGACCCCTT
TTTGTATGATCTGTTTTAGTAACAGCCGTCCTCCTCCTTCTTTCCCTTACC
AGTTCCTGCAGCCGGTATCACCATACTACTTACTGACCGTAATTTAAACA
CAACCTTTTTTGACCCTGCTGGAGGAGGGACCTATTCTTTACCAACAC
TTATCTGATTTTTTGGGCACCCGGAGGTTTATATTTTAATTTTACCAGG
ATTCGGAATAATCTCACACATCGTTGCCTATTATCTGGTAAAAAAGAGC
CCTTTGGTTATATAGGAATAGTATGAGCTATAATAGCCATCGGTTACTA
GGATTTATCGTGTGAGCCCACCATATATTTACAGTAGGAATAGACGTTGA
CACACGAGCATATTTCTAGAGAGGAACCTTCATCCATCTAACTGCC'TTG
CATGCTGTTGCTGTCTGATGCCACCAGTGTACCAAGCTATCAGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGAC
TTTCTCCAAC'TGCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGG
TCAACTATGACCTGGAAAGCAGGCACTGCCACCTGCCAGAGCTGCTGAGT
ACGGTCCGCCTGGCCCTGCTACCCGCTATATTCCTCATGGAGAATGTCTC
CACAGAAGAGCTGATCAATGTCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCACTGCAAGCTGAAGATCTTGCAAAATGATG---TGGTTAAC
AGCCCTGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGATCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGCTGTAAGGTCTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTATGGGTCTATGACACCATCCACGAGG
AATGGTCCAAGGACGCCATGCTCATAGCCAGGTTTGGTACGGCTCT
GCTGAGCTGAAACACTGCCTCTATGTGGTAGGAGGTCACACAGCTGCAAC
TGGCTGTCTCCAGCCTCTCCCTCTGGATGAATACATTTGTAGTGTTCAGT

CGTTCAACAACAAGGCTAATTCTGAACGAAGCCGAGCTAATCATGGCACT
GGCCAGGAATTTTCAGATGAGAGTGGTTACAGTATCCCTGGAGGAACAAA
CTTTTCGCCAGCATCATCCAGGTGATCAGCAGGGCCTCCATGTTAGTCAGT
GTGCATGGAGCTCAGCTTGTACCTCACTCTTCCCTCCCCGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTATGCTGTGAACCCAGAACAGTACACCCCAT
ATAAAAACACTTGCCTCCTTGCCAGGCATGGACCTTCAATACGTTTCCCTGG
AGGAACACTATGGAGGGGAACACCATCACCCACCCAGACCGACCCCTGGGA
ACAAGGAGGTATCGCYCATTTGGAAAAAGATGAACAAGAGCGAATACTGG
CCAGCAAGGACGTCCCCAGGCACCTGTGCTGCCGCGACCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTAGACATCCCCTCATTCCCTGGAAGT
CATCAA---AGAGGGCATCAAG---GCTAGGCCAGCCTGAGGAA---GG
CCAAGCCGGCCAGCACGGTTCATCCGGGCCGGGTGAGAGAACCGCAGTGC
CACACCTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTGTCTGGCA
GATCCCCTGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTATGAGG
TG-----AAGAAGGACACCAGCAAGGGAACACTGGAGGATCAAATC
ATCCAGGCAAACCCTGCACTGGAAGCCTTTGGAAAATGCCAAAACAGTGAG
GAATGACAACACTCATCCCGTTTTGGAAAATTCATYCGAATTCACTTTGGAA
CCAGTGGCAAGCTGGCGTCTGCTGACATTGAGACTTACCTGCTGGAGAAG
TCGCGTGTACCTTCCAGCTCAAGTCTGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGTTGATTA
CCAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
CAATCCATCAACGACTCAGAGGAACTGTTGGCCACTGACAGTGCC TTCAC
TGTA CT TGGCTTCAATCAAGAGGAGAAGTTGGGAATCTATAAGCTGACCG
GTGCCATTATGCACTAYGGCAACATGAAGTTTAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAACCTGATGGAACGGAGGCTGCTGATAAGGCAGCTTACCT
AATGGGGCTGAACTCTGCAGACCTTATCAAAGCCCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAATATGTTACCAAAGGCCAGGGTGTAGACCAAGTC
TACTACCCCAACAAAGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTTACCTGTAAAGTGTGCATGCAGAGCTTCGAGAGCACGCC
GTGCTCCTGGAGCACCTCAAGAGCCACTCAGGGAAGTCCTCGGGTGGCGC
CAAGGAGAAGAAACACCCATGTGACCCTGCGACCGTCGCTTCTACACTC
GGAAGGATGTAAGACGGCACATGGTGGTCCATACAGGTCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGACCACCTGACACG
GCATGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCGGATATGTTAAGTCTTTTAGGTTCTGGCTCTCCACCTTGTTCGGTC
AAGGAGGAGCTTAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCTTTCCCAGCGGGACCCCTTCCCGATGGGCATGT
ATAACCCCATCAT-----CTCCAGGCCATGTCCAATTCTGGNGNGGGTCA
CCCC-----CACCCCTCCCTGATGCCAGTCCCTGTCTGCAGCTATGG
GCATGGGCTGTACATGGAATATCTCATCTACGCCCTCGTTCTCATTCATG
GGATGTTTACAAATCAGTGATGGGTCAAACATTGTGAACTTGCTGGCCAG
TAACTCTCCGAGCGTTTCGTACGCGCTGACCCAGCAGAAATACTTCAGTA
ACTACAGYCCCCTGATCGGGTTTTACATTTACGAGCCCATTTGAGTACTGG
AACTCCACGGTGCAGGAGCATCTAAAGACACTGAGTCACGGCTTCAACAA
GATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGA
GYGCGTCGAACAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCCTG
CGCAGCCCAGAGTACCAGCACTTACC GAAGACATCATCTTCTCTAAGA-
--ACCGTGAGAGTG-----ATGAGTATGACATTATTGCCTCACGCATGT
ACCTGGTGGCGCGGACCACAGAGAAAAAGCGCGAGGAGGTGGTGGAGCTT
CTGGAGAACTGCGTCCGCTGATGCTAATCAACAGCATYAAGTTCATCGC
CTTCAACCCACCTTTGTTTTTTCATGGACCGTTACAGCGCCTCTGTCATCT
CACCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCACT

CAATCCTTAACATGAAACCCCTGCTATGTCTCAGTATCAAACCTCCCCTT
TTCGCTGATCTGTCTTAATTACAGCCGTTCTACTTCTCTTGTCCCTCCC
CGTTCTTGCAGCCGGAATTACAATACTCCTTACAGATCGAAACCTTAATA
CAACCTTCTTTGACCCTGCGGGGGCGGCGATCCCATTCTTTACCAACAT
CTATTC-----

-----TTCTAGAGAGAAACCTTACCCATCTAACTGCCCTCGG
CATGCTGTTGCTGTCCGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTCGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAATTGGA
TCAACTATGACCTGGAAAAGAGGCACTGCCATCTTCCAGAACTCCTGAGA
ACGGTCCGCCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTATC
TACAGAAGAGCTGATCAACGCCACAGGCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTCCAGAATGATGGTGTGCTCAAC
AGCCCGTGTGCCCGACCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGATGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTGAAGGCGGCGCCCATGCTCATTGCCAGGTTTGGCCATGGTTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTTGGAGGTCACACAGCTGCAAC
TGGCTGCCTCCCGCTTCTCCATCTGGATGAATACATTGTTGTGTTTAGT
CGCTCAACAACGAGGCTGATACTGAATGAAGCSGAGCTAATCATGGTGTCT
AGCCCAGGAGTTCAGATGAGAGTGGTACAGTATCTCTGGAGGAACAGT
CTTTCCCCAGTATAGTCCAGGTGATCAGCAGTGCTACCATGTTGGTTAGT
ATGCATGGAGCTCAGCTCATCACCTCACTGTTCCCTCCAAGAGGAGCTGT
TGTGGTGGAACTCTTCCCTTTTGTCTGTA AACCCAGAGCAGTACACCCAT
ATAAAACCCCTTGCCCTCCCTGCCAGGCATGGACCTTCACTATGTCTCTTGG
AGGAACACTAAGGAGGAGAATACCATCACCCATCCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCACTTGGAGAAAGAGGAGCAAGAGCGAATACTGT
TGAGCAAAGATGTCCCTAGGCACCTTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATTCTTCCCTTCCCTGGAAGT
CCTCAA---AGAGGGCATGAAG---ACAAAGCCCAATTTGAAGAA---GT
CAAAGCCGGCCAACGCAGTCCACCCGGGCGGGTCAGAGAACCCAGTGT
CAAACCTCAGTTCAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
NATCCCGTGGAAATCTGAAATACCTTAAGGTGAGAGAGGTGAAATATGAGGT
GTGGATCCGGAAAAAAGATACCAGCAAGGGAACCTGGAGGATCAAATCA
TCCAGGCGAACCCCTGCGTTGGAGGCTTTCGGCAACGCCAAAACGCTGAGA
AACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACCTTTGGTAC
AAGCGGCAAACCTGTCRTCTGCTGACATCGAGACATACCTTCTGGAGAAAT
CACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAATTATCACATCTTCTAC
CAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGATATGCTGCTGATCAC
CAACAACCCGTATGACTACTCCTACATCTCCAAGGAGAAGTGACAGTGG
CGTCCATCAACGACTCTGAGGAGCTGATGGCCACAGACAGCGCCTTTGAT
GTGCTTGGCTTCACTCCAGATGAGAAGATGGGTGTCATAAACTGACGGG
AGCCATCATGCACTATGGCAACATGAAGTTCAAACAGAAACAGCGTGAGG
AGCAGGCTGAGCCTGATGGGACGGAGGCTGCTGATAAATCAGCTTACCTA
ATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCACCCAGAGT
CAAGGTAGGAAATGAATATGTACCAAAGGCCAAAAGTGTAGACCAAGTCT
ACTATCCTAACAAGGAGGCCTTTAAGTGTGAGGAGTGTGGGAAGCACTAC

AGACCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGGATCCATAGGA
GCCTGGGCCAGCGAAGGAAACGAGTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCCTTAGGGCCCC
GGTGAAGGAGAG
CCCACAGCCTTTCTCCTGTTCCATTGAAGACCCCACTAAACAAACAAAGT
TCAAGGGCATCAAGACGTACATATCGTACCGGGTCACGCCGAGCCACT
GCGCATCCTGTCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCG
CTTACTGCACAAGTTCACGTGTGATCTCTGTGCCTCACCTGCCTGAGAAGC
AGGCCACGGGGCGATTTCGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGA
CTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTCTCCCAGTA
TGAAGGCTTCGAGCACTTTCTGATGTGTGCCGATGACAAGCAGTGGAAC
TGGGCAAGAGACGGGCGGAGAAGGACGAGATGGTGGGTGCCATTTTCATG
CTGACCCTCCAGATCCCCTAACGAACACCAGGACCTTCAGGATGTAGAGGA
GCGGGTCGACTCCTTCAAGGCCTTCGCTAAGAAAAATGGATGACAGCGTGA
TGCAGTCACTCATGTTGCCTCGGAGCTGGTGCCKAAGCACCTGGGTGGG
TTCAGGAAGGAGTTCCAGCGACTGGGAAATGCCTTCCAGTCTATCAGCCA
GGCGTTCATGCTGGACCCTCCCCACTGCTCAGAGACCTTCAACAACGCCA
TCTCCCATNN
NN
NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNCCGCCATCTGCTTCCCCTTTGTCTTCCACTCGGTCAAGAATG
GATCTGCCTGGACCTACGGCACGCTGACCTGCAAGGTGATCGCCTTTCTG
GGTGTCTCTCCTGTTTCCACACAGCGTTTATGCTGTTCTGTGTCAGTGT
CACACGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTAGCTGTCACTGTGCATGGTGTGGACGTTGTCTGTG
GCTATGGCGTTCCCACCGGTGCTAGACGTGGGGACATACTCTTTCATCCG
GGAGGAGGACCAGTGCACATTCCAGCACCGTTCTCAGGGCGAATGATT
CGCTGGGCCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCACGACCGCCGAAAGATGAAGCC
TGTCCAGTTCGTGCCGTGCCGTCAGCCAGAACTGGACCTTCCACGGGCCAG
GYGCCAGCGGGCAGGCGGGCGCCAACGGCTGGCCGGGTTTGGTCGAGGC
CCCACCCCGCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGG
CCGCAGGCGTCTGCTGGTTTTTGGATGAATTCAAAACAGAGAAGAGGATTA
GTAGGATGTTCTACATCATGACGTTTTTCTTCTGGCATTGTTGGGGCCC
TATCTGGTGCCTGTACTGGCGGGTGTGTGCAAGGGGCCCGTGGTCCC
TGGGGCTACCTGACAGCAGCCGTGTGGATGAGCTTTGCCCAGGCTGGGG
TCAATCCTTTTCATCTGCATCTTTCTCCAACAGGGANNNNNNNNNNNNNNNNNNNNNNGGCGTGGGGACTGG
T
CCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCC
GCAGCAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTG
TCACC---CTGCCAACCAACCGACTGGACTTTGCTGCCTCGGCATACGAC
GCCGCT-----GATTCGCCGGTAACGCGGCCACCTTGCTGTCCTA
CGCAGCGCGCGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAGGCT
GCTCCAACCGGCTCTTGGCTATTACGCAGACCCGTCAG---GCTGG---
GGAGGACGCACGCCCGCGCAGTACTGTGGCGTGAATAGCAAATCCAGCTC
GGTCTTTTCTGCTGGCCACTAACTCTATCGGTGGCAGAGCAGGCA---
CC---AACTACCTGG-----CTGAGGA---GGGA---GACTC---C
ATCCCGACGGAGCGGTCACCG---AT---CGGCGGCACGGAGGAG---AC
CAAACCCAAGACATGAC---ATCAGA---GTCAAACCTGGATAGAG---A
CGCCGTCCTCCATTAAGTCCATCGACTCAAGCGATTCTGGTATCTTTG---
-AACAGGCCAAAAGGAGAAGGATCTCACCTTCTGCAACGCCA-----
-GTTTTCAGAGACAGTGTCCCCGTAAAATCAGAGCATCACTCAACAGGCG
AAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGG
ATGGGCGCTTCAAATAAACCACAGCTCCCACGATATTGGCTCCGG---
ACAGACGGCGTTTTTCTCCAGGCG---CCCGGCTAC---GCAGCAGCCG

CCCTGGGA---CACCACCA-----CCACCCGACCCACGTTGGCTCT---
TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCG
AGGATTCGGGGACGCCACCGG-----CGCGCAACACAGTTTGT
TCGCCTC-----CGGAAGTTT---C-----GCAGGCCACATGGA
CACTCAGATGCAGCGGGGCACCTGCTCTCCCGGGGCTCCACGAG---CA
AGCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGG
GCTTCTCGGGGGACATGTACGGACGGGCGGACCGTACGGCCACGTTACA
AGCCCGCGGT---CCGACCACTATGCTTCGACCCAGCTGCACGGCTACGG
CCCCATGAACATGAAATATGGCCGCG---CACCACGGAGCAGGGGCCCTTCT
TTTCGATACATGAGGCAACCGATCAAGCAAGAGCTCATCTGCAAGTGGATC
GAGCCGGAGCAGCTGACAAATCCCAAAAGTCGTGCAACAAAACTTTTAG
CACGATGCACGAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGAC
CGGAGCAGACCAACCACATCTGCTTCTGGGAGGAGTGTCCCGAGAAGGA
AAGCCATTCAAAGCCAAATACAAACTTGTAAATCATATCAGAGTACACAC
CGGAGAAAAGCCCTTCCGTGTCCGTTTCCCGGCTGTGGCAA

>Chanos chanos

AGCCTCTTAATTTCGAGCAGAGCTTAGCCAACCAGGATCTCTTCTGGGCGA
TGATCAAATCTATAACGTCATCGTCACAGCGCACGCTTTTGTAAATAATCT
TCTTTATAGTAATGCCTATCCTCATTGGAGGGTTTCGGAACTGACTTGTC
CCACTAATGATCGGGGCCCGACATGGCATTCCCTCGAATGAACAACAT
AAGCTTCTGGCTTCTTCCACCTTCGTTTCTTCTCCTCCTAGCATCGTCTG
GAGTTGAAGCCGGAGCCGGAACAGGATGAACAGTCTACCCCCACTAGCC
GGAAATCTTGCTCACGCAGGAGCCTCCGTGGACTTAACAATTTTCTCTCT
TCACCTAGCAGGGGTCTCTTCAATTCCTGGAGCAATTAATTTTCACTACTA
CTATTATTAACATGAAACCCCGACCATCTCCCAATATCAAACACCTCTA
TTTGTGTGAGCCGTCTCGTTACAGCCGTGCTTCTCCTTCTATCTCTTCC
AGTGCTAGCCGCTGGAATTACGATGCTCCTGACAGATCGAAACCTTAATA
CAACATTCCTTCGACCCGGCTGGAGGAGGAGACCCAATTCTGTACCAACAC
CTGTTCC
NN
NN
NN
NNTTCTGGAGAAGAACTTGCATCCATCCAACCTGCCTGGGCATGCT

CCTGCTGTCTGATGCCACCACTGCACGCAGCTTTTCCAGCTCCTCCTGGA
GTATGTGCTGAGCAACTTTCCCTGCCATCTGTAAAGACTGAAGAATCCTG
CAACTCCTAAAGACATGCTAGTCCAGCTACTGTCTCATGAGGAATGGA
GACTGAGGATGAACGGCTAGTCTATGAATCTGCGCTCAACTGGGTGAAC
ATGACCTGGAACGTCGGCATTGCCACCTTCCGGAGCTGCTCCGGACAGTG
CGGCTGGCGCTGCTTCCGTGCATATTCCTGATGGAGAACGTCTCTACAGA
GGAGCTGATCAATACTCAAGCCAAAAGCAAGGAGCTGGTGGATGAGGCCA
TCCGATGTAAGCTGCGCATCTACAGAACGATGGGGTGGTCAACAGCCCC
TGTGCCCGTCCCGTAAACTAGCCATGCCCTTTTCCTACTGGGAGGTCC
TACCTTCATGTGTGATAAGCTGTACCTGGTGGATCAGAAGGCCAAGGAGA
TCATTCCTAAAGCTGACATTCCTAGTCCACGAAAGGAGTTCAGCGCTTGT
GCCATTGGTTGCAAAGTATATGTGACGGGCGGGC--GTGGCTC-CGAAA
CGGCGTATCCAAAGACGTTTGGGTGTATGACACACTGCATGAGGAGTGGT
CCAAAGCAGCACCAATGCTAATTGCACGATTTGGCCACGGCTCAGCCGAG
TTACGGCACTGCCTCTATGTGGTGGAGGTACACGGCTGCAACAGGTG
CCTTCTGATCGCCGTCTGGACGATTACATAGTGGTTTTTTCAGTCGCTCT
ACCAATCGGCTAATCCTCAACGAAGCGGAGCTGATCCTGGCTCTCGCACA
AGAGTTTCAGATGAGGACCATCACTGTGTCTCTGGATGAGCAGTCGTTTG
CCAGCATAATCCAGATTATCAGCGGGGCATCGATGTTGGTTCAGCATGCAT
GGGGCCCAACTGATAACCTCCATATTCCTGCCAGAGGGGCTGCTGTGAT
TGAGCTTCCCTTATGCAGTTAACCCAGAACACTACACACCATAACAAGA

CCCTCGCCTCTTTGCCAGGCATGGACCTCCAGTACGTTGCATGGAGAAAC
ACAATAGGAGAGAACTCGGTGGCTTACCCTAACCGTCCTTGGGACCAGGG
TGGCATCGCACATCTGGAGAAGGAAGAGCAGGACCGAATAATGGCCAGCA
AGGAGGTCCTCGGCACCTGTGTTGCCGTAACCCAGAATGGCTGTTCCGG
ATCTACCAGGACACTGTTGTGGACGTCCCCTCCTTGGATGTCCTCAG
---AGAAAGTCTGAAG---GGCAAGCCTAGCCTTAAAA---GACCAAGG
CTACCAGCACAGTTCATCCCAGTTCGAGAGCCCAAGTGCCAGACA
TCTGTGCAAGCCACCAACGAGGCCAAGCTGACAGTGTGCGTGGCAGATCCC
TTGGAATCTCAAGTACCTGAAAGTTCGAGAGGTCAAATACGAAGTGTGGA
TTCAGAAGAAGGATCTAATAAGGGGACCCTGGAAGATCAGATTATCCAG
GCTAATCCTGCACTGGAGGCGTTCGGCAATGCCAAAACGGTGAGAAATGA
CAATTCCTCTCGCTTTGGGAAGTTCATTTCGCATTCATTTCCGGACAAGTG
GCAAACGTCTTCTGCAGACATAGAAACATACTTGCTTGAAAAATCTCGG
GTAACATTTTCAGCTTAAAGCGGAGAGGAACATCACATCTTCTATCAGAT
ATTATCCAATGAAAAGCCAGAGTTACTGGACATGCTGCTGATTACCAATA
ACCCCTTATGATTACGCATACATCTCCCAAGGAGAAGTAACTGTTGCTTCC
ATCAATGATAACGAAGAGCTTGTTCGCAACAGACAGTGCCTTTGATGTGCT
TGGCTTTACTTTCAGATGAAAAGGTAGGGGTCTATAAGTTGACTGGTGCAA
TAATGCACATATGGCAACATGAAGTTTAAAGCAGAAGCAGCGTGAGGAGCAG
GCAGAGCCTGATGGAACAGAGTCTGCTGACAAGTCAGCATACTGATGGG
GCTGAATTCTGCAGATCTTCTAAAGGACTCTGCCACCCAGGGTAAAAG
TGGGAAATGAATACGTCACAAAAGGTCAGAGCGTCGATCAAGTCTACTAC
CCCAACAAAGAAGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTATAACAC
CAAGCTTGGTTATAAGCGTCACGTGGCCATGCACTCCGCCACGGCGGGTG
ACCTTACTTGAAGGTGTGCCTGCAAAGTTATGAAAGCACGCCGGCCCTC
CTGGAGCACCTAAAGAGTCACTCGGGTAAGTCGTCGGCGGTACCAAGGA
GAAGAAGCATCCATGTGACCACTGTGATCGTTCGTTTCTACACGCGCAAGG
ACGTACGACGCCATATGGTGGTACACACGGGACGCAAGGACTTCCATGTC
CAGTACTGCGCCAGCGCTTTGGCCGCAAGGACCACCTGACACGGCATGT
CAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATTAATCGGAACCTCCGG
ATATGCTGGGTCTTTTGGGGTCAGGCTCACCACCGTGTCTGTCAAAGAA
GAACTCAACCCTATGATGTGTAGCATGGGACCTGCCAAGGATCCCATGAT
GACCAAGCCCTTTCCCCAGGAAACCCCTTCCCATGGGTATGTACAACC
CGCATCAT-----ATCCAGGCCATGTCCAATCCTGGAGTGGGTCAT---
-----CACCACTCTTTGGTGTCTGGCTCTCTGTCCGCTGCTATGGGAAT
GAGCTGCCATATGGAGTATCTGATTTATGCCTCCTTTTCCTTTATGGGAT
GTTTACAAATCAGTGATGGCTCCAACATTTGTGAACCTGTTAGCTAGCAAT
TCCCCTAGCGTCTCGTTCGCCCTGACCCAACAGAAGTACTTCAGCAACTA
CAGCCCAGTGATTGGGTTTTACATATATGAGCCATAGAGTACTGGAAC
CCACTGTGCAGGATCATCTTAAGACTCTGGGCCAGGGTTTTCAATAAGATT
TCATGGATCGACAATTATTTTCACTACCTGAAGGTAGTGAACGTTAGCGC
GTCAACCAAAAGTGATTTTATAAACATCCTCAAGAACTCTTTCTGAGGA
GTCCTGAATATCAGCATTTACGGACGACATCATCTTTTCCAAAA---TC
GGAG-----ACGAGTACGACATTATTGTGTCCCGGATGTACTT
GGTCCGACAGAACACGGAAAAGACCAGAGAAGAGGTGGTGGAGCTGCTCG
AGAGACTCAGACCCCTCTCCCTCATAAACAGCATCAAATTTATTGTCTTC
AACCCACCTTCATCTTCATGGATCGTTACAGCTCCTCTGTTCATCTCCCC
TATCCTGACATCAGGCTTCAGTGTCTGACCATCCTCATCCTAACATTTT
TCCTGGTCATTAATCCACTGGGGAACCTTCTGGTTGATTCTGACCGTTACC
TCCGTGGAGCTGGGCGTCTGGGTCTTATG-----
-----TCCAGTTCTTGGGATGTGGGCATCATTG
ATGGACTGTCTGGTCTTCAACCTCAGTTGACGATTTCCCCGCTGACACC
ATCTCTCGACGTTTCCGCTATGATGTGGCTCTGGTTTCCGCTTTAAAAGA

CTTGGAAGAGGACATCATGGAAGGCCTGAGAGAGAAGGAACTAGATGACA
GTGCCTGCACCTCTGGCTTCACTGTTGTGATCAAGGAGTCCTGTGACGGC
ATGGGAGACGTCACTGAGAAACATGGAGGTGGGCCGGCAGTTCCAGAGAA
AGCAGTGAGGTTCTCCTTTACAGTGATGTCTATCTCTGTCCAAGCTGAGG
GTGAAGAT-----GAAGCAGTCACC
ATCTACCAAGAGCTGAAGCCAACTCTGAACTTTCCCTGCAGGCCCTCTATG
CCTCATGTTTTGTTGATGAGTCAGACCATGAGACCCTCACTGCAATTCTGG
GTCCTGTGGTGGCTGAACGCAAAGCCATGCAAGAGAGTCGCCTCATCTG
TCAATTGGAGGGATGCTTCGCTCCTTCCGCTTTCACTTCCGAGGCACAGG
ATATGATGAGAAGATGGTACGGGAGCTGGAGGGCTGGAAGCCTCAGGCT
CCACTTATATCTGTACCCTCTGCGACTCCACTCGGGCTGAGGCCCTCACAC
AACATGGTGCTGCACTCCATCACCAGGAGCCATGAGGAGAACCCTGAACG
CTATGAGATCTGGAGGACCAATCCATTTTTCAGAGTCTGTTGAAGAGCTCA
GAGATCGGGTCAAAGGTGTTTTCTGCCAAGCCCTTTATGGAGACCCAGCCG
ACCTTAGACGCCCTTCACTGTGACATTTGGCAATGCCACTGAGTTCTACAA
GATATTCCAGGATGAGATCGGCGAGATGTACCTGAAGAA---CTCC---C
CAGCACGGGAAGAGAGACGTCGTTGGCGCTCTGCCCTAGACAAAACAGCTG
AGGAAGAAGATGAAGCTCAAGCCAGTCATGCGGATGAATGGAAACTACGC
TCGTCGCCTGATGACCCGGGAGGCCGTGGAGGCCGTTTTCGAGCTTGTGC
CATCACAGGAACGTCGTGAAGCCTTGAGGGAGCTCATGGAGCTATACCTT
CAGATGAAGCCAGTGTGGCGCTCCACGTGCCCGCCAGGAGTGTCAGA
TCAGCTCTGCCGTTACAGTTACAACCTCCAGCAATTCGCTGAGTTGCTCT
CCACCACTTTTCAAGTACCGATACGACGGTAAAATCACCAACTACCTGCAC
AAGACCTTAGCTCACGTGCCTGAGATTTGTGGAAGGGATGGATCCATTGG
TGCATGGGCTAGT-----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCCCGCAGTGGAAGG
AGAGCCCCCAGCCTTTCACCTTGCTCTATTGAGGACCCCACCAAACAGACT
AAGTTCAAGGGCATTAAAGACCTACATATCGTATCGTGTGACCCCTAGCCA
TACCACCTCGACCCGTTACCAGCCGCTACAACATTTTCGACTGGTTGTATA
ATCGGCTCCTGCACAAGTTCACTGTCTCATCTCAGTGCCCCATCTACCCGAA
AAGCAGGCAACTGGGCGCTTTGAGGAGGACTTCATTGAGAAACGCAAAG
GCGTCTCATCTTATGGATGAACCACATGACCAGTCACCCAGTTCTGTAC
AGTATGAAGTTTTGAGCACTTCTCATGTGTGGTGATGACAAGCAGTGG
AAGCTGGGCAAGCGGAGAGCTGAGAAGGATGAGATGGTGGGTGCCCACTT
CATGCTTACCTTCCAGATCCCAGCGAGCACCAGGATCTACAGGATGTGG
AGGAGCGTATAGACTCTTTAAAGGCTTCGCCAAGAAAATGGATGACAGT
GTCATGCAGCTAACACATGTGGCCTCTGAGTTGGTGCGCAAGCACCTTGG
AGGCTTCCGGAAGGAGTTCCAGAGGCTTGGAATGCTTTCCAATCCATCA
GCCAGKCTTCCTGCTGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNTAACCTCTCTGGGTTTCATCATCGGTGTC
GGTGTGGTTGGCAACCTCTTAATTTCATCCTGCTCGTCAAAGACAAGAG
CCTCCACCGTGCGCCCTACTACTTCTTTTGGACCTGTGTGCCTCTGATA
TTCTACGCTCAGCCATCTGCTTCCCCTTTGTGTTTCACCTCAGTCAAAAAT
GGCTCGGCCTGGTCGTACGGCACTCTCACCTGCAAAGTGATTGCCTTCT
GGGTGTTCTCTCGTGTTCATAACCGCTTCATGCTCTTCTGCATCAGTG
TCACGCGCTACCTGGCCATTGCCCATCACCAGCTTCTATACCAAGAGGTTG
ACCTTCTGGACCTGCCTGGCTGTCTGTGATGGTGTGGACACTGTCGGT
CGCTATGGCATTCCCACCGGTACTGATGTTGGTACCTACTCGTTCATCC
GAGAGGAAGACCAGTGCACGTTTTCAACACCAGCTCCTTTTCGTGCCAACGAC
TCGCTGGGCTTCATGCTGCTCCTTGCACCTATTCTCCTGGCCACTCAGCT
TGTCTACCTCAAGCTCATCTTCTTGTGTCACGACCGCCGGAAGATGAAGC
CTGTCCAGTTTTGTGCCAGCGGTGAGCCAGAACTGGACCTTCCATGGACCG
GGAGCCAGCGGCCAGGACAGCAATTGGTTGGCTGGATTTGGCCGTGG

CCCTACCCCGCCACCCTTTTGGGGATCCGGCAGAACAGCAACGCAGCAG
GCCGCAGGAGATTGCTGGTGTGGATGAGTTTAAAGACTGAAAAGAGGATT
AGCAGGATGTTCTACATTATGACCTTCTTCTTTCTCAGCTTGTGGGGGCC
CTACCTGGTGGCTTGCTACTGGAGGGTGTGGCCAGGGGCCCGTGGTCC
CTGGGGGTTACCTGACAGCCGCTGTGTGGATGAGCTTTGCCCAGGCAGGA
GTCAACCCCTTCANNNNNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTCCGGACCG
GTC

CTGGCACGGACC---GCAGCGTCCACTCAGTAACAGCTTGCTATCACCG
CAACAAACCGAGGAGACCGCAGTGG---CCTCCCCGAGCGATGGTTTGT
CACCC---CTGCCAACACCGACTGGACTTTGCCGCCTCGGCATACGATG
CCGCCGGGCTGCTGATTTTGGCGGTAACGCGGCCACCCTTCTGTCGTAC
GCAGCTGCTGGAGTTAAGGCGC-----TTCCCTTGCCCACTGCAGGCTG
CTCCAACAGACCCTTGGGTTATTACGGAGAGCCACCGG---GATGG---G
GCACGCGCACCTCACCGCAATACTGC-----AGCAAATCCAGCACA
GTTCTCGCGTGTGGCCATCCAACCTGTGCGGAAGCAGAACGACCA---C
TTCTAATTACCTGG---CCGGAATGGAAGA---CGGG---GACCC---TA
TCGCACCTGAGAGGTCACCT---CT---CGGTGGCGCCGAAGAA---GGC
AAGCCAAAAGACCT-----CTCGGA---ATCCAGCTGGATAGAA---AC
CCCATCGTCTATTAAGTCTATTGATTCAAGCGATTCTGGGATTTTGT---
AGCAAGCCAAACGGAGGAGGATTTACCCATCTGCCACACCG-----
GTTTCAGAGACGTCTCTCCATTAATACTGAA-----CAGGCGA
CGTTACAGACAGAGAAGTGGCTTTGGGGATAAATCCGTTTCGCCGACGGCA
TGGGCGCCTTCAAATTAACCACAGCTCTCACGATCTTGGCTCTGG---G
CAAACGGCGTTTTCTCGCAAGCA---CCCGGTAT---GCAGCTGCTGC
CCTGGGA---CATCATCA-----TCACCCCACTCATGTCAGCTCC---T
ACTCCACCGCGCTTCAATTCTACTCGGGACTTTCTTTTTTCGGAATCGG
GGCTTCGGAGACGCTACCAC-----AGCACAGCACAGTCTTTT
CGCCTCAGC---CGCGGAAGTTT---T-----GCAGGGCCACATGGAC
ATTCTGATGCCGACGACACCTGCTCTTCCCAGGACTGCACGAG---CAA
GCAGCGACGCACGCTCCTCGAACGTAGTGAACAGCCAAATGCGCCTGGG
GTTTTTCAGGGGACATGTATGGCAGAGCTGAGCAATACGGTCACGTTACGA
GCCCCAGGT---CCGAGCATTATGCCTCCACTCAGTTGCATGGCTATGGC
CCCATGAACATGAATATGGCTGCC---CATCACGGTGTGGGGCCTTCTT
TCGTTATATGAGACAACCGATCAAACAAGAGCTCATCTGCAAGTGGGTCG
AACCGGAGCAACTGACAAATCCGAAAAAGTCGTGCAACAAAACCTTTCAGC
ACCATGCATGAACCTGGTGACCCACATCACAGTGAACATGTTGGGGGACC
AGAACAATCGAATCACATTTGTTTTTGGGAAGAGTGTTCGCGAGAAGGAA
AGCCATTTAAAGCCAAGTACAAACTTGTAATCATATCAGAGTGCACACC
GGAGAAAACCGTTCCCTTGCCCATTTCCGGG-----

>Chauliodus danae
AGCCTGCTAATTCCGGCAGAACTCAGCCAGCCCGGTGCATTTATGGGCGA
CGACCAGATCTACAACGTTATCGTTACAGCACATGCCTTCGTTATAATTT
TCTTCATAGTAATAACCCATTATGATCGGGGGTTTCGGAAACTGGTTAATC
CCTCTAATAATTGGGGCCCCCTGACATAGCCTTCCCCGAATAAACAACAT
GAGCTTCTGACTTCTCCCTCCCTCATTTCTTCTTCTACTCGCCTCTTCCG
GGGTAGAAGCTGGGGCCGGGACCGGATGAACTGTATACCCACCCCTTTCA
GGCAACCTCGCTCACGCTGGTGCCCTGTGTTGACCTTACAATTTTCTCCCT
CCACCTTGCAGGAATCTCTTCTATCTAGGAGCAATTAATTTCTACTA
CTATTTATAATATGAAACCCGCGGTATATCCCAATACCAGGCTCCCTG
TTCGTGTGATCTGTTCTCATTACTGCTGTTCTTCTCCTTCTATCCCTACC
CGTCTAGCCCGCGGAATTACCATGCTTCTTACAGACCGAAACCTTAACA
CAACCTTCTTCGATCCTGCAGGGGGTGGAGACCCCATCCTTTACCAGCAC
CTCTTCTGATTCTTCGGCCACCCTGAGGTCTATATTTCTCATTCTCCGGG

CACGAG---CAAGCCGCGAGCCACGCGTCCTCGAATGTGGTTAACAGCCA
GATGCGGCTGGGGTTTTCGGGGACATGTACGGGAGAGCCGACCAGTATG
GCCACGTTACGAGCCCGCGGT---CCGACCACTACGCTTCGACCCAGTTG
CACGGCTATGGCCCTATGAACATGAATATGGCCGCG---CACCACGGAGC
CGGGCCTTCTTCCGTTACATGAGGCAGCCGATCAAGCAAGAGCTCATCT
GCAAGTGGATCGAGCCGGAGCAACTATCGAATCCTAAAAAGTCGTGCAAC
AAAACTTTTAGCACGATGCACGAGCTGGTGACCCACTTGACGGTGGAGCA
TGTGGGGGGACCCGAGCAGTCCAACCACATTTGCTTCTGGGAAGAGTGCG
CCCGAGAAGGAAAAGCCCTTCAAAGCCAAATTCAAAACTTGTGAACCACATC
CGAGTGCACACCGGAGAGAAGCCGTTTCCTTGTCCGTTTCCTGGCTGTGG
CAA

>Chaunax suttkusi

-----TTCTAGAGCGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCACACCAGTGCACCAAGCTGTCGGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCTATTTGCAAGACAGAGGAC
TTTTCTCAAACCTCCAAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GTTAGAGACTGAAGATGAGAGACTTGTATGAAGCTGCCCTCAATTGGA
TCAAATATGACCTGAAAAAGAGGCACTGCCACCTCCAGAGCTTTTGAGA
ACGGTCCGTCCTGGCCCTGCTGCCCGCCATCTTTCATGGAGAATGTCTC
TACAGAAGAGCTGATCAATGCCCAGGCCAAGAGCAAGGAATTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCTTGCAGAATGATGGCGTTGTAAAC
AGCCCGTGTGCTCGACCAAGAAAAACAAGCCATGCCCTTTTCTCTGGG
CGGTCAGACATTATGTGTGACAAGTTGTATCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGCTGACATTCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTGTACATCACTGGAGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTATGGGTCTACGACACAGTTCAAGAGG
AATGGTCAAGGCCGCACCCATGCTCATTGCAAGATTTGGCCATGGCTCT
GCAGAGCTTAAACTGCCTCTACGTGGTAGGAGGTCACACTGCAGCAAC
TGGCTGCCTCCCAGCCTCTCCATCTGGATGAATACATTGTTGTGTTAGT
CGTTCAACAACGAGACTGATACTGAATGAAGCGGAGCTCATCATGGCACT
GGCTCAGGAGTTCCAGATGAGAGTGGTCCAGTGTCCCTGGAGGAACAGT
CATTCACTAGTATCATCCAGGTGATCAGCAGTGCTACCATGTTAGTCAAT
ATGCATGGAGCTCAACTTATTACCTCGCTCTTCCTCCCCAGAGGAGCTGT
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCAT
ATAAAACTTGCCTCCCCTTCCGGCATGGACCTTCATTATATCTCCTGG
AGGAACACTAAGGAGGATAACACTATCACCCACCCAGACAGGCCCTGGGA
ACAAGGGGGTATCGCTCATTTGGATAATGAGGAGCAAGAACGAATACTGA

CGAGTAAAGATGTGCCAGGCATCTGTGTTGCCGAAACCCAGAGTGGCTC
TTCCGGATCTATCAGGACACATTGGTGGACATTCCCTCCTTCTGGAAGT
CCTCAA---AGAGGACATGAAG---ACAAAGCCCAACTTGAGGAA---GT
CAAAGCCGGCCAGCACACTCCACCCTGGCCGGGTCAGAGAACCTCAGTGT
CAGACTTCAGTTCAAACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATACCGTGGAATCTGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
ACCAACAAGGGGACCCCTGGAGGA
TCAAATCATCCAAGCAAACCCTGCATTTGGAGGCTTTTGGCAACGCAAAAA
CAGCAAGAAATGATAACTCATCACGTTTTGGAAAAGTTCATCCGAATTCAC
TTTTGGTACAAGCGGCAAGCTGTCACTGTCTGACATCGAAACGTACCTGCT
GGAGAAGTCCCAGTACCTTTTTCAGTGAAGGCTGAGAGAAATATCACA
TTTTCTACCAGATCCTGTCAAATCAGAAACCAGAGCTGCTGGACATGCTG
CTGATCACCAACAATCCCTATGACTATTCCCTACATCTCCCAAGGAGAGGT
AACTGTGCGCTCCATCAACGACTCAGAAGAGCTGATGGCCACGGACAGCG
CCTTCGATGTGCTCGGCTTCACTCCAGAGGAGAAGATGGGCGTCTATAAA
CTCACGGGTGCCATCATGCACTATGGCAACATGAAATTCAAACAAAAGCA
GCGTGAGGAGCAGGCTGAGCCAGATGGGACGGAGGCTGCTGATAAATCAG
CTTACCCTAATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGTTCAT
CCCAGAGTCAAGGTAGGAAATGAATANNNNNNNNNNNNNNNNNNNNNNNNN
AGGAGGCCTTCAAATGT
GATGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGCGCCATGT
TGCCATGCATTAGCCACGGCGGGGATCTCACCTGTAAAGTGTGCATGC
AGACCTACGACAGCACACCATGCTCTTGGAGCACCTGAAGAGCCACTCT
GGGAAGTCCCTCAGGTGGCACCAGGAGAAAAACACCAGTGCACCCTG
TGACCGGCGTTTTCTACACAAGGAAGGACGTGAGACGGCACATGGTTGTCC
ACACGGGCCGAAAGACTTCCCTCTGCCAGTACTGTGCGCAACGCTTTGGC
AGGAAGGACCATCTGACACGCCATGTGAAGAAGAGCCACTCACAGGAGCT
GCTGAAAATCAAGACAGAGCCTCCTGATATGTTAGGCTTTTTAGCTTCTG
GGTCACCACCGTCTCTGTGAAGGAGGAGCTCAGCCCATGATGTGCGGT
ATGGGCCCAAACAAGACCCCATGATGAGCAAACCCTTTCCGAGTGGGGC
CCCTTTTCCAATGGGCATGTACAACCCTCATCAT-----CTCCAGGCCA
TGCTAATTTCTGGGGTAGGTCCTCA-----
CACCCGTCCNN
NNNNNNNNNNNTCATTCAT
GGGATGTTTACAGATCAGTGTGATGATCAAATATCGTGAACCTGCTGGCGA
GTAACTCTCCAAGTGTTCATATGCTCTGACCCAGCAAAAATACTTCAGT
AACTATAGTCCAGTCAATGGGTTTTACATTTATGAGCCCATCGAGTACTG
GAACTCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAATA
AGATCTCCTGGATAGACAACCTTTTCCACTACCTGCGGGTGGTGAATGTG
AGTGCATCAACCAAGAGCGACTTTCATCACCATCCTCAAGGGCTCCTTCTC
GCGCAGCCCGGAGTACCAGCACTTCAACCGAGGACATCATTTTCTCAAAGA
---ACCGTGAGACCG-----ATGAGTACGACATCATCGCCTCGCGGATG
TACTTGGTGGCACGGACCACGGAGAAGAAGCGTGAAGAAGTGGTGGAGCT
CCTGGAAAACCTTCGTCCTACTGATGCTGATCAACAGCATCAAGTTCATTG
CCTTCAATCCTACGTTTTGTGTTTATGGACCGCTACAGCTCCTCCGTCATC
TCACCCATCCTGACGTCAGGATTCAGCGTACTCACAACTCCTCATCCTCAC
TTTCNN
NNNNNNNNNNNNNNNGGTTTTACCAGTTTTGAGTGGCAGCCAGTTCCTCAAGAATGTGTCTA
CATCTTGCAATGTTGGCATTATTAATGGTCTCTCTGGATGGGATTCCTCG
GTGGATGACTTCCAGCTGACACCACTCGACGGTTTTCGCTATGATGT
GGCACTAGTATCAGCATTAAAGGATCTGGAGGAGGACATCATGGAGGGAC
TGAGAGAGAATGGAATGGAAGACAATGCTCACA-----ACTTCACTGTT
ATGATCAAAGAATCCTGTGATGGCATGGGCGATGTCAATGAGAAGCATGG

TGGAGGACCAGCTGTCCCTGAGAAGGCTGTGCGTTTCTCTTTCACTGTTA
TGTCGTCTCTTTTCGTAGCAGACAGTCAGGAG-----
-----GAAGAGGTCGCCATCTTCACAGAGCCAAAGCCAAACTC
AGAACTGTCCTGTAAGCCCTTTGCCGTGATGTTTGTGGATGAATCMAACC
ATGAGACTCACAGCCATCCTGTGTCCTTTAATTGCAGAGCGTAACGCA
ATGAAAGAGAGCAAGCTCATCCTGTCCATCGGTGGACTTCTTCGCTCCTT
CTGCTTTCACCTTAGAGGGACAGGATATGATGAGAAGATGGTGCCTGAGA
TGGAAAGGCTTTGAGGCCTCTGGGTCCACCTACATCTGCACTCTCTGTGAC
TCCAGTCGTGCAGAGGCCTCTCAAAACATGGTGCCTGCACTCCATCACCCG
CAGTCATGAAGAGAACCCTAGAACGTTATGAAATGTGGAGAACCAACCCAT
TTTTCTGAGTCTGTAGATGAGTTGCGAGATAGAGTCAAAGGAGTCTCTGCC
AAGCCCTTCATGGAGACCCATCCCACACTGGATGCCCTTACACTGTGACAT
CGGCAATGCCACTGAGATGTACAAAATATTCCAAGATGAGATTGGGGAGG
TGTACAAAAGGT---CAAT---CCCAGCCGGGAGGAGCGGCGGGGCTGG
AGGACAGCCTTAGATAAACAGCTGAGGAAGAGGATGAAGCTCAAACCAGT
AATGAGGATGAATGGGAACTATGCCCGCAGGCTAATGACCCTGGAGACTG
TGGAGGTGGTGTGTGAGCTGGTGCCCTCGGAGGAGAGGAGAGAGGCCCTG
AGGGAGCTTATGAAACTCTACATCCAGATGAAGCCTGTGTGGCGGCCAC
CTGTCCAGCCAAGGAGTGCCCTGACCAGCTGTGCCGCTACAGCTTTAACT
CCCAGTGCTTTGCTCAGGTCCTCTCCTCTAAGTTCAAATATAGATACAAT
GGAAAGATAACCAATTACCTGCATAAGACTCTGGCTCATGTGCCGTGAAT
CATAGACAGAGATGGATCCATAGGAGCCTGGGCCAGCGANNNNNNNNNNNNNNNNNNNNTCTTACACC
AT

CGAGATGGGTCCCTTGGGGCCCCGATGGAAGGAGAGCCACAGCCGTTCT
CCTGCTCCATTGAAGACCCACAAAACAGACAAAGTACAAGGGCATCAAG
ACGTACATTTTCGTACCGGGTGCACCCGAGCCACACTGGGCATCCTGTCTA
CAGACGCTACAAACACTTTGACTGGCTGTACAACCGTTACTGCACAAGT
TCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGA
TTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGTGGAT
GAACCACATGACCAGTCAACCAGTCTCTCCAGTATGAAGGGTTCGAGC
ACTTCTGATGTGTGCTGATGACAAGCAGTGGAAACTGGGTAAGAGACGG
GCAGAAAAAGACGAGATGGTGGGTGCCATTTTCATGCTGACCCTTCAGAT
CCCTAACGAGCACCAGGACCTTCAGGATGTTGAGGAGCGGATCGACTCCT
TCAAGTCCTTTGCTAAGAAGATGGATGACAGTGTGATGCAGCTCACACAT
GTGGCCTCAGAGCTGGTGCCTAAGCACCTGGGTGGGTTTCAGGAAGGAGTT
CCAGAGGCTGGGAAATGCCTTCCAGTCAATCAGCCAGGCATTCATGCTGG
ACCCTCCCCACAGCTCACAGAACTTAAACAACGCCATCTCCATNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNTGGGTT

TCATCATCGGAGTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTG
GTCAAAGACAAGAGCCTGCACCGAGCGCCCTACTATTTCCCTGCTGGACCT
GTGCGCCTCTGACATCCTGCGCTCCGCCATCTGCTTCCCCTTTGTCTTCA
CCTCGGTCAAGAATGGATCTGCCTGGACCTATGGCACGCTCACCTGCAA
GTGATCGCCTTCCCTGGGTGTGCTCTCCTGTTTCCACACGGCGTTTATGCT
ATTCTGCGTGAGCGTCACGCGCTACCTGGCCATAGCGCATCACCGTTTCT
ACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCCGTCATCTGCATGGTG
TGGACGTTGTGGTGGCTATGGCGTTCCCAGGAGTCTAGACGTAGGGAC
GTACTCGTTTATCCGGGAGGAGGACCAGTGCACGTTCCAGCACCGCTCGT
TCAGGGCAATGATTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTC
CTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCACGACCG
TCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTCAGCCAGAAATGGA
CCTTCCACGGGCCAGGCGCCAGCGGGCAGGCAGCGGCAACTGGCTGGCA
GGATTCGGTCGAGGCCCCACCCACCTACTTTGCTGGGCATTCGGCAGAA
CAGCAACGCAGCGGGCCGAGGCGTCTACTGGTATTGGATGAGTTCAAA

CAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCCTG
GCGCTGTGGGGGCCCTATCTGGTTGCTTGCTACTGGCGGGTGTGGCAAG
GGGCCCCGTGGTCCCTGGGGGCTACNN
NN
NN
ACTGGTCTGGCAGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCT
ATCCCCGAGCAAACCGAGGAGCCACTGTTGCCACCCCCCGCAGCGAT
GGTTTGTCAACC---CTGCCAACACCGACTGGACTTTGCTGCCTCGGCA
TACGACGCCGCC-----GATTCGCCGGTAACGCGGCCACCTTGCT
GTCCTACGACGCGGCCGGAGTGAAGGCTC-----TCCCCCTGCCGGCTG
CAGGCTGCTCCAATCGGCCTCTTGGCTATTACGCAGACCCGTCAG---GC
TGG---GGAGGACGCACGCCGCTCAGTACTGTGGCGTGAATAGCAAATC
CAGCTCGGTCTTTTCTGCTGGCCCTCTAACACTATCGGAGGCAGAGTGG
GGA---CC---AACTACCTGG-----CCGAGGA---GGGA---GAC
TC---AATCCCCACAGAGAGGTCAACG---AT---CGGCGGCTCGGAGGA
G---GCCAAACCCAAAGATATCAC---ATCAGA---GTCGAACTGGATAG
AG---ACGCCGTACATCTATTAAGTCCATCGATTCTAGCGACTCTGGGATC
TTTG---AACAGGCCAAAAGGAGACGGATCTCACCTTGTCTNNNNNN-----
-

NN
CGCTGGGGATAAATCCGTTTCGCGGATGG
GATGGGCGCCTTCAAATAAACACAGCTCCACGATATTGGCTCCGG--
-ACAAACGGCGTTTTCTCCAGACG---CCCGCTAT---GCAGCAGCC
GCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGCTCT--
-TACTCCACGGCTGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATC
GAGGATTCGGGGACGCCACCGG-----AGCGCAGCACAGTTTG
TTCGCCTC-----CGGGAGTTT---C-----GCAGGGCCACACGG
ACACTCAGATGCAGCAGGGCACCTGCTCTTCCCCGGGCTCCACGAG---C
AAGCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTG
GGCTTCTCGGGGACATGTACGGACGGCCGACCAGTATGGCCACGTTAC
AAGCCCGCGGT---CCGACCACTATGCTTCGACCCAGTTGCACGGCTACG
GCCCTATGAACATGAATATGGCCGCA---CACCACGAGCAGGGCCCTTC
TTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGAT
CGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACTTTTA
GCACGATGCACGAGCTCGTGACCCATCTGACGGTGGAGCATGTTGGNN
NN
NN

>Chelmon rostratus
AGCCTACTTATTCGAGCAGAAGTCAACCAGGAGCTCTTTTAGGGGA
TGACCAGATTTATAATGTTGTTGTAACAGCACATGCGTTTGTAATGATTT
TCTTTATAGTAATAACCAATTATGATTGGCGGCTTCGGAACTGACTTATT
CCACTAATAATTGGAGCCCCCGATATGGCCTTCCCACGAATAAATAACAT
AAGCTTCTGGCTTCTCCACCCTCCTTTTTCTACTACTTGCCTCTTCTG
GCGTAGAGGCTGGGGCCGGCACTGGCTGAACTGTTACCCCCATTAGCA
GGCAACCTCGCACACGCGGGAGCTTCTGTTGACCTGACCATTTTCTCCCT
TCATTTAGCAGGAATTTCTTCCATCTCGGTGCCATTAACCTTTATACTA
CAATTATTAATAAACCCTGCTATAACTCAATATCAAACCCCTTTA
TTTGTATGATCCGTTCTTATCACAGCCGTTTTACTCCTGCTGTCCCTTCC
TGTAATTGCCGCTGGGATTACCATGTTACTAACAGATCGTAACCTGAATA
CAACCTTCTTGATCCTGCGGGGGGAGGAGATCCTATTCTGTACCAACAT
CTT-----

-----TTCCTAGAGAGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGA
TCAACTATGACCTGGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTATC
TACAGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTAAAGATCCTGCAGAATGATGGCGTTGTTAAC
AGCCCGTGTGCCCGACCAAGAAAAACCAGCCATGCCCTCTTTCTCCTGGG
AGGACAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCYTGCGCCATCGGATGTAAGGTGTACATCACTGGTGGAA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTATGGGTCTACGACACAGTCCACGAGG
AATGGTGAAGGCGGCCCATGCTCATCGCCAGGTTTGGCCACGGCTCT
GCGGAACTGAAACACTGCCTCTACGTGGTGGGAGGTCACACGGCTGCAAC
TGGCTGCCTCCCGGCTTCCCGTCTGGATGACTACATTTGTGGTGTTTAGT
CGCTCAACAACGAGGCTGATACTGAATGAAGCAGAGTTAATCATGGCGCT
AGCCCAAGAGTTCCAGATGAGAGTGGTACCGGTGTCTCTGGAGGAACAGT
CTTTCCCGAGTATAGTCCAGGTGATCAGCGCTGCCACCATGTTGGTCAAGT
ATGCATGGAGCTCAGCTCATCACCTCACTCTTCCCTTCCAAGAGGAGCTGT
TGTGGTGGAGCTGTTCCCTTTTGTGTAAACCCAGAGCAGTACACTCCGT
ATAAAAACCTTGCCCTCCCTCCCAGGCATGGACCTTCACTATGTCTCTTGG
AGGAACACCAAGGAGGAGAATACCATCACGCATCCAGACAGACCCCTGGGA
ACAAGGGGGCATCGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGT
TGAGCAAAGATGTCCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCCGATCTACCAGGACACTTTGGTAGATATCCCTTCCTTCCCTGGAAGT
CGTCAA---AGAGGGCATGAAG---ACAAAGCCCAACTTGAAGAA---GT
CAAAGCCGGCCAACACAGTCCACCCGGGCCGGGTCAGAGAACCCCAAGTGT
CAAACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCGTGGAAATCTGAAATACCTTAAGGTGAGAGAGGTGAAATACGAGG
TGTGGATCCAGAAAAAAGATAACCAGCAAGGGGACTCTGGAGGATCAAATC
ATCCAGGCAAACCCCTGCGTTGGAGGCTTTTCGGCAATGCCAAAACGTTGAG
AAATGACAACCTCATCTCGGTTTGGAAAATTCATCCGAATTCACTTTGGTA
CGAGCGGCAAGCTGTCTGCTGCCGACATTGAGACATACCTGCTGGAGAAG
TCACGGGTCACCTTTCAGCTCAAGGCTGAGAGGAATTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTCGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCAAGGAGAAGTGACGGTC
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACGGACAGCGCCTTTGA
TGTGCTCGGCTTCACTCCGGATGAGAAGATGGGTGTCTATAAACTGACAG
GCGCCATCATGCACTATGGCAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCAGATGGGACGGAGGCTGCTGATAAATCAGCTTACCT
AATGGGTCTGAACTCTGCCGACCTCATCAAAGGGCTGTGCCACCCCAAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAAAGTGTAGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACGAAGCTGGGATATAAGCGGCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTATGAGAGCACGCCT
GTGCTCCTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCAGGTGGCAC
CAAGGAGAAAAAGCACCCGCTGTGACCACTGTGACCGTCTGTTTCTACACAC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCGGAAAGGACTTC
CTGTGCCAGTACTGTGCCCAACGCTTTGGCAGAAAAGGACCATCTGACTCG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAAATCAAGACGGAGC
CTCCGGATATGTTAGGGCTTTTAGCTTCTGGGTCAACCACCTTGTCCGTC

AAGGAGGAGCTCAGCCCCATGATGTGTGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCGTTCCCCAGTGGAGCCCCTTTTCAGATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCCGGTCCCTTGTCTGCAGCTAT
GGGCATGGGTTGTCACATGGAATATCTCATCTACGCCTCCTTCTCGTTCA
TGGGATGTTTTACAAAACAGTGACGGGTCAAATATCGTGAACCTGCTGGCG
AGTAACTCTCCGAGCGTTTTCGTATGCTCTGACCCAGCAAAAATACTTCAG
TAACTACAGTCCTGTGATTGGGTTTTACATTTATGAGCCCATAGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTGCCTCAACGAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATATTTCCAAG
A---ACGGGAGACCG-----ATGAGTACGACATTATCGCCTCGCGGAT
GTACTTGGTTGCACGGACGACAGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TGCTGGAGAAGCTTCGTCCGCTGATGCTGATCAACAGCATCAAAATTCATC
GCCTTCAATCCTACGTTTGTGTTTCATGGACCGGTACAGCTCCTCTGTTCAT
CTCGCCCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACT
GTAACGTCCGTTGGAGCTGGGTGTCTTGGGTTTTGATGGGCTTTTACCAGTT
TGAATGGCAGCCTGCTCTCAAAAATGTGTCTGCATCTTGCAATGTTGGCA
TTATTAATGGGCTCTCTGGATGGGCTTCCTCAGTGGATGACTCCCTGGCT
GACACTATCACTCGGCGGTTTTCGCTATGATGTAGCACTGGTGTGAGCATT
AAAAGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGCGCTTGCACCTCAGGCTTCAGTGTGATGATCAAGGAATCTTGT
GATGGCATGGGTGATGTGAGTGAAGCACGGTGGAGGACCAGTTGTTCC
TGAGAAGGCTGTACGTTTCTCTTTCATATTATGTCTGTCTCTATCCTGG
CAGCTGACAAGGAG-----GAAGAG
GTTACCATCTTCATGGAGCCAAAGCCAAACTCAGAATTGTCCTGTAAGCC
CCTTTGCCTGACATTTGTGGATGAGTCAGACCATGAGACGCTCACAGCCA
TCCTGCGGCCTATAGTCGCAGAGCGTAATGCAATGAAAGAGAGCAGACTC
ATCCTATCCATCGGTGGACTGCTTCGCTCCTTCCGCTTTTCACTTCAGAGG
TACAGGTTACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTTGAGGCCT
CACGGTCCACCTATGTCTGCACTCTGTGTGACTCTGGTTCGGGCAGAAGCT
TCTGAAAACATGGTGCTACACTCCATCACTCGCAGCCATGAAGAGAACCT
AGAACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGCAGATG
AGCTGCGAGACAGAGTCAAAGGGGTCTCCGCCAAGCCCTTCATGGAGACC
CATCCCACAATGGATGCATTACATTGCGACATAGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTACCAAAAGGC---CA
AC---CCCAGCCGGGAGGCGCGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAACAAGGTGAAGCTGAAACCAGTAATGAGGATGAATGGGAA
CTTTGCCCCCGGCTAATGACCCTGGAGGCTGTGGAGGCAGTGTGTGAGC
TGGTGGCCTCTGAGGCGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTT
TACCTCCAGATGAAGCCTGTGTGGCGGCCACCTGCCAGCCAAGGAGTG
CCCCGACCAGCTGTGCCGCTACAGCTTTAATTCCCAGCGCTTTGCTGACC
TCCTCTCCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTAC
CTGCACAAGACCTTGGCCCATGTGCCGAAATAATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAGGGCAACGAGTCCGGCAAACAAATCGTACA
CCATCGAGATGGGTCCCTTAGGGCCCCGGTGGAAAGGAGAGCCACAGCCT
TTCTCCTGTTCCATTGAAGACCCCACTAAGCAAACAAAGTTCAAGGGCAT
CAAGACGTACATTTTCGTACCGTGTACGCGGAGCCACACTGGGCATCCTG
TATACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCCCGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGT

GGATGAACCACATGACCAGTCACCCAGTCCTCTCCAGTATGAAGGCTTC
GAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAACCTGGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTGGGTGCCATTTTCATGCTGACCCTCC
AGATCCCTAACGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGGTGGAC
TCCTTCAAGGCCTTCGCTAAAAAATGGATGACAGCGTGATGCAGCTCAC
GCATGTTGCCTCGGAGCTGGTGCCTAAGCACCTCGGTGGGTTTAGGAAAG
AGTTCAGCGACTGGGGAATGCCTTCCAGTCTATCAGCCAGGCGTTCATG
CTGGACCCTCCCCACTGCTCAGAGACCTTCAACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNAC
TGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGGAAACCTCCTG
ATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACAGAGCGCCCTACTA
CTTCTGTTGGACCTGTGCGCCTCTGATATCCTCCGCTCCGCCATCTGCT
TCCCCCTTCGTTTACCTCGGTCAAGAATGGATCTGCCTGGACCTATGGC
ACGCTGACCTGTAAGGTGATCGCCTTCTGGGGTCTCTCCTGTTTCCA
CACGGCGTTTATGCTGTTCTGTGTCAGTGTACGCGCTACCTGGCCATCG
CACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTCGCC
GTCATCTGCATGGTGTGGACGTTGTCAGTGGCTATGGCATTTCGGCCGGT
GCTAGACGTGGGGACGTACTCTTTCATCCGCGAGGAGGACCAGTGCACGT
TCCAGCACCGTTTCTCAGGGCGAACGATTTCGCTGGGCTTCATGCTCCTG
CTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTT
CTTCGTCACGACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCCG
TCAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGCGGCG
GCCAACTGGCTGGCGGGATTTCGGTCGAGGCCACCCCGCCTACTTTGCT
GGGCATCCGGCAGAACAGCAACGCTGCGGGCCGAGGCGTCTGCTGGTAT
TGGATGAATTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACGTTTTTCTTCTGGCACTGTGGGGCCCTATCTGGTCGCCTGCTACTG
GCGGGTGTTTGCAAGGGGCCCGTGGTCCCGGGGGCTACCTGACGGCAG
CCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNCTCGCTTTCACCC
TGGCATGGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCCTCGGCA
ACAGCTTGCTATCCCCGACGAAACCGAGGAGCCACTGTTGCCACCCCC
CCGACGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGC
TGCTCGGCATACGACGCCGCT-----GATTTCGCCGGTAACGCGG
CCACCTTGCTGTCTTACGACGCGCCGGAGTGAAGGCTC-----TTCCC
CTGCCGACTGCAGGCTGTCCAACCGCCCTTTGGCTATTACGACAGCCC
GTCAG---GCTGG---GGAGGACGCACGCCACCGCAGTACTGCGGCGTGA
ACAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCACTAACTCTATCGGT
GGCAGAGCGGGCA---CC---AACTACCTGG-----CCGAGGA---
GGGA---GACTC---CATCCCGACGGAGCGGTACCG---AT---CGGCG
GCTCGGAGGAG---ACCAAACCCAAAGACATGAC---ATCAGA---GTCG
AACTGGATAGAG---ACGCCGTCTCCATTAAGTCCATCGACTCGAGCGA
TTCTGGCATCTTTG---AACAGGCCAAAAGGAGACGGATCTCACCTTCTG
CCACGCCG-----GTTTCAGAGACAGTGTCCCCTTAAATCAGAG
NN
NNNNNNNNNNNNNNNNCCACAGCACCCACGATATTGGCTCCGG---ACAGACGGCGTTCCTCCC
AGGCG---CCGGGCTAC---GCAGCAGCCGCCCTGGGA---CACCATCA-
-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAA
CTCCACCAGGGACTTCTCTTTCAGAAATCGGGGATTCGGGGACGCCACCG
G-----CGCGCAGCACAGTGTGTTGCTC-----CGGA
AGTTT---C-----GCAGGCCACATGGACTCAGATGCAGCGGGGCA
CCTGCTTCTCCCGGGCTCCACGAG---CAAGCGGCGAGCCATGCGTCTT
CCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTAC
GGACGGGCCGACAGTACGGCCACGTTACAAGCCCGCGGT---CCGACCA
CTACGCTTCGACCCAGCTGCACGGCTACGGCCCCATGAACATGAATATGG

CCGCA---CACCACGGAGCAGGGGCCCTTCTTTTCGATACATGAGGCAGCCG
ATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACAAA
CCCCAAAAGTCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTGGTGA
CCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGACCAACCACGTC
TGCTTCTGGGAGGATTCGCCTCCGAGAAGGAAAGCCATTCAAAGCCAAATA
CAAACCTGTGAATCATATCAAAGTACACACCGGAGAAAAGCCCTTCCCGT
GTCCGTTTCCCGGNNNNNNNNNN

>Chiasmodon sp

AGCCTTCTTATCCGAGCTGAACTCAGCCAACCAGGCGCCCTACTTGGGGA
TGACCAAATCTATAATGTTATCGTCACAGCCACGCCTTCGTAATAATTT
TCTTTATAGTAATACCAATCATAATTGGAGGATTCGGGAACTGGTTAATC
CCACTTATGATCGGGGCCCGGATATAGCCTTCCCTCGAATGAACAACAT
AAGCTTCTGACTTTTACCCCTTCGTTCCCTTCTCCTTCTCGCTTCTCCG
GAGTTGAAGCCGGTGCCGGAACCGGGTGAACAGTCTACCCCTTTAGCC
GGTAATTTAGCCCATGCCGGAGCATCCGTTGATTTAACTATTTTTTCTCT
TCATCTGGCAGGTATCTCATCAATCCTGGGGGCCATCAATTTTATCACGA
CAATTATTAACATAAAAACCTGCAGCTATCTCGCAGTACCAAACCTCCCTTA
TTTGTGGGGCCGCTTAATTACAGCTGTTCTTCTTCTACTCTCTCTCCC
AGTTCCTGGCCGAGGCATTACAATACTTCTAACAGACCGAAACCTAAATA
CAACCTTTTTTGATCCGGCAGGAGGGGGAGACCCAATTCTTTATCAACAC
TTATTTTGATTCTTC-----

-----NNNNNNNNNAGAAACCTTACCCGACTAACTGCCTCGGCATGCTGTT

GCTGTCTGACGCCCACCAGTGCACCAAGCTGTCAGAGCTCTCTTGGGGAA
TGTGCCTCAGCAACTTCCCGCTATTTGTAAGACAGAGGACTTCTCCAA
CTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGAGCTGGAGAC
AGAAGATGAGAGACTGTTTTATGAAGCTGCCCTGAATTGGATCAACTATG
ACCTGAAAGGAGGCACGTGTACCTTCCAGAGCTCCTGAGAACGGTCCGC
CTTGCCCTGCTGCCTGCCATCTTCTCATGGAAAACGTCTCGACAGAAGA
GCTGATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACGAGGCTATCC
GCTGTAAGCTGAAGATCTTGCAGAATGACGGCGTCTTAACAGCCCCTGT
GCTCGACCACGGAAAACAGCCATGCTCTCTTCTGCTGGGAGGGCAGAC
GTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGAGATCA
TCCCGAAGGCGGACATCCCCAGCCCAGGAAGGAGTTCAGCGCCTGTGCC
ATCGGCTGTAAGGTGTACATCACCGGCGGGA--GAGGCTC-AGAGAAAYGG
TGTGTCCAAAGATGTGTGGGTCTATGACACCATCCACGAGGAATGGTCCA
AAGCGGCGCCCATGCTCATCGCCAGGTTTGGCCACGGCTCTGCTGGCCTG

ANNNGGAT

GAATACATCGCTGTCTTCAGTCGTTCAACAACAAGACTGATACTG
AACGAACCCGAGCTAATCATGGCTCTGGCCCAGGAGTTCCAGATGAGAGT
TGTACAGTTTCCCTAGAGGAACAGTCTTTCCCCAGCATTGTCCAGGTGA
TCAGCGGTGCTTCAATGTTAGTCAGCATGCATGGAGCTCAGCTTATCACC
TACTCTTCCCTCCCCAAGGAGCTACTGTAGTGGAGCTGTTCCCCCTTGC
TGTGAACTCAGAGCAGTACACCCCATATAAAAACCTTGCCTCCCTTCCAG
GAATGGACCTTCATTATATTTCCCTGGAGGAATACTCAGGAGGAAAACACT
GTCACCCATCCAGACAGACCCTGGGAACAAGGAGGCATCATTCACTTGGA
CAAGGAGGAGCAGGAGCGAATTCTGAGCAGCAAAGATGTCCCCAGGCACC
TGTGCTGCCGCAACCCGGAGTGGCTCTTCCGAATCTATCAGGACACATTG
GTAGACATTCCTTCTTCCCTGGARGTCCTCAA---CGAGGGAATGAAG--
-ACCAAGCCCAGCTYGAAGAA---GTCCAAGTCAGCTAGTACAGTCCATC
CAGGCCGGGTGAGAGAAGCCCAGTGTACAGACCTCAGTACAGACCACCAAT

GAGGCTAAACTCACAGTCTCCTGGCAGATCCCATGGAATCTGAAATACTT
GAAAGTAAGAGAGGTGAAGTACGAGGTG-----AAAAGAGACACCA
GCAAGGGAACTCTGGAGGATCAGATCATCCAGGCGAACCCGGCGCTGGAG
GCCTTCGGGAACGCCAAAACGCTGAGGAATGACAACTCGTCCCGTTTTGG
AAAGTTCATCCGAATTCACTTTTGGAACCAGCGGAAAACGTGTCGTCCGCTG
ACATCGAGACGTACCTGCTGGAGAAGTCTCGCGTCACCTATCAGCTCAAG
GCTGAGAGGGACTACCACATCTTCTACCAGATCCTGTCCAATCAGAAGCC
AGAGCTGCTGGACCTGCTGCTAATCACCAACAACCCCTACGACTACTCCT
ACATCTCCCAAGGAGAGGTAACGGTCGCCTCCATCAACGACTCAGAGGAG
CTGATGGCCACCGACAGCGCCTTCGACGTGCTGGGCTTCACGCCGGAGGA
GAAGATGGGCATCTATAAACTGACCGGCGCCATCATGCACCACGGCAACA
TGAAGTTC AAGCAGAAGCAGCGTGAGGAGCAGGCGGAGCCTGACGGGACG
GAGGCTGCTGATAAAATCAGCTTACCTGATGGGACTGAACTCTGCTGACCT
CATCAAAGGATTGTGTCATCCCAGAGTCAAGGTAGGAAACGAGTACGTCA
CCAAAGGCCAGAGCGTGGACCAGGTCCACTACCCCAACAAGGAGGCCTTC
AAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGCG
CCATGTGGCCATGCACTCCGCCACGGCGGGGGATCTCACCTGTAAAGTGT
GCATGCAGAGTTATGAGAGCACCCCTGTTCTCTTAGAGCACCTCAAGAGC
CACTCGGGGAAGTCCTCGGGCGGAGCCAAGGAGAAAAAGCATCCGTGTGA
CCACTGCGACC GCCGTTTTCTATAACGCGAAAGATGTGAGACGGCACATGG
TGGTTACACAGGCCGAAAGGACTTCTTGTGCCAGTACTGTGCCAGCGC
TTTTGGAAGGAAGGACCACCTGACCCGCCACGTGAAGAAGAGCCACTCACA
GGAGCTGCTGAAGATCAAGACGGAGCCTCCTGATATGTTAGGTCTTTTAG
CCTCGGGGTACCACCGTGTCTGTGAAGGAGGAGCTTAGCCCCATGATG
TGCGGCATGGGTCCCAATAAAGACCCCATGATGGGCAAACCGTTCCCTAG
TGGCGCCCTTTTCCGATGGGCATGTACAACCCCCACCAC-----CTTC
AGGCCATGTCTAATTCTGGGGTGGGTTCATGCA-----CACCCGTCCCTG
ATGCCAGCTCCCTGTCTGCAGCTATGGGCATGGGCTGTACATGGAATA
TCTCATCTACGCCTCATTCTCATTCATGGGATGTTTACAAATCAGTGACG
GATCGAACATAGTGAACCTGCTGGCTAGTAACTCTCCGAGTGTTTCATAC
GCTCTGACCCAGCAGAAATACTTCAGCAACTACAGTCCTGTGATTGGCTT
TTACATTTACGAGCCCATCGAGTACTGGAAGTCCACAGTGCAGGAGCACC
TGAAGACTCTGAGTCACGGCTTCAACAAGATCTCCTGGATGGACAACCTC
TTCCACTACCTGCGGGTGGTGAATGTGAGCGCATCGACCAAGAACGACTT
CATCACCATCCTCAAGGGCTCCTTCTGCGCAGCCAGAGTACCAGCATT
TCACTGAGGACATCATATTTTCCAAAA--ACCGCGAGACTG-----AC
GAATATAACATTATCGCCTCACGCTTGTATTTGGTGGCACGGACCACAGA
GAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAGAAGCTTCGCCCTTGA
TGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCCACGTTTGTGTT
ATGGACCGCTACAGCTCCTCCGTATCTCACCCATCCTGACCTCAGGCTT
CAGCGTGCTACCATCCTCATCCTCACTTTCTTCTGGTTCATCAACCCTT
TGGGGAACCTTCTGGCTCATCCTCACGGTTACGTCCGTGGAGCTGGGCGTNNNNNNNNNNNNNNNNNNNN
NN
NN
NN
NNNG
AGAAACACGGTGGAGGACCACCTGTTCCTGAAAAGGCTGTACGTTTCTCT
TTCACTACTATATGCTGTCTGTCTGCTGGCAGATGATGAGGAG-----
-----GAGGCAGTTACAATTTTACGGAGCCGA
AGCCCAACTCAGAACTGTCCTGTAAGCCTCTTTGCTTGATGTTAGTGGAT
GAATCAGACCATGAGACCCTCACAGCTCTCCTGGGGCCCATAGTTGCAGA
GCGTAATGCAATGAAAGAGAGCAGGCTTATCCTTTCAATCGGCGGCCTGC
TTCGCTCCTTCGCTTCCACTTCAGAGGCACGGGATATGATGAGAAGATG

GTGCGTGAGATGGAGGGCCTGGAGGCCTCAGGGTCCAGCTATGTCTGCAC
TCTGTGTGATTCCAGTCGGGCAGAGGCATCTCAAAACATGGTGCTACACT
CCATCACACGCAGCCATGACGAGAACCTTGAATGTTATGAAATATGGAGA
ACCAACCCTTTTTCTGAGTCAGGAGACGAGCTGCGGGACAGAGTCAAAGG
GGTCTCTGCCAAGCCCTTCATGGAGACCCATCCCACACTGGATGCATTAC
ACTGTGACATTGGCAATGCCACTGAGTTCTACAAAATTTTTCCAGGATGAA
ATTGGGGAGGTGTTCACAAAGGT---CAAT---CCCAGCAGAGAGGAACG
GCGGAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGTTGAAGC
TTAAACCAGTAATGAGGATGAATGGGAACTATGCCCGCAGGCTAATGACT
CAGGAGGCTGTGGAGGCGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGGAG
GGAGGTCCTGAGGGAGCTTATGAGACTATACATCCAGATGAAGCCTGTGT
GGCGGCCACCTGCCATCCAAGGAGTGCCCTGACCAGCTGTGCCGCTAT
AGCTTTAACTCCCAGAGCTTTGCTGACCTCCTCTTCTGCCTTCAAATA
TAGGTACAATGGAAAAGATAAGCAATTACCTGCACAAGACTCTGGCCCATG
TCCCTGAAATCATAGAGAGAGATGGATCCATCGGAGCCTGGGCCAGCGAA
GGAAACGAGTCANNNNNNNNNNTCATAACAATTGAGATGGGCCCAGTGGGGCCCCAGTG
GAAGGAGAGCCCACAGCCTTTTTTCTGCTCAGTTGAAGACCCAACAAAAC
AGACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTATCGGGTCATGCCG
AGTCACACAGGGCACCCTGCTACAGGCGCTACAAAACACTTTGACTGGCT
GTACAACCGCTACTGCACAAGTTCACTGTGATCTCTGTGCCTCACCTGC
CCGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTTATCGAGAAGCGG
AAGAGACGACTGATATTTGTGGATGAATCACATGACCAGTCACCTGTCTCT
CTCCCAGTACGAAGGCTTTGAGCACTTTCTGATGTGTGCCGATGACAAGC
AGTGGAAGCTGGGCAAAGACGAGCWCAGGAAGGATGAGATGGTGGGCGCC
CATTTTCATGCTGACTCTCCAGATCCCCTAATGAGCACCAGGACCTTCAGGA
TGTAGAGGAGAGGGTAGACACCTTCAAGGCCCTTTGCTAAGAAAATGGACG
ACAGCGTCATGCAGCTCACACATGTTGCCTCGGAGCTGGTGCCTAAGCAC
CTGGGTGGATTTCAGGAAGGAGTTCAGCGGCTGGGAAATGCCTTCCAGTC
CATTAGCCAGGCATTCATGCTGGACCCTCCCCATAGCTCAGACACCCTCA
ACAACGCCNNNNNNNNNNNNNNNNNNNACAGTTCCTCAAACACTGACCTCTCTGGGTTTCATCATTGGCGT
CGGTGTGGTTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGA
GCCTTACCAGACACCCTACTATTTCCCTGCTGGACCTGTGCCTCCGAT
ATCCTTCGCTCCGCCATCTGCTTCCCCTTTGCTTACCTCGGTCAGAA
TGGATCCGCCCTGGACGTATGGCACGCTGACCTGCAAAGTGATCGCTTCC
TGGGTGTGCTCTCCTGTTTCCACACGGCGTTCATGCTATTTCTGCGTGAGC
GTCACCCGCTACCTGGCCATCGCCACCACCGTTCCTACACCAAGAGGCT
GACCTTCTGGACCTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGTCCG
TGGCTATGGCGTTCCCGCCGGTGTAGACGTAGGGACATACTCTTTTATC
CGGGAGGAGGACAGTGCACGTTCCAGCACCCTCCTTCCAGGGCGAATGA
TTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATTCTCCTGGCCACACAGC
TGGTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAG
CCTGTCCAGTTTGTGCCCTGCTGTCAGCCAGA ACTGGACCTTCCACGGGCC
AGGCGCCAGCGGGCAGGCGGCCGCAACTGGCTGGCCGATTTGGTAGAG
GCCCCACCCCGCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCA
GGCCGAGGCGTCTACTGGTATTGGATGAATTCAAACAGAGAAGAGGAT
TAGTAGGATGTTCTACATCATGACTTTTTTTCTTCCGGCACTGTGGGGG
CCTATCTGGTAGCCTGCTACTGGCGGGTGTGTGCAAGGGGCCCTGTAGTC
CCTGGAGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCGCAGGCTGG
GGTCAATCCATTTCATCTGNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGAC
TGGTCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTAT
CCCCGAGCAAACCGAGGAGCCCACTGTTGCCACCCCGCAGCGATGG
TTTGTACCC---CTGCCAACACCGACTGGACTTTGCTGCCTCGGCATA
CGACGCGGCT-----GATTTTCGCCGGTAACGCAGCCACCTTGCTGT

CCTATGCAGCGGCCGGAGTGAAGGCTC-----TCCCCTGCCGACCGCA
GGCTGCTCCAACCGACCTCTTGGCTATTACGCAGACCCGTCCG---GCTG
G---GGAGGACGCACGCCGCCGAGTACTGCGGGCTAAACAGCAAAACCA
GCTCGGTCTTTTCTGCTGGCCCGCAACTCTATCGGCGGCAGAGCAGGC
A---CC---AACTACCTGG-----CCGAGGA---GGGA---GACTC
---CATCCCCGACGGAGAGGTCACCC---AT---C---GGCTCCGAGGAG-
--ACCAAACCCAAAGACATAAC---ATCAGA---GTCGAGCTGGATAGAG
---ACACCGCCCTCCATTAAGTCCATCGATTCAAGCGATTCTGGTATCTT
TG---AACAGGCCAAGAGGAGAAGAATCTCACCCCTTGCCACGCCG----
-----GTTTCAGAGACAGTGTCCCAGTTAAAATCCGAGNNNNNNNNNNCAGGCGAAGTCA
CAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCAGATGGGATGGGC
GCCTTCAAATAAAACCACAGCTCCACGATATTGGCTCCGG---ACAAAC
GGCGTTTTCTCCAGGCA---CCCGGTAC---GCAGCAGCCGCCCTGG
GA---CACCACCA-----CCACCCGACCCACGTTGGCTCT---TACTCC
ACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGCTT
CGGGGACGCCACCGG-----GGCGCAGCACAGTTTGTTCGCCT
C-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCA
GATGCGGCAGGGCACCTGCTCTTCCCGGGGCTCCATGAG---CAAGCGGC
GAGCCATGCGTCTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCT
CGGGGGACATGTACGGACGGGCTGACCAGTACGGCCACGTTACGAGCCCG
AGGT---CCGACCACTACGCTTCGACCCAGCTGCACGGCTATGGCCCAT
GAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCTTCTTTTCGAT
ACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCGAGCCG
GAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGAT
GCATGAGCTAGTGACCCATCTGACGGTGGAGCATGTGGGGGACCGGAGC
AGACCAACCACATCTGCTTCTGGGAAGAGTGCTCCAGAGAAGGGAAGCCA
TTCAAAGCCAAATACAAACTTGTGAATCATATCAGAGTACACACCGGAGA
AAAGCCCTTTCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

>Chirocentrus dorab

AGCCTGCTCATCCGAGCCGAATTGAGCCAACCGGGGGCCCTCCTTGGAGA
CGACCAGATCTACAACGTCAATTGTTACCGCACATGCATTCGTAATAATCT
TCTTTATGGTCATGCCATTCTCATCGGAGGGTTCGGCAACTGACTAGTC
CCCCTCATGATCGGGGCGCCGATATAGCATTCCCCGTATAAACAACAT
GAGCTTTTGGCTACTGCCCCCTCATTTCTTTTACTGCTTGCCCTCATCCG
CAGTTGAGGCGGGAGCGGGCACTGGGTGAACGGTCTACCCCCCCTGGCC
GGTAATCTTGCCACGCAGGTGCCTCAGTCGACCTGACCATTTTCTCACT
CCACCTGGCAGGTGTCTCATCTATCTCGGGCTATTAATTTCAATTACCA
CAATTATCAACATGAAACCTCCCGCCATTTACAATAACCAGACACCCCTA
TTTGTCTGAGCGGTA TAGTCACTGCAGTACTCCTCCTCCTTTCTCTTCC
CGTGCTAGCGGCAGGAATTACCATGCTGCTTACGGACCGAAACTTAAACA
CGACGTTCTTCGACCCCGCTGGTGGGGGGGACCCATCCTCTACCAACANNNNNNNNNNNNNNNNNNNNNN
NN
NN
NNNT
TCCTGGAGAAGAACCTGCACCCGTCCAAGTGTCTGGGCATGCTCCTGCTG
TCCGACGCCACCAGTGCACCCAGCTCTCCAGCTGTCTGGAGCATGTG
CCTGAGCAACTTCCCCGCCATCAGCAAGAGCGAGGAGTTCCTGCAGCTGC
CCAAGGACATGCTGGTCCAGCTGCTGTCCACGAGGAGCTGGAGACGGAG
GACGAGCGGCTGGTCTACGAGTCCGCCCTCAACTGGGTCAACTACGACCT
GGAGCGCCGCACTGCCACCTGCCGAGCTGCTGCGCACCGTGCGCCTGG
CGCTGCTTCCCGCCATCTTCTGATGGAGAACGTCCTCACCAGGAGCTG
ATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACGAGGCCATCCGGTG
CAAGCTGCGCATCCTGCAGAACGACGGCCTGGTCAACAGCCCTGCGCC

GGCCCCGCAAGACCAGCCACGCCCTCTTCCTGCTGGGCGGCCCCACCTTC
ATGTGCGACAAGCTCTACCTGGTGGACCAGAAGGCCAAGGAGATCATCCC
CAAGGCCGACATCCCCAGCCCCCGCAAGGAGTTCAGCGCCTGCGCTATCG
GCTGCAAGGTGTACGTGACGGGCGGGC--GGGGCTC-CGAGAACGGCGTG
TCCAAGGACGTGTGGGTGTACGACACGCTGCACGAAGAGTGGTCCAAGGC
GCCGCCATGCTGATCGCCCCGCTTCGGGCACGGCTCGGCCGAGCTGCGCC
ACTGCCGTGTACGTGGTGGGCGGGCACACGGCCGCCACGGGCTGCCTGCCG
GCCTCCCCGTCCTGATGACTACATTGTAGTGTTTACGAGATCTATTAATA
GGCTGATACTCAACGAGGCTGAGCTGATTCTGGCACTAGCCCAAGAGTTC
CAGATGAGGACCGTCACAGTGTCCCTTGAGGACCAGTCGTTCTCAAGTAT
CATTCAAGTGATCAGTGGGGCATCCATGCTAGTGAGCATGCATGGAGCCC
AGCTCATCACTTCCCTGTTTTCTGCCTCGAGGAGCAGTTATGGTGGAACCTT
TTCCCTATGCTGTGAACCCCGACCATTATACTCCTTACAAGACTCTTG
TTCCCTGCCAGGCATGGACCTTCAATATGCAGCTTGGAAGAACACGATAA
TGGAGAACTCTGTAGCTTATCCAGAGCGACCCTGGGATCAAGGTGGC
TCTCATTTGGATAAGGATGAACAAGACCGCATCCTTGCAAGTAAGGAAGT
GCCCAGGCATCTATGTTGCAGTAACCCGGAATGGCTTTTTCCGCATTTATC
AGGATACATTGGTGGACATAACATCGTTCATGGCTACCCTCAG---AAGA
ACTGTACAA--ATCAAGCCGAATTTGAAAAA---GGCCAGACCTGCAAG
CACAGTTCACCCAGGCCGAGTAAGGGAGCCTAAATGTCAGACTTCAGTCC
AAGCTGCCAATGAGGCCAAGTTGACGGTGTCTTGCCAAATTCCTGGAAC
CTCAAGTACCTAAAGGTTTCGTGAAGTCAAATATGAGGTGTGGATACAGAA
AAAGGATGCTAGTAAGGGGACTCTGGAGGATCAAATCATCCAGGCCAACC
CCGCTCTGGAGGCGTTTTGGGAATGCCAAAACACTGAGAAACGACAACCTC
TCTCGCTTTGGGAAATTCATTTCGTATTCACCTTTGGAACAGTGGAAGCT
TTCCCTCTGCTGACATTGAGACTTACCTCCTGGAAAAGTCCAGGGTGACCT
TTCAGCTTAAGGCTGAGAGGAACCTACCACATCTTCTATCAGATCATGTCC
AATGAAAAGCCTGAGTTGTTAGACATGTTGTTGATCACCATAACCTTA
TGATTACTCTTATGTCTCTCAAGGAGAGATCGCTGTGGCCTCCATCAACG
ACTCAGAGGAGCTGATTGCCACCGACAGTGCCTTTGATGTGCTTGGCTTC
ACTGGTGAAGAGAAAATGGCAGTCTACAAGCTGACTGGTGCCATCATGCA
CCATGGCAACATGAAATTC AAGCAGAAGCAGAGAGAAGAGCAGGCCGAGC
CAGACGGCACAGAGTCTGCTGACAAGTCTGCTTACCTGATGGGATTAAC
TCCGCAGACCTCCTCAAAGGACTCTGCCACCCAAGGGTCAAGGTAGGCAA
TGAGTACGTACCAAAGGTGAGAATGTAGACCAAGTTTACTATCCCAACA
AGGAGGCCTTCAAGTGCGAGGAGTGCGGCAAGCACTACAACACCAAGCTG
GGCTACAAGCGGCACGTGGCCATGCACTCAGCCACGGCAGGCGACCTGAC
TTGCAAGGTCTGCCTGCAGAGCTACGAGAGCACGCCGGTGTGCTGGAGC
ACCTCAAGAGCCACTCGGGCAAGAGCTCGGGTGGCGCCAAGGAGAAGAAG
CACCCGTGTGACCACTGCGAACGGCGCTTCTACACGCGCAAGGACGTGAG
GCGCCACATGGTGGTGCACACGGGACGCAAGGACTTCCTGTGCCAGTACT
GTGCCCAGCGCTTCGGCCGCAAGGATCACCTCACGCGTCACGTCAAGAAG
AGCCACTCACAGGAGCTGTTGAAAATCAAGACAGAGCCGCCGGACATGCT
GGGTCTGTTGGGCTCAGGATCGCCTCCCTGCTCTGTCAAGGAGGAACCTCA
GCCCCATGATGTGCAGCATGGGCTCGGCCGAGACCCCATGATGGCCAAG
CCCTTCCCCACTGGAGCGCCATTCCCCATGAGTATGTACAACCCGCACCA
C-----CTCCAGGCCATGTCCAACCCGGGGGTGGGCCACCATCACCACC
ACCCTCCCTGGTGGCCAGCTCGCTGTCAGCTGCTATGGGCATGGGCTGC
CACATGGAG-----

-
>Chitala chitala

----ACAAGCGAAGTCACAGACAGAGAAGTGGCTTTGGGGATAAAATCCGT
TTGCCGACGGGATGGGTGCTTTTAAAATCAACCACAGTACCCACGATTTG
GGGACTGG---TCAAACAGCGTTACCTCGCAGGCT---CCGGGCTAT--
-GCGGCTGCAGCCCTGGGA---CATCATCA-----CCATCCTACCCATG
TCAGCTCC---TATTCCACGGCGGCTTTCAACTCTACCCGGGACTTTCTG
TTTCGAAACAGGGGTTTGGAGATGCGGCGAC-----TGCTCA
GCACAGTCTTTTTGCCACCGC---AGCAGGAGGCTT---C-----GCAG
GGCCACACGGACACTCAGATGCTGCGGGACATCTTCTTTTTCCCGGACTT
CACGAA---CAAGCGGCCACCCACGCCACTTCCAATGTTGTAAACAGTCA
GATGCGACTGGGATTTTCGGGGGAAAATGTATGGCAGAGCAGAGCAGTACG
GCCACGTAACGAGCCCCAGGT---CCGATCACTATGCGTCTACCCAGTTA
CACGGCTATGGCCCCATGAACATGAATATGGCAGCA---CACCATGGAGC
CGGGGCCCTTCTTTTCGCTATATGAGGCAGCCGATAAAAACAAGAGCTTATTT
GCAAATGGATTGAACCGGAACAGCTAACGAACCCGAAAAAGTCTTGCAAC
AAAACTTTCAGCACAATGCACGAGCTTGTGACTCACCTTACAGTGGAAACA
TGTTGGGGGACCAGAACAATCGAATCACATATGCTTTTGGGAAGAGTGTG
CCCGGGAAGGAAAACCGTTTTAAAGCGAAGTACAAGCTTGTGAATCACATC
AGAGTACACACTGGCGAGAAACCCCTCCCGTGCCCTTTCCCGGGGTGTGG
GAAA

>Chlorophthalmus agassizi

AGCCTCCTTATTCGGGCAGAACTAAGCCAGCCCCGAGCCCTTCTAGGCGA
CGATCAGATTTTACAATGTTATCGTTACAGCCACGCCTTTGTAATGATTT
TCTTCATAGTAATGCCAATTATGATTGGAGGGTTTGGAAACTGGCTCATC
CCGCTTATGATTGGAGCCCCGACATGGCATTCCCCCGGATAAAATAACAT
GAGCTTCTGGCTTCTTCCCTCCATCTTTCCTCCTCCTCCTCGCTTCTCTG
CAGTAGAGGCAGGAGCCGGCACAGGGTGAACAGTCTACCCTCCTCTTGCC
AGTAATCTAGCGCACGCCGAGCCTCTGTTGACCTAACCATCTTTTCGCT
TCACCTAGCAGGAATTTCCCTCCATCTTGGGTGCTATCAACTTTATTACAA
CCATCATTAATATGAAGCCCCCAGCAATTAATCAATATCAAACCCCCCTG
TTTGTATGAGCAGTCTGATTACCGCGTCTTCTTCTCCTATCCCTCCC
TGTTTTAGCAGCAGGCATTACGATGCTTCTTACTGATCGTAATCTAAACA
CAACGTTCTTCGACCCGGCGGGGGAGGAGACCCAATCCTCTATCAACAC
CTATCTGATTCTTTGGCCACCCAGAGGTTTATATTTAATTCTTCCAGG
CTTTGGTATAATCTCCCATATTGTTGCTTACTACTCGGGTAAAAAGAAC
CTTTCGGCTACATGGGTATAGTTTGGAGCCATGATAGCAATTGGCCTTCTT
GGGTTCAATTGTTTGGGCTCCCTCATGTTTACAGTCGGGATGGACGTAGA
CACACGTGCCTATTCTGGAGAGGAACCTGCACCCATCCAACCTGCCCTGG
CATGCTGCTACTGTCAGATGCCCACCAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCATGAAGA
GCTGGAGACAGAAGATGAGAGACTAGTTTATGAGGCTGCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTGCCAGAGCTGTTGAGA
ACCGTGCGCCTGGCCTTGCTTCCCAGCATCTTCCCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAGGCAAAGAGCAAGGAGTTGGTGGATG
AGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTCAAC
AGTCCCCTGTGCCCGGCCAGAAAGACCAGCCACGCCCTTTTCCCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATTGGCTGTAAGGTCTACGTACAGGCGGGA--GAGGCTC-
AGAGAACGGTGTATCTAAAGACGTGTGGGTCTATGACACCGTCCACGAGG
AGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT

GCTGAGCTCAAACACTGCCTCTATGTGGTTGGAGGACACACAGCAGCCAC
TGGCTGCCTCCCAGCCTCTCCGTCTGGATGAGTACATTGTGGTGTTCAGT
CGTTCCACAACAAGGCTAATTCTGAACGAAGCAGAGCTGATACTGGCACT
GGCCCAAGAGTTTCAGATGAGGGTTGTTACAGTGTCCCTGGAGGAACAGT
CTTTCCCCAGCATCGTACAGGTCATCAACGGGGCTCCATGTTGGTCAGT
ATGCACGGAGCTCAGCTCGTCACCTCACTCTTCCCTCCCTAGAGGAGCTGC
TGTAGTGGAGCTCTTCCCCTATGCTGTGAACCCGGAGCAGTACACCCCAT
ACAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAGTACGTTTCCTGG
AGGAACACTATTGAGGAGAACACGGTCACCCACCCAGACAGACCCCTGGGA
CCAAGGAGGCATTGCCATTTGGAGAAAAGAGGAGCAGGAGAGAATCCTAG
CCAGCAAGGATGTCCCAGGCACCTYTGTGCCGAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTAGACATCCCCCTCCTTCCCTGGAAGT
CCTCAA---GGAGGGCCTGAAG---ACAAGGCCGAGCTTGAAGAA---GT
CCAAGCCAGCCAGCACGGTTACCCGGGCGGGTCCGAGAACCCCA-TGC
CAGACTTCAGTGCAAGCCGCCGACGAGGCAAAACTCACAGTATCCTGGCA
GATCCCATGGAACCTTAAGTATCT-AAGGTGCGAGAGGTGAAGTACGA-G
TGTGGATCCAGAAAAGGACACAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTTCAGGCGAACCCCTGCACTGGAGGCTTTTGGTAATGCCAAAACACTGAG
GAACGATAATTCTCCCGTTTTGGAAAATTCATCCKCATCCACTTTGGAA
ACAGTGGTAAACTGTCTCTGCGGACATTGAGACCTACCTGCTGGAGAAG
TCACGGGTCACCTTTCAGCTTAWGGCAGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTACTGATCA
CCAACAACCCCTATGACTACTCGTACATCTCCAAGGAGAAGTAACCGTA
GCATCCATCAATGATTTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTACSCAMGAGGAGAAGATGGGAGTCTACAAGTTGATAG
GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCAAAGCAACGTGAG
GAGCAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCGGCAGACCTAATCAAAGGACTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGGTTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAAGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACCCCG
GTGCTCCTGGAACACCTCAAGAGCCACTCGGGGAAGTCCTCGGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCCGTGCTTCTACACGC
GGAAGGACGTGAGGCGGCACATGGTTGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGATCATCTGACACG
GCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATTAAGACGGAGC
CTCCGGATATGTTGGGTCTCCTGGGCTCTGGCTCGCCACCTTGCTCTGTC
AAGGAGGAGCTGAGCCCCATGATGTGCAGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCCCTTCCCAGCGGGACCCCTTCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCTAATCCTGGGGTGGGC
CACCC-----CACCCCTCCCTTATGCCTGGTTCTCTATCTGCAGCTAT
GGGCATGGGCTGTCAATGGAGTATCTCATCTACGCYTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGCGACGGGTCGAACGTCGTGAATTTGCTGGCC
AGTAACTCTCCGAGCGTCTCGTACGCCCTGACGCAGCAGAAGTACTTCAG
TAACTATAGCCCCGTGATCGGGTTTACATCTATGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGTTGAGCCACGGCTTCAAC
AAGATCTCCTGGGTGGACAACTTCGTCCACTACCTGCGGACGGCGAACGT
GAGCGCGTCGACCAAGGCCGACTTCGTGCGCGTCCCAAGGGCTCCTTCC
TGAGGAGCCCGGCTACCAGCACTTCACGGAGGACATCATCTTCTCCAAG
A---GCCACGAGAGCG-----ACGGCTACGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCACCGAGAAGAGGCGGAGGACGTGGTGGAGC
TCCTGGAGAAGCTCCGGCCGCTGATGCTGATCAACAGCATCAAGTTCATC

GGAAACCTGGCCCACGCAGGAGCTTCCGTAGACCTAACAATCTTCTCCCT
ACACCTTGCAGGTATCTCCTCAATCTTGGAGCCATTAACCTTATTACAA
CTATTATCAACATGAAGCCCCCGCAATCTCACAATACCAGACCCCTCTA
TTCGTGTGGGCTCTACTAATCACCGCGTCTTCTACTCCTCTCCCTCCC
CGTTCTAGCAGCCGGCATCACAATGCTCCTAACAGATCGAAATCTTAACA
CAACTTCTTTGACCAGCAGGAGGGGTGACCCCATTTCTATAACCAACAC
CTC-----

-----TTCTGGAGAGGAACCTGCACCCGTCCAACCTGCCTAGG
CATGCTGCTGCTCTCGGACGCCACCAGTGCGCCAAGCTGTGGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCCATCTGTAAGACGGAGGAC
TTCTTGCAGCTGCCAAGGACATGGTAGTGCAGCTGCTCTCCACGAGGA
GCTGGAGACGGAGGACGAGCGGCTGGTGTACGAGGCGGCCCTCGGCTGGC
TGAACTACGACCTGGACGGGAGGCACTGCCACCTGCCGGAGCTGCTCCAG
ACAGTCCGCCTGGCTCTGCTGCCGGCCATCTTCTGATGGAGAACGTGTC
GACGGAGGAGCTGATCAACTCCCAGGCCAGGAGCAAGGAGCTGGTGGACG
AGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAACGATGGCGTGGTCAAC
AGCCCGTGCACACGGCCCCGCAAGACCAGCCACGCCCTCTTCTGCTGGG
CGGCCAGACGTTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCTGACATCCCGAGCCCCGCAAGGAGTTCAGC
GCGTGTGCCATTGGCTGCCGGGTGTACATCACCGGCGGGC--GGGCTC-
CGAGAACGGCGTCTCCAAGACGTGTGGGTGTACGACACCGTGCACGAAG
AGTGGTCCAAGGCAGCACCCATGCTCATCGCCCGCTTCGGCCACGGCTCG
GCCGAGCTGAAACACTGCCTCTATGTGGTGGGAGTTCATACTGCGGCTAC
AGGCTGCCTACCGCCCTCCCCGTCGGGATGAGTACGTCGTGGTGTTCAGT
CGTTTCGACAACAAGGCTGATTCTGAATGAAGCGGAGCTAATTATGGCTCT
TGCACAAGAGTTCAGATGAGGGTGGTCAACCGTCTCCCTGGAGGAACAGC
CGTTTGCCAGTATCGTGCAGGTGATCAGCGGAGCCAGCGTGTGGTAAGC
ATGCATGGAGCTCAGCTCGTACATCACTGTTCTGCCAGAGGAGCAGC
CGTGGTGGAGCTGTTCCCGTACGCTGTGAACCCACAGCAGTACACCCAT
ATAAGACGCTGGCATCCCTGCCAGGCATGGACCTTCACTACGTTTCATGG
AGGAACACTATGGAGGAGAACACAGTCAACCCAGACAGACCTTGGGA
CCAAGGAGGCATCACGCACTTGGAAAAGGAGGAGCAAGAGCGAATACTGG
CCAGCAAGGACGTGCCAGGCATTTGTGTTGCCGCAACCCAGAATGGCTT
TTCCGGATCTACCAGGACACTTTGGTAGACATTCTTCAATGCTGGAGGT
CCTGAA---AGAGGGCTGAAG---ACGAGGCCTAGCTTAAAGAA---AA
CCAGGCCGGCCAGCACAGTCCATCCTGGACGGGTGAGGGAAGCCCAATGT
CAGACCTCCGTCCAAGCTGCCAATGAGGCTAAGCTCACAGTCTCCTGGCA
GATCCCATGGAATCTCAAATACCTGAAGGTGAGAGAAGTTNNNNNNNNNNNNNNNNNNNNNAAGAAGGAT
G

CCAGCAAGGGAACACTTGAGGATCAGATCATCCAGGCCAACCCGGCCCTG
GAGGCCTTTGGCAATGCCAAGACCGCCCGCAATGACAACTCCTCCCGTTT
TGGAAAATTCATTCGGATCCACTTCGGAACAAGCGGGAAGCTGTCATCCG
CTGACATCCAAACATACTTCTGGAAAAGTCCCAGGTCACCTTTCAGCTC
AAAGCTGAGAGGAATTACCACATCTTCTTCCAGATCCTATCTAATCAGAA
ACCAGAGCTCTTGGATATGCTGCTGATCACAACAATCCCTACGACTATT
GCTACATCTCCAGGGAGAAGTGACCGTCTCCTCTATCAACGACTCCGAG
GAGCTAATGGCCACGGACAGTGCCTTTGACNTGCTTGGATTCACTCCTGAG
GAGAAGATGGGCGTGTACAAGCTAATAGGAGCCATCATGCATTACGGCAA
CATGAAGTTTAAACAGAAACAGCGTGAGGAGCAGGCAGAGCCAGACGGAA
CCGAANCAGCTGATAAGTCAGCATACTGATGGGTCTAAACTCTGCTGACC

TCATCAAAGGACTGTGCCATCCCAGGGTCAAGGTAGGAAATGAGTATGTC
ACCCAAGGACAAAGTGTAACCCACGTCTACTACNCCAACAAGGAGGCTTTC
AAGTGCAGCAGAGTGTGGCAAGCACTACAACACCAAGCTGGGCTACAAGCG
CCATGTGGCCATGCACTCGGCCACGGCAGGGGACCTCACGTGCAAGGTGT
GCATGCAGAGCTACGAGAGCACCCCGTCTCTGGAGCACCTCAAGAGC
CACTCGGGAAAGTCGTCGGGCGGGCCAAAGGAGAAAAAGCACCCGTGCGA
CCACTGCGACCGCCGCTTCTACACCCGCAAGGACGTGCGGCGGCACATGG
TGGTCCACACGGGCGCAAGGACTTCTGTGCCAGTACTGCGCCAGCGC
TTCGGCAGGAAGGACCACCTGACGCGGCACGTGAAGAAGAGCCACTCGCA
GGAGCTGCTGAAGATCAAGACGGAGCCGCCTGACATGCTGGGCTCTTG-
-----GGCCCTCCCCCTGCTCCGTCAAAGAGGAGCTGAGCCCCATGATG
TGCAGCATGGCCCCAGTAAGGACCCCTGATGGGCAAGCCCTTTCAG
CGGGACCCCTTCCCCATGGGCATGTACAACCCAC-----CTCC
AGGCCATGTCCAACCTCAGGGGCGGCCACCC-----CACCCCTCCCTG
ATGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTATCTCATATATGCGTCCCTCT
CGTTCATGGGATGTTTACAAAT
CAGCGATGGATCGAACATTGTGAATTTGCTGGCCAGTAACTCTCCAAGCG
TGTCCTACGCCCTGACCCAGCAGAAGTACTTACGCAACTACAGTCCGGTG
ATCGGGTTTACATTTACGAACCCATTGAGTACTGGAACCTTACGGTGCA
GGAGCACCTGAAGACGCTGAGTCATGGCTTCAACAAGATCTCCTGGATGG
ACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGAGTGCCTCAACAAAG
AACGACTTTCATCMACATACTCAAGGGCTCCTTCTTGCAGTCCGGAGTA
CCAGCACTTTCACAGAGGACATCATCTTCTCCAAGA---ACCGTGACAGTG
-----ACGAGTACGACATCATCGCCTCGCGGATGTATCTGGTGGCGCGC
ACCACAGAGAAGAAGCGCGAGGAGTTGTGGAGCTCCTGGAAAAGCTGCG
TCCGCTAATGCTGATCAACAGCATTAATTCATCGCCTTCAACCCACTT
TTGTGTTTTCATGGACCGTTACAGCTCTTCGGTAATCTCGCCATACTGACT
TCAGGCTTTAGCGTGTAAACCATCCTCATCCTCACCTTCTTCTGTCAT
CAACCCCTTGGGGAACCTTCTGGCTCATATTGACAGTCACTTCTGTGGAGT
TAGGGTCTTGGGTTGATGGGCTACCACCCATTTGAGTGGCAGCCTGCG
CTTAAGAACGTGTCCGCTCCTGCCACGTGGGCATTATCAACGGGCTCTC
TGGTTGGGCCGCTTCCGTGGATGACGTCCCACATCGAGACCATCACTCGGC
GGTTCCGCTACGACGTAGCCCTGGTGTGCGCCATGAAGGACCTGGAGGAG
GACATCATGGAGGGCCTGACAGAACATGGCCTGGACGACAGCTCATGCAA
CACGGGCTTTGACGTGATGATAAAGGAGTCTTGCAGCGGCATGGGAGATG
TCAGCGAGAAGCACGGCGGGGGCCCGCTATCCAGAGAAGGCTGTGCGC
TTCTCGTTACCATCATGTCCGTATCCGTGCTGCCTGAAGGGAAGGAC--
-----GAGACGGTGACCGTTTTTCAGGG
AGCCAAAGCCAAACTCTGAGTTGTCTTGTAAAGCCCTGTGCCTGATGTTT
GTGGATGAGTCGGACCAGAGATGCTCACCGCCGCTCTGGACCCCTGCT
GGCCGAGAGGGCCGCATGAAACACAGCCGGCTCATCTTATCCATAGGTG
GCCTGCCCCGGTCTTCCGCTTCCATTTCCGAGGCACCGGCTACGATGAG
AAGATGGTGCAGGAGATGGAGGGCCTGGAGGCTCTGGCTCCACGTATAT
CTGCACCCTGTGTGACTCCACCAGAGCGGAGGCGTCCCACAACATGGTGC
TCCACTCTGTAAGCCGCAACCACGATGAGAACCTGGAGCGCTATGAAATC
TGGAGGACCAATCCCTTCTCGGAGTCCGCCGAAGAGCTGCGGGACCGGGT
GAAAGGGGTTTCCGCCAAGCCGTTCTTGGAGACCCATCCCCTCTGGATG
CGCTGCACTGCGACATCGGCAACGCCACTGAGTTTTACAAGATCTTCCAG
GATGAGATTGGGGAGGTGTTCCGGAAGCC---CAAC---CCCACACGGGA
GGAACGACGAAGCTGGAGGGCAACGCTGGACAAGCAGCTGCGGAAGAAGA
TGAAGCTCAAACCGGTGATGAGGATGAACGGGAACACGCCCCGAAGCTG
ATGACCGAGGACGCTGTTGATGTAGTCTGTGAGCTGGTGCCTCCGACGA
ACGCCGGCAGGCTCTGCGAGAGCTCATGGGCTCTACCTACAGATGAAAC

CTGTCTGGCGTGCCACCTGCCCTGCTAAAGAGTGCCCAGACCAGCTGTGC
CGCTACAGTTTCAACTCGCAACGCTTTTCCGAACTCCTCTCCTCCACCTT
CAAGTACAGGTACAATGGAAAGATTACCAATTACCTGCACAAAACGCTAG
CTCATGTTCTGAAATCATAGAGAGAGACGGCTCTATTGGAGCCTGGGCT
AGCGAGGGGAATGAGTCGGCCAACAAATCATAACCATTGAAATGGGTCT
CAAAGGGCCACAGTGAAGGAAAGTCCTCAGCCTTCTCGTGCTCCATTG
AAGACCCCACTAAACAAACTAAGTTCAAGGGCATCAAAACGTACATTTTCG
TACAGGGTCACGCCGAGCCACACGGGGCGACCCGTTTACAGACGCTACAA
GCATTTTGATTGGCTGTACAACCGCTGCTGCACAAGTTCACTGTGATAT
CGGTACCCCACTTGCCCGAGAAGCAGGCCACAGGGCGCTTCGAGGAGGAC
TTTATTGAAAAGCGCAAACGGCGACTTGTCTGTGGATGAACCACATGAC
AAGTCACCCGATCCTCTCCCAGTACGAGGGCTTTGAGCACTTTCTCATGT
GTGCAGATGACAAGCAGTGAAGCTGGGCAAGAGGGCGCGCAGAGAAGGAT
GAGATGGTGGGCGCTCATTTTATGCTGACCTTCCAGATTCTAGCGAGCA
TCAGGACCTACAGGATGTCGAGGAGCGCATCGACTCCTTCAAGTCTTTCG
CTAAGAAGATGGACGACAGCGTCATGCAGCTCACGCACGTTCGCATCGGAG
CTGGTGCGTAAGCACCTCGGAGGGTTTCCAGGAGTTCCAGCGGTTGGG
AAATTTCGTTCCAATCGATCAGCCAGGCATTACGCTGGACCCTCCTCAG
GCTCTGATGCCCTAACAGCGCCATCTCCAC-----

-----GCCAAATCCCGATTTTACCCTGGCGTAGGGA
CTGGTCCCTGGCACTGAGC--GTAGCGTCCCCTCAGCAACAGCTTGCTG
TCTCCGCAACAAACCGAGGAGCCACTGTTG--CCTCCCCACAGCGATG
GTTTGTACCC--CTGCCAACAAACCGACTGGACTTCGCTGCTTCGGCAT
ACGATGCCGCT-----GATTTCGCCGGCAACGCCGCCACGTTGCTA
TCCTACGCAGCGGCTGGAGTGAAGGCGC-----TTCCCTTGCCGGCTGC
AGGTGCTCTAACAGGCCTCTTGGGTATTACGCAGACCCATCTG--GCT
GG--GGCGCTCGTACTCCGCCGACTGTACC-----AGTAAACCA
AGCACGGTGTCTCTCTGCTGGCCA--AATTCTGTTAGCGGCAGAGCGGG
CT-----CAAATACTGG-----CTGAGGA--CGGA--GATG
C--CATTTCCACCGAGAGGTCCCCG--AT--TGGTGGGACCGAGGAG
--ACAAAACCCAAAGACT-----GTCAGA--ATCCAGCTGGATAGA
G--ACCCCGTCTTCGATCAAATCAATCGATTCTAGCGATTCTGGGATCT
TTG--ACAAGCCAAACGGAGAAGAATTTCTCCTTCAGCCACACCG--
-----GTTGCAGAACTGTGTCCCCGTTAAAATCAGAGCATCACTCAAC

AGGCGAAGTCACAGAACGAGAAGTAGCTTTGGGGATAAATCCGTTCGCGG
ACGGGATGGGAGCCTTCAAGATCAACCACAGTTCCCATGATATCGGCTCC
GG---ACAGACAGCGTTTTCCACACAGGCG---CCCGGGTAC---GCAGC
GGCGGCGCTGGGA---CATCATCA-----TCACCCCTCACACGTCAGCT
CT---TACTCCACGGCGGCGTTCAACTCTACCCGGGACTTTCTCTCAGA
AATCGGGGCTTTGGAGACGCCGCGAG-----TGCTCAGCACAG
TTTATTTGCATCCGC---CGCGGAAGTTT---C-----GCAGGGCCAC
ATGGACACTCAGATGCCGAGGGCACCTTCTCTTCCCGGGGCTCCACGAG
---CAAGCCACTACGCATTCATCTTCTAACG---TCAACAGCCAAATGAG
GCTTGGCTTTTTCCGGGGACATGTACGGCCGGGCTGACCAGTACGGGCACG
TAACCAGCCCGAGGT---CCGACCACTATGCTTCTACTCAATTGCACGGT
TATGGGCCTATGAATATGAACATGGCCGCG---CACCATGGAGCGGGGGC
CTTCTTTCGGTACATGAGGCAGCCGATCAAACAGGAGCTCATCTGCAAGT
GGATCGAACCGGAGCAATTGACGAACCCAAAAAAGTCGTGTAACAAAAC
TTTAGCACAATGCATGAGCTGGTGACCCACCTGACTGTAGAGCATGTGGG
GGGCCCAGAACAGTCGAACCACGTATGTTTCTGGGAAGATTGCTCTCGAG
AAGGAAAACCGTTCAAAGCTAAATACAAACTTGTCAATCACATTCGAGTG
CACACCGGAGAGAAACCATTTCCATGCCCATTTCCCGGCTGTGGCAA

>Chromis cyanea

AGCCTCCTCATTCGGGCAGAACTAAGCCAACCAGGCGCTCTCCTTGGAGA
CGACCAGATTTATAATGTAATTGTTACAGCACACGCCTTTGTAATAATTT
TCTTTATAGTAATGCCAATTATAATCGGGGGTTTCGAAACTGACTTATC
CCTCTTATGATTGGAGCCCAGATATAGCATTCCCCCGAATAAATAACAT
AAGCTTTTACTTCTACCACCTCATTCCTTCTCCTACTCGCCTCCTCTG
GTGTTGAAGCAGGTGCCGGAACCGGGTGGACCGTCTATCCCCCTTATCA
GGAAACCTAGCTCACGCAGGAGCCTCCGTAGACTTAACTATTTTCTCTCT
CCACTTAGCAGGGATTTCCCTCAATTCGGGGGCAATCAATTTCAATTACCA
CCATTATTAACATGAAACCCCGAGCCATCTCTCAATATCAAACCCCTCTC
TTTGTATGNGCTGTTCTGATTACCGCGTTCTTCTCCTCCTATCCCTTCCA
GTCCCTAGCTGCTGGCATCACCATGCTCTTAACCGACCGAAACTTAAACAC
CACATTTTTTCGACCCTGCAGGAGGGGAGATCCTATCCTCTACCAGCACT
TATTC-----

-----TTCTAGAGAGAAACCTCCACCCGTCCAACCTGTCTTGGC
ATGCTGTTGCTGTCTGAYGCCACCAAGCTGTCAGAGCTCTC
CTGGGGCATGTGTCTCAGCAACTTCCCGCAATTTGCAAGACAGAGGACT
TCCTCCAACCTGCCAAAGACATGGTGGTGCAGCTTTTGTACATGAAGAG
CTAGAGACTGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGAT
CAACTACGACCTGGAAAGGAGGCACTGCCATCTTCCAGAGCTCCTGAGAA
CAGTCCGCCTTGCCCTGCTGCCKGCCATCTTTTTAATGGAGAAAGTCTCA
ACAGAGGAGCTGATCAACGCCAGGCTAAGAGCAAGGAGCTGGTGGATGA
AGCCATCCGCTGTAAGCTGAAGATCCTGCARAATGATGGTGTCTGTCACA
GCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGGT
GGGCAGACTTTTCATGTGCGACAAGTTGTACCTGGTTGACCAGAAGGCCAA
AGAGATCATCCCGAAGGCTGACATCCCCAGTCCCAGGAAGGAGTTCAGCG
CCTGTGCCATTGGCTGTAAGGTGTACATCACCGGTGGGA--GGGGCTC-A
GAGAAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACTGTCCATGAAGA
ATGGTCAAAGGCGGCACCCATGCTCATYGCCAGGTTTCGGCCATGGCTCAG
CAGAGCTGAAACACTGCCTCTACGTCGTAGGAGGCCACACTGCAGCAACC
GGCTGCCTCCCAGCTTCTCCGTCAGGATGAATACATTTGTTGTGTTTAGTC
GTTCAACAACAAGGCTGATATTGAATGAAGCAGAGCTTATCATGGCACTG

GCCCAGGAGTTCCAAATGAGAGTGGTCACAGTGTCTTAGAGGAACAATC
TTTCCCAGTATCGTCCAGGTGATTAGCGGTGCTTCCATGTTAGTCAGCA
TGCACGGAGCTCAGCTTATCACCTCACTCTTTCTTCCCAGAGGAGCTGCT
GTGGTGGAGTTGTTCCCTTTTGTCTGTGAACCCAGAGCAGTACACCCATA
TAAAACCCTTGCTCTCTTCCGGGCATGGACCTTCACTATGTCTCCTGGA
GGAACACGAAGGAGGAGAACAATATGACCCACCCAGACAGACCTGGGAG
CAAGGAGGCATTGCTCACTTGGAAAAAGACGAGCAGGAACGAATCCTGGC
CAGTACGGACGTCCCAGGCACCTGTGCTGCCGCAATCCAGAGTGGCTCT
TCCGGATCTATCAGGACACTCTGGTGGACATCCCATCCTTACTGGAGGTC
CTCAA---AGAAGCCATGAAG---ACCAAGCCCCAAGTTGAAGAA---GGC
CAAGGCAGCAAGCACAGTCCACCCAGGCCAGGTGAGAGAGCCCCAGTGTC
AAACTTCAGTACAAACCTCTAATGAGGCAAAACCTTACAGTCTCTTGCCAG
ATCCCGTGAATCTGAAATACCTTAAGGTGAGAGAGGTAAAGTACGAGGT
GTGGATCCAG-----

-----CCCAACAAGGAGGCCCTTCAAGTGGCAGGAGTGTGGGAAGCACTAC
AACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACCGC
GGGCGATCTGACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCGG
TTCTCCTGGAGCACCTCAAGAGCCACTCAGGGAAGTCTCGGGCGGCGCC
AAGGAGAAGAAACACCCGTGCGACCCTGCGACCGTTCGTTTCTACACCCG
GAAGGATGTGAGGCGGCACATGGTGGTGCACACGGGCCGAAAGGACTTCC
TGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAAGACCATCTGACGCGT
CACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCC
TCCGGATATGTTGGGTCTGTTGGCCTCGGGTCTCCACCCTGCTCCGTTGA
AGGAGGAGCTCAGCCCCATGATGTGTGGTATGGGGCCCAACAAAGACCCC
ATGATGGGCAAACCTTCCCCAGCGGGGCCCCATCCCGATGGGCATGTA
CAACCCCCACCAT-----CTCCAGGCCATGTCTAATCTGGGGTGGGTC
ACTCA-----CACCCGTCCCTGATGCCCGGTTCCCTGTCTGCAGCTATG
GGCATGGGCTGTCACATGGAGTATCTCATCTATGCCCTTTTCTCATTCAT
GGGATGTTTACAAATCAGTGACGGATCGAATATCGTGAACCTGCTGGCTA
GTAACTCTCCGAGTGTTTCATATGCTTTGACCCAGCAGAAATACTTCAGT
AACTACAGTCCCCTGATTGGGTTTTATATTTACGAGCCCATCGAGTACTG
GAACTCCACGGTGCAGGAGCATCTGAAGACTCTGAGTCACGGCTTCAACA
AGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTAGTGAATGTG
AGCGGTCAACTAAAAGCGACTTTATCAGCATCCTTAAGGGTTCCTTCTCCT
GCGCAGTCCGGAGTACCAGCACTTACCCGAGGACATCATATTCCTCAAGA
---ACGCGGAGACTG-----ATGAGTACGACATTATCGCCTCAGGATG
TACTTGGTAGCACGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGCT
TTTAGAAAAGCTTCGTCCCTTGATGCTGATAAACAGCATCAAATTCATTG
CCTTTAATCCCACGTTTGTGTTTATGGACCGCTACAGCTCCTCCGTCATC
TCACCTATCCTGACCTCAGGCTTCAAGTGTACTCACCATCCTCATCCTCAC
TTTCTTCTGTCATCAACCCCTTGGGGAAGTCTGGCTCATCCTCACGG

TTACGTCCGTGGAGCTGGGCGTCTTGGGTTTGGATGGGCTTTCACCAGTTT
GAATGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAACGTTGGCAT
TATTAACGGGCTCTCTGGATGGGTTTCCTCGGTGGATGACTCCCCGGCTG
ACACAATCACTCGGCGCTTTCGTTATGATGTGGCCCTGGTGTCTGCATTA
AAGGATCTGGAGGAGGACATCATGGACGGGCTGAGAGAGAGTGGGATGGA
AGACAGCGCTTGCACCTCAGGCTTTAGTGTTCATGATCAAGGAATGTTGCG
ACGGTATGGGTGATGTCAGCGAGAAGCACGGCGGAGGACCTGCTGTTCCCT
GAGAAGGCTGTACGCTTCTCTTTCACCATTATGTCTGTCTCTGTCCCTCGC
AGATGATAAGAAG-----GAGGAGG
TTACCATTTTCACTGAGCCAAAACCAAACCTCAGAGCTGTCCTGTAAGCCC
CTCTCCCTGATGTTTCGTGGATGAGTCAGACCATGAGACACTCACAGCTGT
CCTGGGGCCCATAGTTGCAGAGCGGAATGCAATGAAAGAGAGCCGACTCA
TCCTATCCATCGGCGGCCTGCCTCGATCCTTTTCGCTTCCACTTCAGGGGC
ACGGGGTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTC
GGGGTCCACGTATGTCTGCACTCTATGTGACTCCACTCGTGCAGAAGCCT
CGAAAAACATGGTCCCTTCACTCAGTCACCTCGCAGTCACGAGGAGAATCTA
GAACGATATGAGATATGGAGAAGCAACCCCTTCTCTGAGTCTGCAGACGA
GCTGCGGGACAGAGTCAAAGGGGTCTCCTCCAAGCCCTTCTGGAGACCC
AGCCACGCTAGATGCCCTTACACTGCGACATTGGCAACGCCAGTGAATTC
TACAAAATCTTCCAGGATGAGATCGGGGAAGTATACAAAAGGT---CAA
C---CCCACCCGGGAGCAACGGCGCAGCTGGAGGGCAGCGCTGGATAAAC
AGCTGCGGAAGAAGATGAAGCTTAAACCGGTAATGAGGATGAATGGGAAC
TACGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGCT
GGTGCCCTCTGAGGAGAGGAAGGAGGCCCTGAGGGAGCTCATAAGGCTCT
ACCTTCAAGATGAAGCCTGTGTGGCGTGCCACCAATCCGGCCAAGGAATGC
CCTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACCT
CCTCTCAACCTCCTTCAAATATAGGTACAACGGGAAGATAACCAATTACC
TGCACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGACGGATCC
ATAGGAGCCTGGGCGAGCGAGGGGAACGAGTCAGCAAACAATCGTACAC
CATTGAGATGGGTCCCCAGGGGCCCTGGTGGAAAGGAGAACCCACAGCCTT
TCTCCTGCTCCATTGAAGAYCCCACCAAACAGACAAAAGTTCAAAGGCATC
AAGACATACATTTTACATACCGGGTCACGCCGAGCCACACGGGGCGTCKGT
CTACAGGCGCTACAAAACACTTTGACTGGCTGTACAACCGTTTACTGCACA
AGTTCACTGTGATCTCTGTTCCCCACCTGCCTGAGAAGCAGGCCACGGGG
CGCTTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGTG
GATGAACCACATGACCAGTCACCCAGTCCTCTCCAGTACGAAGGCTTTG
AGCACTTTCTGATGTGCGCTGACGACAAGCAGTGGAAACTGGGCAAGAGA
CGGGCAGAGAAGGACGAGATGGTGGGCGCACATTTTCATGCTGACACTCCA
AATCCCAACGAGCAYCAGGACCTTCAGGATGTTGAGGAGCGGGTCGACA
ACTTCAAGGCCTTTGCCAAGAAAATGGACGACAGCGTGATGCAGCTGACA
CACGTGGCCTCGGAGCTGGTGGGTAAACACCTGGGTGGATTTCAGGAAGGA
GTTCCAGCGGCTGGGAAACGCCTTCCAGTCTATCAGCCAGGCTTTCATGC
TGGACCCTCCCCATAGGTGAGACACCCTCAACAACGCCATCTCCATNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNTGG
GTTTTATCATCGGAGTCGGCGTGGTTGGAAACCTCCTGATCTCCATCCTG
CTGGTCAAAGACAAGAGCCTGCACCGAGCGCCCTACTATTTCCCTGCTGGA
CCTGTGCGCCTCYGACATCCTGCGCTCTGCCATCTGCTTCCCCTTCGTCT
TCACCTCGGTCAAAGAATGGATCTGCCGACGTACGGCACRGTGACCTGC
AAAGTGATCGCCTTCCCTGGGTGTGCTCTCCTGTTTCCACACGGCGTTCAT
GCTMTTCTGCGTCAGCGTCACACGCTACCTGGCCATTGCACATCACCGTT
TCTACACCAAGAGGCTGACTTTCTGGACGTGCTTGGCTGTCATCTGCATG
GTGTGGACGTTGTCTGTRGRATGGCATTYCCGCCGGTGCTAGACGTAGG
GACGTACTCTTTCATCCGAGAGGAGGACCAGTGCACCTTCCAGCACCGCT

CCTTCAGGGCGAACGATTCATTGGGATTCATGCTCCTGCTGGCGCTCATC
CTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCACGA
CCGTCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCTGTGAGTCAGAACT
GGACCTTCCACGGCCAGGCGCCAGCGGGCAGGCGGCGGCAACTGGCTG
GCTGGATTTGGTCGAGGCCCCACTCCGCCTACTCTGCTGGGCATCCGGCA
GAACAGCAACGCAGCGGGCCGAGGCGYCTACTGGTTTTGGATGAGTTCA
AAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTC
CTGGCGCTGTGGGGGCCCTATCTGGTCGCCTGCTACTGGCGGGTGTTCG
AAGGGGCCCTGTGGTCCCTGGAGGCTACCTGACAGCAGCCGTGTGGATGA
GCTTCNNNGCCAAATCTCGCTTTCA
CCCTGGCGTGGGGACTGGTCCTGGCAG
GAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTATCCCCGCAGCAAAG
CGAGGAGCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---
CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT---
-----GATTTCCGCGTAACGCGGCCACCTTGCTGTCTACGCAGCGGC
CGGAGTTAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCAACC
GGCTCTTGGCTATTACGCAGACCCGTCTG---GCTGG---GGAGGACGC
ACGCCGCCGAGTACTGTGGCGTAAATAGTAAATCCAGCTCGGTCTTTTC
CTGCTGGCCCGCAACTCCATCGGTGGCAGGGCCGGCG---CC---AACT
ACCTGT-----CCGAGGA---GGGA---GACTC---CATCACGACG
GAGAGTACCCG---AT---CGGCGCTCGGAGGAG---ACCAAACCCAA
AGACATGAC---GTCCGA---GTCGAGCTGGATAGAG---ACGCCGTCCCT
CCATAAAGTCCATCGATTCCAGCGACTCTGGGATCTTTG---AACAGGCC
AAACGGAGGAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGA
GACAGTGTCCCCGTTAAAATCCGAGCATCACTCAACAGGCGAAGTCACAG
AGCGAGAAGTGGCGTTGGGGATAAATCCGTTCCGAGATGGGATGGGCGCC
TTCAAATCAACCACAGCTCCACGATATTGGCTCCGG---ACAGACGGC
GTTTTCTCCAGGCG---CCCGGTTAC---GCAGCAGCCGCCTTGGGA-
--CACCATCA-----CCACCCGACCACGTTGGCTCT---TACTCCAG
GCGGCGTTCAACTCCACCAGGGACTTCTGTTTCAGAAATCGGGGTTTCGG
GGATGCCACCGG-----CGCGCAGCACAGTTTGTTCGCCTC--
-----GGGAAGTTT---C-----GCAGGGCCACACGGACACTCAGAT
GCGGCGGGGCACCTGCTCTTCCCGGGGCTCCACGAG---CAGGCGGCGAG
CCACGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGG
GGGACATGTACGGACGCGCCGAGCAGTACGGCCACGTTACGAGCCCCAGG
T---CCGACCACTACGCCTCGACCCAGCTGCACGGCTACGGCCCCATGAA
CATGAATATGGCCGCG---CACCACGGCGCAGGGGCCCTTCTTTCGGTACA
TGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAG
CAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACTTTCAGCACGATGCA
CGAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGA
CCAACCACATTTGCTTCTGGGAGGACTGTGCCCCGAGAAGGGAAGCCGTT
AAAGCCAAATACAAAACCTTGTGAATCATATCAGAGTACACACCCGGAGAAAA
GCCCTTCCGTTGTCGTTCCCGGGCTGTGGCAAA

>Coccorella atlantica

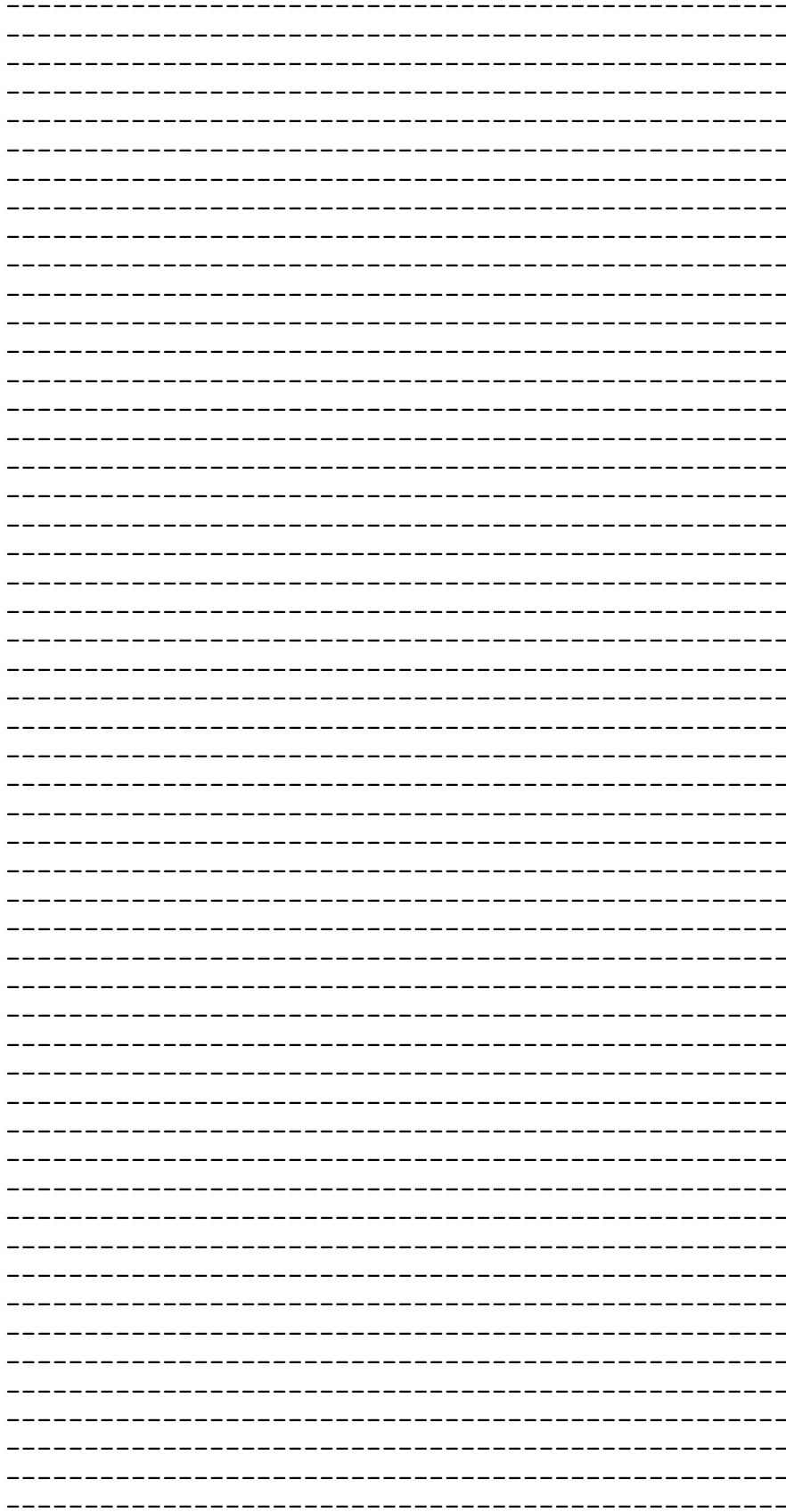
AGCCTTCTCATCCGAGCAGAGCTGAACCAACCCGGTGCCCTCTTAGGGGA
CGACCAGATCTACAATGTAATCGTCACCGCTCACGCCTTCGTAATAATCT
TCTTTATAGTAATGCCAATTCTAATCGGCGGATTCGGAAACTGACTAGTC
CCCCTGATACTCGGCGACCCGACATGGCATTCCCACGCATGAACAACAT
AAGCTTCTGGCTTCTTCCCCCTCCTTCCTGCTCCTCCTAGCCTCTTCCG
CCGTTGAAGCGGGGGCCGGCACAGGCTGAAGTGTATCCGCCCCCTTGCC
AGCAACCTGGCTCACGCCGGAGCTTCTGTTGACCTGACAATCTTCTCACT
CCATCTGGCCGGTATTTCCCTCCATTTCTAGGCGCCATTAATTTCAATTCAA
CCATCATTAACATGAAACCCCGAGCTATTACCCAATACCAAACCCCCCTA

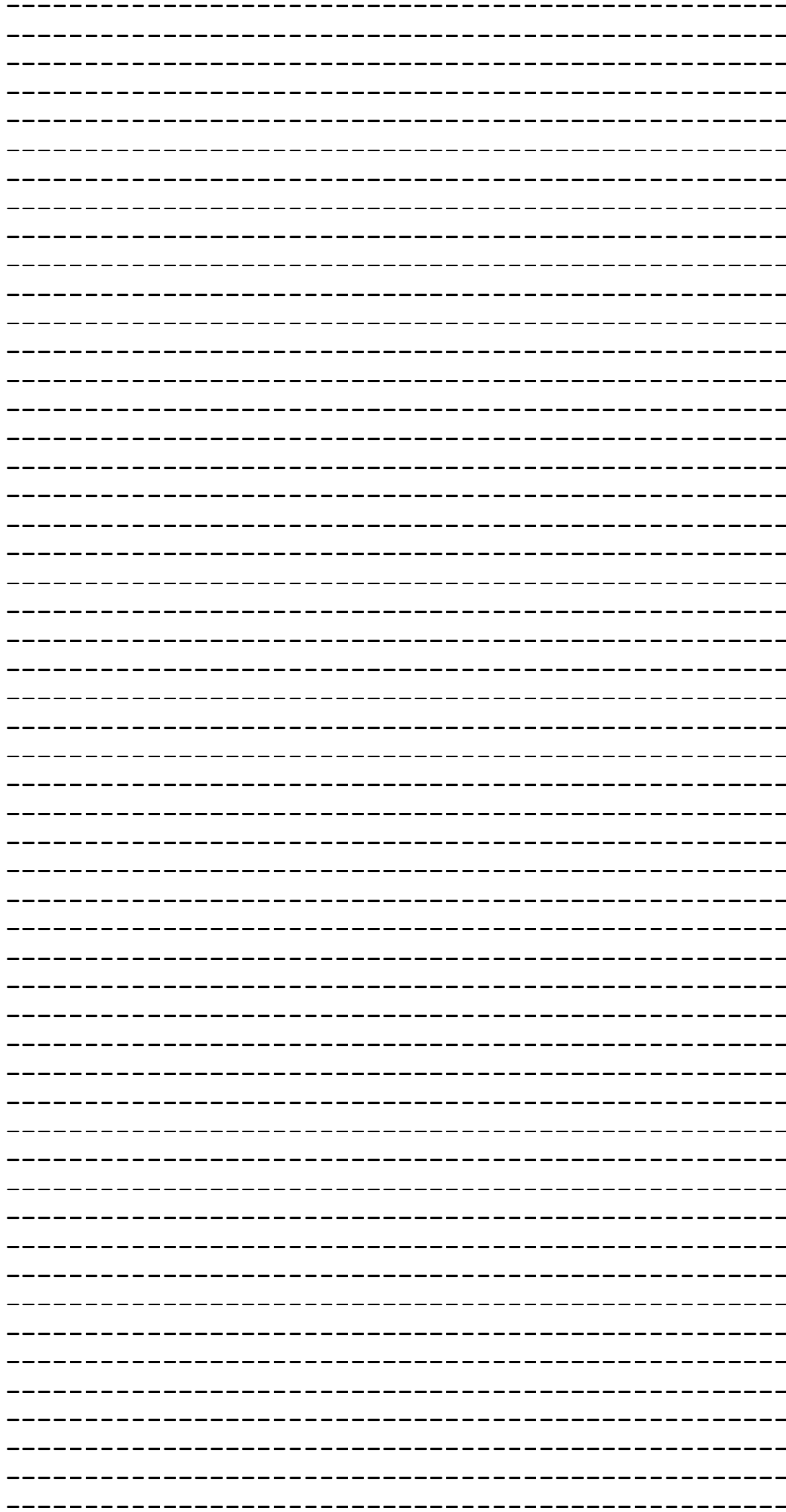
TTTGTGTGAGCAGTACTTATTACTGCCGTCCTTCTCCTCCTCTCTCTCCC
TGTTCTAGCAGCAGGGATTACAATACTCCTCACAGACCGAAACTTAAACA
CAACCTTCTTTGACCCCGCAGGCGGGGTGACCCAATTCTTTACCAACAT
CTATTTTGATTCTTTGGCCACCCAGAAGTCTATATCCTCATCCTCCCCGG
TTTTGGTATTATTTCTCACGTTGTGCTACTATGCAGGAAAAAAGAGC
CCTTTGGCTACATGGGAATGGTCTGAGCTATAATAGCAATCGGCCTCCTG
GGGTTTATTGTCTGAGCCCCCACATATTTACCGTCGGCATAGACGTTGA
TACACGCGCCTATTCTCGAGAGGAACCTGCACCCGTCCAACCTGCCTTGG
CATGCTGCTGCTGTCAGACGCCACCAGTGCACCAAGCTGTGGAGCTGT
CCTGGGGTATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTCCAGTTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCACGAAGA
GCTGGAGACGGAAGACGAGAGACTGGTTTATGAGGCCGCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTGCCGGAGCTGCTGAGA
ACCGTACGCCTGGCCTTGCTTCCCTGCCATCTTTCTCATGGAGAACGTCTC
CACAGAGGAGCTGATAAATGCCAGGCAAAGAGCAAGGAGTTGGTGGATG
AGGCCATCCGTTGCAAGCTGAAGATCCTGCAGAACGACGGTGTGGTCAAC
AGTCCCTGTGCCCGGCCAGAAAGACCAGCCACGCCCTTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGCAAGGTGTACGTACGGGCGGGA--GAGGCTC-
AGAGAACGGCGTCTCTAAGGACGTGTGGGTCTACGACACCGTCCACGAGG
AGTGGTCCAAGGCGGCGCGATGCTCATCGCCCGGTTCCGGCCACGGCTCT
GCCGAGCTCAAACACTGCCTCTATGTGGTTCGGAGGACACACTGCGGCCAC
CGGCTGCCTCCCCGCTTCCGTCGGACGAGTACATCGTAGTGTTCAGC
CGTTCCACAACCGGCTGATTCTGAACGAAGCGGAGCTGATACTGGCACT
GGCCCAGGAGTTCAGATGAGGGTGGTTCACGGTGTCCCTGGAGGAGCAGT
CCTTCCCCAGCATCGTGCAGGTTCATCAGCGGGGCTCCATGTTGGTTCAGC
ATGCACGGAGCTCAACTCGTACCTCGCTCTTCCCTCCCCAGAGGAGGCGT
CGTGGTGGAGCTCTTCCCCTACGCCGTGAACCCGGAGCAGTACACCCAT
ACAAGACCCTAGCCTCCCTGCCGGCATGGACCTCCAATACGTTTCCCTGG
AGGAACACTATTGAGGAGAACACTGTCGCCACCCAGACAGAGCCTGGGA
CCAAGGAGGCATTGCCATTTGGAGAAAGAAGAGCAGGAGAGAATCCTAG
CCAGCAAGGATGTCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATCCCCTCCTTGCTGGAAGT
CCTCAA---GGAGGGCTGAAG---ACGAGGCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTCACCCGGGCGGGTCCGAGAACCCAGTGC
CAGACTTCGGTCCAAGCCACCAACGAGGCTAAACTCACAGTGTCTGGCA
GATCCCGTGAACCTTAAGTACCTGAAGGTGCGAGAGGTGAAGTACGAAG
-----AAAAAGGATACAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCGCTGGAGGCTTTTGGTAACGCCAAAACACTGAG
GAACGATAAATCCTCCCCTTTGGAAAATTCATCCGAATCCACTTCGGAA
CCAGCGGTAAATTGTCTCAGCGGACATTGAGACCTACCTGCTGGAGAAG
TCACGGGTACCTTTCAGCTCAAGGCGGAGAGGAACCTACCACGTCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGTTGATCA
CCAACAACCCTTACGACTACTGCTACATCTCCCAAGGAGAAGTAACCGTA
GCGTCCATCAACGACTCAGAAGAGCTGATGGCCACCGACAGTGCCTTCGA
TGTGCTCGGCTTACGCAAGAGGAGAAGATGGGAGTCTACAAGTTGGTAG
GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGCGAG
GAACAGGCAGAGCCTGATGGCACAGAAGCTGCCGATAAGTCGGCTTATCT
AATGGGGCTGAATTCAGCAGACCTAATCAAATGTCTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGGGTGTAGATCAAGTC
TACTAC-----GGAGGCGTTCAAGTTCGAGGAGTTCGGCAAGCATTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCCGCCACCG

CGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACCCC
GTGCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCGTCGGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCCGTTCTACACGC
GGAAGGACGTCCGGCGGCACATGGTGGTCCACACGGGCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGACATGCTGGGCCTCCTGGGCTCCGGCTCCCCGCCCTGCTCCGTC
AAGGAGGAGCTGAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCCAGCGGGACGCCCTTCCCCATGGGCATGT
ACAACCCCCACCAC-----CTCCAGGCCATGTCTAACCCCGGGGTGGGC
CACCCC-----CACCCCTCCCTCATGCCCGGTTCCCTGTCCGCASCCAT
GGGCATGGGCTGTACATGGAGTATCTCATCTACGCTTCTTTCTCCTTCA
TGGGATGTTTACAGATCAGCGACGGCTCGAACGTGGTGAACCTGCTGGCC
AGTAACTCTCCGAGCGTCTCGTACGCCCTGACGCAGCAGAAGTACTTCAG
CAACTACAGCCCCGTGATTGGGTTCTACATCTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGCTCAGCAATGGCTTCAAC
AAGATCTCCTGGGTGGACAACTTCGTCCACTACCTACGGGCGGCAAACGT
GAGCGCGTCCACCAAGGCCGACTTCGTTCGCCGTCTCAAGGGCTCCTTCC
TGCGGAGCCCTGTGTACCAGCACTTCACCGACGACATCATCTTCTCCAAG
A---GCCACGAGAACA---GCGACGACTACGACATCATTGCCTCGCGCAT
GTACCTGGTGGCGCGCACCACGGAGAAGCGGCGGAGGACGTGGTGGAGC
TGCTGGAGAAGCTCCGGCCGCTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAACCCACGTTTCGTCTTCATGGACCCTACAGCTCCTCGGTCAT
CTCGCCCATCCTCACCTCGGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CCTTCTTCCCTGGTCATCAACCCGCTGGGGAACCTCTGGCTCATCCTGACG
GTCACGTCCGTGGAGCTGGGCGTGCTGGGCCTGATGGGCTACCACGCGTT
CGAGTGGCGGCCGGCCCTCCAGAACGTGTCCCCGTCCTGCCACGTGGGTA
TCATCAACGGGCTTTCGGGTGGGCCGCGTCCGTGGACGAGGTCCCCGCC
GACACCATCGCCCGTTCGGTTCGGCTACGACGTGGCCCTCGTGTCCGCCCT
GAAAGACCTGGAGGAGGACATCGTGGACGGGCTGAGGGAGCACGGGCTGG
CTGAC-----TGCGCCTCACGCTTCAGCGTCATGGTCAAGGAGTCTGC
GACGGCTTGGGAGACGTCAACGAGAAGAACGGCGGCGGGCCGGCGATGCC
CGAGAAGGCCGTGCGCTTCTCCTTACCCTCATGTCCGTCTCCGTCCACG
CCGACGGAGAGGAGGAGGAGGAGGAG-----GAGGCG
GTCGTGCTCTTCAGGGAGCCGAAGCCAACTCCGAACGTCTCCTGTAAGCC
CCTGTGCCCTGATGTTCTGTGGACGAGTCTGACCACGAGACGCTCACCGCCG
TCCTGGGACCTCTGGTGGCGGAGAGGAACGCGATGAAGCAGAGCCGGCTC
GTCCTCCCGGTGGGGGGCGTCCCCCGCTCCTTCCGCTTCCGCTTCCGGG
CTCGGGCTACGACGAGAAGATGGTGC GCGAGATGGAAGGCCTGGAGGCCT
CGGGCTCCACCTACGCTTGCACCCCTTCGCGACGCCACCCGGGCGGAGGCC
TCTCGCAACATGGTGCTCCACTCCGTACGCGTGGCCACGACGAGAACCT
GGAGCGCTACGAGACGTGGAGGACCAACCCCTTCTCCGAGTCCGCCGCGG
AGCTGCGGGACCGGGTCAAGGGGGTCTCCGCCAAGCCGTTTCATCGACACC
CATCCGACGATGGACGCGTTGCACTGCGACATAGGCAACGCCACGGAGTT
CTACAAGATGTTCCAGGACGAGATCGGGGAGGTGTTCCGGAAGGCCGCCA
AC---CCCAGCCGGGAGGAGCGGCGGGCTGGCGGGCGGCCCTCGACAAG
CAGCTGAGGAAGAGGCTGAAGCTGAAGCCGGTGAATGCGGATGAACGGGAA
CTACGCCCCGAGGCTGATGACCGAGGAGGCGGCGGAGGCGGTGTGTGAAC
TGGTGGCCTCGGAGGAGAGGCGGGCGGCGCTGAGGGAGCTGATGGCGCTC
TACGTCCAGATGAAGCCGGTGTGGCGCGCCACCCGCCCGGCGGAGGAGTG
CCCCGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTCGCCGAGC
TCCTCTCCTCCACCTTCAATACAGGTACGACGGAAAGATCACCAACTAC
CTGCACAAGACCCTGGCCACGTCCCCGAGATCATAGAGAGGGACGGCTC

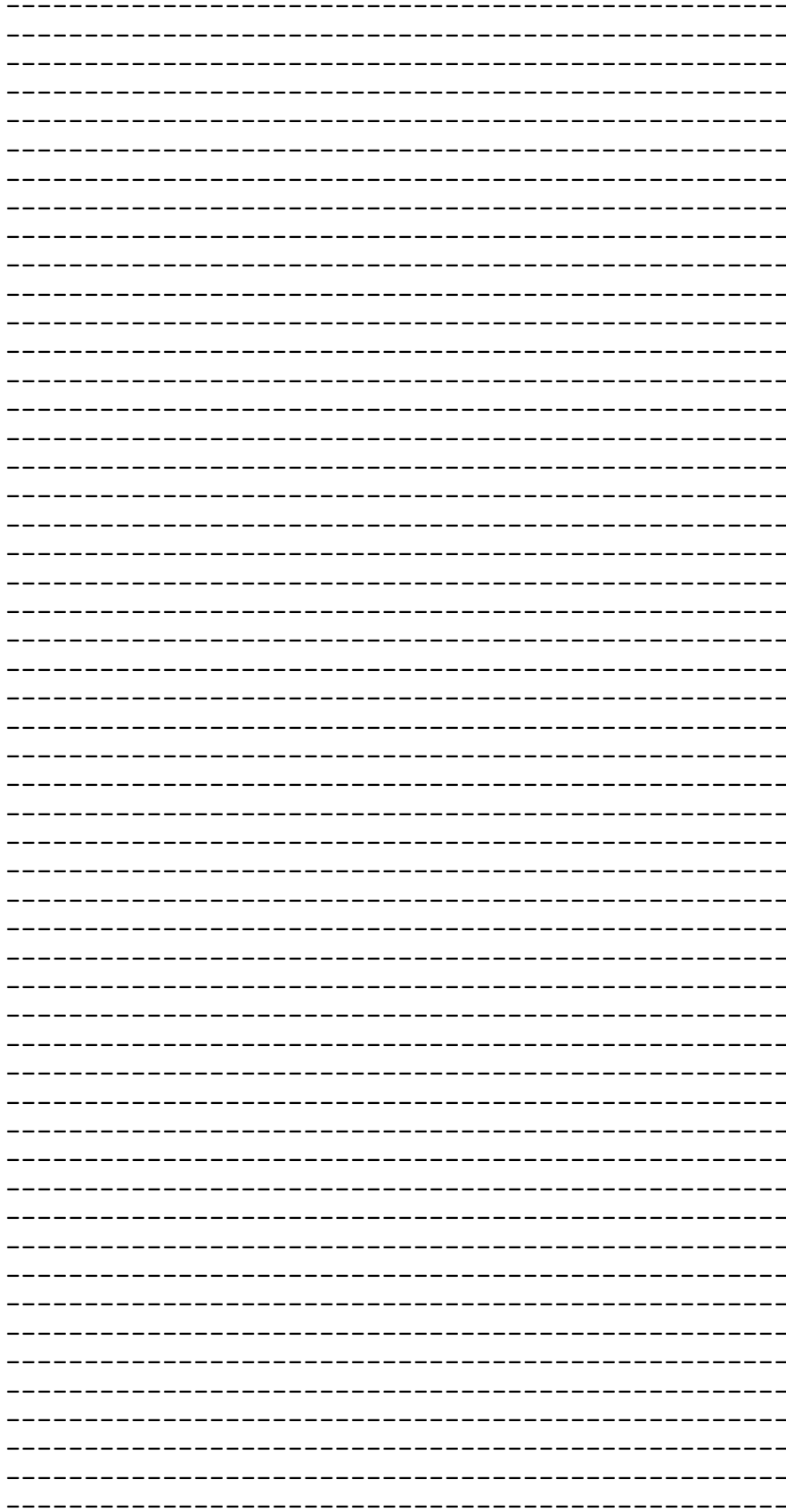
>Collichthys lucidus

AGTCTCCTTATTCGAGCAGAACTGAGCCAACCCGGCTCACTTCTCGGAGA
CGACCAGATTTTTAATGTAATTGTTACGGCACATGCCTTCGTTATAATTT
TCTTTATAGTAATACCCGTTATGATTGGAGGTTTCGGGAACTGGCTCGTG
CCCTTAATAATCGGCGCCCCGACATAGCATTCCCCGGATAAAATAACAT
GAGCTTCTGACTCATCCCTCCTTCTTTCCTCCTGCTCCTAACCTCATCAG
GGGTCGAAGCGGGAGCCGGAACAGGGTGAACAGT---CCCCCACTTGCT
GGAAACCTTGACACACGCAGGGGCTTCAGTTGACTTAGCCATCTTTTCTCT
ACACCTCGCAGGTGTATCCTCAATCCTGGGGGCTATCAACTTCATTACAA
CAATTATTAACATAAAAACCCCGCCATCTCCCAATACCAGACACCCCTG
TTTGTCTGAGCCGTCTCATTACAGCAGTACTCCTGCTACTTTCCTACC
TGCTTAGCTGCCGGCATCAAAATGCTCTAACAGACCGCAATCTTAACA
CAACCTTTTTTGCACCCTGCAGGAGGAGGCGACCCCATCCT---CCAACAC





CCAGGGTGGCATTGCTCACTTGGAGAAGGAGGAGCAGGAACGCATCCTTA
AGAGCAAGGAGGTGCCACGTACCTGTGCTGTGCGGAACCCGGAGTGGCTC
TTCCGTATCTACCAGGACACCCAGGTGGACATTGCATCCCTACTCGACGC
CCTGCG---CCAGGGACTGACC---TCCAAGCCAGGGCCCAAGAA---GG
CTAGGCCCCAGCAGCACAGTCCATCCAGGCAGGGTGAGGGAGCCCAAGTGC
CAGACCTCCGTCCAGGCCACCAACGAGGCCAAGCTGACCGTGTCTGGCA
GATCCCCTGGAACCTCAAGTACCTGAAGGTGAGGGAGGTGAAGTATGAGG
TATGGATTGAGAAGAAGGATACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCAGCGCTGGAGGCTTTCGGCAATGCCAAGACGGCAAG
GAATGACAACCTCCTCACGTTTTGGTAAATTTATTCGCATTCATTTTCGGAG
TAAGTGGCAAGCTGTCTCTGTGACATAGAAACCTACCTACTTGAGAAA
TCTCGTGTGACCTTTCAGCTCAAGGCTGAGAGGGACTATCACATATTCTA
CCAGATCATGTCCAACAAAAGCCAGAATTGCTGGACATGCTGCTGATCA
CCAACAACCCATAACGATTATGCTTACGTCTCCCAAGGAGAGGTGACGGTC
ACATCCATTGATGACTCAGATGAACTGATTGCCACAGACAGTGCCTTTGA
TGTGCTAGGCTTACGGCAGAGGAGAAGACAGGTGCTTATAAGCTAACAG
GCGCCATCATGCATTATGGAAATATGAAATTC AAGCAGAAGCAGCGCGAG
GAGCAGGCAGAGCCTGATGGCAGTGAGTCTGCTGACAAGTCAGCCTTCCT
AATGGGGCTGAACTCTGCTGACCTTCTCAAGGGACTCTGCCATCCAAGGG
TTAAAGTTGGAAATGAGTTTTGTACCAAAGGCCAAAATGTGGATCAAGTT
TACTATCCCAACAAAAGAGGCCTTCAAGTGCAGAGGAGTGC GGCAAGA ACTA
CAACACCAAGCTGGGCTACAAGCGGCACATGGCCATGCACGCGGCCACCA
GCGGCGACCTCACCTGCAAGGTGTGCCTGCAGAGCTATGAGAGCACGCC
GTGCTGCTGGAGCACCTGAAGAGCCACTCGGGGAAGTCCTCCGGCGGGGC
CAAGGAGAAGAAGCACCCCTGTGACCACTGCGACCGCCGCTTCTACACAC
GCAAGGATGTACGGCGCCACATGGTGGTGCACACCGGCCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTTCGGCCGCAAGGACCACCTGACCCG
GCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACCGAGC
CGCCGACATGCTGGGTCTGCTGGGGTCCGGCTCCCCGCCCTGCCCCATA
AAGGAAGAGCTCAGCCCCATGATGTG---TATGGGCCCCTCCAAGGACTC
CCTGATGGGCAAGCCCTTCCCCGGTG-----CCTTCCCCATGGGCATGT
ACAACCCTCAC-----CTGCAGGCTATGTCCA ACTCAGGGGTGTCC
-----CATCACTCCCTGGTGTCCGGGTGCTGTCTGCAGCCAT
GGGAATGGGCTGCCACATGGAGTACCTGATCTACGTTCCCTTCTTTCA
TGGGATGTTTACAGATCAGCGACGGGTCGAACGTCGTCAACCTGCTGGCC
AGCAACTCCCCGAGCGTCTCCTACGCTCTGACCCAGCAGAAGTACTTCAG
CAACTACAGCCCGGTGATCGGGTCTACATCTACGAGCCCATCGAGTACT
GGAACTCCACCGTCCAGGAGCACCTGAAGACGCTGGGCCACGGGTCAAT
AAGATTTTCGTGGATTGACAACCTTCTTTCAGTATCTGAAGGTGGTGAACGT
TAGCGCGTGCACAAAAGCGAATTCATAACCATCCTCCAGTCCCTCCTTCC
TGAGGAGCCCAGAGTACCAGCACTCAAGGACGACATAATATTTTACAAA
A---TAAGGG-----ACGAGACAGAGATCATCGCCTCCCGGAT
GTACCTGGTGGCCCGACCACGGAGAAGACCCGGGAGGAGGTGGTGGAGC
TCCTGGAGAGGCTSAGGCCCTCTCCCTCATCAACAGCATCAAATTCATC
GTCTTCAACCCACCTTCGTGTTTCATGGATCGATACAGCTCCTCGGTCAT
TTCGCCATCCTCACCTCAGGCTTCAGCGTCTGATCATCCTGATCCTGA
CCTTCTTTCTGGTCATCAACCCCTGGGGA ACTTCTGGCTGATTCTGACG
GTCACCTCGGTGGAGCTGGGGGTCTGGGCCTAATG-----



AAGCCGTTCCCCACTGGCACCCCTTCCCCATGGGCATGTACAACCCCA
CCAC-----CTCCAGGCCATGTCCAACCCTGGGGTGGGTAC-----
--CACCATTCTCTGATGCCCGGCTCCCTGTCTGCTGCCATGGGGATGGGC
TGCCACATGGAGTACCTGATCTACGCCTCCTTCTCCTTCATGGGATGTTT
ACAAATCAGTGATGGATCCAACATCGTCAACCTCCTAGCCAGCAACACGC
CCAGTGTGTCTAYGACYACGACCCAGCAGAAGTACTTCAGTAACTACAGC
CCCGTGATCGGCTTCTACATATAACGAGCCCATCGAGTACTGGAACCTCAC
GGTGCAGGAGCACCTCACAACGCTKAGCCACGGCTTCAACAAGATCTCCT
GGATGGATAACTATTTTTCAGTATCTGAAGGTGGTGAATGTGAGCGCCTCG
ACAAAAGTGATTTYATCACCATCCTRCAGGGCTCCTTCTGCGCAGCCC
AGAGTATCAGCACTTCATGGARGACATCATTCTGTCCAAGACAGATGGRG
-----ATGAAATGGAGATCATCGCRTCCAGGATGTACCTGGTG
GCGCGGACCACAGAGAAGACAAGGGAGGAGGTGGTGGARCTGYTGGAGAG
GCTCCGCCMCTCTCGTCTATCAACAACATCAAGTTCATTGTCTTCAACC
CCACCTTCGTCTWCATGGACCGTTACAGCTCCTCCGTGGTGTACCCATC
CTCACMTCGGCYTTTCAGYGTGCTCACCATCCTCATCCTCACCTTCTTCT
GGTCATCAACCCTCTGGGGAACCTTCTGGTTGATCCTGACYGTACCTCCG
TAGAGCTGGGGTCTGGGCCTCATGGGCTACCACCCCTTCGAGTGGCAG
CCGGCCCTCAAGAGTGTGTCCACATCCTGCCATGTGGGGATCATTGACGG
GCTATCAGGGTGGGTCGCTTCGGTGGATGACTCCCCAGCAGACACAGTCA
CGCGTCGGTTCCGCTACGACGTAGCCCTGGTGTGCGCCTTGAAGGACCTG
GAGGAAGACATCATGGAGGGCTGAGAGAGCGAGGCCTGGAGGACAGCGC
TTGCACCTCGGGCTTCAGCGTCATGATCAAGGAGTCTGCGATGGCATGG
GGGACGTCAGTGAGAAGCATGGTGGAGGGCCGGCCATCCCGAAAAGGCT
GTGCGTTTCTCCTTACCATCATGTCCATCTCTATTCAAGCTGAGGGAGA
AGAT-----GAGGCGATCACCATTT
TCCGGGAGCCCAAGCCAACTCAGAGATGTCCTGCAAGCCGCTCTGCCTG
ATGTTTGTGGATGAGTCGGACCACGAGACGCTCACAGGCGTCTGGGGCC
TGTGGTGGCCGAAAGGAACGCTATGAAGCACAGCCGTCTCATCCTGTTTG
TGGGCGCCTTTCTCGTCTCCTTCCGCTTCCACTTCCGGGGCACGGGCTAC
GACGAGAAGATGGTGCAGAGATGGAGGGTTTGGAGGCCTCTGGCTCCAC
TTACATCTGCACGCTGTGCGACTCTACTCGGGCAGAGGCCTCCACAACA
TGACTCTCCACTCTGTACCCCGCAGCCACGATGAGAACCTGGAGCGTTAC
GAACTTTGGAGACCAACCCTTATCTGAATCAGCTGAGGAGCTGCGAGA
CCGAGTCAAAGGCGTCTCTGCCAAGCCCTTCATGGAGACCCAGCCACAC
TGGACGCCCTGCACTGTGATATCGGCAACGCCACCGAGTTCTACAAGATT
TTCCAGGATGAGATAGGGGAGGTCTATCACAAGGC---CAAC---CCAG
CCGGGAGCAGCGTCGGAGCTGGCGAGCAGCCCTGGACAAACAGCTGAGGA
AGAAGATGAAGCTGAAGCCTGTGATGAGAATGAATGGGAACATGCACGG
AAGCTGATGACCCGGGAGGCAGTGGAGGCAGTGTGTGAGCTGGTGCATC
AGAGGAGCGTCAGGAAGCC-----

-----TCGTACACCATTGAGAT
GGGCCCCAAGGGCCTCAATGGAAAGAAAGCCCCACACCTTTCTCTTGCT
CCATCGAGGACCCTACCAAGCAGACCAAGTTCAAAGGCATCAAGACCTAC
ATATCGTACCGAGTGACCCCAAGCCACAATGCGAGGCCTGTGTACCGGCG
TTACAAGCACTTTGACTGGTTGTACAACCGTCTACTGCACAAGTTCACAG
TCATCTCTGTGCCCCACCTGCCCGAGAAACAGGCAACGGGGCGCTTCGAA
GAGGACTTCATCGAGAAGCGCAAGAGGCGGCTGATCCTCTGGATGGACCA
CATGACCAGCCACCCGGTCTGTGCGAGTACGAGGGCTTTGAGCACTTCC

TCATGTGCGCTGACGACAAGCAGTGGAAAGCTGGGCAAGCGGCGGGCAGAG
AAGGACGAAATGATGGGCGCCAACCTTCATGCTCACCTTCCAGATCCCAA
CGAGCACCAGGACCTGCAGGATGTGGAGGAACGTGTGGACTCCTTCAAGT
CCTTCGGCAAGAAAATGGATGACAGCGTCATGCAGCTTACGCATGTGGCC
TCGGAAGTGGTGCAGCAAGCACCTCGGAGGCTTCCGCAAGGAATTCAGCG
GCTGGGGAATGCTTTCAGAACGTCAGTCAGGCGTTCATGCTGGACCCTC
CCCACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCCTCTCGCCACTTTTCTCAA
ACTGACATCCCTGGGTTTTATCAT

CGGAGTCGGCGTTCGTGGCAACCTCCTGATCTCCATCCTACTAGTCAAAG
ACAAAAGCCTGCACCGCGGCCATACTACTTCTGCTGGACCTGTGCGCC
TCGGACATCCTGCGCTCCGCCATCTGCTTCCCCTTCGTCTTACCTCCGT
CAAGAATGGTTCCACCTGGACGTATGGCACACTTACCTGCAAAGTGATAG
CCTTCTAGGGGTGCTGTCTGCTTTCATACAGCGTTCATGCTCTTCTGT
GTGAGTGTGACACGCTACCTGGCCATAGCCCACCACCGTCTTACACCAA
GAGGCTCACCTTCTGGACGTGTCTGGCAGTCATCTGCATGGTGTGGACGT
TGTCGGTGGCCATGGCCTTTCCCCCGGTGTGGACGTAGGGACGTATTCC
TTCATAAGGGAGGAGGACCACTGTACGTTCAGCACCCTCGTTCAGAGC
CAACGACTCCCTGGGCTTCATGTTGCTCCTCGCCCTGATCCTCCTGGCCA
CCCAGCTTGTCTACCTCAAGCTTATCTTCTTCGTCCACGACCGCCGGAAG
ATGAAACCGGTCCAGTTTGTGCTTCCGCTCAGCCAGAAGTGGACCTTCCA
TGCCCCGGGGCCAGCGGCCAGGCAGCGGCTAACTGGTTGGCGGGGT---

-----NNGCAATCT

CGCTTTCACCCTGGCGTAGTACTGGACCTGGCACGGACC---GCAGCGT
CCCACTTAGTAACAGCTTGCTATCCCAGCAACAAACCGAAGAGCCCACAG
TTG---CATCCCCGCAGCGATGGTTTTGTACCC---CTGCCAATAACCGA
CTGGACTTTGCGCCCTCGGCGTACGAYGCTGCCCGGGCTGCTGATTTTGC
CGGTAACGCGGCCACCCTGCTGTCTTACGCAGCAGCTGGAGTAAAGGCAC
-----TTCCACTGCCACTGCAGGGTGTCAAACAGACCTCTAGGTTAC
TATGCCGACCCATCCG---GCTGG---GGCACACACACACCACCCAGTA
CTGC-----ATAAGTCTAGCTCTGTGCTCTTGTCTGGCCAACAA
ATTCTGTTG---GYAGAACAGGCA---CCTCCWACTACCTGG-----
-TKGATGA---CGAG---GACAC---CATCCCAACAGAAAGGTCRCCC--
-AT---CGGAGGGTCTAATGAG---GCAAAACCAAAAGACTT-----AT
CAGA---ATCCTACTGGATAGAG---ACGCCGTCTTCAATGAAGTCGATT
GATTCATGTGATTCTGGTATTTTTG---AGCAAGCTAAACGGAGAAGAAT
CTCACCGTCTGCTACACCG-----GTTTCGGAAACAGTGTCCCGGT
TGAAATCTGAG-----ACAGGCGAAGTCACAGAAAGAGAAGTGGCT
TTGGGGATAAATCCGTTTCGCAGACGGGATGGGAGCTTTTAAAATCAACCA
CAGCTCCCACGACCTGAGCTCCGG---TCAGACGGGCTTCTCCTCCAGG
CT---CCCGGTAY---GCTGCTGCCGCCCTKGGT---CACCACCA----
--CCACCCGACACACGTCAGCTCC---TACTCCACCGCAGCATTCAACTC
CACCCGGGACTTTCTCTTCAGAAACCGGGGCTTCGGAGACGCAACCAG--
-----CGCGCAGCACAGCCTGTTTGCCTCCGC---AGCGGGAAGT
TT---T-----GCAGGGCCACATGGACACTCCGATGCCACGGGGCACCT
GCTCTTCCCYGGACTCCACGAG---CAAGCCGCCAGCCATGCGTCTGCTTA
ATGTCGTCAACAGCCAGATGCGCCTTGGCTTTACCGGGGACATGTACGGC
CGGGCTGACCAGTAYGGCCACGTTACGAGCCCCGMT---CCGACCATA
CGCCTCCTCCCAGCTGCATGGCTATGGCCCTATGAACATGAACATGGCGG

CT---CACCACGGGGCAGGGCCTTCTTCCGATACATGAGGCAGCCCATC
AAACAAGAGCTCATCTGTAAGTGGGTCGAGCCCGAACAGTTGTGCAACCC
CAAAAAGGCTTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGTGACCC
ACCTGACCGTGGAGCATGTGGGGGACCGGAGCAGTCGAACCATATTTGC
TTTTGGGAAGAGTGCCTCCGAGAAGGAAAGCCGTTCAAAGCCAAATATAA
ATTTGTTAATCATATCAGAGTRCACACCGGAGAGAAACCATTCCCATGTC
CCTTCCCCGGCTGTGGAAA

>Coryphaena hippurus

AGTCTTCTCATTTCGAGCTGAGTTAAGCCAGCCTGGGTCACTTCTAGGAGA
TGACCAAACCTATAATGTCATCGTTACAGCACATGCCTTCGTAATAATTT
TCTTTATAGTTATGCCAATTATGATCGGAGGCTTCGGGAACTGATTAATC
CCACTAATGCTTGGCGCTCCTGATATAGCATTCCCTCGAATAAATAACAT
AAGCTTTTGACTTCTTCCACCATCATTTCTTCTCCTTCTAGCCTCTTCAG
GGGTAGAAGCAGGAGCAGGAACTGGTTGAACGGTCTACCCACCTCTGGCG
GGTAACTTAGCCCATGCTGGGGCCTCTGTAGATTTAACAATTTTCTCCCT
GCATTTAGCCGGGGTATCATCAATTCCTGGGGCAATCAATTTTATTACAA
CTATTATTAATAATAAAACCCCCACAGTAACGATATACCAAATTCCTACTA
TTCGTGTGAGCTGTACTAATTACAGCTGTACTACTACTCCTATCACTTCC
TGTCCTAGCTGCGGGAATTACAATACTGCTAACAGACCGAAATTTAAATA
CAGCTTTCTTTGACCCAGCGGGAGGAGGGGATCCTATCCTATAACCAACAC
CTGTTT-----

-----TTCCTGGAGAGAAACCTTACCCCTCTAACTGCCTTGG
CATGCTGTTGCTGTCCGACGCCCACCAGTGCACCAAGCTGTCAGAGCTCT
CTTGGGGCATGTGCCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGAC
TTCCCTCAACTGCCCAAAGATATGGTAGTCCAGCTTTTATCACACGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTACGACCTGGAGAGGAGGCACCTGCCACCTTCCAGAGCTTCTGAGA
ACGGTCCGCCTCGCCCTGCTGCCTGCCATTTTTCTGATGGAAAACGTCTC
AACGGAGGAGCTGATCAATGCCCAAGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATTCGCTGCAAGCTGAAAATCCTGCAGAACGAYGGCGTTGTCAAC
AGCCCGTGCCTCGGCCGAGAAAACCCAGCCAYGCCCTGTTCTTCTGGG
CGGGCAGACTTTCATGTGTGACAAGTTGTAYCTGGTAGAYCAGAAGGCCA
AAGAGATCATACCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACCGGTGGGA--GAGGCTC-
CGAGAATGGTGTGTCCAAGACGTGTGGGTCTACGATAACCGTCCACGAGG
AATGGTCCAAAGCAGCTCCCATGCTCATCGCTCGGTTCCGGCCATGGCTCC
GCAGAGCTGAAACATTGCTCTACGTGGTAGGAGGTCACACGGCGGCCAC
CGGTTGCCCTCCAGCTTCTCCGTGAGGACAATTACATTGTTGTGTTAGT
CGCTCGACGACGAGGCTGATACTGAACGAAGCGGAGCTCATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTGACAGTTTCCCTGGAGGATCAGT
CCTTCCCCAGTATTGTGCAGGTGATCAGCRGCGCTTCCATTCTAGTTAGC
ATGCACGGAGCCCAGCTCATCACCTCRCTTCTTCCCTCCCCAGAGGAGCCAC
TGTGGTGGAACTGTTCCCTTCCGCGTGAACCCGGAGCAGTACACCCCTT
ATAAAACCCTGGCCTCCCTTCCCTGGCATGGACCTTCACTACATCTCCTGG
AGGAACAGCAAGGAGGAAAACACTATCACCCACCCAGACAGACCCCTGGGA
ACAAGGAGGCATTATTCACTTGGACAAAGAGGAGCAGGAGCGAATACTGG
CCAGCAAGGACGTTCCAGGCACCTGTGCTGCCGAAACCCCGAGTGGCTC
TTCCGGATCTACCAGGACACATTGGTGGACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---AGAGGGCATGAAG---GCCAAGCCAGCTTTAAGAA---GT
CTAAGCCAGCCAGCATGGTCCACCCAGGCCGAGTCCGGGAGCCTCAATGT

CAGACCTCAGTCCAAACCAGTAATGAGGCCAAGCTCACAGTCTCCTGGCA
GATCCCATGGAATTTAAAATACCTGAAGGTAAGAGAGGTGAAGTACGAGG
TCTGGATCCAGAAAAAGATGCCAGCAAGGGAACACTGGAGGATCAAATC
ATCCAGGCTAACCTGCGCTGGAAGCCTTTGGCAACGCCAAGACGTTGAG
AAATGACAACCTCATCCCGTTTTGGAAAATTCATTCGAATTCACTTCGGCA
CGAGTGGCAAACCTGTCATCCGCTGACATCGAGACATACCTGCTGGAGAAA
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
TCAGATCCTGTCCAATCAGAAGCCGGAACCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTGACGGTC
GCTTCTATCAATGACTCGGAGGAGCTAATGGCCACTGACAGCGCCTTTGA
CGTGCTTGGCTTCACTGCAGAGGAGAAGATGGGCGTCTATAAACTGACTG
GTGCCATCATGCATTATGGCAACATGAAGTTCAAAACAGAAACAGCGTGAA
GAGCAGGGTGAACCGGATGGGACCGAGGCCGCTGACAAATCAGCTTACCT
AATGGGACTGAACTCCGCTGACCTCATCAAAGGCCTTTGCCACCCAAGAG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCAAAGTGTGGATCAAGTC
TACTATCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAACACTA
CAACACCAAGCTGGGGTATAAGCGTCATGTGGCCATGCACTCTGCCACAG
CAGGCGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGTACACCC
ATCCTCCTGGAGCACCTCAAGAGCCACTCCGGGAAATCCTCCGGTGGCAC
CAAGGAGAAGAAAACCCCGTGCAGCCACTGTGACCGTCGTTTTCTACACAC
GCAAGGATGTGCGACGACACATGGTGGTCCACACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAAGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGTTGAAGATCAAGGCGGAGC
CTCCAGACATGTTAGGTCTCTTAGCCTCCGGATCCCCACCTTGCTCTGTG
AAAGAGGAACTCAGCCCATGATGTGCGGCATGGGTCCTAACAAAGACCC
CATGATGGGCAAAGCGTTCCCAGTGGGGCCCTTTTCCAATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCAATGTGCAATACTGGGGTGGGT
CACCCA-----CACCCGTCCCTAATGCCCGCTCCCTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAATTAGYGATGGGTCAAATATCGTCAACCTGCTGGCA
AGTAACTCTCCGAGTGTTCATATGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGCCCCGTGATTGGGTTTTACATTTATGAGCCCATCGAGTACT
GGAATCCACGGTGCAGGAGCACCTGAAAACCTGAGTCATGGTTCAAC
AAGATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTCAACGT
GAGCGCTCAACTAAAAGCGACTTCATCACCATCCTCAAAGGCTCCTTCC
TGCGCAGCCAGAGTACCAGCATTTCACAGAGGACATCATATTCTCCAAG
A---ACCGTGAGACCG-----ATGAGTATGAYATCATTGCCTCACGGAT
GTACCTGGTGGCGCGGACGACCCGAGAAGAAGCGGAGGAAGTGGTGGAGC
TCCTGGAAAAGCTTCGTCCGTTGATGCTAATCAACAGCATCAAGTTCATT
GCCTTCAATCCCACATTTGTGTTTCATGGACCCTACAGCTCCTCTGTCAT
CTCACCCATCCTGACCTCAGGCTTCAGCGTACTCACTATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCATTTGGGAAACTTCTGGCTCATCCTCACG
GTCACGCTGTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCAACATCTTGCAATGTTGGCA
TTATTAATGGCCTCTCTGGATGGGCTTCCCTCGGTGGATGACTCCCAGCT
GACACCATCACTCGACGGTTCGGCTATGATGTGGCACTGGTGTGAGCATT
AAAAGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGATAGTCGGATGG
AAGACAGTGCTTGACCTCAGGCTTACTGTCATGATCAAGGAATGTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCATGGTGGAGGACCAGTTATTCC
TGAGAAGGCTGTACGTTTCTTTTCACTGTTATGTCATCTCTGTCATGG
TAGACAATGAGGGG-----AAGGAG
GTTACCATCTTACCCGAACCAAGGCCAAACTCAGAACTGTCCTGTAAGCC
CCTTTGCTTGATGTTTGTGGATGAGTCAGACCACGAGACGCTCACAGCGC

TCCTGGGGCCTGTAGTTGCAGAGCGTAATGCCATGAAAGAGAGCAGGCTC
ATCCTATCCATAGGTGGCCTACCTCGCTCCTTCCGCTTCCACTTCAGAGG
TACAGGATACGATGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGTCTT
CTGGGTCCACATATATCTGCACTCTATGCGACTCCAGTCGAGCAGAGGCC
TCTCAAACATGGTCTTACACTCCATCACCCGCTGCCACGAAGAGAACCT
AGATCGTTATGAAATATGGAGAACCAACCCCTTCTCTGAGTCTGCAGATG
AACTGCGAGACAGAGTCAAAGGAGTCTCTGCAAAACCCTTTATGGAGACC
CATCCCACACTGGACGCATTACACTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATTGGAGAAGTGTATCAAAAGGT---CA
AC---CCCAGCCGAGAGGAAAGGCGCAGCTGGAGGGCAGCTCTAGATAAA
CAGCTGAGGAAGAAGATGAAGCTGAAACCGGTGATGAGGATGAATGGGAA
CTACGCCCCGAGGCTAATGACCCTGGAGGCGGTTGAGGTGGTGTGTGAAC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTT
TACCTCCAGATGAGGCCCTGTGTGGCGCGCCACCTGCCAGCAAAGGAATG
CCCAGACCAGCTGTGCCGCTATAGCTTTAACTCTCAGCACTTTGCTGACC
TCCTCTCCTCCACCTTCAAATATAGATAACAATGGAAAGATAACCAATTAC
CTTACAAAGACTCTGGCCCATGTCCCTGAAATCATAGAGAGAGATGGATC
CATAGGAGCATGGGCCAGTGAGGGGAATGAATCGGCAAACAAATCGTACA
CCATCGAGATGGGCCCCCTGGGTCTCGGTGGAAGGAGAACCCGCGACCT
TTCTGCTGCTCCATCGAAGACCCCAAAAACAGACAAAGTTCAAAGGCAT
CAAGACCTATATTTTCATACCGGGTCACCCCGAGCCACACGGGGCGTCTTG
TCTACAGGCGCTACAAACACTTTGACTGGCTCTACAATCGCCTGCTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCCGAGAAACAGGCCACGGG
GCGATTTGAGGAAGACTTCATTGAGAAGCGTAAAAGACGACTGATACTGT
GGATGAACCACATGACCAGTCACCCGGTCTCTCCAGTACGAAGCTTT
GAGCACTTTCTGATGTGTGCTGACGACAAACAGTGAAACTGGGAAAGAG
ACGAGCGGAGAAGGACGAGATGGTTCGGCGCCATTTTCATGCTTACACTTC
AAATCCCCAACGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGGTGGAC
TCCTTCAAATCCTTTGCTAAAAAATGGACGACAGCGTGATGCAGCTCAC
GCATGTTGCCTCGGAGCTGGTGCGAAAACATCTGGGTGGGTTTCAGGAAGG
AGTTCCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCCCTTTATG
CTGGACCCCCCCCCACAGCTCGGATGCCCTCAACAACGCCATCTCACATCC
TCTCGCCACGTTCCCTCAAACAGCTCTCTGGGTTTCATCATTGGAGTCG
GTGTGGTTGGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTGCACCGAGCGCCCTACTATTTCCCTGCTGGACCTGTGCGCCTCTGATAT
CTTGCCTCCGCCATCTGCTTCCCCCTTTGTCTTACCTCAGTCAAGAATG
GCTCTGCCCTGGACCTACGGCACGCTGACCTGCAAAGTGATTGCCCTCCTG
GGTGTGCTCTCCTGTTCCACACAGCGTTCATGCTGTTCTGTGTCAGTGT
CACTCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTGGCTGTCTGTCATGTCATGGTGTGGACGCTGTCAGTA
GCTATGGCATTCCCGCCGGTGTAGATGTAGGGACGTACTCTTTTATCCG
GGAAGAGGACCAGTGCACATTCCAGCACCGTTCCCTTCCGGGCGAATGATT
CGCTGGGCTTCATGCTCCTCCTGGCGCTCATCCTCCTGGCCACACAGCTG
GTTTACCTCAAGCTCATCTTTTTTGTCCATGACCGTCGAAAGATGAAGCC
TGTCCAGTTCGTGCCCTGCTGTCAGCCAGAAGTGGACCTTCCATGGGCCAG
GTGCCAGTGGGCAGGCGGCGGCAACTGGCTGGCTGGATTTGGTCTGTGGC
CCCACCCACCTACTTTGCTGGGTATCCGGCAGAACAGCAACGCAGCGGG
CCGCAGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGCGGATTA
GTAGGATGTTCTACATCATGACGTTTTTCTTCCCTGGCACTGTGGGGGCC
TACCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCGTAGTCCC
TGGGGGCTATCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGCG
TCAATCCTTTTCATCTGCNNNNNNNNNNNNNNNNNNNN-----

-----NNNNNNNNNNNNNNNNNAAGTCACAGAGAG
AGAAGGGGGCGCTGGGGATCAATCCGTTCGCGGATGGGATGGGCGCCTTCA
AAATAAACCCAGCTCCCACGATATAGGCTCCGG---ACAGACGGCGTTT
TCCTCCCAGGCA---CCCGGCTAC---GCGGCGGCCGCCCTGGGA---CA
CCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGG
CTTTCAACTCCACCAGGACTTTCTCTTTCAGAAATCGGGGTTTCGGGGAC
GCCGCCGG-----GGCGCAGCACAGTTTGTTCGCCTC-----
---TGGAAGTTT---C-----GCAGGGCCACATGGACTC
CGGATGCGGCGGGCCACCTGCTCTTCCCCGGGCTGCACGAG---CAAGCGGCGAGCCAT
GCCTCCTCCAACGTGGTCAACAGCCAGATGCGCCTGGGCTTCTCGGGGGA
CATGTACGGACGGGCCGACCAGTACGGCCACGTTACCAGCCCCGCGT---
CCGACCACTATGCCTCGACCCAGCTGCACGGCTACGCCCCATGAACATG
AATATGGCCGCG---CACCACGGAGCAGGGGCCCTTCTTTTCGCTACATGAG
GCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGC
TGACGAATCCCCAAAAGTCGTGCAACAAAACCTTTTAGCAGATGCACGAG
CTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGACCAA
CCACGTCTGCTTCTGGGAGGACTGCTCCAGAGAAGGAAAGCCATTCAAAG
CCAAATACAAAACCTTGTAATCATATCAGAGTACACACCGGAGAAAAGCCC
TTTCCCTGCCCGTTCCCCGGCTGTGGCAAG

>Coryphaenoides rupestris

-----TTCTGGAGAGGAACCTGCACCCCCCAACTGCCTGGG
CATGCTGCTGCTCTCCGACGCCACCAGTGCACCAAGCTCTCCGAGCTCT
CCTGGAGCATGTGCTGAGCAACTTCCCCACCATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCCAAGACATGGTCGTGCAGCTTCTGTCCCACGAGGA
GCTGGAGACGGAAGACGAGAAAACCTGGTCTACGAGGCCGCGCTGAACTGGG

TTACCTACGACCTTCCGGGGAGGCACCCCCACTTGCCGGAAGTCTGAAA
ACGGTGCCTCTGGCTCCTGCCCAGCCTTTCTCATGGAGAACGTCTC
CATGGAGGAGCTGATCAACGCGCAGACCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCTGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCGAC
AGCCCGTGGCCCCGTCCCCGGAAGACCAGCCACGCGCTTCTCTGTGGG
CGGGCAGACCTTCATGTGCGACAAGCTCTACCTGGTGGACCAGAAGGCCA
AAGAGATCATTCCCAAGGCGGACATCCCCAGCCCCGCAAGGAGTTCAGC
GCCTGCGCCATCGGTGCAAGGTCTACATCACGGGCGGCC--GCGGCTC-
GGAGAACGGCGTGTCCAAGGATGTGTGGGTCTACGACACCGTGCAGGAGG
AGTGGTCCAAGGCGGCGCCATGCTCATCGCCCCGTTCCGGCCACGGCTCC
ACGGAGCTGAAGCACTGCCTGTACGTGGTGGGCGGGCACACGGCCGCCAC
GGGCTGCCTCCCCGCTCGCCGTCCGGAGGATTACATTGTGGTCTTCTCT
CGCTCCACAACGAGGTTGATCCTAAACGAAGCGGAGCTGATCATGGCGCT
GGCCAGGAGTTTCAGATGAGAGTCTTGACGGTGTCCCTGGAGGAGCAGT
CTTTTACCAGCATCGTGCAGGTGATCAGCGGAGCTCCATGCTGTTCAGT
ATGCACGGCGCACAGCTCATCACGGCGCTGTTTCCCTGCCCGAGGTGCAGC
CGTGGTGGAGCTGTTCCCCTACGCCGTGAACCCAGAGCAGTACACCCCAT
ATAAAAACCTGGCCTCCCTGCCGGGCATGGACCTCCAGTATGTCTCCTGG
AGGAACACGATGGAGGAGAACACCGTCACTCACCCGGACCGGCCCTGGGA
CCAAGGGGGCGTCTACACTTGGAGAAGGAGGAACAAGAGCGCATCCTAG
CCAGCAAGGACGTCCCCAGGCACCTGTGCTGCCGTAACCCAGAGTGGCTT
TTCAGAATCTACCAGGACACTTTGGTGGACATCCCTTCACTCCTCGAGGT
GCTCAA--GGACGGCCTCAGA--ACCAGGCCAACTTGAAAAA--GA
GCAAGGCGGCCAGCACAGTTCACCCCTGGGCGAGTCCGAGAACCCAGTGC
CAGACCTCGGTCCAAGCCACCAACGAGGCCAAACTCACAGTGTCTGGCA
GATCCCCTGGAACCTGAAGTTCCCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGACGCCAGCAAAGGAACCCCTGGAGGATCAAATC
ATCCAGGCCAACCCCTGCCTTGAGGCCTTTGGTAATGCCAAAACCCCTGAG
AAATGACAACCTCCTCACGTTTTTGGAAAGTTTTATCCGATTCACTTTGGGA
ACAGTGGCAAGCTGAGCTCTGCGGACATTGAGACCTACCTCCTAGAAAAG
TCCAGAGTCACCTTTCAGCTTAAGTCAGAGAGGAACATCACATATTCCTT
CCAGATCTTGTCCAATCAGAAGCCAGATCTGCTGGACATGCTGCTGATAA
CCAATAACCCGTATGATTACTCCTACATCTCCCAAGGAGAGGTAACGTG
GCGTCCATCAACGACTCTGAGGAGCTCATGGCCACTGACAGTGCATTTGA
CGTCCCTGGCTTACCCCTGGAAGAGAAGATGGGGGTGTACAAGCTGACAG
GTGCCATCATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCAGAGTCCGATGGGACTGAAGCAGCTGATAAATCAGCGTACCT
CATGGGTTTGAACCTCTGCAGACCTCATCAAATGCCTCTGCCACCCCAGGG
TGAAGGTAGGAAATGAATATGTCACCAAAGGTCAAGGGGTGGACCAAGTC
TACTAC-----

-----TACCTCATCTACGCTTCCTTCTCCTTCA

>*Cottus carolinae*

AGCCTCCTAATTCGAGCAGAATTAAGTCAACCCGGCGCCCTTTTAGGGGA
CGACCAGATTTATAATGTAATTGTTACAGCCCATGCTTTCGTAATAATTT
TCTTTATAGTAATACCGATTATAATCGGAGGTTTCGGGAACTGGCTCGTT
CCCCAATGATTGGCGCTCCTGATATGGCCTTTCTCGAATGAATAATAT
GAGCTTTTGACTTCTTCCCCCATCTTCTTACTCCTCCTTGCTCCTTCGG
GAGTCGAAGCAGGAGCCGGAACCGGATGAACAGTTTACCCGCCCCTCGCC
GGAAACCTCGCCACGCAGGAGCCTCTGTTGACCTAACAACTTCTCCCT
TCACCTAGCAGGTATCTCCTCTATTCTTGGAGCAATCAACTTTATCACAA
CTATCATTAACATAAAGCCCCCTGCTATTTACAAATACCAGACCCCGCTC
TTTGTATGATCTGTTCTTATTACTGCTGTCTACTGCTTCTTTCCCTCCC
CGTTCTTGCCGCCGGCATCACAATACTCCTGACAGACCGAAATCTTAACA
CCACCTTCTTTGACCCTGCCGGAGGAGGGGACCCAATCCTTTACCAACAT
CTC-----

-----GGATGATTACGTTGTTGTCTTCAGT
CGCTCCTCAACCAGGCTGATTCTGAATGAAGCAGAGCTAATCATGTTACT
GGCCAGGAGTTCAGATGAGAGTGGTACGGTGTCCCTTGAGGATCAGT
CTTTCCCAGTATCGTCCAGGTGATCAGCGCGCTTCTGTGTTGGTCAGT
ATGCATGGCGCTCAGCTCATCCTCACTCTTCTCCTCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
ATAAAACCCCTCGCCACCCCTTCCAGGCATGGACCTTCACTATATCTCCTGG
AGGAACATTCAGGAGGAGAACACCATCACCCACCCGACAGACCCCTGGGA
GCAAGGGGGCATCGCTCACTTGGAGAAGGAGGAGCAAGAGCGTATACTGG
CGAGCAGAGATGTCCCAGGCACCTGTGCTGTGCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCTTCTYCTGGAAGC
CCTTAA---AGAGGGCATGAAG---ACAAAGCCCAGCATGAAGAA---GT
CAAAGCCGGCCAGCACAGTCCACCCGGGCCGGGTCAGAGAACCCAGTGT
CAGACCTCGGTACAAACCACCAACGAGGCTAAACTCACAGTATCCTGGCA
GATCCCTTGGAACCTGAAATACTTGAAGGTGAGAGAGNNNNNNNNNNNNNNNNNAAAAAGAGAC
ACCA

GCAAGGGGACGCTGGAGGACCAGATCATCCAGGCTAACCCAGCGCTGGAA
GCTTTCGGTAATGCCAAAACGCTGAGGAACGACAACCTCGTCTCGTTTTGG
AAAATTCATCCGAATTCACCTTGGTACGAGCGGGAAAGCTGTGCTCTGCCG
ACATCGAGACGTACTTGTGGAGAAGTCTCGGTGCACCTTCAACTCAAG

GCAGAGAGGAACTACCACATCTTCTACCAGATCCTGTCCAATCAGAAGCC
AGAGCTGCTGGACATGCTGCTGATCACCAACAACCCGTACGACTACTCCT
ACATCTCCCAAGGGGAGGTGACGGTGCCATCCATCAACGACTCGGAGGAG
CTGCTGGCCACCGACAGCGCCTTCGATGTGCTCGGCTTCACTGCGGAGGA
GAAGATGGGCGTCTACAACTCATCGGCGCCATCATGCACTACGGCAACA
TGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGCTGAGCCAGACGGCACA
GAGGCGGCTGATAAAACGGCTTACCTCATGGGCCTGAACTCTGCTGACAT
CATCAAGGGGCTGTGTCATCCCAGAGTCAAGGTGGGAAATGAATATGTAA
CCAAAGGCCAAAGTGTAGACCAGGTGTACTACNNNNACAAGGAAGCCTTCAAGT
GTGAGGAGTGC GGCAAGCACTACAACACCAAGCTGGGATACAAGCGTCAT
GTGGCCATGCACTTTGCCACGTCCGGAGATCTCACCTGCAAAGTGTGCAT
GCAGAGCTACGAGAGCACACCGGTGCTCCTGGAGCACCTCAAGACCCATT
CCGGGAAGTCTTCGGGCGGTGCCAAGGAGAAAAAGCACCCGTGCGACCAC
TGTGACCGTCTGTTTCTACACGCGCAAGGATGTGAGACGGCACATGGTGGT
CCACACGGGTGCGAAGGACTTCCCTGTGCCAGTACTGTGCCCAGCGCTTCG
GCAGGAAGGACCATCTGACACGTACGTGAAGAAGAGCCACTCGCAGGAG
CTGCTGAGGATCAAGACGGAGCCTCCAGATATGTTAGGTCTTTTAGCGTC
CGGGTCACCACCTTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCG
GCATGGGTCCCAACAAGACCCCATGATGGGCAAACCGTTCCCCAGCGGG
GCCCCTTTCCCGATGGGCATGTACAACCCCCACCAT-----CTCCAGGC
CATGTCCTAATTCTGGGGTGGGTACCCG-----CACCCGTCCCTGATGC
CCAGTCCCTTGTCTGCAGCTATGGGCNNNNNNNNNNNNNNNNNNNTATCTCATCTACGCCTCTTTCTCA
TTCATGGGATGTTTACAGATCAGTGATGGATCAAAATATAGTGAACCTGCT
GGCCAGTAACTCCCCGAGTGTTTCGTACGCTACGACGCAGCAGAAATACT
TCAGTAACTACAGTCCCGTATCGGCTTCTACATTTACGAGCCCATTGAG
TACTGGAACCTCCACGGTGCAGGAGCATCTGAAGACCCCTGAGTCATGGCTT
CAACAAGATCTCTTGATGGACAACCTTTTTTCCACTACCTGCGTGTGGTGA
ACGTGAGCGCGTCGACCAAGGGCGACTTTCATCTCCATCCTCAAGGGCTCC
TTCCCTCCGACGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTTCTC
CAAGA---ACC GCGAGACTG-----ATGAGTACGACATTATCGCCTCGC
GGATGTACCTGGTGGCACGGACGACGGAGAAGAAGCGCGAGGAGGTGGTG
GAGCTTCTGAAAAGCTTCGTCCCTTGATGCTGATCAACAGCATCAAGTT
CATTGCCTTCAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCGTCCG
TCATCTCGCCATCCTGACCTCAGGGTTCAGCGTACTCACAATCCTCATC
CTCACTTTCTTCTGTCATCAACCCGTTGGGGAACCTTCTGGCTCATCCT
CACGGTAACGTCCGTGGAGCTGGGCGTCTTGGGTTGATGGGCTTTCACC
AGTTTGAGTGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAGTGTT
GGCATTATTAATGGGCTCTCTGGATGGGCTTCCCTCGGTGGATGATTTTCC
AGCTGACACCATCACTAGACGGTTTCGCTACGATGTGGCTCTGGTGTGAG
CATTAAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGG
ATGGAAGACTGTGCTTGCACCTCAGGCTTCAGTGTGATGATCAAGGAATC
CTGTGATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTG
TTCCCTGAGAAGGCTGTGCGTTATTCTTTCACTGTTATGTCTGTCTCTGTC
CTGGCAGACGAGCAGGAG-----GA
AGAGGTTACCATCTTCACTGAGCCAAAGCCAAACTCCGAACCTGTCTGTA
AGCCCCTTTGCCTGATGTTTGTGGACGAGTCAGACCATGAGACGCTCACA
GCTGTCCCTGGGGCCTGTAGTTGCCGAGCGTAATGCAATGAAAGAGAGCAG
GCTCATTTCTGTCCGTGGGTGGACTACCTCGTTCCCTCCGCTTTCACTTCA
GAGGCACGGGATATGATGAGAAGATGGTGC GCGAGGTTGAGGGCATGGAG
GCCTCAGGGTCCACCTACGTCTGCACTCTTTGCGACTCCACTCGGGCAGA
GGCTCTCAAAACATGGTGCTACACTCCATCACTCGCAGTCATGAAGAGA
ACCTAGATCGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTA
GATGAGCTGCGGGACAGGGTCAAAGGATCTCTGCTAAGCCCTTCATGGA

GACCCAGCCAACGATGGATGCATTACATTGTGACATCGGCAATGCCACTG
AGTTCTACAAAATCTTCCAGGACGAGATCGGAGAGGTGTACCAAAAGGT-
--CAA--CCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTGGA
TAAACAGCTAAGGAAGAAAATGAAGCTTAAACCGGTGATGAGGATGAATG
GGAACATATGCCCGCAGGCTGATGACCCAAGAGGCTGTGGAGGTGATCTGT
GAGCTGGTGCCTCTGAGGAGAGGAGGGAGGCCCTGAGGGAGCTGATGAG
GATCTACATTAGATGAAGCCTGTGTGGCGCGCCACCTGCCCTGCCAAGG
AGTGCCCCGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTTGCT
GACCTTCTCTCCTCCACCTTCAAATACAGGTACAAATGGAAAGATAACCAA
TTACCTGCACAAGACCCTGGCCATGTGCCCGAAAATCATAGAGAGAGATG
GATCCATAGGAGCCTGGGCCAGCGAAGGGAACGAGTCTGCAAACAAGTCG
TACACCATCGAGATGGGCCCGCGGGGCCCTGTGGAAGGAGAGCCCGCA
ACCGTTTTCTGCTCCATCGAGGACCCACGAAACAGACAAAGTTCAAGG
GCATCAAGACGTACATTTTCGTACCGGGTCACGCCAAGCCACACGGGGCGC
CCCGTCTACCGGCGCTACAAGCACTTCGACTGGCTGTACAACCGCTTGCT
GCACAAGTTCACTGTGATCTCCGTGCCCTCACCTGCCCGAGAAGCAGGCCA
CGGGGCGCTTCGAGGAGGACTTCATCGAGAAGCGCAAGCGGCGACTGATT
CTGTGGATGAACCACATGACCAGCCACCCGGTGCTCTCCAGTACGAGGG
CTTCGAGCACTTCTGATGTGCGCCGACGACAAGCAGTGGAAGCTGGGCA
AGAGGCGGGCGGAGAAGGACGAGATGGTGGGCGCCACTTCATGCTGACC
CTGCAGATCCCCAACGAGCACCAGGACCTTCAGGACGTCGAGGAGCGCAT
CGACACCTTCAAGCCTTTTGCCAAGAAAATGGACGACAGCGTGATGCAGC
TCACGCACGTGCGCTCGGAGCTGGTGCCTAAGCACCTGGGCGGTTTCAGG
AAGGAGTTCCAGCGGCTGGGGAATTTCTTCCAGTCCGTGAGCCAGGCGTT
CATGCTGGACCCCCCCCCAAAGATCAGAGGCCCTCAACAAAGCCATCTCCC
ACCCCTCTCGCCACGTTCCTCAAACCTGACCTCTCTGGGTTTTATCATTTGGA
GTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAA
GAGTCTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCTG
ACATCCTGCGCTCTGCCATCTGCTTCCCCTTTGCTTTCACCTCGGTCAAG
AATGGATCGGCCTGGACCTACGGCACGCTGACCTGCAAGGTGATCGCCTT
CCTGGGTGTGCTCTCCTGTTTTCCACACGGCGTTTATGCTCTTCTGCGTCA
GCGTCACACGCTACCTGGCCATCGCACACCACCGTTTTCTACACCAAGAGG
CTGACCTTCTGGACCTGTCTAGCCGTCTATCTGCATGGTGTGGACGTTGTC
CGTGGCTATGGCGTTCCCGCCGGTGTAGATGTAGGGACGTACTTTTTTA
TCCGGGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCGAAT
GATTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACA
GCTGGTTTTACCTCAAGTCTATCTTCTTCGTGCACGACCGTCCGGAAGATGA
AGCCTGTCCAGTTTGTGCCCTGCTGTGTCAGCCAGAACTGGACCTTCCACGGG
CCAGGCGGAGCGGGCAGGCGGCGGCCAACTGGCTGGCGGGATTTCGGCCG
AGGCCCCACCCCGCTACCTTGCTGGGCATCCGGCAAACAGCAACGCAG
CGGGCCGAGGCGTCTGCTGGTATTGGATGAGTTCAAACAGAGAAGAGG
ATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTCCTGGCGCTGTGGGG
GCCCTATCTGGTCGCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTGG
TCCCTGGGGGCTACTTGACGGCCGCGTGTGGATGAGCTTTGCCAGGCC
GGGGTCA-TCCTTTCATCTGCATCTTCTCANNNNNNNNNGCCAAATCTCGCTTTCACCC
TGGCGTGGGGACTGGTCCCTGGCACGGAGC---GCAGCGTCCCCTCGGCA
ACAGCTTGCTGTCCCCGACGAAACCGACGATCCCCTGTTGCCACCCCC
CCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGC
TGCTCGGCATACGACGCGCC-----GATTTCCCGGTAACGCGG
CCACCTTGCTGTCTTACGACGCGGCGGAGTGAAGGCTC-----TTCCC
CTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGACCC
GTCGG---GCTGG---GGAGGACGCACGCGCCGCGCAGTACTGCGGCGTGA
ACAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCCGTAACCTCTCTCGGC

GGCCGAGCAGGTA---CC---AACTACCTGG-----CCGAGGA---
AGGA---GACTC---CATCACGACGGAGAGGTCCCA---AT---CGGCG
GCTCGGACGAG---ACCAAACCCAAAGACATGAC---ATCCGA---GTCG
AGCTGGATAGAG---ACGCCGTCTCCATCAAGTCGATTGATTTCGAGCGA
TTCTGGTATCTTTG---AACAGGCCAAACGGAGAAGAATCTCACCTTCTG
CCACGCCG-----GTTTCAGAGACAGTGTCCCCGCTAAAAATCTGAG
CATCACTCAACAGGCGAAGTACAGAGAGAGAAGTAGCGTTGGGGATAAA
TCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAAACCACAGCTCCCACG
ACATCGGCTCCGG---ACAAACGGCGTTTTCTCCAGGCG---CCCGGC
TAC---GCGGCAGCCGCCCTGGGA---CACCATCA-----CCACCCGAC
CCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACT
TTCTCTTCAGAAATCGGGGCTTCGGGGACGCCACCGG-----G
GCGCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----
-GCAGGGCCACATGGACACTCGGATGCAGCGGGGCACCTGCTCTTCCCGG
GGCTCCACGAG---CAGGCGGCGAGCCATGCGTCTTCCAACGTGGTCAAC
AGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCCGACCA
GTACGGCCACGTTACGAGCCCGCGGT---CCGACCCTACGCTTCGACCC
AGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA---CACCAC
GGCGCAGGGGCTTCTTTTCGATAACATGAGGCAGCCGATCAAGCAAGAGCT
CATCTGCAAGTGGATCGAGCCGGAGCAACTGACGAATCCCAAGAAGTCGT
GCAACAAAACTTTTAGCACGATGCACGAGCTTGTGACCCATCTGACGGTG
GAGCATGTGGGGGGACCGGAGCACACCAACCACATCTGCTTCTGGGAGGA
ATGCGCCAGAGAGGGAAAGCCATTCAAAGCCAAATACAAACTTGTAATC
ATATCAGGGTACACACCGGAGAAAAGCCCTTTCCGTGTCCGTTCCCCGGC
TGTGGCAA

>Cromeria nilotica

AGCCTTTTAAATTCGAGCAGAAGCTCAGCCAACCCGGCTCACTTATAGGCGA
CGACCAAATTTATAATGTAATCGTCACAGCACATGCTTTTCGTAATAATTT
TCTTTATAGTAATGCCAATTTTAAATTGGGGGCTTTGGGAACTGGCTAATT
CCACTTATAATTTGGGGCCCCAGATATGGCCTTTCCCCGAATAAATAATAT
AAGTTTCTGGTTACTCCCCCGTCATTCCTTCTGCTCTTGGCTTCTCCCG
GCGTAGAGGCAGGTGCCGGGACAGGCTGAACTGTTTATCCTCCCTTAGCA
GGTAATCTAGCACATGCCGGGGCCTCTGTAGACCTTACAATCTTTTCGCT
GCACCTAGCAGGTGTGTCATCTATCCTTGGTGCAATTAACCTTCAATTACCA
CAATTATTAACATGAAACCTCCAGCAATCTCACAATACCAAACCCCTTA
TTTGTGTGAGCCACTTTGATCACAGCAGTACTTCTTCTGCTTTCCCTTCC
AGTGTAGCTGCCGGGATTACAATGCTACTTACAGACCGAAATATTAACA
CCACATTCCTTCGACCCCGCTGGAGGTGGTGATCCCATCCTATAACCAGCAC
TTGTCTGATTCTTTGGCCACCCAGAAGTATATATTTAATCCTGCCAGG
CTTCGGTATAATTTCTCATATCGTTGCATACTATGCGGGCAAAAAGAGC
CCTTCGGGTACATAGGGATAGTATGGGCCATGATAGCAATCGGACTTCTG
GGGTTCAATTGTCTGAGCCCATCATATGTTACCCGTAGGCATGGACGTAGA
CACACGGGNNNNTTCTTGAGAAAGAACTTTCACCCATCAAATGCTTAGGAATG
TGCTTCTCTGTGATGCCCATCAATGCACACAGCTCTTCCAGCTTCTCCTG
GAACATGTGCCTGAGTAACTTTCCAGCTATCTGCAAGACCGAGGAGTTCC
TACAGCTTCCCAAAGACATGCTTGTCCAGCTCCTGTCCCATGAGGAACTG
GAGACAGAGGACGAGCGGCTTGTATACGAGTCAGCACTCAACTGGGTCAA
CTATGATCTGGAACGTAGACACTGCCACTTGCCAGAGCTGCTGCGTACGG
TTCGGCTAGCTCTGCTTCCC GCCATCTTCTTGATGGAAAACGTTTCAACA
GAGGAACTGATAAATGCACAAGCCAAAAGTAAAGAGCTGGTGGACGAAGC
GATTCGCTGTAAGCTGCGCATTTTGCAAAACGATGGAGTGGTAAACAGTC
CCTGTGCCCGTCTTCGAAAACCTAGCCATGCACTCTTTTTATTGGGTGGT
CCCACCTTCATGTGCGATAAGCTGTACCTGGTGGACCAGAAGGCCAAAGA

AATCATTCCTAAGGCTGACATCCCTAGCCACGCAAAGAATTCAGTGCCT
GTGCTATTGGCTGTAAAGTGTATGTGACGGGTGGGC--GTGGCTC-TGAA
AATGGTGTGTCTAAGGACGTGTGGGTGTATGACACACTGCATGAGGAATG
GTCTAAAGCAGCACCAATGTTAATAGCACGATTCGGCCATGGATCGGCAG
AGTTGCGGCATTGCCGTGTATGTGGTGGTGGTCACACAGCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NGGATGATTAC
ATTGTCGTTTTTAGTCGTTCTAACCAACAGGTTGATCTTTAATGAACCAGA
ATTGATTCTAGCTCTTGCTCAAGAATTCCAAATGAGAACCGTCACTGTAT
CCCTGGATGAACAGTCATTTCCAAACATTGTCCAGATCATTAGTGGAGCG
TCAATGTTGGTCAGCATGCATGGAGCTCAATTGGTTACCTCCATGTTTCT
CCCTCGAGGTGCAGTTGTGATTGAACTCTTCCCCTTTGGAGTTAAACCAG
ATCAGTACACACCATACAAACCTTTGCCTCCTTGCCTGGAATGGACCTC
CAATACGTTGCATGGAGAAACACAATAGAGGAGAAATTCGATAGCCTACCC
TGACCGTCCCTGGGATCAGGGTGGCATCGCTCACTTGGACAAGGAGGAAC
AGGACCGCATAATTGCCAGCAAGGAGGTACCACGTCACCTTGTGTTGTGCG
AACCCAGAGTGGCTATACCGCATCTATCAAGACACGATTGTGGACATTCC
CACCTTTATGGAGGTAGTTTCG---GGAAGGTCTTAAG---GCCAAATTAA
ATTTGAAAAA---GACCAAGGCCGCCAGCACAGTGCACCCTGGCCGCGTT
CGAGATCCCAAATGCCAGACTTCTGTGCAGGCGACCAGTGAAGCCAAGTT
GACTGTGTCTTGGCAGATTCCTTGGAACCTCAAATACCTGAAAAGTTCGGG
AAGTCAAATACGAAGTGTGGATACAAAAAAGGATGCTAGCAAAGGGACA
CTGGAAGATCAAATTATTCAGGCTAACCTTGCCTGGAGGCTTTTGGCAA
TGCCAAAACAGTAAGAAATGACAATTCCTCCCGCTTTGGAAAGTTCATT
GCATTCATTTTGGAACAAGTGGTAAACTAGCTTCTGCTGACATAGAGACT
TACCTACTTGAAGAAGTCTCGTGTAACCTTTCAATTAAAATCTGAAAGGAA
CTACCACATCTTTTTTCAGATATTTGCTGCTGAAAAGCCAGAGTTGTTGG
ATATGTTATTGATTACCAACAATCCTTATGATTACTCTTACATTTCCCAA
GGAGAAGTAACAGTCGCATCCATCAATGACAACGAAGAAGTCTTGCTAC
TGACAATGCTTTTGTATGTTCTTGGTTTTACAGCAGATGAAAAGATGGGTG
TCTACAAGTTGACGGGTGCAATAATGCACTACGGCAACATGAAATTCAG
CAGAAGCAGCGAGAGGAGCAGGCAGAGCCTGATGGAAGTCTGAGTCTGCAGA
CAAGTCAGCCTACCTAATGGGGCTAAACTCAGCAGATCTCCTAAAGGGAC
TCTGCCATCCGAGAGTTAAAGTAGGCAATGAGTATGTTACAAAAGGACAG
AATGTGGATCAAGTCTACTACCCCAACAAGAGGCCTTTAAGTGTGAAGA
GTGTGGTAAGCACTACAACACCAAGCTAGGTTACAAGCGCCACGTAGCCA
TGCCTCTGCTACAGCCGGTGATTTGACTTGAAGGTGTGCCTGCAGAGC
TATGAGAGTACTCCAGCTCTTTTAGAGCACTTGAAGAGTCAATTCAGGCAA
ATCATCAGGGAGCACCAAGGAGAAGAAGCATCCATGTGACCACTGTGATC
GGCGTCTTACACGCGTAAAGACGTACGCCGTCACATGGTTCGTGCACACA
GGTCGCAAGGACTTCCTGTGCCAGTACTGTGCACAACGTTTTGGCCGCAA
AGATCACCTGACACGGCATGTCAAGAAGAGCCACTCACAGGAGTTACTGA
AGATCAAGACAGAACCCTCCGGACATGTTAAGCCTGTTGGGGTCTGGATCT
CCACCCTGTGCTGTGAAGGAAGAACTCAGCCCAATGATGTCAGGCATGGG
GCCTGCCAAGGACCCCTGATGGCTAAGCCTTTTCCCACAGGAACCCCTT
TTCCCATGGGTATGTATAACCCCAACCAC-----ATCCAGGCCATGTCT
AATCCCGGTGTGGGTCAC-----CACCACACCTTGGTACCTGGCTC
TCTGTCTGCTGCTATGGGGATGGGCTGTCATATGGAATATTTAATTTATG
CTTCTTTTTCTTCATGGGATGTTTACAAATTAGTGTGGTTCCAACATT
GTGAACCTACTTGGCTAGCAACTCTCCTAGTGTATCATTGTCTCTGACGCA
GCAGAAGTACTTTCAGTAACTACAGTCCAGTTATTGGGTTCTACATTTATG
AGCCCATGAGTATTGGAACACTACTGTGCAGGAACACCTTAAAGACGTTA
GGACATGGTTTTCAACAAGATTTTCGTGGATTGATAATTACTTTTATTACCT
TAAAGTGGTGAATGTCAGTGCATCAACCAAAAGTGATTTTATAAACATCC

TCAAGAATTCGTTCTTGAGGAGTCTGAGTATCAACACTTCATGGAGGAC
ATTATTTTCTCCAAAA---ATGGAG-----ATGAGTATGACAT
TATTGTGTCCCGGATGTACTTGGTCGCCAGAACCACGGAGAAGACCCGAG
AGGAGGTTGTGGAGCTGCTGGAGAGGTTAAGACCTCTGTCCCTAATAAAC
AGCATCAAATTTATTGTCTTTAACCTACCTTCGTCTTCATGGACCGTA
CAGTCTTCRGTCATTTACCTATACTGACGTCAGGCTTTAGYGTTTTGA
CCGTCATTATTCTTACGTTCTTCTAGTCATTAATCCACTGGGGAAC TTC
TGGTTGATACTAACCGTCACTTCTGTGGAGTTAGGGGTTCTGGGTCAT
GNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNTGGATGATTCCTGCAGACACCATCGCTCGGCGTTTTCGCT
ATGATGT

TGCCCTGGTTTTCAGCTTTGAAAGACTTGGAAGAGGACATTATAGAGGGGC
TAAGGGAGAGAAGGCTGGATGACAGCCTCTGCACCTCTGGTTTTAGTGTG
GTTATCAAAGAATCATGTGATGGTATGGGAGATGTTAGTGAAAAACATGG
AGGTGGTCCATCAGTTCCTGAAAAAGCAGTAAGATATTCCTTCACTGTGA
TGCTATTTTCTGTTCAAGCTGAAGGGGAAGAT-----
-----GAGGCAGTCTCTATTTTCCAGGAAATGAAGCCCAACTC
TGAGCTATCTTGCAGACCTCTGTGTCTCATGTTTGGTTGACGAATCAGACC
ACGAAACGCTCACGGCTATCCTGGGGCCTGTAGTGGCTGAACGTAAGGCC
ATTAAGAGAGTGCCTCATTCTGTCAATTGGAGGGATGCCCGATCTTT
TCGATTTCACTTCGGGGCCTGGATATGATGAAAAAATGGTCAGAGATA
TGGAGGGCTAGAGGCATCAGGTTCCACCTATGTCTGCACACTTTGTGAC
TCTACCCGAGCAGAGCCTCTCAAACATGGTGCTGCATTCCATCACTCG
AAGCCATGAAGAGAACCCTGAACGATACGAAATCTGGAGAACAATCCAT
TTTCTGAGTCTGCAGATGAACTCAGAGATCGGGTAAAAGGTGATCAGCC
AAGCCTTTTTATGGAGACTCAGCCAAGTTTGGATGCTTTGCACTGTGACAT
TGGTAATGCCACTGAGTTCTACAAGATCTTTTCCAGGATGAAATTGGTGAAG
TACACCTGAAAAA---TAAC---CCAGGACGTGAAGAACGTCGTCGCTGG
CGCTCAGCTCTAGACAAACAGCTGAGGAAAAAATTGAACTGAAACCAGT
AATGAGAATGAATGGTAATTACGCAAGACGTCTAATGACCCTAGAGGCAA
TAGATGCTATTTGTGAGCTTTGTGCCATCTGAGGAACGTCGCAAGGCTTTG
AGGGAACTTATGGAACTTTACATCCAGATGAAACCAGTGTGGCGCTCAAC
ATGCCAGCACGTTGAATGCCCGGATCAACTGTGCCGCTATAGTTATAACT
CTCAACGCTTTGCTGAGCTTCTGTCTCCACATTCAAATACCGATATGAT
GGCAAATTAACCAACTATCTTACATAAGACCCTGGCTCATGTTCTTGAGAT
TGTTGAGAGGGATGGATCTATCGGTGCATGGGCAAGTGAAGGGAATGAAT
CTGGAAACAAGNNNNNNNNNNNNNNNNNNNNNNNCCAGGACCTCAGTGGAAAGGAGAACCCCAAGCCTTT
TAAT

TGTTCCATTGAAGATCCTACCAAACAACCAAGTTCAAGGGTATAAAGAC
GTACATATCATAACCGCTGACCCCCAGCCACACTGGTCGCCCTGTGTATC
GTCGTTACAAGCACTTTGATTGGCTGTATAATAGGCTACTGCACAAGTTC
ACTGTTATCTCAGTGCCTCATTTACC TGAGAAGCAAGCAACTGGCCGCTT
TGAGGAGGACTTTATTGAGAAGCGCAAGAGACGCCATTTTATGGATGG
ACCACATGACCAGTACCCCTGTTTATCACAATATGAGGGCTTTGAACAT
TTTCTGATGTGTGCTGATGATAAGCAGTGGAAACTTGGGAAACGAAGAGC
GGAKAAGGATGAGATGGTAGGAGCGCACTTTATGCTCACTTTACAGATTC
CCAATGAGCACCAGGACTTG CAGGATGT CGAAGAACGAGTGGACTCTTTT
AAGGCCTTTGCAAAAAGATGGATGACAGTGTCA TG CAGTTGACCCATGT
GGCTCTGAGCTGGTACGTAAGCACCTGGGGGGCTCCGAAAGGAGTTTC
AGAGACTGGGTAATGCATCCAATCTATCAGT CAGGCCTTCATGCTGGAT
CCACCTTATTGCTCAGATGCTT WAAAACATGCCATCACTCACNNNNNNNNNNNNNTTCCTCAA
ACTGACGTCTTTGGGTTTTATCATTTGGTGTGGAGTGGTCGGTAATCTCC
TGATCTCCATCCTTCTCGTTAAAGACAAAAGCTTGCACCGTGCCCCCTAC

TATTTCCTTTTGGACCTGTGCGCCTCTGACATCCTTCGTTTCAGCAATCTG
TTTCCCCTTTGTGTTTACTTTCAGTCAAAAATGGCTCAGCATGGTCATATG
GCACACTTACCTGCAAAGTGATTGCCCTCCTGGGTGTTCTATCGTGTTC
CACACCGCCTTTATGCTTTTTCTGTGTCAGTGTTACGCGGTACCTGGCCAT
CGCCATCACCGCTTCTATAACCAAGAGGCTCACCTTCTGGACTTGCCTGG
CTGTTATCTGTATGGTGTGGACGTTRTCAGTCGCCATGGCATTCCCACCA
GTGTTAGATGTGGGCACATATTCGTTTCATCCGTGAAGAAGACCAGTGTAC
ATTTACAGCACCGCTCTTTCCGTGCCAACGATTCTCTGGGCTTCATGTTAC
TCCTTGCCCTCATTCTCCTGGCTACCCAGCTTGTCTACCTCAAGCTCATC
TTCTTTGTCCATGATCGTCGAAAAATGAAGCCTGTCCAGTTCGTTCCAGC
CGTTAGCCAGAACTGGACCTTCCATGGCCWGGAGCCAGTGGCCAGGCAG
CAGCTAATTGGCTGGCTGGATTTGGCCGTGGTCCCACCCACCCACACTA
CTGGGGATAAGGCAGAACAGCAACGCGGCAGGCCGAGAAGACTGCTGGT
GTTGGATGAGTTTAAAGACTGAAAAGAGGATTAGCAGGATGTTCTACATTA
TGACCTTCTTTTTCTTAGCTTGTGGGGACCCTACCTGGTGGCTTGCTAC
TGGAGAGTGTGGCAGGGGTCCAGTTGTCCCTGGGGGTTACCTGACAGC
CGCTGTGTGGATGAGCTTTGCCAGGCTGGAGTCAACCCCTTCATTTGCA
TCNNNNNNNNNNNNNNNGCCAAATCCCGCTTTCACCCTGGCGTCGGGAGCGGTCTGGCACGGAC
C---GCAGCGTCCCACTCAGTAAACAGCTTGTATCACCGCAACAAACCGA
GGAGACCGCTGTGG---CCTCCCCGAGCGATGGTTTGTACCC---CTG
CCAACAACCGACTGGACTTTTGCCGCGTCAGCTTACGACGCCGCTGCGGCT
GCTGATTTCCCGGTAACGCTGCGACCCTTCTGTTCGTATGCGGCTGCTGG
AGTAAAAGCGC-----TTCCATTGCCACCGCAGGCTGCTCCAACAGGC
CATTAGGTTACTATGGAGACCCGCCG---GTTGG---GGCACGCGTACT
CCTCCTCAGTATTGC-----AGTAAATCTAGCGCAGTTCGCGGTG
TTGGCCGTCCAACCTGTGGGTAGTAGAACGACCA---CTACCGTTATC
TGA---CCGGCTTGGAGGATGGTGGT---GACCC---CATAGCGCCTGAA
AGATCCCCT---CT---CGGCGGAGCAGAGGAA---ACCAAGCCGAAAGA
CCT-----TACGGA---ATCCAGCTGGATAGAG---ACACCGTCTCTA
TCAAGTCCATTGATTCAAGCGATTCTGGAATTTTTG---AACAAAGCCAAA
CGGAGGAGGATTTCCGCATCTGCCACACCA-----GTTTCAGAGAC
CTCCTCTCCTTTAAAATCTGAA-----ACAGGCGACGTTACAGACA
GAGAAGTGGCTTTGGGGATAAATCCGTTTCGCCGACGGCATGGGTGCTTTC
AAAATTAACCACAGCTCCCACGATCTTGGCTCTGG---GCAAACGGCGTT
TTCTCACAGGCT---CCCGGCTATGCAGCCGCTGCTGCCCTGGGACATC
ACCATCA-----TCACCCTACTCATGTCAGTTCC---TACTCCACGGCG
GCTTCAACTCAACACGGGACTTCTTTTTTCGGAATCGGGGGTTTGGAGA
CGCCACCAG-----CGCGCAACACAGTCTTTTTGCTTCTGC--
-CGCGGGAAGTTTTGCT-----GCAGGGCCACATGGACATTTCAGATGCC
GCGGGGCACCTGCTCTTTCCGGGATTGCACGAGGCTCAGGCGGCGACACA
TGCTTCCCTCAAACGTGGTGAATGGTCAAATGCGCCTGGGCTTTTCCGGGG
ACATGTATGGCAGGGCTGACCAATACGGCCACGTTACGAGCCCTAGGT--
-CCGAGCATTACGCGTCGACTCAGTTGCATGGCTATGGCCCTATGAACAT
GAACATGGCTGCC---CATCACGGCGCCGGGGCCTTCTTTCGATACATGA
GACAGCCCATCAAACAAGAGCTCATCTGCAAGTGGTTCGAGCCCAGCAG
CTTACGAATCCAAAAAGTCTGTAAACAAAATTTACAGCACCATGCATGA
GCTGGTTACCCATCTCACGGTGGAAACACGTTGGGGGACCCGAACAATCCA
ATCACATTTGCTTTTGGGAAGAGTGTGCCCGGGAAGGAAAACCTTTTAAA
GCCAAGTACAACTTGTAATCATATCAGAGTCCACACCGGAGAAAAGCC
TTTTCTTGCCCATTTCCGGNNNNNNNNNN
>Cryptopsaras couesi
AGCCTATTGATCCGTGCTGAGCTCAGCCAGCCAGGCACACTTTTAGATAA
CGACCAGATCTACAACGTTGTTGTAACAGCGCATGCCTTTGTAATAATTT

TTTTTATGGTTATAACCAATTATGATTGGAGGCTTTGGGAATTGGCTAATT
 CCTTTAATGATCGGAGCGCTGATATAGCGTTCCCTCGAATAAATAACAT
 AAGCTTCTGGTACTTCCCCCTTCTTCTTTCTCCTGCTGGCCTCTCAG
 GCATTGAAGGGGGCGCAGGAACAGGGTGAACAGTATACCCGCCCCTCGCA
 GGTAAC TTGGCGCACGCTGGGGCATCTGTAGACCTAACAATTTTCTCTCT
 ACACCTGGCAGGTGTGTCCTCAATTTTAGGGGCTATCAACTTTATCACAA
 CAATTATTAATATAAAAACCTCCCGCCATGTCACAGTACCAGACACCTTGT
 TTCGTATGGTCCGTGTTAATTACGGCCGTATTACTTTTACTCTCACTACC
 CGTTCTTGCGGCTGGTATCACCATGCTACTAACAGACCGTAACCTAAATA
 CAACATTTT-----

-----NNNNNNNGAGAAACCTTACCCGWCTAACTGCCTTGGCATGCTGT

TGCTGTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCTCTTGGGGC
 ATGTGCCCTCAGCAACTTCCCCTACTATTTGCAAGACAGAGGACTTCCCTCCA
 ACTACCCAAAGATATGGTGGTGCAGCTTTTTGTACATGAAGAGCTGGAGA
 CAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGATCAACTAT
 GACCTAGAAAAGGAGGCCTGTCACCTTCCAGAGCTCCTGAGAACGGTCCG
 TCTTGCCCTGCTGCCCTGCCATCTTTCTAATGGAGAATGTCTCGACAGAAG
 AGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATGAGGCTATC
 CGCTGTAAGCTGAAGATCCTGCAGAATGACGGCGTCGTTAACAGCCCGTG
 TGCTCGACCAAGAAAAACCAGCCATGCTCTTTTTTCTCCTGGGAGGGCAGA
 CTTTCATGTGTGACAAGTTATACCTGGTGGATCAGAAGGCCAAAGAGATC
 ATCCCAAAGGCAGACATTTCCAGCCCCAGGAAAGAGTTCAGCGCCTGTGC
 CATCGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-CGAGAATG
 GCGTGTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGGAATGGTCC
 AAAGCGGCGCCCCCTGCTCATTGCCAGGTTTTGGTCAATGGCTCTGCTGAGCT
 GAAACACTGCCTCTATGTCGTAGGAGNNNGGA
 TGAATACATTGTTGTGTTTAG

TCGTTCAACAACAAGACTAATACTGAATGAAGCGGAGCTAATAATGGCAC
 TGGCTCAGGAGTTCCAGATGAGAGTGGTACAGTATCCCTGGAGAACAG
 TCGTTCCCTAGTATCATCCAGGTGATCAGCAGTGCTACCATGTTAGTCAG
 TATGCATGGAGCTCAACTTATCACCTCACTTTCCCTCCCAGAGGAGCTG
 TTGTGGTGGAGCTTTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCA
 TATAAAACCCCTTGCCCTCCCTTCCGGGCATGGACCTGCATTATATCTCCTG
 GAGGAAC TTAAGGAGGATAACACCATCACCCACCCAGACAGGCCCTGGG
 AACAAAGGGGGTATTGCTCATTTGGATAAGGAGGAGCAAGAACGAATACTA
 ATGAGTAAAGATGTGCCAGGCATCTGTGCTGCCGAAACCCAGAGTGGCT
 CTTCCGGATCTATCAGGATACATTGGTGGACATTCCCTCCTTCTCCTGGAAG
 TCCTCAA--AGAGGACATGAAG--ACTAAGCCCAACTTGAAGAA--G
 TCAAAGCCGGCCAGCAACCTCCACCCGGGCCGGGTGAGAGRACCTCAGTG
 TCAGACTTCAGTTCAAACCAGTAATGAGGCTAACTCACAGTGTCCGGC
 AGATAACCGTGGAACTGAAATACCTGAAGGTGAGGAGGTCAAATATGAG
 GTG-----

GCAGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTCCCTGCTTCTCCATCCGGATGAATACATTGTTGTGTTTCAGT
CGTTCAACAACAAGGCTGATACTGAACGAAGCCGAGCTAATCATGGCACT
GGCCAGGAGTTCCAGATGAGAGTGGTCACAGTTACCCTAGAGGAACAAT
CTTTCCCCAGTATTGTCCAGGTGATCAGTGGTGCATCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTAC
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACTCAGAGCAGTACACCCCAT
ATAAAAACCCTTGCCTCGCTTCCAGGCATGGACCTTCATTATATTTCCCTGG
AGGAACACTCAGGAGGAGAACACTGTCACCCATCCAGACAGACCCCTGGGA
ACAAGGAGGCATCACTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGA
CCAGCAAAGACGTCCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGAATTTACCAGGACACTTTGGTAGACATCCCTTCCTTCCCTGGAAGC
CCTCAA---GGAAGGAATGAAG---ACCAAGCCAGCTTGAAGAA---GT
CCAAACCAGCCAGTGCAGTCCATCCGGGCCGGGTCAGAGAAGCCAGTGT
CAGACCTCAGTACAAACCACCAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATTTGAAATACCTGAAAGTAAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAGAGATACCAGCAAGGGAACCTCTGGAGGATCAAATC
ATCCAGGCGAACC CGCGCTGGAGGCCTTTGGAAAATGCCAAAACGCTGAG
AAATGACAACCTCATCCCGTTTTTGGAAAATTCATTTCGAATTCACTTCGGAA
ACAGTGGCAAGCTGTCATCTGCTGACATCGAGACATACCTGCTGGAGAAG
TCTCGTGTACCTTTCAGCTCAAGGCTGAGAGGGACTACCACATCTTCTA
TCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTTTTAATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTC
GCCTCCATCAATGACTCGGAGGAGCTGATGGCCACTGACAGCGCCTTTGA
TGTGCTCGGCTTCACTCCGGAGGAGAAGATGGGCGTCTATAAACTGACTG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCCGAGCCTGACGGGACGGAGGCTGCTGATAAATCAGCTTACTT
GATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTTACCAAAGGCCAGAGTGTGGACCAAGTC
AACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACACCT
GTTCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGCGGAGC
AAAGGAGAAAAAGCACCCATGTGACCACTGCGACCGCGTTTTCTACACAC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGATCACCTGACCCG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCGGGGTCACCNCCTTGCTCTGTGA
AGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCC
ATGATGGGCAAACCGTTCCCCAGTGGCGCCCCTTTCCGATGGGCATGTA
CAACCCCAACCAC-----CTTCAGGCMATGTCTAATTCTGGGGTGGGTC
ATCCA-----CACCCGTCCCTGATGCCAGCTCGCTGTCTGCAGCTATG
GGCATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTTTTCATTCAT
GGGATGTTTACAAATCAGTGTGATGGATCAAACATTGTGAACCTGCTGGCTA
GTAACTCTCCAAGTGTTCGTATGCTGTGACCCAGCAGAAATACTTCAGC
AACTACAGTCCCGTGATTGGGTTCTACATTTACGAGCCATTGAGTAYTG
GAACTCCACGGTGCAGGAGCACTTGAAGACTCTGAGTACCGGTTTCAACA
AGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGTG
AGTGCCTCGACAAAAGCGACTTCATCACCATCCTCAAGGGCTCCTTCCT
GCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTTCTCCAAGA
---ACCGTGACACTG-----ACGAATACGACATTATCGCCTCACGCATG
TATTTGGTGGCACGGACCACAGAGAAGAGGGGGGAGGAAGTGGTGGAGCT
TCTAGAGAAGCTTCGCCCGTTGATGCTGATCAACAGCATCAAGTTCATTG

CCTTCAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCATC
TCGCCATCCTTACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCAC
TTTCTTCCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACGG
TTACGTCCGTGGAGCTGGGCGTCTGGGTTTGTATGGGTTTTCAACAGTTT
GAGTGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGTAATGTTGGCAT
TATTAATGGGCTCTCTGGATGGAGTTCTTCAGTGGATGACTCCCCAGCTG
ACACCATCACTCGGCGGTTTTCGTTATGATGTGGCACTAGTGTGAGCATT
AAGGATCTGGAGGAGGACATGATGGAGGGGCTGAGAGAGAGTGGGATGGA
AGACAGTGCTTGCACATCAGGCTTCAGTGTATGATCAAGGAATCGTGTG
ACGGCATGGGCGATGTCAGCGAAAAGCATGGTGGAGGACCAGTTGTTCCCT
GAGAAGGCTGTACGTTTCTCTATCACTATTATGTCTGTCTCTGTCCCTGGC
AGATGATGAGGAG-----GAGGCGG
TTACTATCTTACGGAGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCCC
CTTGGCCTGATGTTTGTGGATGAATCAGACCATGAAACACTCACAGCTCT
CCTGGGGCCTATAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCA
TCCTTTCCATCGGTGGCCTGCCTCGCTCCTTCCGCTTCCACTTCAGAGGC
ACGGGATACGATGAGAAGATGGTGCAGAGATGGAGGGCATGGAGGCCTC
AGGGTCCAGCTATGTCTGCACGCTGTGTGATTCCAGTCGGGCAGAGGCAT
CTCAAAACATGGTGTACTACTCCATCACCCTGTAACCATGAAGAGAACCCTT
GAACGTTACGAAATATGGAGAACCAACCCTTTTTCTGAATCTGGAGAAGA
GCTGCGGGAGAGAGTCAAAGGGGTGTCTGCCAAGCCCTTCATGGAGACTC
AGCCACGATGGATGCATTACATTGCGACATTGGCAATGCCACTGAGTTC
TACAAAATCTTCCAGGATGAAATTGGGGAGGTGTACCAAAGGT---CAA
T---CCCAGCCGGGAGGAACGGCGTAGCTGGAGGGCAGCCCTAGATAAAC
AGCTGAGGAAGAAGCTGAAGCTTAAACCGTAATGAGGATGAATGGGAAC
TATGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGCT
GGTGCCTCAGAAGAGAGGAGGGAGCCCTGAGGGAGCTTATGAGGCTAT
ACCTCCAGATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAATGC
CCTGACCAGTTGTGCCGCTATAGCTTTAACTCCCAGAGCTTTGCCGACCT
TCTCTCGTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACC
TGCACAAGACCCTGGCCCATGTCCCTGAAATCATAGAGAGAGATGGATCG
ATCGGAGCCTGGGCCAGCGAGGNNNNNNNNNNNNNNNNNNNNNTCATAACCATCGACATGGGTCCCCTTG
GGCCTCGGTGGAAGGAGAGCCCGCAGCCTTTCTCCTGCTCTGTTGAAGAC
CCCACGAAACAGACAAAGTTCAAAGGCATTAAGACGTACATTTTCGTACCG
GGTCACTCCGAGCCACACGGGGCATCCCCTTACAGGGCGCTACAAACACT
TTGACTGGCTGTACAACCGCCTACTGCACAAGTTCACTGTGATCTCCGTG
CCTCACCTACCTGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTTAT
TGAGAAGCGKAAGAGACGACTGATACTGTGGATGAACCACATGACCAGTC
ACCCTGTGCTCTCCAGTACGAAGGCTTTGAACACTTTCTGATGTGTGCC
GACGACAAGCAATGGAAGCTGGGCAAGAGACGAGCTGAGAAGGACGAGAT
GGTGGGCGCCCATTTTCATGCTGACCCCTCAGATCCCTAACGAGCACCAGG
ACCTTCAGGATGTAGAGGAAAGAGTCGACACCTTCAAGGCCTTTGCTAAG
AAAATGGACGACAGCGTCATGCAGCTCACACATGTTGCCTCGGAGCTGGT
GCGTAAACACCTGGGTGGATTACAGGAAGGAGTTCCAGCGGCTGGGAAATT
CCTTCCAGTCTATTAGCCAGGCATTCATGCTGGACCCCTCCCATAGCTCA
GACACCCTCAACAACGCCATCTCCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGGGTTCATCA
TTGGAGTCGGT
GTGGTCGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCT
GCACCGAGCGCCCTACTATTTCCCTGCTGGACCTGTGCGCCTCCGATATCC
TTCGCTCTGCCATCTGCTTCCCCTTCGTCTTCACTCGGTCAAGAATGGA
TCTGCCCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTTGGG
TGTGCTCTCCTGTTTCCACACGGCATTCATGCTATTCTGCGTGAGCGTCA
CCCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACC

TTCTGGACCTGTCTGGCCGTCATCTGCATGGTGTGGACGTTGTCAGTGGC
TATGGCGTTCCCGCCCGTCTAGACGTAGGGACGTACTCTTTTATCCGYG
AGGAGGACCAGTGCACATTCCAGCACCGCTCCTTCAGGGCGAATGATTTCG
CTGGGCTTCATGCTCCTGCTGGCGCTCATTCTCCTGGCCACACAGCTGGT
TTACCTCAAGCTCATCTTCTTTGTCCACGACCGTCGAAAGATGAAGCCCG
TCCAGTTCGTGCCTGCTGTCAGCCAGAAGTGGACCTTCCACGGGCCAGGC
GCCAGCGGGCAAGCGGCGGCAACTGGCTGGCCGGATTTGGTAGAGGCC
CACCCCGCTACTTTGCTAGGCATMCGGCAGAACAGCAACGCAGCGGGCC
GCAGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGT
AGGATGTTCTACATCATGACGTTTTTCTTCCTGGCACTGTGGGGGCCCTA
TCTGGTAGCCTGCTACTGGCGGGTGTTCGAGGGGCCCTGTAGTCCCGG
GGGGCTATCTGACGGCAGCCGTGTGGATGAGCTTTCNNNNNNNNNNNNNN
NNNNNNNNNNNNGCCAAATCTCGCT

TTCACCCTGGCGTGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCA
CTCGGCAACAGCTTGGTATCCCCGAGCAAACCGAGGAGCCCACTGTTGC
CACCCCGCGCAGCGATGGTTTTGTCAACC---CTGCCAACAACCGACTGG
ACTTTGCTGCCTCGGCATACGACGCCGCT-----GATTTTCGCCGGT
AACCGGGCCACCTTGGTGTCTTACGCAGCGGCCGGAGTGAAGGCTC----
--TTCCCCTGCCGACCGCAGGCTGCTCCAACCGGCTCTTTGGCTATTACG
CAGACCCGTGAG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGT
GGCGTAAATAGCAAACCAGCTCGGTGTTTTCTGCTGGCCCGCCAACTC
TATCGGCGGAGAGCAGGCA---CC---AACTACCTGG-----CCG
AGGA---GGGA---GACTC---CATAACCACGGAGAGGTCACCC---AT-
--C---GGCTCTGAGGAG---ACCAAACCCAAAGACATGAC---ATCAGA
---GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAGTCCATTGATT
CAAGCGATTCTGGTATCTTTG---AGCAGGCCAAGAGGAGGAGAATCTCT
CCTTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTAA
ATCTGAGNN
NNNNNNNNNNNNNNNNNNNNCCACAGCTCCCACGATATTGGCTCCGG---ACAAACGGCGTTT
TCCTCCAGGCA---CCCGGTAC---GCAGCAGCCGCCCTGGGA---CA
CCACCA-----CCACCCGACCCAGTTGGCTCT---TACTCCACGGCGG
CTTTCAACTCCACCAGGGACTTTCTCTTTAGAAAATCGGGGTTTCGGAGAC
GCCGCCG-----GGCGCAGCACAGTTTGTTCGCCTC-----
---CGGAAGTTT---C-----GCAGGGCCACATGGACTCGGATGCAG
CGGGACACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCGGCGAGCCAT
GCGTCTTCCAACGTGGTCAACAGCCAGATGCGTCTGGGCTTCTCGGGGA
CATGTACGGACGGGCCGACAGTACGGCCACGTTACAAGCCCGCGGT---
CCGACCACTATGCTTCGACCCAGTGCATGGCTATGGCCCCATGAACATG
AATATGGCCGCG---CACCACGGTGCAGGGGCCCTTCTTTCGATACATGAG
GCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGC
TGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAG
TTGGTGACCCATCTGACGGTGGAGCATGTGGGGGACCAGAGCAGACCAA
CCACATCTGCTTCTGGGAAGAGTGTCCAGAGAAGGAAAGCCATTCAAAG
CCAAATACAAACTGTAAATCATATCAGAGTACACACCCGGAGAAAAGCCC
TTNN

>Cyclothone microdon

AGCCTGCTCATCCGAGCCGAGCTTAACCAACCCGGCGCCCTTCTGGGCGA
CGACCAAGTGTACAACGTCAATTGTTACTGCTCACGCTTTTGTTATGATCT
TTTTTATGGTCATGCCAATCATGATCGGCGGCTTTGGCAACTGGCTAATT
CCTCTGATGCTCGGCGCCCCGACATGGCTTTCCACGGATAAATAACAT
AAGCTTCTGGTTACTCCCCCTTCTTCTTCTCTCTGCTAGCCTCGGCTG
GGGTAGAAGCAGGCACAGGCACAGGTTGAACCGTACCCCCCTCTCGCT
AGCAACCTAGCTCACGCTGGGGCTCAGTAGACCTGACTATCTTCTCCCT

AGGCCACGTTGCCATGCACTCTGCCACGGCGGGCGACCTCACCTGTAAG
GTGTGCCTGCAGAGCTACGAGAGCACGCCGGCGCTCCTGGAGCACCTGAA
GAGCCACTCGGGGAAGTCGTTCGGGCGGGCGCAAGGAGAAGAAGCACCCGT
GCGACCACTGCGACCGCCGCTTCTACACGCGCAAGGACGTGAGACGCCAC
ATGGTGGTGCACACCGGCCGCAAGGACTTCTGTGCCAGTACTGCGCCCA
GCGCTTCGGCAGGAAGGACCATCTGACACGGCACGTGAAGAAGAGCCACT
CGCAGGAGCTGCTGAAGATCAAGGCGGAGCCTCCGGACATGCTGGGGCTG
CTGGGCTCCGGCTCGCCGCCCTGCCCCGTCAAAGAGGAGCTCAGCCCCAT
GATGTGCAGCATGGGTCCCTCCAAGGACCCCTGATGGCCAAGCCTTTCC
CCAGCGGAACCCCTTCCCATGGGCATGTACAACCCCCACCAC-----
CTGCAGGCCATGTCTGGCCCTGGGGGAGGGCAC-----CACCCCTC
TCTAATGCCCGTTCTCTGTCTGCGGCTATGGGCATGGGCTGCCACATGG
ACTACCTGATCTACGCCTCGTTCTCCTTCATGGGTTGTTTGCAGATCAGC
GACGGCTCCAACGTGGTCAACCTGCTGGCCAGCAACTCCCCAGCGTCTC
CTACGCGCTGACMCAGCAGAAATACTTYAGCAACTACAGCCCGGTCATCG
GCTTCTACATCTACGAGCCCATCGAGTACTGGAACCTTACGGTGCAGGAG
CACCTGAAGACGCTGGGCCACGGCTTCAACAAGATCTCCTGGATGGACAA
CTATTTCCACTACYTGAAGGTGGTGAACGTGAGCGCCTCCACCAAGAGTA
GCTTCATCGCCATCCTGCGGGGCTCCTTCCCTGAGGAGCCCGGAGTACCAG
CACTTCACCGAGGACATCATCTTCTCCAAGA---ACGGCG-----
--AGGAGTACGACATCATCGCCTCGCGGATGTACCTGGTGGCGCGCACCA
CGGAGAAGACCCGCGAGGAGGTGGTGAACCTGCTGGAGCGTCTCCGGCCG
CTCTCGCTCATCAACAGCATCAAGTTCATYGTCTTCAACVCACCTTCGT
CTTCATGGACCGATACAGCTCCTCGGTCATCTCGCCCATCCTCACCTCAG
GTTTCAGYGTCTCACCATCCTCATCCTCACCTTCTTCTTAGTCATCAAC
CCCCGGGAACTTCTGGCTCATCCTGACTGTCACCTCGGTGGAGCTGGG
CGTGCTGGGCCTGATG-----

-----GTGTCTGGACTCAGAGATCTGGAAGAGGACA
TCATGGAGGGGCTGAGAGAGCGCAGCCTGGAAGACAGCACCTGCACCTTG
GGCTTCAGTGTGATGATCAAAGAGTCTTGCAGCGCATGGGGGACGTCAG
TGAGAAACACGGCGGGCGGGCCAGCCATGCCAGAAAAGGCTGTGCGCTTCT
CCTTCACCATCATGTCCATCTCCATCCAGGCTGAGGGGGAGAAT-----
-----GAGGCCGTCACTGTCTTCAGGGAGTC
CAAGCCAACTCAGAGCTGTCTGCAAGCCTTTGGTCTGATGTTTGTGG
ATGAGTCTGACCATGAGACGCTGACGGGCGTCTTGGGCCCCTGGTGGCA
GAGAGAAATGCCATGAAGAACAGCCGCTCATCCTGTCCCTGGGAGGCCT
CGCCAGATCCTTCCGCTTCTTCTCAGAGGACGCGCTATGATGAGAAGA
TGGTACGCCAGTTGGAGGGTCTGGAGGCCTCAGGCTCCACGTACATCTGC
ACCTCTGCGACTCGACCCGTGCGGAGGCCTCTCACAACATGGTGTCCA
CTCCATCACCCGACGCCACGAGGAGAACATGGAGCGCTACGAGATCTGGA
GGACCAACCCCTACTCCGAGTCTGCAGATCAGCTTCGGGATCGGGTAAA
GGTGTCTCAGCCAAACCCTTCATGGAGACCCAGGCCACTCTGGACGCTCT
GCACTGTGACATTGGTAATGCCACTGAGTTCTACAAGATCTTTCAGGATG
AGATTGGAGAGGTGTACCAGAGGCC---AAAC---CAAAGCACGGAGGAG
CGCAGGAGCTGGCGGGCAGCTCTGGATAAGCAGCTCAGGCACAGGATGAA
GCTGAGGCCGGTGATGAGGATGAACGGGAACTACGCCCGGCGGCTGATGA
CCAGCGAGGCAATAGAGGTGGTGTGTGAGCTGGTCCCCTCGGAGCAGCGG
CGGGAGGCCCTCAGGGAGCTGATGGCACTCTACATTCAAATGAAGCCTGT
GTGGCGCTCCACCTGCCATCCAAAGAGTGCCCTGACCAGCTCTGTGCGCT
ACAGCTTCAACTCCCAGAGGTTTGC-----

-----TCCTACACTATAGAAATGGGCCCCAAA
GGCCCTCAGTGGAAAAGAGAGCCCTCAGCCTTTCTCTTGTTCTATTGAGGA
CCCCACCAAACAGACCAAGTTCAAAGGCATCAAGACCTACATATCTTACC
GGGTCACTCCCAGCCACACCGGGCGGCCCGTGTACCGTCGGTACAAGCAC
TTTGACTGGCTCTACAACCGCCTGCTTCACAAGTTCAGTGCATCTCTGT
TCCCCACCTGCCAGAGAAGCAAGCCACAGGACGCTTCGAGGAGGACTTCA
TCGAAAAGCGCAAAAAGGCGTCTGGTCCTGTGGATGGACCACATGACCAGT
CACCCAGTCCTCTCCAGTATGAGGGCTTTGAGCACTTCCTCATGTGCGC
TGATGACAAACAGTGGAAGCTGGGGAAGAGGCGGGCGGAGAAAGATGAGA
TGGTGGGGGCCCACTTCATGCTGACCTTCAGATCCCCAACGAGCACCAG
GACCTGCAGGATGTGGAGGAGMGAGTCGACTCCTTCAAGGCTTTTGCCAA
GAAAATGGACGACAGTGTATGCAGCTGACACACGTGACCTCTGAACTGG
TGCGGAAACATCTAGGGGGTTTACAGGAAGGAGTTTCAGCGTCTGGGGAAC
GCTTTCAGTCCATTAGTCAGGCCCTTACGCTGGACCCTCCTCACTGCTC
TGACGCCCTCAACAACGGCATCTCACAC-----

-----GCCAAATCTCGCTTTCACCATGGCGTAGGGACTGG
TCCTGGCAGCGAGC---GCGGCGTCCCCTTAGCAACAGCTTGCTATCCC
CGCAACAACCCGAGGAGCCCCCGGTTG---CCTCCCCGAGAGATGGTTT
GTCACCCCTGCTGCCAACAACCGACTGGACTTTGCCGCCTCGGCATACGA
TGCTGCCGCTGCTGCAGATCTGGCCGGAACGCAGCCACTTTGCTGTCCT
ACGCAGCAGCTGGAGTSAAGGCGCTACCGGTTCCCCTGTCCACWGCTGGA
TGCTCCAACAGACCTCTKGGCTATTACGCAGACCCATCGG---GCTGG---
-GGCGCACGCACTCCACCGCAATACTGC-----AGCAAGTCCAGCT
CAGTYCTCTCTTGTTGGCCG-----GTAGGGGGCAGAACAGGCA---
-CC---GGTTACCTGG-----AGGA---CGGG---GACAC---
-----CGATAGATCTCCA---AT---AGGCGCACCGCCGGACGACC
CCAAATCAAAGACTT-----GTCCGA---ATCCAGTTGGATAGAG---
ACGCCGTCTTCAATCAAGTCAATTGATTTCGAGTGATTCTGGAATCTTTG-
--AGCAGGCAAAGCGGAGAATAATTTCTCCTTCTGCCACACCA-----
--GTTTCAGAGGCCATGTCACAGTTGAAATCCGAA-----ACGGGC
G-----AAGAACGAGAGGTGGCTTTGGGGATCAACCCGTTTCGACAGCGG
GATGGGCGCTTTCAAATCAACCACAGCTCGCACGATCTGGGAACCGG---
-GCAACAGCGTTTTCTCCAGGCG---CCCGCTACGCAGCCGCTGCA

GCTCTTGGA---CACCACCA-----CCACCCGACACATGTCAGCTCC--
-TACTCCACCGCGGCGTTCAACTCCACCCGGGACTTTCTCTTCAGAAATC
GGGGTTTCGGAGACGCCACCAG-----TGCGCAGCACAGTCTG
TTCGCTCTGC---AGCGGGAAGTTT---T-----GCTGGGCCACATGG
ACACTCAGAT-----GGACACCTGCTCTTCCCTGGACTCCACGAG---C
AAGCCGCCAGCCACGCGTCTCTAATGTCGTTAACAGTCAGATGCGGTTG
GGCTTTTCGGGGGACATGTACGGTCTGGGCCGACCAGTATGGCCATGTTAC
CAGCCCGCGAT---CCGATCACTATGCGTCAACCCAGTTGCATGGCTATG
GCCCTATGAACATGAATATGGCCGCA---CACCACGGGGCAGGGCCCTTT
TTCCGTTACATGAGGCAGCCGATCAAACAAGAGCTGATCTGCAAGTGGAT
CGAACCAGAGCAACTCTCCAATCCGAAAAAGTCTGCAACAAAACTTTCA
GCACGATGCACGAGCTGGTGACCCATCTCACAGTGGAGCATGTGGGGGGA
CCGGAGCAGTCGAACCACATTTGCTTCTGGGAAGAGTGTGCCCGCAAGG
AAAACCATTCAAAGCCA-----

>Cyttomimus affinis

-----TTTCTAGAGCGGAACCTTCACCCATCCAATTGTCTAGG
CATGCTGTTGTTGTTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTCT
CATGGAGTATGTGCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAT
TTTCTCCAACCTGCCAAAGACATGGTTGTGCAGCTTTTGGCCCATGAGGA
GCTGGAGACAGAAGATGAAAGACTGGTTTACGAGGCTTCACTCAATTGGG
TGAACATATGATCTTGAAAGACGGCACTGCCACTTGCAGAGCTGCTGAAA
ACTGTCCGTTTTGGCACTGCTTCCCTGCCATCTTCCCTAATGGAGAATGTCTC
CACAGAAGAGCTGATAAATACCCAGGCCAAGAGCAAGGAGCTAGTGGATG
AGGCCATTCGCTGCAAACCTCAAGATCTTGCAGAACGATGGTGTGGTTAAC
AGTCCATGCGCCCCGTCGAAGAAAACTAGCCATGCACTATTTCTGCTAGG
TGGGCAGACCTTTATGTGTGACAAGCTATACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCAGACATCCCGAGTCCGAGGAAGGAGTTCAGT
GCCTGTGCCATTGGCTGTAAAGTTTACATAACAGGTGGGA--GAGGCTC-
CGAAAAATGGCGTTTCCAAAGATGTATGGGTGTACGATACAGTACATGAGG
AATGGTCCAAGGCAGCCCCCATGCTCATAGCCAGGTTTGGCCATGGCTGT
GCAGAGCTGAAACACTGCCTGTACNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNGGATGAATACATTGTAGTGTTCAGTC
GCTCCGTGACCAGACTGATCCTGAACGAAGCCGAGCTGATCATGGTGCTG
GCTCAGGAGTTTTCAGATGAGAGTTGTTACGGTATCCCTGGAGGACCAATC
TTTCCCAGCATAGTTTTCAGGTGATCAGTGGAGCCTCCATGTTGGTCAGCA
TGCACGGGGCTCAGCTTGTGCTCTCTTTTCCCTGCCAGAGGAGCTGCC

CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTCAAAAAGAGCCACTCGCAGGAGCTAATGAAGATCAAGACGGAGC
CTCCCGATATGCTGGGGCTCCTGGGCTCCGGCTCGCCGCCTTGCTCCGTC
AAGGAGGAGCTAAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCAGCGGCACTCCCTTCCCATGGGCATGT
ACAACCCTCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGC
CACCCG-----CACCCCTCTGTATGTCCAGCTCGCTGTCTGCGGCCAT
GGGCATGGGCTGTACATGGAATACCTCATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAAATTAGCGATGGATCAAACATCGTGAATTTGCTGGCC
AGCAACTCTCCGAGTGTTCCTATGCTCTGACCCAGCAGAAGTACTTCAG
CAACTACAGTCCCGTGATCGGGTCTACATCTATGAGCCCATCGAGTACT
GGAATGCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGACAACTTTTTCCATTACCTGCGGGTGGTGAATGT
GAGCGCTCCACCAAGAACGACTTCATCAACATCCTCAAGGGCTCCTTCC
TGCGCAGCCAGAGTACCAGCACTTCACAGAGGACATCATCTTCTCCAAG
A---ACGCGGAGAGCG-----ACGAGTACGACATCATCGCCTCTCGCAT
GTACCTCGTGGCGCGGACCACAGAGAAGAAGCGGGAGGAGGTGGTAGAGC
TTCTGGAGAAGCTGCGACCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCTTTC AACCCGACCTTTGTCTATATGGACC GTTACAGTTCCCTCTGTGAT
CTCACCCATCCTTACCTCAGGCTTCAGCGTCCCTCACCATCCTCATCCTCA
CTTTCTTCTCCTGGTCATCAACCCCTGGGTAACCTTCTGGCTCATCCTGACC
GTCACCTCAGTGGAGTTGGGTGTGCTAGGTTTGTATGNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNTCGCCGTTTTTCGCT
ATGATGTTGCCCTAGTGTCCGCCTTAAAGGATCTGGAAGAGGACATCGTG
GAGGGGCTGAGGGAAAGGGGGCTCGAAGACAGCGCCTGTACCTCAGGCTT
CACTGTTATGATAAAAAGAATCCTGTGACGGCATGGGAGATGTCAGCGAGA
AGCACGGTGGAGGCCAGCGGTGCCGGAAGAAGGCCGTGCGCTTCTCCTTT
ACGATCATGTCTGTGTCTGTGCTGGCAGATGGAGAGGCG-----
-----AAGGCAGTGACCGTCTTCAGAGAGCCGAAAC
CAAActCCGAGCTGTCTGTAAAGCCCTGTGTATCATGTTTTGTAGACGAG
TCGGACC GCGAGACTCTCACCGCCGTCCCTGGGGCCTTTGGTAGCTGAGCG
GGACGCGATGAAGCGGAGCCAACTCATCCTTTCAATCTCTGGTCTTCTCCTC
GCTCGTTCTGCTTCCAATT CAGAGGCACCGGCTACGATGAGAAGATGGTG
CGCGACCTTGAGGGCCTGGAGGCCTCCGGGTGCGACCTATATCTGCACCCT
CTGCGATTCTACTCGAGCAGAGCCCTCTCAAACATGTGCTTCACTCCA
TCACCCG CAGCCATGATGAGAACC TAGAGCGCTATGAGATGTGGAGGACC
AATCCATTCTCAGAGTCTGCGGAACAGCTGCGAGACAGAGTGAAAGGGGT
GTCCGCCAAGCCTTCTGTGAAACCCATCCCACTCTGGATGCGTTACTACT
GTGACATTGGCAATGCCACGGAGTTCTACAAAATCTTCCAAGATGAGATT
GGGGAGGTGTTT CAGAAAGA---CAAC---CCGACTCGGGAAGAACGGCG
CCACTGGCGGGCGGTCCCTCGATAAGCAGCTGAGGAAGAAGTTAAAGCTTA
AACCGGTAATGAGGATAAATGGGAAC TACGCTCGGAAGTTGATGACCCCG
GAGGCTGTGGACGTGGTGTGCGAGCTGGTGCCCTCAGAAGAGCGACGGGA
GGCCCTGAGGGCGCTCATGCAGCTATACCTGGAGATGAAGCCCGTGTGGC
GCACCACCTGTCCGGCCAGAGAATGCCGCGATCAGCTGTGTGCGCTT CAGC
TTCAACTCCCAGAGCTTTGCTGAGCTCCTCTCCACTAGCTTCAAATACAG
ATACAACGGAAAGATCACCAATTACTTT CACAAGACCCTCTCCCACGTCC
CGGAAATCATAGAAAAGAGATGGCTCTATTGGAGCCTGGGCCAGCGAAGGA
AACGAGTCAGCAAAAAAATCATA CACCATTGAGATCGGCCCAAAGGGCC
AGAATGGAAGGAGAGTCCGCAGCCCTTCTCTTGTCTCCATCGAAGACCCCA
CAAAGCAAACCAAGTTCAAGGGCATCAAGACTTACATTT CATA CAGGGTG
ACCCCGAGCCACACGGGGCAACCCGTCTACAGACGTTACAAACACTTTGA

-----AAGAAAGATTCAAGCAAGGGCACACTGGAGGATCAAATCATCC
AGGCTAACCCAGCTCTGGAGGCATTTGGAAATGCAAAAACGCTCCGAAAT
GACAATTCCTCGCGTTTTGGGAAGTTCATCCGCATTCATTTTGGAAACAAG
TGGGAAACTTTCTCAGCAGACATAGAGACTTATTTGCTTGAGAAATCCA
GAGTGACCTTTAGCTGAAATCTGAGAGAACTACCACATCTTTTCCAA
ATCCTGTCCAATGAAAAGCCAGAGCTTTTAGACATGTTGCTGATCACAAA
CAATCCCTACGACTACTCTTACATCTCTCAAGGAGAAGTCTCCGTTGCAT
CTATCAACGATTCTGAAGAACTTCTTGCCACTGACAGCGCTTTTGACGTG
CTTGGCTTTACGGCAGAAGAAAAAATGGGAGTGTACAAGCTCACAGGGGC
CATTATGCACTATGGCAACATGAAGTTCAGCAAAAAGCAACGCGAAGAGC
AGGCAGAGCCAGATGGCACAGAGTCAGCGGATAAGTCTGCCTATCTAATG
GGACTGAACTCTGCTGACCTCTTGAAAGGGCTTTGTCACCCCAAGGTGAA
GGTGGGCAATGAGTACGTACCAAGGGCCAAAGTGTGGATCAGGTTTACT
AC-----AGAGGCCTTCAAATGCGAGGAATGTGGCAAGCACTACAAC
ACCAAGCTGGGGTACAAGCGCCATGTTGCCATGCACTCAGCCACAGCAGG
TGATCTCACCTGCAAGGTCTGCCTCCAGAGCTACGAGAGCACACCTGCTC
TCCTCGAACACCTCAAGAGCCACTCAGGCAAAAAGCTCGGGCGGTACCAAG
GAGAAGAAGCACCCATGCGATCACTGCGAGCGTCGCTTCTACACCCGCAA
GGACGTTTCGGCGCCACATGGTGGTGCACACAGGACGCAAGGATTTCTGT
GCCAGTACTGTGCCCGAGCATTTGGTTCGCAAGGACCACCTGACTCGGCAC
GTAAAGAAGAGCCACTCACAAGAGCTGCTGAAGATCAAGAACGAACCGCC
CGACATGCTAGGCTTGCTGGGATCTGGGTTCGCAACTTGTGTTGTCAAAG
AGGAGCTAAGCCCAATGATGTGTACCATGGGACCCACCAAGGACCTCATG
ATGGGCAAGGCCTTCCAACAGCACCCCGTTCCCTATGGGCATGTACAA
CCCTCACAC-----CTCCAGGCTATGTCCAATCCTGGAGTGGGCCAC--
-----CACCCTCTCTAATGCCTGGTCCACTGTCAGCTGCTATGGGT
ATGGGCTGCCATATGGAGTATCTGATTTACGCCCTCGTTCTCCTTCATGGG
ATGCTTACAAATCAGCGACGGGTCCAACGTGGTCAACCTGCTGGCCAGCA
ACTCGCCAGCGTGTCTACGCCCTCACCCAGCAGAGGTAATTCAGCAAC
TACAGCCCGGTGATTGGCTTCTACATATAACGAGCCATCGAGTACTGGAA
CGCCACTGTGCAGGAGCACCTCAAGACCCTTGGCCATGGATTTAATAAGA
TCTCCTGGATAGACAATTACTTCCACTACCTGAAGGTGGTSAACATGAGT
GCGTCGAACAAAAGCGATTTTCATAAACGTTCTCAAGACGTCCTTTTGA
GAGCCCGAGTATCAGCACTTCAATGATGACATCATCTTCTCCAAGA---
AGGGGG-----AGGAGTATGAGATCATTGCCTCCAGGATGTAT
CTGGTGGCCAGAACGACAGAAAAGACCCGCGAGGAGGTGGTGGAGCTGCT
GGAGCGGCTGCGGCCCTGTTCGCTCATCAACAGCATCAAGTTCATCGTCT
TCAACCCACCTTCGTCCTCATGGACCGCTACAGCTCCTCCGTCATCTCA
CCCATCCTGACGTCAGGCTTCAGCGTCCTCACCGTCCTCGTCCCTCACGTT
CTTCTGGTTCATCAACCCCTGGGGAACCTTCTGGCTGATCCTGACCGTCA
CGTCTGTGGAGCTGGGGGTGCTCGGCCTGATGGGCTACCATCAGTTGAG
TGGCAGCCTGCTCTGAAGAATGTGTTCGAGTGCATGCGATGTAGGCATCAT
CAATGGACTCTCGGGCTGGACCAGCTCAGTAGATGACGTTCCCTGCTGACA
CGATTCACGGCGCTTCGGCTATGATGTGGCCTTGGTCTCAGCGCTGAAA
GACTTGGAAGAGGACATCATGGAGGGCTTGAGAGAGCGAAACCTGGATGA
CAGCACCTGCACCTCAGGCTTCAAGTGTGTCATCAAAGAGTCTTGTGATG
GCATGGGAGACGTTAGCGAGAAACATGGAGGTGGTCCAGCAGTTCCAGAA
AAGGCGGTGCGCTTCTTTTACGGTGTATGTCCATATCTGTTTACAGGCTGA

GGGTGAAGAC-----GAGACAGTTA
CTATCTTCCAGGAACCAAAGCCCAACTCTGAACTCTCCTGCAAGCCAATG
TGCTGATGTTTCGTTGATGAATCTGACCATGAGACCCTTACCGCCATCCT
AGGTCCCCTGGTGGCAGAGCGAAATGCCATGAAGGAGAGCAGACTCATCC
TATCAGTCGGCAACCTTCCACGTTCTTCCGCTTCACTTCCGGAGCACG
GGATACGACGAGAAGATGGTACGAGAGCTAGAAGGTCTGGAGGCATCTGG
CTCCACTTACATATGCACCCTCTGCGACTCCACCCGTGCGGAGGCCCTCTG
AGAACATGGTGTCTCACTCAATCACCCGAAGTCATGAAGAAAATCTGGAA
CGATATGAAATCTGGCGGACGAATCCATTCTCAGAGTCTGCAGACGAATT
ACGCGAACGGGTCAAGGGCGTCTCAGCCAAACCCTTTATGGAGACCCAAC
CCACTTTGGACGCCCTGCACTGCGACATCGGGAACGCCACAGAGTTCTAC
AAGATCTTTTCAGGATGAGATTGGAGAGGTCTACAAAAGGC---GAAT--
-CCGAGCCGAGAAGAACGTCGTCGCTGGCGAGCTGCCCTGGACAAGCAGC
TGAGGAAGACGATGAAGCTGAAGCCGGTGGCGCGGATGAACGGTAACTAC
GCTCGCCGGCTGATGACCACCGAGGCGGTGGAAGTTGTTTGCGAGCTTGT
GCCTTCAGAGGAGCGCCGTGAAGCCTTGCGTGAGCTCATGGGTCTGTACC
TACAAATGAAACCAGTGTGGCGCTCAACCTGCCCCGCCACTGACTGCCCA
GACCAGCTCCTCCGCTACAGCTTCAACTCCCAGCGCTTTGCTGAGATCCT
GTCTCCACCTTCAAGTACCGGTATGATGGCAAGATCACGAACTACCTGC
ACAAGACCCTGGCCACGTACCTGAGATAGTTGAGAGAGACGGCTCTATC
GGAGCCTGGGCCAGCGAAGGGAACGAATCCGGGAACAAGTCTACTAT
AGAGATGGGGCCAAAAGGGCCGAGTGAAGGAAAACCCACAGCCTTTCA
CCTGCTCCATCGAGGACCCACCAAGCAGACCAAGTTTAAAGGGATCAAG
ACCTACATCTCCTACCGCGTCACCCCCAGCCACATCGGCCGGCCCGTGTA
TCGCCGCTACAAGCACTTTGATTGGCTGTACAACCGCTGTTGCACAAAT
TCACGGTCATCTCTGTGCCCCACCTGCCTGAGAAGCAGGCGACGGGCCGT
TTTGAGGAGGACTTCATTGAAAAGCGCAAACGGAGGCTCATCCTCTGGAT
GGAGCACATGACCAGCCACCCGGTGTGTCCAGTACGAGGGCTTTGAGC
ACTTCTCATGTGCGGCGACGACAAGCAGTGAAGCTGGGAAAGCGGCGG
GCAGAGAAGGACGAGATGGTGGGTGCTCACTTCATGCTCACCTTCCAGAT
CCCCAAAGAGCACCAAGACCTGCAGGACGTTGAGGAGCGGGTGGACACCT
TCAAGCTTTTTGCCAAAAGATGGACGACAGTGTCTACAGCTCACTCAT
GTGACTTCAGAACTGGTGCGCAAACATCTCGGAGGCTTCCGGAAGGAGTT
CCAGAGGCTGGGCAACGCTTTCCAGTCCATCAGCCAGGCTTTTATGTTGG
ATCCTCCATACAGCTCTGATGCTCTGAGCAATGCCATCTCCCACCTCTC
GTCACGTTCCCTCAAACCTGACCTCCCTGGGATTTCATCATTGGCGTCGGCGT
GGTCGGCAACCTCCTGATTTCCATCCTGTTGGTCAAAGACAAAAGCCTGC
ACCGGGCTCCCTACTACTTCCCTGCTGGACCTGTGTGCCTCGGATATCTTG
CGCTCTGCAATCTGCTTCCCCTTCGTCTTCACTCCGTCAAGAACGGCTC
CGCTGGACGTACGGCACCTCACCTGCAAGGTGATCGCTTTCTGGGGG
TCCTTTCTGCTTCCACACGGCCTTCATGCTCTTCTGCGTCAGCGTCACC
CGCTACCTAGCCATAGCCCACCACCGATTCTACACCAAGAGGCTAACGTT
CTGGACCTGCTTGGCTGTCAATTTGCATGGTGTGGACGCTTTCGGTGGCCA
TGGCCTTCCCTCCGGTGTGGACGTGGGCACGTACTCCTTCATCAGGGAG
GAGGACCAGTGCACCTTCCAGCACCGCTCTTTCCGGGTCAAACGACTCGCT
GGGCTTCATGCTCCTGCTGGCCCTCATCCTGCTGGCCACCCAGCTGGTCT
ACCTCAAACCTCATCTTCTTTCGTTTACGACCGCCGGAAGATGAAGCCCGTC
CAGTTCGTGCCCGCAGTCAGCCAGAACTGGACCTTCCACGGGCCGGGAGC
GAGCGGCCAGGCGGCGGCAACTGGCTAGCGGGCTTCGGACGAGGCCCGA
CTCCGCCCACCCTGCTGGGCATCAGGCAAAACAGCAACGCGGCGGGGCGG
CGGCGGCTCCTGGTGTGGACGAGTTTAAAGACAGAGAAGCGGATCAGCCG
GATGTTCTACATCATGACCTTCTTCTTTCTGGCTCTGTGGGGGCCGTACC
TGGTGGTGTGCTACTGGAGGGTGTTCGGCCCGTGGCCGGTGGTGCCAGGC

GGGTACCTGACGGCTGCAGTGTGGATGAGCTTCGCCAGGCTGGGGTCAA
CCCCTCATCTCATCTNNNNNNNNNNNNNNNNNN-----

>*Dibranchus* *tremendus*
AGCCTGCTCATTCGAGCTGAACCTAAGCCAACCGGGCGCCCTCTTAGGGGA
TGACCAGATTTACAATGTTATCGTCACGGCTCATGCTTTTGTAATAATTT
TTTTTATAGTAATGCCAATCATGATTGGCGGCTTTGGGAACTGGCTAGTG
CCCCAATAATCGGGCGCCCCGATATAGCATTCCCGCGAATGAACAACAT
AAGTTTTTGACTGCTGCCCCATCCTTCCTTCTACTCCTAGCTTCTTCTG
GCATTGAAGCCGGGGCTGGAACCGGATGAACAGTATACCCCCGCTAGCC
GGGAATCTCGCCCATGCAGGAGCCTCGGTTGATTAACTATCTTCTCACT
TCACCTTGCAGGGGTGTCATCAATCTTGGTGCGATCAACTTTATCACCA
CAATTATCAACATAAAACCCCCGCCACATCTCAGTACCAGACGCCCTG
TTCGTGTGGTCAGTATTAATTACTGCAGTACTCCTTCTTAGCATTACC
AGTCCTTGCTGCTGGCATTACAATGCTACTTACTGACCGAAACCTGAACA
CTACTTTCTTTGATCCTGCTGGGGGAGGCGACCCTATCTTTTACCAACAC
TTA-----

GATCCCATGGAATCTCAAATACCTGAAGGTCAGAGAGGTGAAATACGAGNNNNNNNNNNNA
GGAAAGATTCCAGCAAGGGGACCCTGGAGGATCAGATCATCCAGGCGAAC
CCGGCACTAGAAGCCTTCGGCAATGCCAAAACATTGAGAAATGACAACTC
GTCTCGGTTTTGAAAATTCATCCGGATTCACCTTTGGTACAAGTGGTAAGC
TGTCATCTGCAGACATAGAGACATATTTGTTGGAGAAGTCCAGGGTGACT
TTTCAGCTGAAAGCAGAGAGAACTACCACATCTTTTACCAGATCCTGTC
CAATCACAAGCCGGAGCTTTTGGATATGTTACTAATCACCAACAACCCAT
ATGACTACTCCTACATCTCCCAAGGGGAGGTAACGGTCGCTTCCATCAAT
GACTCAGAGGAGCTGATGGCCACAGACAGCGCCTTTGATGTTCTTGGATT
CACCACAGAGGAGAAGATGGGTGTCTACAAATTGACAGGTGCCATCATGC
ACTACGGCAACATGAAGTTCAAGCAGAAGCAACGTGAGGAACAGGCTGAA
CCTGATGGCACAGAGTCTGCTGATAAGTCAGCTTACCTAATGGGGCTGAA
CTCTGCAGACCTCATCAAAGGGCTGTGCCACCCTCGAGTCAAGGTGGGAA
ATGAGTATGTGACCAAAGGCCAAAAGTGTAGACCAAGTCTACTACCCCAAC
AAGGAGGCCTTTAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAACCT
GGGATATAAACGCCATGTGGCCATGCATTCTGCCACAGCAGGTGATCTCA
CCTGTAAAGTGTGCATGCAAACCTATGAGAGCACGCCGGTGCTCCTGGAG
CACCTGAAGAGCCACTCTGGGAAGTCTTCAGGTGGCACCAAGGAGAAGAA
ACATCCCTGCGACCACTGTGACCGTCGTTTTCTACACACGGAAGGATGTGA
GGCGACACATGGTGGTCCACACGGGCCGGAAGACTTCCCTGTGCCAGTAC
TGTGCCCAGCGCTTTGGCAGGAAGGATCACCTGACTCGCCATGTGAAGAA
AAGCCACTCACAGGAGCTGCTGAAGATTAAGACGGAGCCTCCAGATATGT
TAGGTCTTTTAGCATCGGGGTCACCACCCTGTTCTGTGAAGGAGGAGCTC
AGCCCCATGATGTGTGGTGTGGGCCCTAACAAAGACCCTATGATGGTTAA
ACCTTTCCCCAGTGGAGCCCCATTTCCAATGGGTATGTACAATCCCCACC
AT-----CTCCAGCCATGTCCAACCTCTGGGGTGGGTCACCCA-----
CACCCGTCCTCATGCCCAGTCCCTTGTCTGCAGCTATGGGCATGNNNNNNNNNNNNNTATCT
CATTATGCATCTTTCTCATTTCATGGGATGTTTACAAATCAGTGATGGGT
CAAATATTGTAAACCTGTTGGCCAGTAACTCCCCAAGTGTTCATTTGCT
TTGACCCAGCAAAAATACTTCAGTAACTACAGCCCTGTGATTGGATTTTA
TATTTACGAGCCTATAGAGTACTGGAACCTCAACAGTGCAAGAGCACTTGA
AAACTCTGAGTCATGGCTTCAATAAGATCTCCTGGATGGACAACCTTTTTC
CACTACCTTAAAGTGGTGAACGTGAGTGCTTCAACCAAGAATGACTTCAT
CACCAGCCTCAAGGGCTCTTTCCCTGCGCAGCCCGAGTACCAGCACTTCA
CTGAGGACATCATATTTCTCAAAGA---ACCGTGAGACTG-----ATGAA
TACGACATTATTGCTTCACGGATGTACTTAGTGGCACGAACAACAGAGAA
GAAGCGGAGGAGGTGGTGGAACTGTTGGAAAAGCTTCGTCCATTAATGC
TAATCAACAGCATTAAAGTTCATTGCTTTCAACCCGACATTTGTGTTCATG
GACCGCTACAGCTCCTCGGTTCATCTCGCCATCCTGACCTCAGGATTCAG
TGTACTCACAATCCTCATCCTCACCTTCTTCCCTGGTTCATCAATCCTTTGG
GTAACCTCTGGCTCATCCTCACTGTAACATCAGTGGAACCTGGGTGTCTTG
GGTCTGATGGGCTTTTCATCAGTTTGGAGTGGCAGCCAGCTCTCAAGAATGT
GTCTACATCTTGCAATGTTGGAATTATTAATGGCCTCTCTGGATGGACTT
CCTCAGTAGATGACTTCCCAGCTGACACCATAACACGACGGTTTCGCTAT
GATGTGGCACTAGTGTGAGCATTAAAGGATCTGGAGGAGGATATCATGGA
GGGACTGAAAGAGAATGGGATGGAAGACAGCATTGTACATCAGGCTTCA
GTGTCATGATCAAAGAATCTTGTGATGGTATGGGTGATGTCAGTGAGAAG
CAYGGTGGAGGACCCTGTTCCCTGAGAAGGCTGTCCGTTTCTCTTTCAC
TGTTATGTCTGTCTGTCTGTCATGGCAGATGGTGAGACC-----
-----GAAAAGTT---ATCTTCAGTGAGCCAAAGCCA
AATTCAGAGTTGTCTGTAAGCCTCTTAGTCTGATGTTTGTGGATGAGTC
AGATCATGAAACACTCACAGCTATCATGTCGCCCCCTTATTGCAGAACGTA
AYGCAATGAAAGATAGCAGACTCATAGTTTCCATCGGTGGACTGCCCTCGC

TCCTTCGGCTTTCAC TTCAGAGGCACAGGATACGATGAGAAGATGGTGCG
TGAGATGGAGGGCCTCGAGGCCTCTGGGTCCACCTATATCTGCACGCTTT
GTGATTCAGTCGCGCAGAGGCTTCTCAAACATGGTACTACACTCAATC
ACTCGCAATCATGAAGAGAACCTAGAGCGCTATGAAATATGGAGAACCAA
TCCTTTTTCTGAGTCTGCAGATGAGCTGCGAGACAGAGTCAAAGGGTCT
CTGCAAAGCCCTTTATGGAAACCCATCCCCTCTGGATGCACTACACTGT
GACATCGGCATTGCCACTGAATTTTACAAAATCTTCCAGGATGAGATAGG
GGAAGTGTACCAAAGGT---CAAC---CCTAGCCGGGAGGAACGGCGCA
GCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAACTGAAGCTAAAA
CCAATAATGAGGATGAATGGAACTTTGCACGCCGGCTCATGACCCTAGA
GGCTGTGGAGGCGGTGTGTGAGTTGGTGCCACAGAGGAGAGGGAGG
CCCTGAGGGAACCTTATGAGGCTCTTCCCTACAGATGAAGCCTGTGTGGCGA
GCTACCTGCCAGTCAAAGAGTGCCCTGACCAGCTGTGCCGCTATAGCTT
TAACTCTCAACGCTTCGCAGACCTCCTCTCCTCTTCTTCAAATATAGGT
ACAATAAAAAGATAAGTAATTACATGCACAAAACCTTTGGCCCATGTTCCCT
GAGATCATAGAGAGAGATGGATCCATAGGAGCGTGGGCTAGTGAGGGGAA
TGAGTCTGCAAACAAATGTTACACCATTGAGATGGGKCTGTTGGGACCCC
AGTGGAAGGAGAGCCACAGCCTTTCTCATGCTCCATTGAAGACCCACACA
AAACAGACAAAGTTCAAGGGTATCAAGACKTATATTTTCATACCGGGTCAC
TCCAAGCCACACRGCACATCCCCTGTACAGACGCTATAAACACTTTGATT
GGCTATAACAACCGCTTACTGCATAAATTTACTGTGATCTCAGTGCCTCAC
TTGCCCTGAGAAACAGGCCACGGGGCGATTTGAGGAAGACTTCATTGAGAA
GCGCAAGAGRAGACTGATATTGTGGATGAACCAYATGACCAGTCATCCMG
TCCTCTCCCAGTATGAGGGCTTTGAGCACTTCTGATGTGTGCTGATGAC
AAGCAGTGGAACTGGGCAAGAGACGGGCAGAGAAGGATGAGATGGTGGG
TGCCCATTTTCATGCTGACCCTCCAGATCCCAAATGAACACCAGGACCTTC
AGGATGTAGAGGAGCGGGTTGATTCTTCAAGTCTTTGCCAAGAAAATG
GATGACAGTGTGATGCAACTCACACACGTACCTCAGAGTTGGTGAGTAA
GCACCTCGGGGGATTGAGGAAGGAGTTCCAGCGCTGGGAAATGCCTTCC
AGTCTATCAGCCAGGCATTTCATGCTGGACCCTCCCYACAGCTCAGAGACC
CTAAACAACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCCTCAAAC TGACCTCTCTGGGTTTCATCATTGGAG
TTGGT
GTGGTTGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGATAAGAGCCT
GCACCGAGCACCCCTACTATTTCTGCTGGACCTGTGTGCCTCCGATATAC
TTCGATCCGCCATCTGCTTCCCGTTTGTCTTCACCTCTGTCAAGAATGGA
TCTGCCTGGACGTACGGCACGCTGACCTGCAAGGTGATCGCCTTCTGGG
TGTGCTCTCCTGTTTTACACGGCTTTTATGCTGTCTGTGTGTCAGTGTCA
CACGCTACCTAGCCATAGCACACCACCGTTTTCTACACCAAGAGGCTGACC
TTCTGGACCTGTCTGGCTGTCTGATCTGCATGGTGTGGACGTTGTCCGTGGC
GATGGCGTTCCCTCCTGTGCTAGATGTAGGGACGTACTCTTTTATCCGAG
AGGAGGACCAGTGCACGTTCCAGCACCGCTCTTTCAGGGCGAACGATTCC
CTGGGCTTCATGCTCCTACTGGCACTCATCCTCCTGGCCACACAGCTGGT
TTACCTCAAGCTCATTTTTTTTTGTCCATGACCGTCGGAAGATGAAGCCTG
TCCAGTTTGTGCCTGCCGTTAGCCAGA ACTGGACCTTCCACGGACCAGGT
GCCAGCGGGCAAGCGCTGCCAACTGGCTGGCTGGATTCCGGTCGAGGACC
CACCCCGCCTACTCTGCTGGGCATTCGACAGAACAGCAACGCGGCAGGCC
GCAGACGTCTACTGGTTTTGGATGAATTCAAAACAGAGAAGAGGATTAGT
AGGATGTTCTACATCATGACGTTTTTCTTCCCTGGCACTGTGGGGGCCCTA
TCTGGTTGCCTGTTACTGGCGGGTATTTGCAAGGGGCCCGTGGTCCCTG
GGGGCTACCTGACAGCAGCTGTGTGGATGAGCTTTGCCAGGCTGGGGTC
AATCCTTTCATCTGCNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCCTGGCATGGGGACTGG
TCCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCC
CGCAGCAAACCGAGGAGCCACTCTTGACACCCCCCGCAGCGATGGTTT

GTCACCC---CTGCCAACAAACCGACTGGACTTTGCAGCCTCGGCATACGA
CGCCGCT-----GATTTCCGCGGTAACGCGGCCACCTTGCTGTCCT
ACGCAGCGGCCGGAGTGAAGGCGC-----TTCTCTGCCGACTGCAGGC
TGCTCCAATCGGCCTCTTGGCTATTACGCAGACCCGTCAG---GCTGG--
-GGAGGACGCACGCCGCCGAATACTGTGGCGTGAACAGCAAATCCAGTT
CGGTCTTTTCTTGCTGGCCCTCCAACCTATCGGAGCCAGAGCAGGTA--
-CC---AATTACCTGG-----CTGAGGA---GGG---GACTC---
ACTGCCGACAGAGAGGTCACCG---AT---CGGCGGTTCTGAGGAC---A
CCAAACCTAAAGACATAAC---GTTAGA---GTCGAACTGGATAAAG---
ACGCCGTCCTCCATTAAATCCATTGATTCAAGCGACTCTGGAATCTTTG-
--AACAGGCTAAACGGAGAAGGATGTCACCTTCTGCCACACCA-----
--GTTTCAGAGACAAATGTCCCCGTAAAGTCTGAGCATCACTCAACAGGC
GAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAAATCCGTTTCGCAGATGG
GATGGGCGCCTTCAAATAAAACCACAGCTCCCATGATATTGGCTCCGG--
-ACAAACAGCGTTTTCCTCTCAGGCG---CCCAGCTACGCAGCGGCAGCA
GCCCTGGGA---CACCACCA-----CCACCCGACCCACGTAGGCTCT--
-TACTCCACGGCAGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATC
GGGGATTTGGTGACGCCACCGG-----TGCACAGCACAGTTTG
TTCGCGTC-----CGGAAGTTT---C-----GCAGGGCCACATGG
ACACTCAGATGCAGCGGGGCACCTGCTGTTCCCGGGGCTTACAGAG---C
AAGCGGCGAGCCACGCGTCTTCCAATGTGGTTAACAGCCAGATGCGACTT
GGCTTCTCGGGGACATGTATGGAAGGGCCGACCAGTATGGCCACGTTAC
GAGCCACGGT---CCGACCATTACGCGTCGACCCAGCTCCACGGCTACG
GCCCCATGAACATGAATATGGCCGCG---CACCACGGAGCAGGGGCCTTC
TTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAATGGAT
CGAGCCGGAGCAGCTGACAAATCCCAAAAAGTCGTGCAACAAAACTTTTA
GCACGATGCACGAGCTCGTCACCCATATCACCGTGGAGCATGTTGGGGGA
CCTGAGCAGACCAACCACATCTGCTTTTGGGAGGACTGCGCCAGAGAAGG
AAAGCCATTCAAAGCCAAATACAAACTTGTGAATCATATCAGAGTACACA
CCGGCGAAAAGCCCTTTCGTTCCGTTCCCGGGCTGTGGCAA

>*Diplophos taenia*

AGCCTACTTATCCGGGCGGAGCTTAGCCAGCCTGGCGCGCTTCTAGGCGA
TGATCAAATTTATAATGTAATCGTTACGGCGCACGCCTTCGTAATAATCT
TCTTTATAGTAATAACCAATTATGATCGGGGATTTGGAACTGATTAATT
CCTCTTATGATTGGGGCCCCGGACATGGCCTTTCCTCGAATGAACAACAT
AAGCTTCTGGCTCCTCCCGCCCTCGTTCCTTCTTCTCCTGGCTTCTCCG
GGGTGGAAGCTGGGGCCGGGACGGGTGAACCGTGTACCCCCCTCTCGCC
GGCAATCTTGCCCATGCAGGAGCCTCCGTTGACCTGACCATCTTCTCCCT
CCACCTCGCAGGGATCTCCTCTATTTCTTGGGGCAATCAACTTCATCACTA
CAATCATTAACATAAAACCCCTGCCATCTCCCAGTATCAAACCCCTCTA
TTCGTGTGAGCAGTCTAGTCACTGCCGTTCTCCTTCTATTATCCCTCCC
TGTTCTGGCTGCGGGGATTACAATACTTCTCACGGACCGGAACCTGAACA
CCACCTTCTTTGACCCGGCAGGAGGGGGGACCCAATCCTTTACCAGCAC
CTCTTTGATTCTTCGGGCACCCCGAAGTGTACATTCCTAATCCTCCCGGG
CTTTGGTATGATCTCCACATTGTTGCCTACTACGCAGGGAAAAAGAGC
CCTTCGGGTATATAGGGATGGTGTGAGCCATGATGGCCATCGGACTTCTA
GGCTTCATCGTCTGGGCCACCACATGTTACGGTCGGAATGGACGTTGA
CACCCGAGCATATTCCTGGAGAGGAACCTGCACCCGTCCAACCTGCCGGG
CATGCTGCTGCTGTCGGACGCCACCAGTGCACCAAGCTGTCCGAGCTGT
CCTGGGGCATGTGCCCTCGGCAACTTCCCGCCATCTGCAAGACGGAGGAC
TTCTCCAGCTCCCCAAGGACATGGTGGTGCAGCTGCTGTCCCACGAGGA
GCTGGAGACGGAGGACGAGAGGCTGGTGTACGAGGCCGCCCTCAACTGGG
TCAACTACGACCTGGAGAGGCCCACTGCCACCTGGCCGAGCTGCTGCGG

ACGGTGGCCTGGCGCTGCTGCCCGCCATCTTCCTCATGGAGAACGTGTC
CACGGAGGAGCTGATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGCCCCTGCGCCCCGCCCCGCAAGACCAGCCACGCCCTGTTCCCTGCTGGG
CGGACAGACCTTCATGTGCGACAAACTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGCAAGGTCTACGTACCCGGCGGCA--GGGGCTC-
GGAGAACGGCGTGTCCAAGACGTGTGGGTGTACGACACCGTCCAGGAGG
AGTGGTCCAAGGCGGCGCCCATGCTCATCGCCCGGTTCCGGCCACGGCTCG
GCCGAGCTGAAACACTGCCTCTACGTGGTGGGAGGGCACACGGCGGCCAC
GGGCTGCCTCCCGGCTCGCCCTCGGGACGAGTACATAGTGGTGTTCAGT
CGCTCCTCTACGAGGCTGATTCTGAACGAGCCAGAGCTAATCATGGTGT
GGCGCAGGAGTTTCAGATGAGGGTGGTCACGGTGTCTCTGGAAGAGCAAT
CCTTCCCCAGCATCATCCAGGCGATCAGCGGCGCTCCATGCTGGTCAGT
ATGCACGGAGCTCAGCTTGTACCTCCCTCTTCCTCCCCAGAGGGGCTGC
CATTGTGGAGCTCTTCCCCTATGCTGTGAACCCAGAGCAGTATACTCCAT
ACAAAACCCTGGCGTCCCTCCCAGGCATGGATCTTCAATATGTTTCCTGG
AGAAACACAATCGAAGAGAACTCAGTTAGCCACCTCGATAGGTCTGGGA
CCAAGGAGGCATTGCTCACCTGGACAAGGAAGAGCAGGAGAGAATTCTCG
CCAGCAAGGAGGTCCCAGGCACCTGTGCTGCCGCAACCCCGAGTGGCTC
TTCCGAATCTACCAGGACACTCTGGTGGACATCCCCTCATTCCCTCAAGAC
CCTCAA---GGAGGGCCTAAAG---ACCAGGCCAGCTTGAAGAA---GT
CCAAGTCGGCCAGCACTGTTACCCGGGCCGGGTCAGGGAAGCCCAGTGC
CAGACCTCGGTCCAGGACACCAACGAGGCTAAACTCACTGTCTCCTGGCA
GATCCCCTGGAATCTCAAGTACCTGAATGTACGAGAGGTTAAGTACGAGG
TCTGGA-----AAAAGGATTCCAGCAAGGGAACCTTGGAGGATCAAATC
ATCCAGGCTAATCCTGCCCTGGAGGCTTTTCGGTAATGCTAAAACATTGAG
AAATGACAACCTCATCACGCTTTGGCAAATTCATCCGGATTCACTTTGGAA
CTASTGGCAAGTTGTCTCTGCAGACATAGAGACATACCTTCTGGAAAAG
TCACGCGTCACCTTTCAGCTCAAGTCAGAGAGGAACTACCATATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTTTTGATCA
CCAACAATCCATATGACTACTCCTACATCTCCCAAGGAGAAGTAACAGTA
GCATCCATCAATGATTCAGAGGAGCTGATGGCCACTGACAGTGCATTTGA
TGTGCTTGGCTTTACTCAAGAGGAGAAAATGGGGGTSTACAAGTTGACAG
GTGCAATCATGCATTACGGCAACATGAGGTTCAAGCAAAGCAGCGTGAG
GAGCAGGCAGAACCTGACGGCACTGAGGCTGCTGACAAGTCAGCTTACCT
AATGGGGCTGAACTCTGCAGATCTAGTGAAAGGACTCTGCCATCCCAGGG
TTAAGGTTGGCAATGAGTATGTACWAAAGGGCAGGGTGTGACCAAGTC
TATTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGCAGGCAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCGGCCACGG
CCGGCGACCTCACCTGCAAGGTGTGCCTGCAGAGCTACGAGAGCACGCCG
GCCCTGCTGGAGCACCTGAAGAGCCACTCCGGCAAGTCGTCCGGCGGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCCGGCGCTTCTACACGC
GCAAGGACGTCCGGCGCCACATGGTGGTGCACACGGGCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGGCGGAGC
CTCCGGACATGCTCGGCCTGCTGGGTACCCGGCTCCCCGCCCTGCTCCGTC
AAAGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCTCCAAGGACCC
TCTGATGGCTAAGCCCTTCCCCGGCGGGACCCCTTCCCCTTAGGCATGT
ACAACCCTCAC-----CTGCAGGCCATGTCCGGCCCCGGGGGGGCC
CAC-----CACCCCTCCCTGATGCCCGGCTCCCTGTCCGGCGGCCAT
GGGCATGGGCTGCCACATGGACTACCTGATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGACGGGTCCAACGTGGTCAACCTGTTGGCC

AGCAACTCGCCCAGCGTGTCTGACGCGCTGACCCAGCAGAAGTACTTCAG
CAACTACAGCCCGGTGATCGGCTTCTACATCTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAGGACGCTGGGCCAAGGCTTCAAC
AAGATCTCCTGGATGGACAATACTTCCACTACCTGAAGGTGGTGAACGT
GACCGCCGCCACCAAGAGCGACTTCATCGCCGTGCTCAAGGGCTCCTTCC
TGAAGAGCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTCTCCAAG
A---AGGGCG-----AGGAGTACGACATCATCGCGTCGCGGAT
GTACCTGGTGGCGCGCACCACCGAGAAGACCCGCGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTGCGGCCCTGGCGCTCATCAACAGCATCAAGTTCATC
GTATTC AACCCACCTTCGTCTTCATGGACCGCTACAGCTCCTCGGTGGT
GTCGCCATCCTCACCTCCGCCTTCAGCGTGCTCACCATCCTCATCCTCA
CCTTCTTCTGGTTCATCAACCCGCTGGGGA ACTTCTGGTTGATCCTGACC
GTCACCTCGGTGGAGCTGGGCGTCTGGGTCTGATGGGCTACCACCCCTT
TGAGTGGCAGCCGCCCTCAAGAACATGTCCACATCCTGCCAGGTGGGCA
TTATCGATGGGCTGTCAGGGTGGGCTGCCTCCGTAGATGACTGCCAGTG
GACACTGTCACCCGGCGGTTCCGCTATGACGTGGCGCTGGTATCAGCTCT
GAAGGACCTAGAGGAGGACATCATGGAGGGGCTGATGGAGTGCGGCCTGG
AGGACAGCATCTGCACCTTGGGCTTCAGCGTGATGATCAAGGAGTCTGC
GATGGCATGGGGGACGTCAGCGAGAAGCATGGTGGGGGGCCGATGGTGCC
TGAAAAGGCTGTGCGATTCTCCTTCACTGTCATGGCTGTCTCTGTCCAGG
CAGAGGGAGAGGAT-----GAGGCC
GTCACCGTCTTCAGAGAGTCCAAGCCAACTCTGAGCTGTCCTGCAAGCC
TCTGTGTCTGATGTTGTGGATGAGTCTGATCACGAGACACTGACAGGCA
TCCTTGGGCCTGTGGTGGCTGAGAGGAACGCTATGAAGAACAGCCGCCTC
ATACTGTCTCTCGGGGGCCTCCCTCGATCCTTTTGTCTTCCACTTCAGGG
CACAGGCTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCT
CAGGCTCCACATATGCTCTGCACCCCTCTGTGACTCCACCCGTGCAGAGGCC
TCCCACAACATGGTGCTTCACTCCATTACCCGCAGCCACGATGAGAACAT
GGAGCGCTACGAGATCTGGAGGACTAACCCTACTCCGAGTCCGCAGATG
AGCTTCGGGATCGGGTGAAAGGTGTCTCTGCCAAACCCTTCATGGAGACT
CAGCCCACCCTAGACGCTCTGCACTGTGATATCGGTAACGCCACCGAGTT
CTACAAGATCTTTCAGGATGAGATCGGGGAGGTGTACCGGAAGCC---CA
AC---CCAAGCAGGGAGGAGCGCCGAGCTGGCGGGCTGCTCTGGACAAG
CAGCTGAGGAGGAAGATGAAGCTGAGGCCAGTGATGAGGATGAATGGGAA
CTATGCCCCGAGGCTGATGACCAGCGAGGCAGTGGAGAGTGTGTGTGAGC
TAGTCCCTCAGAACAGCGCGTGAGGCTCTCAGGGAGCTGATGGGACTC
TATCTCAAATGAAGCCTGTGTGGCGCTCCACCTGCCGGCCAAAGAGTG
CCCTGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGAGGTTTGGTGAGC
TCCTCTCCACCACCTTCAAGTACAGATATGACGGTAAGATCACCAACTAC
CTTCAAGACACTGGCCACGTGCCGGAGATCATAGAGAGGGACGGCTC
TATCTGGGCCTGGGCCAGCGAGGGAATGAGTCAGGCAATAAGTCTTACA
CAATCGAAATGGGCCCAAAGGGCCTCAGTGGAAAGGAGAGCCCTCAGCCT
TTCTCTTGTTCTGTGAGGACCCTACCAAACAGACCAAATTTAAAGGCAT
CAAGACCTACATATCTTACCGAGTCACGCCAGCCACACAGGGCGACCCG
TATACCGTCCGTACAAGCACTTTGATTTGGCTATAACAACCGCCTGCTGCAT
AAGTTCACCTGTCATCTCTGTGCCTCACCTGCCAGAGAAGCAGGCCACAGG
GCGTTTCGAGGAGGACTTCATCGAAAAGCGCAAAAAGGCGACTGATCCTCT
GGATGGACCACATGACCAGTACCCCTGTCTCTCCAATATGAGGGCTTC
GAGCACTTCTCATGTGCGCTGATGACAAACAGTGGAAAGCTGGGCAAGCG
GCGGGCGGAGAAGGATGAGATGGTGGGTGCCACTTCATGCTGACCTTTC
AGATTTCCAATGAGCACCAGGACCTGCAGGACGTGGAGGAGCGAGTGGAC
TCCTTCAAGTCTTTTGCCAAGAAAATGGATGATAGTGTGATGACGCTGAC
GCATGTGGCCTCAGA ACTGGTGCGGAAACATCTAGGGGGTTTCAGGAAGG

AGTTCCAACGTCTGGGGAATGCTTTCCAGTCTATAAGTCAGGCATTTATG
CTGGACCCTCCTCACAGCTCTGATGCCCTCAACAATGCCTTCTCGCAC--
-----AACTGACCTCTCTGGGTTTCATAATTGGAGTCG
GCGTGGTAGGAAACCTGCTGATCTCTATCCTGCTGGTCAAAGACAAAAGC
CTGCACCGCRCNCCCTACTACTTCTTGCTGGACCTGTGCGCCTCCGACATC
CTGCGCTCCGCCATCTGCTACCCCTTCGTCTTACCTCTGTCAAGAATGG
ATCCGCCTGGACCTACGGCACGCTCACCTGCAAAGTGATTGCCTTCCTTG
GCGTACTCTCCTGTTTCCACACGGCATTATGCTGTTCTGCGTCAGCGTC
ACCCGCTACCTGGCCATCGCCCACCACCGTTTCTACACCAAGAGGCTGAC
TTTTCTGGACCTGCCTGGCCGTCATCTGCATGGTGTGGACGTTATCCGTGG
CCATGGCCTTCCCCCCAGTTCTCGATGTAGGGACTTATTCCTTTATCCGG
GAGGAGGACCAGTGATATTCCAGCACCGCTCCTTCAGGGCTAACGACTC
CCTGGGCTTTATGCTCTTGCTGGCACTTATCCTGCTGGCTACGCAGCTGG
TTTACCTCAAGCTCATCTTCTTTCGTCCATGACCCGAGGAAGATGAAGCCT
GTCCAGTTTGTGCCAGCTGTCAGCCAGAACTGGACCTTCCATGGGCCTGG
TGCCAGCGGGCAGGCAGCGGCCAACTGGCTGGCCGGATTTCGGGAGAGGCC
CCACCCCGCCTACCTTGTGGGCATCCGTTCAGAACAGCAACGCGCCGGGC
CGCAGGCGTCTGCTGGTGTGGATGAGTTTAAAACAGAGAAGAGGATAAG
TAGGATGTTCTACATCATGACGTTTTTTTTTCTGGTGTGTGGGGGCCCT
ATCTAGTGGCCTGCTACTGGCGGGTGTTCGCCA-----

-----CAGGCGNAAGTCACAGAANGAGAGGTGGCTTTGGGGATA
AATCCGTTTCGACAGCGGGATGGGCGCTTTCAAAATCAACCACAGCTCGCA
TGATCTTGGCTCCGG---GCAAACAGCGTTTTCTCCTCTCAAGCA---CCCG
GCTAC---GCAGCCGCTGCCCTCGGA---CACCACCA-----CCATCCA
ACACATGTCAGCTCT---TACTCCACCGCGGCTTCAACTCCACTCGGGA
CTTTCTTTTCAAAAAATCGGGGCTTCGGAGACGCCACCAG-----
-TGCGCAACACAGTCTCTTCGCATCTGC---AGCGGGAAGTTT---T---
---GCAGGGCCACATGGACACTCAGATGCCGCTGGACACCTGCTCTTCCC
AGGACTTCACGAG---CAAGCTGCGAGCCATGCGTCCCTCAAATGTTGTTA
ACAGTCAGATGCGGTTGGGCTTTTCAGGGGACATGTACGGGCGGGCCGAC
CAGTATGGCCACGTTACTAGCCCCGGT---CCGACCACTATGCTTTCGAC
CCAGTTGCATGGCTACGGCCCTATGAACATGAATATGGCCGCA---CATC
ATGGAGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATAAAAAAAGAG
CTGATCTGCAAGTTGATCGAACCAGAGCAACTTACGAATCCGAAAAAGTC
GTGCAAAAAACTTTTAGCACGATGCACGAGCTGGTGAACCATTTGACGG
TGGAGCATGTGGGGGGACCAGAGCAGTCGAACCATATTTGCTTCTGGGAA
GAGTGTGCCCGAGAAGGAAAACCATTCAAAGCCAAATACAAACTTGTGAA

CCACATCAGAGTGCACACCGGGGAGAAACCGTTTCATGTCCTTCCCNGG
CTTATGCTCG

>Diretmichthys parini

NNNNNNNNNNNNNNNNNNNNNNNNNNTAATTGCCTGGGCATGCNGTTGCTGTCTGATGCACACCA
GTGTACCAAGCTATCAGAGCTCTCCTGGGGCATGTGCNTCAGCAACTTTCC
TGCTATTTGCAAGACAGAGGACTTCCCTCCAAGTGCCTAAGACATGGTGG
TGCAGCTTCTATCCCACGAGGAGCTGGAGACAGAAGATGAGAGANTGGTTT
ATGAAGCTGCCCTTAAC TGGGTCAACTATGACCTGGAAAGGAGGCAGCTGC
CATCTGCCAGAGCTGCTGAGAACGGTTTCGCCTGGCCCTGCTACCTGCCAT
CTTCCATCATGGAGAATGTCTCGACAGAAGAGCTGATCAATGCCCAAGCCA
AGAGCAAGGAGCTGGTGGATGAGGCCATACGCTGCAAGCTGAAGATCTTG
CAGAATGACGGTGTGGTTAAACAGCCCTGTGCTCGGCCGAGAAAAACCAG
CCATGCCCTTTTTCTGCTGGGAGGGCAGACCTTCATGTGTGACAAGCTGT
ACCTGGTGGACCAGAAGGCGAAAGAGATCATCCCCAAGGCTGACATCCCC
AGCCCTAGGAAGGAGTTCAGTGCCTGTGCCATTGGCTGTAAGGTCTACAT
CACAGGTGGCA--GAGGCTC-AGAAAATGGTGTGTCTAAAGANGTATGGGT
CTATGACACCGTCCAAGAAGAATGGTCCAAGGCAGCACCCATGCTCATCG
CCAGATTTGGTCATGGCTCTGCTGANCTGAAACTGCCTTTACGTAGTANG
ANGTCACACAGCAGCAACTGGCTGCCTCCCAGCCTCTCCCTCCGGATCACT
ACATTGTAGTGTTCAGCCGTTCAACAACGAGGCTGATTCTGAATGAAGCG
GAGCTAATCATGACGCTGGCCCAGGAATTTTCAGATGAGAGTGGTCACGGT
GTCCTTGAGGAACAAAAGTTCCCCAGCATCGCCCAGGTGATCAGCGGGG
CCTCCATGCTAGTCAGTATGCATGGAGCTCAGCTCGTCACCTCACTCTTC
CTCCCAGAGGAGCTGCTGTGGTGGARCTGTTCCCCTACGCTGTTAACCC
AGAACAGTACACCCCATATAAAAACCTCGCCACCTACCAGGCATGGACC
TTCAGTATGTTTCCCTGGAGGAACACTATAGAGGAGAACACTGTCACCCAC
CCAGACAGACACTGGGAACAAGGAGGCATCGCCATTTGGAAAAGGACGA
GCAAGAACGAATATTAGCCAGCAAGGATGTCCCCAGACACCTGTGTGCC
GCAACCCGGAGTGGCTATTTCCGAATCTACCAGGACACTTTGGTGGACATC
CCTTCATTCCCTGGAGGCCCTCAA---AGAGGGCCTGAAG---ACCAGGCC
CAGCTTGAAGAA---GGCCAAGCTGGCCAGCACGGTTCATCCGGGCCGGG
TCAGAGAACCCAGTGCCACACCTCAGTCCAAGCCACCAACGAGGCTAAA
CTCACAGTTTTCTGGCAGATCCCGTGGAATCTGAAATACCTGAAGGTGAG
AGAAGTGAAGTACGAGGTG-----AAGAAGGATACTAGCAAGGGAA
CACTGGAGGATCAAAATCATCCAGGCAAACCCTGCGCTGGAGGCTTTCCGGT
AATGCCAAAACAATGAGGAATGACAACCTCATCCCGCTTTGGAAAAATTCAT

CCGAATTCATTTTGAACCAGTGGCAAGTTATCCTCTGCTGACGTTGAAA
CGTACCTATTGGAGAAGTCACGTGTCACCTTTCAGCTCAAGGGTGAGAGA
AACTATCACATTTTCTTCCAGATATTGTCCAATCAGAARCCAGAGCTATT
AGACATGATGTTGATCACTAACAACCCATATGACTACTCCTACATCTCCC
AAGGAGAGGTAACAGTAGCATCCATCAATGACTCAGAGGAGCTGCTGGCC
ACTGACAGCGCCTTTGATGTGCTTGGCTTCACTCCAGAGGAGAAGATGGG
ACTATATAAGCTAATTGGTGCCATTATGCACTTTGGCAACATGAAGTTTA
AGCAGAAGCAGCGTGAGGAGCAGGCTGAGCCTGACGGAACAGAGGCTGCT
GACAAGTCAGCTTATCTTATGGGGCTGAACTCTGCAGACCTCATCAAAGG
GCTATGCCATCCCAGAGTCAAGGTAGGAAATGAATATGTCACCAAAGGCC
AAGGTGTAGACCAAGTCTACTACCCAAACAAGGAAGCCTTCAAGTGTGAG
GAGTGTGGCAAGCACTACAACACCAAGCTGGGATACAAACGTCATGTGGC
CATGCACTCTGCCACAGCAGGGGACCTCACCTGTAAAGTGTGCATGCAGA
GCTATGAGAGCACGCCGGTGCTCCTGGAGCACCTTAAGAGCCACTCGGGG
AAGTCCCTCGGGTGGCGCAAGGAGAAAAACACCCATGCGACCACTGCGA
CCGCCGTTTCTACACACGGAAGGATGTGAGACGGCACATGGTGGTCCACA
CGGGCCGAAAAGACTTCTGTGCCAGTACTGTGCCAGCGCTTTGGCAGG
AAGGACCACCTGACACGCCACGTAAAGAAGAGCCACTCGCAGGAGCTGCT
GAAGATCAAGACAGAGCCTCCAGATATGTTAGGTCTTCTAGGTTCTGGCT
CGCCACCTTGCTCAGTGAAGGAGGAGCTTAGCCCTATGATGTGCAGCATG
GGTCCCAACAAGACCCCATGATGGGCAAACCTTCCCCAGTGGGACCC
CTTCCCCATAGGCATGTACAACCCCCACCAC-----CTCCAGGCCATGT
CCAATTCTGGGGTGGGTCACCC-----CACCCCTCCCTGATGCCTAGC
CCCCGTCTGCAGCTATGGGCATGGGCTGTACATGGAATATCTCATCTA
TGCCCTTTTCTCATTCATGGGATGTTTACAAATCAGTGATGGTTCAAACA
TCGTGAACTTGCTGGCTAGTAACTCTCCGAGCGTTTCATATGCTCTGACC
CAGCAGAAATACTTCACTAAGTACAGTCCCGTGATTGGGTTTTACATTTA
CGAGCCATTGAGTACTGGAAGTCCACAGTGCAGGAGCACCTGAAGACAC
TGAGTCACGGCTTCAACAAGATCTCCTGGATGGACAACCTTCTTCCACTAC
CTGCGGGTGGTGAACGTGAGTGTCTCGACCAAGAGTGACTTTATCACCAT
CCTCAAGGGCTCTTTCCCTGCGCAGCCCGGAGTACCAGCACTTCACTGAGG
ACATCATCTTCTCCAAGA---ACCCTGAGAGTG-----ATGAGTATGAC
ATTATCGCCTCAGCATGTACCTAGTGGCACGGACCACAGAGAAGAAGCG
CGAGGAGGTGGTGGAGCTTCTGGAGAACTGCGTCCACTGATGCTGATCA
ATAGCATCAAGTTCAATCGCCTTCAACCCACCTTTGTTTTTCATGGACCGC
TACAGCTCCTCAGTCATCTCGCCATCCTGACCTCAGGCTTCAGYGTGCT
CACCATCCTCATCCTCACTTTCTTCTGGTCAATCAACCCCTTGGGGAAC
TCTGGCTCATCCTTACAGTTACCTCTGTGGAGCTGGGCGTCTTGGGTTTA
ATGGGCTATCATCTATTCGAATGGCAGCCAGCTCTCAAGAATGTGTCTAC
ATCCTGCCATGTGAGCATTATTAATGGGCTCTCTGGATGGGCTGCCCTGG
TGGATGACTCCCCAGCTGACACCACTACTCGACGGTTTCGCTATGACGTG
GCCCTGGTATCAGCCTTAAAGGATCTGGAGGAGCACATCATGGAGGGACT
GAGAGAGTGTGGGCTGGAAGACAGTGCTTGCACCTCAGGGTTCAGTGTA
TGATCAAGGAATCTTGTGACGGCATGGGAGATGTCAGCGAGAAGCACGGG
GGAGGGCCAATGGTCCCCGAGAAGGCTGTACGCTTCTCTTTTACTGTTAT
GTCTGTCTCTGTCTGGCAGATGGAGAGGAA-----
-----GAGGCGGTTACCATCTTTAGCGAGCCAAAGCCCAACTCA
GAACTGTCCTGTAAGCCCCTATGCCTGATGTTTGTGGATGAGTCAGACCA
TGAGACAGTCACTGCTGTCTGGGACCTGTAGTTGCAGAGCGTAATGCAA
TGAAGCAGAGTCAACTCATCCTATCTATGGGTGGCCTCCCTCGCTCCTTC
CGCTTCCACTTCAAGAGCCACAGGATATGATGAGAAGATGGTGGCTGAGAT
GGAGGGCCTGGAAGCCTCGGGTTCACCTATATCTGCACTCTGTGTGATT
CCAGTCGAGCAGACGCCTCTCAAAATATGGTGCTACTCCATCACCCGC

AGCCAYGATGAGAACCTGGAGCGTTATGAATTATGGAGGACCAATCCCTA
TTCTGAGTCTGCTGACGAGCTGCGAGACCGGGTCAAAGGGGTCTCTGCCA
AGCCCTTTATGGAGACCCAGCCCCTATGGATGCATTACACTGTGACATT
GGTAATGCCACTGAGTTCTACAAAATCTTCCAGGATGAGATTGGGGAGGT
GTACCGGAAGGC---CAAT---CCCAGCCGTGAGGAACGGCGGAGCTGGA
GAGCAGCCCTAGACAAGCACCTGAGGAAGAAGATGAAGCTTAAACCAGTG
ATGAGGATGAATGGGAACCTTGGCCGGAAGCTAATGACCCAGGAAGCTGT
GGAGGTGGTGTGTGAGCTGGTGCCTTCAGAAGAGAGGGCGAGAGGCCCTGA
GGGAGCTTATGGGGCTCTACATCCAGATGAAGCCTGTGTGGCGTGCCACC
TGCCAGCCAAGGAATGCCCTGACGAGCTGTGCCGCTACAGCTTTAACTC
CCAGCACTTTGCCGATCTCCTCTCCAGTACCTTCAAATATAGGTACAATG
GAAAGATCACCAATTACCTGCATAAGACCCTCGCCCATGTCCCTGAAATC
ATTGAAAGAGATGGCTCTATAGGAGCCTGGGCCAGTGAGGGGAATGAGTC
AGCAAACAAATCGTACACCATCGAGATGGGTCCCAAGGGGCCCCAGTGGA
AGGAGAGTCCCTCAGCCTTTCTCCTGCTCCATTGAAGACCCACGAAACAG
ACCAAGTTCAAAGGCATCAAGACCTACATTTTCGTACCGGGTCACGCCGAG
CCACATAGATCGTCCCGTCTACAGGCGCTACAAACACTTTGACTGGTTGT
ATAACCGCTTGCTGCACAAGTTCACTGTGATCTCGGTGCCCCACCTGCCT
GAAAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATCGAGAAGCGTAA
AAGACGACTGATTCTGTGGATGAACCACATGACCAGTCACCCGGTTCTCT
CCCAGTACGAGGGATTTGAGCACTTCCTTATGTGTGCCGATGACAAGCAA
TGGAAGCTGGGTAAAGAGGCGGGCGGAGAAGGACGAGATGGTGGGCGCCCA
CTTCATGTTGACCTTCCAGATCCCTAACGAGCATCAGGACCTCCAGGATG
TGGAGGAGCGGGTCGACTCCTTCAAGTCCTTCGCTAAGAAAATGGATGAC
AGCGTCATGCAGCTCACGCACGTTGCCTCGGAGCTGGTGCGTAAACACCT
GGGTGGATTTCAGGAAGGAGTTCCAGCGGCTAGGAAACGCCTTCCAGTCCA
TCAGCCAGGCCTTCATGCTGGAACCCCCCACAGCTCTGAGGCGCTCAAC
AACGCCATCTCCCACNNNNNNNNNCGTTCCTCAAACCTGACCTCTCTGGGTTTCATCATT
GGAGTCGGTGTGGTCGTAACCTGCTGATCTCCATCCTGCTGGTCAAAGA
CAAGAGCCTGCACCGTGCACCCTATTACTTCCTGCTAGACCTCTGCGCCT
CCGACATCCTGCGCTCTGCCATCTGCTTCCCCTTCGTCTTACCTCTGTCT
AAGAATGGATCCGCTTGACCTACGGCACGCTCACCTGCAAAGTGATCGC
CTTCTGGGCGTGCTCTCCTGTTTCCACACGGCGTTCATGCTATTCTGCG
TCAGCGTCACTCGCTACCTGGCTATCGCGCATCACCGCTTCTACACCAA
AGGCTGACCTTCTGGACCTGTCTAGCCGTCATCTGCATGGTGTGGACGTT
GTCAGTAGCCATGGCGTTCACCCCGGTGCTGGACGTAGGGACGTACTCCT
TCATCCGGGAGGAGGACCAGTGCACATTCCAGCACCGTTCCTTTCAGGGCC
AATGACTCACTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTCGCCAC
ACAGCTGGTTTACCTCAAGCTTATCTTCTTTGTCCACGACCGTCGGAAGA
TGAAGCCCGTCCAGTTCGTGCCTGCCGTCAGCCAGAACTGGACCTTCCAC
GGGCCGGGCGCCAGCGGGCAGGCGGCGGCTAACTGGCTCGCTGGATTTGG
GAGAGGCCCCACCCCGCCTACCTTGTGGGCATCCGGCAGAACAGCAACG
CGGCGGGCCGACGGCGTCTGCTGGTGGTGGATGAGTTCAAACGGGAGAAG
AGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCCCTGGCGTTGTG
GGGGCCCTACCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCCG
TAGTTCGCGGAGGATACCTGACGGCGGCGGTGTGGATGAGCTTTGCCAG
GCTGGGGTCAATCCCTTCATCTGCATCTTCTCTAACNNNNNN-----

GCCCCGTGTGCTCGGCYGAGAAAAACCAGCCATGCCCTTTTTCTGCTKGGA
GGGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCGAA
AGAGATCATCCCCAAAGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGTG
CCTGCGCCATTGGCTGTAAGGTCTACATCACAGGTGGCA--GAGGCTC-A
GAAAATGGTGTGTCTAAAGACGTATGGGTCTATGACACCGTCCACAAGGA
ATGGTCCAAGGCAGCACCCATGCTCATCGCCAGATTTGGTTCATGGCTCTG
CTGANCTGAAACACTGCCTTTANNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNGGATCACTACATTGTAGTGTTCAGCCGTT
CAACAACGAGGCTGATYCTGAACGAAGCGGAGCTAATCATGACGCTGGCC
CAGGAATTTTCAGATGAGAGTRGTCACGGTGTCCCTGGAGGAACAAACGTT
CCCCAGCATTGCCAGGTGATCAGCGGGGCCTCCATGCTAGTCAGCATGC
ATGGAGCTCAGCTTGTACCTCACTCTTCCTCCCCAGGGGAGCTGCTGTG
GTGGAGCTGTTCCCTACGCTGTTAACCAGAGCAGTACACCCCATATAA
AACCTTGCCACCCTACCAGGCATGGACCTTCAGTATGTTTCCTGGAGGA
ACAGTATAGAGGAGAACACTGTCACCCACCCAGACAGACCCTGGGAAGAA
GGAGGCATCGCCCATTTGGAAAAGGACGAGCAAGAACGAATACTAGCCAG
CAAGGATGTCCCCAGACACCTGTGCTGCCGCAACCCGGAGTGGCTATTCC
GAATCTACCAGGACACTTTGGTGGACATCCCTTCATTCCTGGAGGCCCTC
AA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GGCCAA
GCTGGCCAGCACGGTTCATCCGGGCCGGGTTCAGAGAACCCAGTGCCACA
CCTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTTTTCTGGCAGATC
CCGTGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGGTGTG
GATCCAGAAGAAGGATTTCTAGCAAGGGAACACTGGAGGATCAAATCATCC
AGGCCAAACCCTGCGCTGGAGGCTTTCGGTAATGCCAAAACAATGAGGAAT
GACAACCTCGTCCCGCTTTGGAAAATTCATCCGAATTCATTTCCGAACCAG
TGGCAAGCTGTCCCTCTGCTGACATTGAAACGTACCTATTGGAGAAGTCAC
GTGTCACTTTTTCAGCTCAAGGGTGAGAGAACTATCACATTTTCTTCCAG
ATATTGTCTAATCAGAAGCCAGAGCTATTAGACATGATGTTGATCACTAA
CAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTAGCAT
CCATCAACGACTCAGAGGAGCTGTTGGCCACTGACAGCGCCTTTGACGTG
CTTGGCTTCACTCCAGAGGAGAAGATGGGACTMTATAAGCTGATTGGTGC
CATTATGCACTTTGGCAACATGAAGTTTAAGCAGAAGCAGCGTGAGGAGC
AGGCTGAGCCTGACGGAACAGAGGCTGCTGACAAGTCAGCTTATCTTATG
GGGCTGAACTCTGCAGACCTCATCAAAGGGCTATGCCATCCAGAGTCAA
GGTAGGAAATGAATATGTACCAAAGGCCAAGGTGTAGACCAAGTCTACT
ACCCAAACAAGGAAGCCTTCAAGTGCAGGAGTGTGGCAAGCACTACAAC
ACCAAGCTGGGATACAAACGCCATGTGGCCATGCACTCTGCCACAGCAGG
GGACCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCGGTGC
TCCTGGAGCACCTTAAGAGCCACTCGGGGAAGTCTCGGGTGGCGCCAAG
GAGAAAAAACACCCATGCGACCACTGCGACCGCCGTTTCTACACACGGAA
GGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCCTGT
GCCAGTACTGTGCCCAGCGCTTTGGCAGGAAGGACCACCTGACACGCCAC
GTAAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGCCTCC
AGATATGTTAGGTCTTCTAGGTTCTGGCTCGCCACCTTGCTCAGTGAAGG
AGGAGCTTAGCCCTATGATGTGCAGCATGGGTCCCAACAAAGACCCCATG
ATGGGCAAACCCTTCCCAGTGGGACCCCTTCCCATGGGCATGTACAA
CCCCATCAC-----CTCCAGGCCATGTCCAATTCGGGGTGGGTCACC
CC-----CACCCCTCCCTGATGCCTAGCCCCCTGTCTGCAGCTATGGGC
ATGGGCTGTACATGGAATATCTCATCTATGCCTCTTCTCATTCATGGG
ATGTTTACAAATCAGTGATGGTTCAAACATCGTGAACCTGCTGGCTAGTA
ACTCTCCGAGCGTTTCATATGCTCTGACCCAGCAGAAATANTTCAGTAACT
ACAGTCCCTGTGATTGGGTTTTACATTTATGANCCCATTGAGTACTGGAAC
CCACAGTGCAGGAGCACCTGAAGACACTGAGTCATGGCTTCAACAAGATC

TCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGAGTGC
TTCGACCAAGAGTGACTTTATCACCATCCTCAAGGGCTCTTTCTGCGCA
GCCCCGAGTACCAGCACTTCACTGAGGACATCATCTTCTCCAAGA---AC
CCTGAGAGTG-----ATGAGTATGACATTATCGCCTCACGCATGTACCT
AGTGGCACGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGG
AGAAATGCGTCCACTGATGCTGATCAATAGCATCAAGTTCATCGCTTTC
AACCCACCTTTGTTTTTCATGGACCGCTACAGCTCCTCAGTCATCTCGCC
CATCCTGACCTCAGGCTTCAGCGTGCTACCATCCTCATCCTCACTTTCT
TCCTGGTCATCAACCCCTTGGGGAACCTTGGCTCATCCTTACAGTTACC
TCTGTGGAGCTGGGCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNTGCCATGTGGGCATTATTAATGGGCTCTCTGGATG
GGCTGCCCTTGGTGGATGACTCCCCAGCTGACACCATTACTCGACGGTTCC
GCTATGACGTGGCCCTGGTGTGAGCCTTAAAGGATCTGGAGGAGCACATC
ATGGACGGACTGAGAGAGTGTGGGCTGGAAGACAGTGCTTGACCTCAGG
GTTTCAGTGTAATGATCAAGGAATCTTGTGATGGCATGGGAGATGTCAGCG
AGAAGCACGGGGGAGGGCCAGTGGTCCCCGAGAAGGCTGTACGCTTCTCT
TTTACTGTTATGTCTGTCTCTGTCTTGGCAGATGGAGAGGAA-----
-----GAGGCGGTTACCATCTTTAGCGAGCCAA
AGCCCAACTCAGAAGTGTCTGTAAAGCCCCTATGCCTGATGTTTGTGGAT
GAGTCAGACCATGAGACAGTCACTGCTGTCTGGGACCTGTAGTTGCAGA
GCGTAGTGCAATGAAGCAGAGTCAACTCATCCTATCTATGGGTGGCCTCC
CTCGCTCCTTTTCGCTTCCACTTCAGAGCCACAGGATATGATGAGAAGATG
GTGCGTGAGATGGAGGGCCTGGAGGCCTCGGGTTCACCTATATCTGCAC
TCTGTGTGATTCCAGTCGAGCAGACGCCTCTCACAATATGGTGTACTACT
CCATCACCCGCAGCCACGATGAGAACCCTGGAGCGTTATGAATTATGGAGG
ACCAATCCCTTTTCTGAGTCTGCCGACGAGCTGCGAGACCGGGTCAAAGG
GGTCTCTGCCAAGCCCTTTATGGAGACCCAGCCACTATGGATGCATTAC
ACTGTGACATTGGTAATGCCACTGAGTTCTACAAAATCTTCCAGGATGAG
ATTGGGGAGGTGTACCGBAAGGC---CAAC---CCCAGCCGCGAGGAACG
GCGGAGCTGGAGAGCAGCCYTAGACAAGCACCTGAGGAAGAAGATGAAGC
TTAAACCAGTGATGAGGATGAATGGGAACCTACGCCCGGAAGCTAATGACC
CAGGAAGCCGTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAAGAGAGGCG
AGAGGCCTTGAGGGAGCTTATGGGGCTCTACCTCCNNNNNNNNNNNNNNNN
NN
NN
NNNTCGTACACC
ATCGAG
ATGGGTCCCAAGGGGCCCCAGTGGAAAGGAGAGTCCTCAGCCTTTCTCCTG
CTCCATGAAGACCCACGAAACAGACCAAGTTCAAAGGCATCAAGACCT
ACATCTCRTACCGGGTYACGTGAGCCACATAGATCGTCCCGTCTACAGG
CGCTACAAACACTTTGACTGGTTGTATAACCGCTTGCTGCACAAGTTCAC
TGTGATCTCGGTGCCCCACCTGCCYGAAAAGCAGGCCACGGGGCGCTTCG
AGGAGGACTTCATCGAGAAGCGTAAAAGACGACTGATTCTGTGGATGAAC
CACATGACCAGTCACCCGGTTCTCTCCCAGTAYGAGGGATTTGAGCACTT
CCTTATGTGTGCCGACGACAARCAATGGAAGCTGGGTAAGAGGCGGGCGG
AGAAGGAYGAGATGGTGGGYGCCACTTCATGTTGACCTTCAGATCCCT
AATGAGCATCAGGACCTCCAGGATGTGGAGGAGCGGGTCCACTCCTCAA
GTCYTTTCGCTAAGAAAATGGACGACAGCGTCATGCAGCTCACGCACGTTG
CCTCGGAGCTGGTGCCTAAACACCTGGGTGGATTCAGGAAGGAGTCCAG
CGGCTAGGGAATGCCCTCCAGTCCATCAGCCAGGCCTTCATGCTGGAACC
CCCCACAGCTCTGAGGCGCTCAACAACGCCATCTCCCACNNNNNNNNNNCATTCCCTCAA
ACTGACCTCTCTGGGTTTCATCATCGGAGTCCGTGTGGTCCGGGAACCTGC
TGATCTCCATACTGCTGGTCAAAGACAAGAGCCTGCACCGCGGCCCTAT

TTTTATGGTCATACCGATTATAATTGGAGGCTTCGGAACTGACTCATCC
CCCTCATGATCGGAGCCCCGACATGGCTTTCGCCGAATAAATAATATG
AGTTTCTGGCTCCTTCCCTCCTTCCCTACTACTACTAGCTTCTTCAGG
TGTAGAAGCCGGGGCGGGAACCGGCTGGACCGTCTATCCCCCTCTCTG
GAACTTAGCCACGCAGGTGCATCCGTTGACCTAACTATTTTTTCTCTG
CATTTAGCAGGCATTTCTTCCATCTTAGGTGCAATTAATTTTATCACAAC
AATTATTAACATGAAACCCCCCTGCCATCTCTCAATACCAAACCCCTCTGT
TCGTATGGGCCGTCTAATTACTGCCGTCTTCTACTTCTTTCACTTCCT
GTGCTAGCTGCCGGAATTACCATGCTTCTCACGGACCGAAACCTCAACAC
CACCTTCTTTGACCTGCAGGAGGGGGAGACCCTATTCTTTACCAACATC
TTTTTC-----

-----TTCCTGGAGAGAAACCTGCACCCGTCTAACTGCCTTGGC
ATGCTGTTGCTGTCTGACGCCACCAGTGCATCAAGCTGTCAGAGCTCTC
CTGGGGAATGTGCCTCAGCAACTTTCCTACTATTTGCAAGACAGAGGACT
TCCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTCCCATGAGGAG
CTAGAGACAGAAGATGAGAGACTGGTCTATGAGGCGGCCCTTAACTGGAT
CAACTACGACCTGAAAAAGAGGCACTGCCACCTTCCAGATCTCCTGAGAA
CGGTCCGCCTGGCCCTGCTGCCCGCCATCTTCTCATGGAGAACGTTTCT
ACAGAAGAGCTGATCAACGCCCAGCCTAAGAGCAAGGAGCTGGTGGATGA
AGCTATCCGCTGTAAGCTGAAGATCCTGCAGAACGATGGCGTGGTTAACA
GCCCTTGTGCCCGACCAAGGAAGACCAGCCATGCCCTCTTCTTCTGGGA
GGGCAGACTTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCAA
AGAGATCATCCCCAAGTCTGACATCCCCAGCCCCAGGAAGGAGTTCAGCG
CCTGCGCCATTGGCTGTAATGTGTACATCACCGGTGGCA--GAGGTTCA--A
GAGAATGGTGTATCCAAAGATGTGTGGGTCTATGACACCGTCCAAGAGGA
ATGGTCAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTG
CGGAGCTGAAACACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNGGATGAATACATTGTACTGTTTAGTCGTTCAACAA
CACGGCTGATACTGAACGAGGCGGAGCTGATCATGGCGCTGGTCCAGGAG
TTCCAGATGAGAGTGGTCCACAGTATCCCTAGAGGAACAGTCTCTCCCCAG
TACCGTCCAGGTGATCAGTGGGGCTTCCATGTTAATCAGTATGCATGGAG
CTCAGCTAATCACCTCACTCTTCCCTCCCTAGAGGAGCTGTTGTGGTGGAG
TTGTTCCCTTTTGTCTGTTAACCCCTGAACAGTACACCCCGTATAAAACCCT
TGCCACCCCTTCCAGGCATGGATCTTCACTATATCTCTTGGAGGAACACCA
AGGAGGAGAACACCATCACCCACCCAGATAAACCTTGGGATCAAGGGGGC
ATTACTCACTTGGAGAAGGAGGAGCAAGAGCGAATCCTGGCGAGCAAAGA
TGTGCCCAGGCACCTGTGCTGTGCAACCCGGAGTGGCTCTTCCGGATCT
ACCAGGACACTTTGGTGGACATCCCTTCCTTCTTGGAAAGTCCCTAA---A
GAGGGAAATGAAG---ACAAAGCCCAGTGTGAGAAG---ATCCAAACCGGC
CAGCACAGTTCATCCGGGCCGGGTGAGAGAACCCAGTGTGACACCTCGG
TACAAACCACTAATGAGGCTAAACTCACAGTCTCTGGCAGATCCCCTGG
AATCTGAAATACCTGAAAGTGAAGAGAGTTGAAGTACGAGGTGTGGATCCA
GAAAAGAGACCCAGCAAGGGCACGCTGGAGGACCAAATCATCCAGGCCA
ACCCCGCACTGGAGGCTTTCGGCAACGCCAAGACGCTGAGAAAACGACAAC
TCCTCTCGTTTTTGGAAAATTCATCCGAATCACTTGGGACGAGCGGCAA
GTTGTGCTCTGCTGACGTCGAGACGTACCTGCTGGAGAAGTCCCGCTGCA
CCTTTCAGCTCAAGGCTGAGAGGAACCTACCACATCTTCTACCAGATCCTG
TCCAACCAGAAGCCAGAGCTCCTGGACTTGCTGCTGATCACCACAACCC
GTACGATTACGCCTACATCTCCAAGGAGAGGTAACCGTCGCCTCCATCA
ACGACGCAGAGGAGCTGATGGCCACCGACAGCGCTTTCGACGTGCTCGGC

TTTACTGCGGAAGAGAAGATGGGCGTCTACAAGCTAACAGGCGCCATCAT
GCACTACGGCAACATGAGGTTCAAACAGAAGCAGCGGAGGAGCAGGCTG
AGTCGGACGGGACGGAGGCGGCAGATAAATCTGCGTACCTGATGGGGCTG
AACTCTGCCGACCTCATCAAAGGGCTGTGCCATCCAGAGTCAAGGTAGG
AAACGAATACGTCACCAAAGGCCAAAGTGTGGACCAAGTCTACTACCCCA
ACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAG
CTGGGGTACAAGCGCCATGTGGCCATGCACTCTGCCACGGCGGGGGATCT
CACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACCCCGTTCTGTGG
AGCACCTCAAAGCCACTCCGGGAAGTCTTCAGGCGGCACCAAGGAGAAG
AAGCACCCGTGTGATCACTGTGACCGTCGTTCTACACCCGGAAGGACGT
GAGACGGCACATGGTGGTGCACACGGGCCGAAAGGACTTCCTCTGCCAGT
ACTGTGCCCAGCGCTTCGGCAGGAAGGACCACCTGACCCGACACGTGAAG
AAGAGCCACTCTCAGGAGCTGCTGAGGATCAAGACGGAGCCCCCTGACAT
GTTGGGTCTTTTAGCCTCTGGGTCTCCACCCTGCTCTGTGAAGGAGGAGC
TCAGCCCCATGATGTGCGGCATGGGGCCCAACAAAGACCCCATGATGGGC
AAACCGTTCTCCGGTGGGGCCCCCTTTTTCAATGGGCATGTACAACCCCA
CCAT-----CTCCAGACCATGTCTAATACTGGGGGGGGTACCCCT----
--CACCCGTCCCTGATGCCCAGTCCGTTGTCTGCAGCTATGGGCATGGGG
TGTCACATGGAATATCTCATCTACGCATCTTTCTCATTCATGGGATGTTT
ACAAATCAGTGATCGATCAAATATTTGTGAACCTGCTGGCGAGTAACTCTC
CGAGTGTTCGTATGCCCTGACCCAGCAGAAATACTTCAGTAACTACAGT
CCCGTGATTGGGTTTTACATTTACGAACCCATCGAGTACTGGAATTCCAC
GGTGCAGGAGCACCTGAAGACTTTGAGTCATGGCTTCAACAAGATCTCTT
GGATGGACAACTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCA
ACTAAGGGTGACTTCATCACAATCCTCAAGGGCTCCTTTCTGCGCAGCC
TGAGTACCAGCACTTCTCTGAGGACATCATATTCTCCAAGA---ACCGTG
AGACCG-----ATGAGTACGACATCATCGCCTCTCGGATGTATTTGGTT
GCCCCGACGACGGAGAAGAAGCGAGGGGAGGTGGTGGAGCTTCTGGAGAA
GCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATC
CTACGTTTGTGTTTATGGACCGCTACAGCTCCTCTGTCATCTCGCCTATC
CTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCCT
GGTCATCAACCCCTTGGGTAACCTTCTGGCTCATCCTCACAGTAACGTCCG
TCGAGCTGGGCGTCTTGGGTTTTGATGGGCTTCTCAGTTTTGAATGGCAG
CCAGCTCTCAAGAAATGTGTCTACATCTTGCAATGTTGGCATTATTAACGG
GCTCTCTGGATGGACTTCCTCGGTGGATGACTTCCAGCTGACACCATCA
CTCGCCGTTTTCGCTACGATGTGGCTCTGGTGTGAGCATTAAAGGATCTG
GAGGAGGACATCATGGAGGTCTCAGAGAGGCTGGTATGGAAGACAGTAC
TTGTATCTCAGGCTTCAGTGTCAAGATCAAAGAAATCCTGTGATGGCATGG
GCGATGTCAGTGAGAAACATGGCGGGGGACCAGCTGTCCCTGAGAAGGCT
GTTTCGTTTTTCTTTTACTGTCTGTCTGTCTGTCAAGCCAGACAACGA
GGAG-----AAGGAGGTTACCATTT
TCACTGAGCCCAAGCCGAACCTCAGAACTGTGATGTAAGCCCCTTTGCCTG
ATGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCTGTCCCTGGGGCC
TGTAGTTGCCGAGCGTAAGGCAATGAAGGAGAGCAAGCTCATCCTATCCT
TGGGTGGACTAGCTCGTCTCCTTCCGATTCCACTTCAGAGGTACAGGATAC
GATGAGAAGATGGTGCCTGAGATGGAGGGCCTTGAAGCCTCTGGGTCCAC
CTATGTCTGCACTCTCTGTGACTCCACCCGGGCAGAGGCCTCTGAAAACA
TGGTGTACTACTCGGTCACTCGCAGTCATGTAGAGAACTTGGATCGCTAC
GAGATATGGAGAACCAACCCCTTTTCCGAGTCTGTAGACGAGCTGCGGGA
CAGAGTCAAAGGTGTCTCCGCCAAGCCGTTTCATGGAGATGCACCCACGC
TGGATGCGCTACTGTGACATTTGGCAATGCGACAGAGTTCTACAAAATC
TTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CAAC---CCCAG
TCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTGGATAAACAGCTGAGGA

AAAAGCTGAAGGTCAAACCGGTCATGAGGATGAATGGGAACTATGCCCGC
AGGCTAATGACCCAGGAGGCTGTGGATGTGGTGTGTGAGCTGGTGCCCTC
AGAGGAGCGGAGGGAAGCCCTCAGGGAGCTTATGAGTATCTACGTCCAGA
TGAAGCCCGTGTGGCGTGCCACCTGCCCTGCCAAGGAGTGCCCCGACCAG
CTGTGCCGCTTCAGCTTTAACTCACAGCGCTTTGCAGACCTTCTCTCTTC
TACCTTCAAATATAGATACAATGGAAAGATAACCAATTATTTGCACAAGA
CCCTGGCTCATGTGCCTGAAATCATAGAGAGAGATGGATCCATAGGAGCC
TGGGCCAGCGAAGGGAACGAGTCGGCAAACAAATCATAACCATTGAGAT
GGGTCAATTGGGGCTGTTTTGGCAGGCGAGCCCAAAGCCTTTCTCCTGCT
CCGTCGAAGACCCACAAAACAGACAAAGTTCAAGGGTATCAAGACGTAC
ATTTCTTACCCTGTCACGCCGAGCCACATAGGGCGTGCCGTGTACAGACG
CTACAAACATTTTACTGGCTGTACAACCGCTTACTGCACAAGTTCACTG
TGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTTGAG
GAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGTGGATGAACCA
CATGACCAGTCACCCAGTACTCTCCAGTATGAAGGCTTAGAGCACTTTC
TAATGTGTACTGATGACAAGCAGTGGAAACTGGGCAAGAGGCGGCAAGAA
AAGGACGAGATGGTTGGTGCCCATTTTCATGCTGACCC TTCAGATCCCCAA
CGAGCACCAGGACCTTCAGGATGTAGAGGAGCGCATCGACACCTTCAAGG
CCTTTGCTAAGAAAATGGATGACAGCGTTTTTGCAGCTCACACATGTTGCT
TCGGAGCTGGTTTCGTAACACCTGGGTGGGTTTCAGGAAGGAGTTCAGCG
GCTGGGAAATTCTTTCCAATCTATCAGCCATGCGTTCACGCTGGACCCTC
CCAACAGCTCAGAGAATCTCAACAAAGCCATCTCCATCCTCTCGCCACG
TTCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCATCGGG
CGCCCTACTATTTCTGCTGGACCTGTGCGCCTCTGACATCCTGCGCTCC
GCCATCTGCTTCCCCTTTGTCTTACCTCGGTCAAGAATGGATCGGCCTG
GACCTACGGCACGCTGACCTGCAAAGTGATCGCCTTCTGGGTGTCCTCT
CCTGTTTCCACACAGCGTTTTATGCTCTTCTGTGTCAGCGTCACACGCTAC
CTTGCCATCGCGCACACCCTTTCTACACCAAGAGGCTGACCTTCTGGAC
CTGTCTGGCTGTGATCTGCATGGTGTGGACGTTGTGAGTGGCTATGGCGT
TCCCGCCGGTGCTAGACGTAGGGACATACTCTTTTATCCGGGAGGAGGAC
CAGTGCACGTTCCAGCACCGTTCTTTCAGGGCGAACGACTCGCTGGGCTT
CATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTCTCGTGCATGACCGTCGGAAGATGAAGCCTGTCCAGTTC
GTGCTGTGTCAGCCAGAACTGGACCTTCCACGGGCCTGGCGCCAGCGG
GCAGGCGGCGGCAACTGGCTGGCCGGATTTCGGTCGAGGCCCAACCCCC
CTACCTGCTGGGCATCCGGCAGAACAGCAACGCAGCAGGCCCGCAGGCGT
CTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTT
CTACATCATGACGTTTTTCTTCTTCTGACTGTGGGGGCCCTATCTGGTTCG
CCTGCTACTGGCGGGTGTTCGAGAGGGGCCAGTGGTCCCTGGGGGCTAC
CTGACGGCGGCCGTGTGGATGAGCTTCGCCACAGGCCGGGGTCAATCCCTT
CATCTGCATCTTCTCCAACAGGGAGGCCAAATCTCGCTTTCACCCCTGGCG
TGGGGACTTGTCTTGGCACGGAGC---GCAGCGTCCACTCGGCAACAGC
TTGCTGTCCCCGCAGCAAACCGACGAGCCACTGTTGCCACCCCCCGCA
GCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCTGCCT
CGGCATACGACGCCGCT-----GATTTCCGCCGGTAACGCGGCCACC
TTGCTGTCTTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCCCTGCC
GAGTGGCGGGCTGCTCCAACCGGCTCTTGGCTATTACGCAGACCCGTCAG
---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTGGCGTAAACAGC
AAACCCAGCGCGGTCTTTTCTGCTGGCCCGCTAACTCTCTCGGTGGCAG
GTCGGGCA---CC---AACTACCTGA-----GCGAGGA---GGGA-
--GACCC---CATCCCAACAGAGAGGTCACCT---AT---CGGCGTCTCC
GAGGAG---CCCAAAGCCAAAGACATGAC---ATCAGA---GTCGAACTG

GATAGAG---ACGCCGTCCTCCATTAAGTCCATCGACTCGAGCGATTCTG
GTATCTTTG---AACAGGCCAAAAGGAGGAGAATCTCACCTTCTGCCACG
CCG-----GTTTCAGAGACAGTGTCCCGTTAAAATCGGAGCATCA
CTCAACAGGCCGAAGTCACGGAGAGAGAAGTGGCGTTGGGGATCAATCCCT
TCGCGGATGGGATGGGCGCCTTCAAATCAACCACAGCGCCCACGATATT
GGCTCCGG---ACAGACGGCGTTCCTCCCAGGCT---CCCGGGTAC--
-GCAGCCACCGCGCTGGGA---CACCACCA-----CCACCCGAGCCACT
CTTACTCC-----ACCTTCAACTCCACCAGGGACTTTCTG
TTCAGAAATCGGGGTTTCGGGGATGCCACCGG-----CGCGCA
GCACAGTTTGTTCGCCCTC-----CGGAAGTTT---C-----GCAG
GGCCACATGGACACTCGGATGCGGGCGGGGCACCTGCTCTTCCAGGGGCTC
CACGAG---CA-G-----AACCACGCGCCCTCCAACGTGGTTAACAGCCA
GATGCGGCTGGGCTTCACTGGGGACATGTATGGACGTGCAGACCAGTATG
GCCACGTTACGAGCCCAGGT---CCGACCATTACGCATCATCCCAGCTG
CACGGCTACGGCCCCATGAACATGAATATGGCCGCG---CACCACGGGGC
AGGGGCCCTTCTTCCGATACATGAGGCAGCCCATCAAACAGGAGCTCATCT
GCAAGTGGATCGAGCCGGAGCAGCTGACGAACCCCCAAAAGTCATGCAAC
AAAACTTTTAGCACCATGCACGAGCTGGTGACCCATCTGACGGTGGAGCA
TGTGGGGGGGGCCCGAGCAGACCAACCACATCTGCTTCTGGGAGGAATGCG
TCCGAGAAGGGAAGCCATTCAAAGCCAAATACAAACTTGTGAATCATATC
AGAGTACACACCGGAGAGAAGCCGTTTCCCTGTCCGTTCCCCGGCTGTGG
GAAA

>Echeneis naucrates

AGCTTACTCATTTCGGGCAGAACTTAGTCAACCAGGCTCATTATTAGGTGA
TGATCAGATTTATAATGTTATCGTCACAGCACATGCCTTTGTAATAATTT
TCTTTATAGTTATAACCAGTAATGATTGGAGGTTTTGGTAATTGATTAGTA
CCTCTTATAATTGGTGCACCAGACATAGCCTTCCCTCGAATAAATAATAT
AAGCTTCTGACTACTGCCTCCTTCCCTCCTACTGCTAACATCTTCAG
GAGTAGAAGCAGGAGCAGGAAGTGGTTGAACTGTTTATCCTCCTTTAGCC
GGAAACCTTGCCCATGCAGGAGCATCTGTTGACCTAACTATCTTTTCACT
TCATCTGGCAGGAATTTCCCTCAATCTTGGAGCAATTAATTTTATTACAA
CAATCATTAATATGAAACCTGCAGCTGCTTCTATATATCAACTCCCATTA
TTTGTATGAGCCGTATTAATTACAGCAGTTCTTCTCCTATCCCTCCC
TGTTTTAGCTGCTGGAATTACAATACTACTAACAGACCGTAATCTTAATA
CCGCCTTCTTTGATCCTGCAGGAGGGGGAGATCCCATCCTTTATCAACAC
TTATTC-----

-----TTCTGGAGAGAAACCTTCACCCCTCTAACTGCCTTGG
CATGCTGTTGCTGTCCGACGCCCACCAGTGCACCAAGCTGTCGGAGCTCT
CCTGGGGCATGTGCCTCAGCAACTTCCCTGCCATTTGCAAGACAGAGGAC
TTCTTCAGCTGCCCAAAGATATGGTGGTCCAGCTTTTATCACACGAGGA
GCTCGAGACAGAAGACGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAGAGGAGGCAC TGCCACCTTCCAGAGCTTCTGAGA
ACGGTCCGCCTCGCCCTGCTGCCCGCCATCTTTCTGATGGAGAACGTCTC
AACAGAGGAGCTGATCAACGCCAGCCAAAGAGCAAGGAGCTGGTGGACG
AAGCCATCCGTTGTAAGCTGAAAAATCCTGCAGAACGATGGCGTCGTTAAC
AGCCCATGTGCTCGACCGAGAAAAACCAGCCATGCCCTTGTTCCTTCTGGG
AGGGCAGACATTCATGTGTGACAAGTTGTACCTAGTTGACCAGAAGGCCA
AAGAGATCATACCCAAAGCTGATATCCCGAGCCCCAGAAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGGGGGA--GAGGCTC-
AGAGAAAYGGTGTGTCCAAAGATGTATGGGTCTACGACACTGTCCACGAGG

TTCTGGAAAAGCTTCGGCCGTTGATGCTAATTAACAGCATCAAGTTCATT
GCCTTCAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACTATCCTCATCCTCA
CTTTCTTCTGCTGGTCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACG
GTCACTTCTGTGGAGCTGGGCGTCTGGGTTTGTGGGCTTCCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCAACATCTTGCAATGTTGGCA
TTATTAATGGGCTTTCAGGCTGGGCTTCCCTCGGTGGATGACTCCCAGCT
GACACCATCAGTCGGCGCTTTCGCTATGATGTGGCTCTGGTGTGAGCATT
AAAGGATCTGGAGGAGGACATTATGGAGGGGCTGAGAGAGAGTGGGAGGG
AGGACAGTGCTTGCACCTCAGGCTTTTCTGTGATGATCAAGGAATGTTGT
GATGGCATGGGCGACGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCC
TGAGAAGGCTGTACGCTTCTCTTTCACCGTTATGTCTATATCCGTTCCGG
CAGACGATGATGAG-----GAGGAG
GTTACCATCTTACCGAACCAAGGCCAAACTCAGAGCTGTCTGTAAAGCC
CCTCTGCTTGATGTTTGTGATGAGTCAGACCATGAGACGCTCACAGCTC
TCCTGGGCCCCATAGTTGCAGAGCGTAATGCCATGAAAGAGAGCAGGCTC
ATTCTGTCCGTCGGCGGCCTGCCTCGCTTCTTCCGCTTCCAATTCAGAGG
CACAGGATATGATGAGAAGATGGTGCAGAAATTGGAAGGCCTGGAGTCCT
CGGGGTCAACGTACATCTGTACCTGTGTGACTCGAGTCGGGCAGAGGCC
TCTAAAAACATGGTGCTGCACGCCATCACCCGCAGCCATGAAGAGAACTT
AGATCGTTATGAAATATGGAGAACCAATCCCTTCTCCGAGTCTGCGGATG
AACTGCGGGACAGAGTCAAAGGGGTCTCTGCGAAGCCCTTCATGGAGACG
CAGCCCACAATGGATGCATTGCACTGTGACATCGGCAACGCCACTGAGTT
CTACAAAATTTTCCAGGATGAGATTGGTGAAGTGTACCAAAGGT---CA
GC---CCCAGCCGGGAGGAGAGGGCGCAGCTGGAGGGCGGCCCTGGATAAA
CAGCTGAGGAAGAAGATGAAACTTAAGCCAGTAATGAGGATGAATGGGAA
CTACGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAAC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTC
TACCTCCAGATGAGGCCGGTGTGGCGCGCCACCTGCCAACAAAGGAATG
TCCAGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTTGCCGACC
TCCTCTCTTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTAC
CTCCACAAGACTCTGGCCCATGTGCCCTGAAATCATAGAGAGAGACGGATC
CATAGGAGCCTGGGCCAGTGAGGGGAATGAGTCAGCAAACAAATCATACA
CTATCGAGATGGGTCCTTTGGGACCTCGGTGGAAGGATAACCCGCAACCT
TTCTCCTGCTCCATTGAAGACCCACAAAACAGACAAAGTTCAAGGGCAT
CAAGACCTACATTTCTACCGGGTCACGCCGAGCCACACTGGGCGTCCCG
TCTACAGGCGTTACAAACATTTTGTGATGGCTCTACAACCGCCTACTGCAC
AAGTTCACGTGTGATCTCTGTGCCTCATCTGCCTGAGAAACAGGCTACGGG
GCGATTTGAGGAAGACTTTATTGAGAAGCGTAAAAGGAGACTTATACTAT
GGATGAACCACATGACCAGTCACCCAGTCTCTCCAGTATGAAGGCTTT
GAACACTTCTGATGTGTGCTGACGACAAGCAGTGGAACCTGGGAAAGAG
ACGCGCGGAGAAGGATGAGATGGTGGGCGCCATTTTCATGCTGACGCTTC
AGATCCCAAATGAGCACCAGGACCTTCAGGATGTGAGGAGCGGGTTGAC
TCCTTCAAGTCTTTGCTAAGAAAATGGACGACAGTGTGATGCAGCTCAC
CCACGTTGCCTCCGAGCTGGTGCCTAAACACCTGGGTGGGTTTCAGGAAGG
AGTTCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCGTTCATG
CTGGACCCTCCTCACAGCTCAGATGCCCTCAACAACGCCATCTCACAT--

-----GCCAAATCTCGCTTT
CACCCCTGGCGTGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCCT
CGGCAACAGCTTGCTCTCCCGCAGCAAACCGAGGAGCCCCTGTTGCCA
CCCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGT-----GATTTTCGCCGGTAA
CGCGGCCACCTTGCTGTCTACGCTGCGGCGGAGTGAAGGCGC-----
TTCCCTGCCGACGGCGGGTCTCCAACCGCCTCTTGGCTATTACGCA
GACCCGTCCG---GCTGG---GGAGACGCACGCCCGCCGAGTACTGTGG
YGTCAACAGCAAATCCAGCTCGGTGTTCCTGCTGGCCCCGCTAACTCGA
TCGGCGGCAGGCCTGGAG---CC---AACTACCTGG-----CCGAG
GA---GGG---GACTC---CATCCCCACCGAGAGATCCCCG---AT---
CGGTGGCTCGGAGGAG---GCCAAACCCAAAGACATGAC---GTCCGA--
-GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAGTCCATCGATTTCG
AGCGATTCTGGTATCTTTG---AACAGGCCAAGAGGAGACGGATCTCACC
GTCTGCCACGCCG-----GTTTCAGAGACAGCRTCCCCGTAAAGT
CTGAGCATCACTCAACAGGCCAAGTCACAGAGAGAGAAGTGGCGTTGGGG
ATAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAACACAGCTC
CCACGACATCGGCTCCG---ACAGACGGCATTTTCCTCCAGGCG---C
CCGGCTAC---GCAGCAGCCGCCCTGGGA---CACCATCA-----CCAC
CCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAG
GGACTTCTCTTTCAGAAATCGGGGTTCGGGGACGCCACCGG-----
----GGCGCAGCACAGTTTGTTCGCCTC-----TGGAAGTTT---C
-----GCAGGGCCACATGGACACTCAGATGCGGCGGGCCACCTGCTCTT
CCCGGGGCTCCACGAG---CAAGCGGCCCGCCATGCCTCTTCCAACGTGG
TCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTACGGACGGGCC
GACCAGTACGGCCACGTTACGAGCCC CGGT---CCGACCACTATGCTTC
GACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCG---C
ACCACGGAGCAGGGGCTTTCTTCGCTACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACAAACCCCAAAA
GTCGTGCAACAAACCTTTTAGCACGATGCATGAGCTGGTGACCCATCTGA
CGGTGGAGCATGTGGGTGGACCGGAGCAGACCAACCAGTCTGTTCTGG
GAGGACTGCTCCAGAGAAGGAAAGCCATTCAAAGCCAAATACAACTTGT
AAATCATATCAGAGTACACACCGGAGAAAAGCCCTTCCCTGTCCGTTC
CCGGCTGTGGCAA

>Elassoma zonatum

AGCTTGCTTATCCGAGCCGAGCTAAGCCAACCTGGGGCCCTTCTTGGGA
CGACCAGATTTATAATGTAATTGTTACTGCACACGCCCTTGTTATAATCT
TCTTTATAGTAATACCAATCATAATCGGAGGTTTTGGTAATTGACTTGT
CCTTTAATAATTGGGGCCCCCTGACATGGCCTTCCCTCGTATGAATAATAT
GAGCTTTTACTCCTGCCCCATCTTTCTTACTTTTACTTGTTCCTCCG

GAGTAGAAGCTGGAGCAGGTACAGGGTGAACCGTATATCCCCCTTTAGCT
GGGAATCTAGCCCATGCGGGGCATCTGTTGACCTAACAATTTTTTCACT
CCATCTTGCAGGGGTTTCCTCAATTCGCGGGCAATCAATTTTATCACAA
CTATTGTTAACATAAAAACCCCTGCTTTATCACAATATCAGACCCCTTTA
TTTGTATGATCTGTTTTAATTACAGCTGTACTACTTCTCTTATCCCTTCC
TGTGCTAGCTGCCGGCATTACAATACTACTAACAGACCGTAACCTCAATA
CTACCTTCTTCGATCCGGCCGGAGGGGGAGATCCGATTCTCTACCAACAC
CTG-----

-----NNNNNNNNNNGAACCTTACCCATCTAACTGCCTTGGTATGCTGCTGC

TGCTGATGCCACCAGTGCACCAAGCTGTGCGAGCTCTCCTGGGGCATG
TGCCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGACTTCCCTCCA
GCCCCAAGACATGGTGGTGCAGCTTTTGTACATGAGGAGCTTGAGACGG
AAGATGAAAGACTGGTTTATGAAGCTGCCCTTAACTGGATCAACTATGAC
TTGGAAAGGAGGCATTGTAGCCTTCCAGAGCTCCTGAGAACGGTCCGTCT
GGCCCTGCTGCCTGCCATCTTTCTCATGGAGAATGTATCTACAGAAGAGC
TGATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACGAAGCCATACGG
TGTAARCTGAAGATCCTGCAGAATGACGGCGTTGTTAACAGCCCGTGTGC
TCGACCAAGAAAACCAGCCATGCCCTTCTCCTTCTGGGTGGGCAGACTT
TTATGTGTGACAAGTTGTACCTGGTAGACCAGAAAGCCAAAGAGATCATC
CCCAAAGCGGACATTCCCAGCCCCAGGAAAGAGTTCAGTGCCTGTGCCAT
TGGCTGTAAGGTGTACATCACAGGAGGGA--GGGGCTC-AGAGAATGGCG
TTTCCAAAGATGTATGGGTCTATGACACAGTCCACGAGGAATGGTCGAAA
GCGGCACCGATGCTCATTGCCAGGTTTGGCCATGGCTCCGCTGAGCTGAA
ACACTGCCTTTATGTGGTGGGAGGTCACACGGCAGCAACTGGCTGCCTCC
CGCCCTCTCCGTCTAGATCAATACATTTGTTGTGTTTAGTTCGTTCAACA
AAGACTGATGCTGAACCAAGCAGAGCTTATCATGATGCTATCCCAGGAAT
TCCAAATGAGAGTGGTACCGGTATCACTAGAGGAACAATCCTTCCCAGC
ATCGTCCAGGTGATTAGCGGTGCATACATGTTAGTCACTATGCATGGAGC
TCAGCTAATCACCTCACTCTTTCTGCCAGAGGAGCTTCTGTGGTGGAGC
TTTACCCTTTTGCTGTTAACCAGAGCAATACACTCCATATAAAAACCCTT
GCCTCCCTTCCAGGTATGGACCTTCATTATATCTCCTGGAGGAACACTAG
AGAAGAGAACACCATCACCCACCCAGACAGACCCTGGGAACAAGGGGCA
TAGCTCATTTGGAGAAGGAAGAGCAAGAGCGTATACTGGCTAGCAAAGAT
GTACCCAGACACTTGTGCTGCCGCAACCAGAGTGGCTCTTCCGGATCTA
CCAGGACACTTTGGTTGATATCCCTTCCCTTTTGAAGTCTCTCAA--AG
AGGGAATGAAG---ACCAAACCCAGCTTTTTTAAA---GTCAAAGCCAGCA
AGCACAGTCCATCCAGGTCGGGTGAGAGAACCTCAGTGTGACACCTCAGT
ACAAACCACTAATGAGGCTAAGCTCACAGTCTCCTGGCAGATCCCATGGA
ATCTGAAATACCTAAAGGTTAGAGAGGTGAAGTATGAGGTGTGGATTTCAG
AAGAAAGACAGCAGCAAAGGGACGCTGGAGGATCAGATCATTTCAGGCGAA
TCCGGCGCTGGAGGCGTTTGGCAATGCAAAGACGTCCAGAAACGACA
CGTCCCCTTTGGAAAATTCATAAGAATTCACTTCGGCACGAGCGGCAAG
CTGTCGTCGCCCGACATCGAGACATACCTGCTGGAGAAGTCACGAGTCAC
CTTCCAGCTGAAGGCGGAGAGGAACCTACCACATATCTACCAGATCCTGT
CAAACGAAAGCCGAGCTGCTGGACATGCTCCTGATCACAACAACCCA
TACGACTACTCCTACATCTCACAGGGAGAGCTGACGGTCGCCTCCATCGA
CGACTCCGAGGAGCTGGTGGCCACAGACAGCGCGTTGACGTGCTCGGCT
TCACTGCTGATGAAAAGATGGGCGTTTACAAGCTGACGGGCGCCATCATG
CACTACGGCAACATGAAGTTTAAAGCAGAAGCAGCGGAGGAGCAGGCGGA
GCCAGACGGGACGGAGGCGGGCGATAAATCAGCTTACCTAATGGGGCTGA

ACTCCGCCGACCTCATCAAAGGGCTGTGTACCCGAGAGTCAAGGTTGGA
AACGAGTACGTGACCAAAGGGCAAAGTGTGGACCAAGTCTACTACCCTAA
CAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGC
TGGGATACAAGCGGCACGTGGCCATGCACTCTGCAACGGCAGGGGATCTC
ACCTGTAAAGTTTTGCATGCAGACCTATGAGAGCACACCCATACTCTTGGA
GCACCTCAAGAGCCACTCCGGGAAGTCTTCTGGTGGTGTCAAGGAGAAAA
AGCATCCGTGCGACCACTGTGACCGGCGTTTTCTATACACGGAAGGATGTG
AGACGGCACATGGTGGTCCACACGGGCGAAAGGACTTCCTGTGCCAGTA
CTGTGCCCAACGCTTTGGCAGGAAGGACCATCTGACACGCCACGTGAAGA
AAAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCGGATATG
TTAGGTCTTTTAGCCTCTGGGTCTTCCCGTGCTCTGTGAAGGAGGAGCT
CAGCCCTATGATGTGCGGAATGGGTCCCAACAAAGACCCAATGATGGGAA
AACCATTTCCAGTGGAGCCCTTTTCCGATGGGCATGTACAACCCCCAC
CAT-----CTTCAGGCCATGTCTAATTCTGGGGTGGGTACCCA-----
-CACCCGTCCCTGATGCCTAGTTCTTATCTGCAGCTATTGGCATGGGCT
GTCACATGGACTATCTCATCTATGCATCATTCTCATTTATGGGATGTTTA
CAAATTAGTGATGGATCAAATATTGTTAACCTGCTGGCTAGTAATTCTCC
TAGTGTCTTACGCTCTGACCCAGCAGAAATACTTCAGTAATTACAGTC
CGGTAATTGGGTTTTACATTTACGAGCCCATTGAATACTGGAACCTCACA
GTGCAGGAGCATCTGAAGACTCTAAGTCATGGCTTCAACAAGATTTTCATG
GATGGACAACTTTTTCCATTACCTGCGGGTGGTAAATGTGAGTGCATCTA
CCAAAAGCGACTTCATTGCCATTCTCAAAGGCTCCTTCCTGCAAAGCCCA
GAGTATCAGCACTTCACTGAGGACATCATATTCTCCAAAA---ACCGTGA
GACTG-----ATGAGTACGACATTATTGCTTCACGAATGTACTTGGTGG
CAAGAACAACAGAGAAGAAGCGCGAAGAGGTGGTAGAGCTTCTGGAGAAG
CTTCGTCCATTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCC
TACGTTTGTGTTTCATGGACCGGTACAGCTCCTCTGTCATCTCGCCCATCC
TGACCTCAGGCTTCAGCATACTCACAATCCTCATACTCACTTTCTTCTTA
GTTATCAACCCCTTGGGAATTTCTGGCTCATCCTCACGGTAACGTCCGT
GGAGCTGGGGTCTTGGGCTTGATGGGCTTTCACCAATTTGAATGGCAGC
CAGCTCTCAAGAATGTGTCTACATCATGCCATGTTGGCATTATTAATGGG
CTCTCCGGATGGGCCCTCATCGGTGGATGACGCGCTGCTGACACTATCAC
TCGGAGGTTTTCGCTATGATGTGGCACTAGTGTGACGATTAAAAGATCTGG
AGGAGGACATCGTGGAGGGCTGAGAGAGAGTGGGATGGAAGACAGTGCT
TGCACCTCAGGCTTCAATGTGATGATCAAGGAATCTTGTGATGGCATGGG
TGATGTCAGCGAGAAGCACGGTGGAGGACCGATGGTTCCTGAGAAGGCTG
TGCGTACTCATTACCGTGATGCGTATCTCTATCCTGGCAGAYGATGAG
GAG-----GAAGAAGTAACCATCTT
TACTGAGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCCCCTTTGCCTAA
TGTTTGTGGATGAGTCAGACCATGAAACACTCACAGCTGTCCTGAGCCCC
ATCATGTCAGAGCGTAGTGCAATGAAAGAGAGCAGGCTCATTCTATCCAT
CGGTGGACTACCTCGGTCTTCCGCTTCCACTTCAGAGGCACGGGATACG
ATGAGAAAATGGTGCCTGAGATGGAGGGCCTCGAGGCCTCGGGGTCCACC
TATATCTGCACTCTTTGCGACTCTACTCGGACCGAGGCCTCTCAAACAT
GGTGCTACATTCATCACGCGTAGTCACGACGAGAACCCTAGAGCGTTACG
AAATATGGAGGACCAACCCCTTTTCTGAGTCTGTAGATGAGTTGCGAGAC
AGAGTCAAAGGTGTCTCTGCAAAGCCCTTTTTAGAGACCCAGCCCACT
GGATGCATTACACTGTGACATTGGAAATGCCACTGAGTTCTACAACTCT
TCCAGGATGAGATTGGAGAGGTTTACCAAAGGT---CAAC---CCGAGC
CGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAA
GAAGTTGAAGCTTAAACCGGTGATGAGAATGAACGGGAACTACGCCCGCA
AGCTAATGACACAGGAGGCCGTGGAGGTGGTCTGTGAACTGGTGCCCTCA
GAGGAGAGGAGGGAAGCCCTGAGGGAGCTCATGAGGCTCTATATCCAGAT

GAAGCCTGTGTGGCGTGCCACCTGTCCGGCCAAGGAATGCCCCGACCAGC
TGTGYCGCTACAGCTTTAACTCCCAGAGCTTCGCAGACCTCCTCTCTTCT
ACATTCAAATACAGGTACAATGGAAAAGATAACCAATTACCTCCACAAGAC
TTTGGCCCATGTGCCGTGAAATCATAGAGAGAGATGGATCCATAGGAGCCT
GGGCTAGCGAGGGAAATGAGTCAGCAAACAAATCGTACACCATCGATATG
GGTCCCATGGGGCCCCGGTGGAAAGGACAACCCGCAGCCTTTCTTCTGCTC
TATTGAAGATCCAACWAAACAGACAAAGTTCAAGGGCATCAAGACGTACA
TTTCGTACAGAGTGACGCCGAGTCACACGGGGCATCCYGTCTACAGGCGT
TACAAACACTTTGACTGGCTTTACAACCGTTTACTSCACAAGTTCACTGT
GATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTTGAGG
AAGACTTCATCGAGAAGCGTAAGCGACGACTGATACTGTGGATGAACCAC
ATGACCAGTCACCCCGTTCTCTCCAGTATGAAGGCTTTGAGCACTTTCT
GATGTGCGTCGATGACAAACAGTGGAAACTGGGCAAGAGGCGGGCAGAGA
AGGACGAGATGGTGGGTGCCACTTCATGCTGACCCTTCAGATCCCTAAT
GAGCACCAGACCTTCAGGATGTAGAGGAGCGGATCGACACCTTCAAGGC
GTTTGCCAAGAAAATGGATGACAGTGTAAATGCAGCTCACACACGTTGCGT
CGGAGCTGGTGCCTAAACATCTGGGGGGGTTCAAGGAGGAGTTCCAGCGG
CTGGGAAACGCCTTCAGTCCATCAGCCAGGCTTTTCATGCTGGACCCTCC
CCACAGTTCAGACACCTTCAACAATGCCATCTCACATNNNNNNNNNNNGTTCCCTCAAAGT
ACCTCTCTGGGCTTCATCATTGGAGTAGGTGTGGTTGGAAACCTCCTGAT
CTCCATCCTGCTGGTCAAAGACAAGAGCTTGCACCGAGCGCCCTACTACT
TCCTGCTGGACCTGTGCGCTCCGATATCTTGCCTCCGCCATCTGCTTC
CCCTTTGTCTTACAGTCCGTCAAGAATGGATCTGCCTGGACCTACGGCAC
ACTGACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTCTCCTGCTTCCACA
CAGCGTTTATGCTGTTCTGCGTCAGTGTACGCGCTACCTGGCCATCGCC
CATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGT
CATCTGCATGGTGTGGACGTTGTCAGTGGCTATGGCGTTCCCGCCGGTGC
TCGACGTGGGGACATACTCTTTTATCCGGGAGGAGACCAGTGCACATTC
CAGCACCGTTCCCTCAGGGCGAATGATTCACTGGGCTTCATGCTGCTGTT
GGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCT
TCGTCCACGACCGTCGAAAGATGAAGCCCGTCCAGTTTGTGCCTGCTGTC
AGCCAGAATTGGACCTTCCACGGGCCCGGCGCCAGCGGTCAGGCTGCGGC
CAACTGGCTCGCCGATTTGGTTCGAGGCCCCACCCCGCTACTTTGCTGG
GCATTCGGCAAAAACAGCAACGCAGCTGGCCGCAGGCGTCTGCTAGTATTG
GATGAATTTAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGAC
GTTTTTCTTCCCTGGCACTGTGGGGACCCTATCTGGTTGCGTGCTACTGGC
GGGTGTTTGCAAGGGTCCCTGTGGTCCCTGGGGCTACCTGACGGCAGCC
GTGTGGATGATCTTTGCCAGGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGCCAAAT
CTCGCTTTCACCCTGGCATGG
GGACTGGTCCCTGGCACGGAGC---GCAGCGTCCCACCTCGGCAACAGCTTG
CTATCCCCGAGCAAAGCGGAGGAGCCTACTGTTGCCACCCCCCGCAGCG
ATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCTGCCCTCGG
CATAAGACGAGCT-----GATTTCCGCGGTAACGCGGCCACCTTG
CTGTCTACGCAGCCCGCGGAGTGAAGGCTC-----TTCCCCTGCCGAC
GGCAGGCTGCTCCAACCGGCTCTTGGCTATTACGCAGACCCGTCAG---
GCTGG---GGAGGACGCACGCCCGCAGTACTGTGGCGTGAACAGCAA
TCCAGCTCGGTCTTTTCCCTGTTGGCCCGCTAACTCTATCGGCGGCAGAGC
GGGA---CT---AACTACCTTG-----CTGAGGA---GGGA---G
ATTC---CATCCCACAGAGAGGTCACCG---AT---CGGCGGCTCCGAC
GAG---ACCAAACCAAAGACATAAC---GTCAGA---ATCGAGCTGGAT
AGAG---ACGCCGTCTCGATAAAGTCAATTGATTCGAGCGATTCTGGAA
TCTTTG---AACAGGCCAAAAGGAGGAGAATCTCACCTTCTGCCACACCG
-----GTCTCAGAGACAGTGTACCATTAAAATCTGAGCATCACTC

GTTCAGATGAGGGTGGTCACTGTGTCCCTTGAAGAGCAATCTTCCCA
GTATAGTCCAGCTTATCAGTGGTGCCTCAATGTTGGTCAGTATGCATGGG
GCTCAGCTTGTACCTCACTCTTCTCCCAAGGAGCTGTGGTGGTGA
ACTCTTCTTATGCTGTGAACCCAGAAGTACACCCCTTATAAAACCC
TCGCCTCCTTACCGGGGATGGACCTGCAGTATGTGTCCTGGAGGAATATG
ATGGAGGAAAACACCATCACCCACCCAGATAGATCCTGGGACCAAGGAGG
CATCGCCACCTGGAAAAGGACGAGCAAGAGCGAATCCTTGCCAGCAAGG
ATGTTCCGCGGCACCTATGCTGCCACAACCCAGAATGGTTCTTCCGAATC
TACCAGGACTCTGGTGGACATCCCCTCATTTCTGGAGGTTCTCAA---
AGATGGCCTGAAGATCACCCAGACCAAGCTTAAAAA---GGCCAAGCCAG
CTAGCACAGTACATCCAGGCCGGTTCAGGGAAAGRCAGTGTCAAACCTCA
GTCCAAGCCACCAACGAAGCTAAACTCACKGTCTCCTGGCAGATCCCATG
GAACCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGGTGTGGATCC
AGAAGAAGGACACAAGCAAGGAAACCCTGGAGGATCAAATCATCCAGGCC
AACCCCGCGCTGGAGGCCTTCGGGAACGCCAAGACCATCCGGAACGACAA
CTCGTCCCCTTCCGGGAAGTTCATCCGCATCCACTTCGGGACAAGCGGAA
AGCTGTGTCGCCGCGACGTCGAGACCTACCTGCTGGAGAAGTCGCGCATC
ACCTTCCAGCTCAAGGCCGAGCGGAACTACCACATCTTCTTCCAGATCCT
GTCCCAAGAGAAGCCGGAGCTGCTGGAAATGCTGCTGATCACCAACAACC
CGTACGACTACTGCTACATCTCCCAGGGGGAGGTGACGGTGGCGTCCATC
AACGACAACGAGGAGCTGATCGCCACGGACAGCGCCTTCGACGTGCTCGG
CTTACCAGGAGGAGAAGATGTCCATCTACAAGCTGACCGGCCATCA
TGCACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGGAGGAGCAGGCC
GAGCCCGACGGCACMGAGGCCGCCGATAAGTCGGCGTACCTGATGGGCT
GAACTCGGCCGACCTCATCAAAGGACTCTGCCATCCCCGAGTCAAGGTGG
GAAACGAGTTTGTACGAAAGGCCAGGGCGTAGATCAAGTCTACTAC---

-----TATCTCATCTACGCGTCATTTCTCCTTCATGGGATGTT
TACAAATCAGCGACGGGTCAAACATTGTGAACCTGCTGGCAAGTAACTCT
CCGAGTGTGTCTTTTGCCTCACCCAGCAGAAGTACTTCAAGTAACTACAG
CCCTGTTATTGGGTCTACATTTATGAACCCATCGAGTACTGGAATTCCA
CGGTGCAGGAGCACCTGAAGACTGAGTACCGCTTCAACAAGATCTCC
TGGATCGACAACTTTCTTCACTACCTGCGGGTGGTAAACGTGAGCGCGTC
GACCAAGAACGACTTCATCACCATCCTAAAGGACTCCTTCTTACACAGCC
CAGAGTACCAGCACTTACCAGGACATCATCTTCTCCAAGA---ACCGC
GAGAGCG-----ACGAGTACGACATCATCGCTCGCGCATGTACCCTGGT
GGCGCGACACCCGAGAAGAAACCGGAGGATGTGGTGTGCTGCTGGAGA
CGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATCGCTTCAAC
CCCACCTTCGTCTTCATGGACCGCTACAGCTCCTCGGTCAATCGCCAT
CCTTACCTCAGGCTTCAGCGTGTACCCATCCTCATCCTCACCTTCTTTC
TCGTCATCAACCCACTGGGAACTTCTGGCTCATCCTGACGGTACGTCG

ATTCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCA
CGACCGTCGAAAGATGAAGCCCCGTCCAGTTCGTGCCGTGCCGTCAGCCAGA
ACTGGACCTTCCACGGGCGGGCGCCAGCGGGCAGGCGGCGGCAACTGG
CTGGCCGATTGGTAGAGGCCCAACCCCGCCTACTTTATTGGGCATCCG
GCAGAACAGCAACCGGGCGGGTCGTAGGCGTCTACTGGTGTGGATGAGT
TCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACATTTTTT
TTCTGGCACTGTGGGGGCCCTACCTGGTAGCCTGCTACTGGCGGGTGT
TGCAAGGGGGCCCCGTAGTACCTGGGGGCTACCTGACGGCAGCCGTGTGA
TGAGCTTTGCCAGGGCGGGGGTCAACTCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGCCAAGTCCCGCTT
TCACCCT

GGCGTGGGGAGCGCTGCTGGCACGGAGCGCTGCAGCGTCCCCTCAGCAA
CAGCTTGCTCTCTCAGCAACAAACCGAGGATCCCGCCGTG---CCTCCC
CGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTCGCA
GCCTCGGCATACGACGCCGCT-----GATTCGCCGGTAACGCGGC
CACCTTGCTGTCTGACGCCGCGGCGGAGTGAAGGCTC-----TCCCCC
TGCCGACCGCAGCTTGCTCCAACAGACCTCTGGGTATTACGCGGACCCG
TCGG---GCTGG---GGCGCGGCACGCCTCCCCAGTACTGC-----
-AGCAAGTCGGCCTCGGTCTTTCTTGCTGGCCACGAATTCTGTGCGGA
GCAGAACGGGCA-----CAAACACTAT-----TGGAGGA---C
GGATCGGACGC---CATTTCAACGGAGAGGTCCCCG---AT---TAATGG
CTCGGAGGAG---GCGAAAGCCAAAGACTT-----GTCCGA---GTCTA
GCTGGATAGAG---ACGCCATCTTCGATCAAATCAATTGACTCAAGTGAT
TCTGGCATCTTTG---AGCAAGCAAAGCGGAGACGAATTTACCCGTCTGC
CACACCA-----GTTACAGAAACGGTGTCTCCGTTGAAATCTGAA-

>Eleotris pisonisa
AGCCTACTGATCCGCGCTGAACTAAGTCAACCTGGTGCCTACTGGGGGA
CGACCAAATCTACAATGTTATCGTTACGGCTCATGCCTTCGTAATGATTT
TCTTTATAGTAATGCCAATTATGATTGGGGGATTTGGAACTGATTAATC
CCACTAATAATCGGTGCCCCGACATGGCCTTCCCCTCGAATAAATAATAT
GAGCTTCTGACTTCTCCCCCTTCTTCCCTCCTCCTCCTGGCATCCTCTG
GGGTGAAGCGGGGCGAGGCACAGGGTGAACCGTCAACCCCTTTAGCA
GGGAAACCTTGCCACGCAGGGGCTCTGTAGACCTAACCATCTTCTCACT
ACACCTAACAGGGGTATCCTCAATCTGGGGGCAATCAACTTTATCACA
CAATTATCAACATGAAACCCCGCAATCTCGCAATATCAGACCCCCTTG

TTTGTGTTGAGCCGTTCTAATTACCGCTGTCCTACTACTACTCTCACTGCC
CGTGCTTGCCGCTGGCATTACAATGCTCCTAACAGATCGAAATCTAAATA
CGACTTTCTTTGATCCCGCGGGAGGAGGGGACCCAATCCTGTACCAACAT
CTTTTCTGATTCTTTGGGCACCCTGAAGTCTACATTCCTTATTCTCCCGG
CTTTGGAATAATCTCTCACATTGTTGCATACTATGCAGGCAAAAAAGAAC
CTTTGCGCTACATGGGAATGGTGTGAGCCATGATGGCTATCGGCCTCCTG
GGCTTTATTGTTTGAGCCACCACATGTTACAGTAGGCATGGATGTTGA
CACCCGAGCCTANNNNNNNNGAGAAACCTCCATCCATCAAACCTGCTGGGCATGCTGC
TGCTGTCGGACGCTCACCAGTGCACCAAGCTCTCGGAGCTCTCCTGGGGC
ATGTGTCTCAGCAACTTTCCTGCAATCTGCAAGACTGAGGACTTCTCCTCA
ACTGCCCAAAGACATGGTTGTGCAACTTTTATCTCATGAGGAGCTAGAAA
CGGAAGATGAGAGACTGGTTTATGAAGCTGCTCTCAACTGGGTCAACTAT
GACTTGGAACGGAGACTGCCACCTTCCTGAACTCCTCAGAACAGTGCG
ACTTGCTTTGCTGCCAGCCATTTTTCTGATGGAGAATGTGTCAACAGAGG
AGCTGATCAATGCCCAGGTCAAGAGCAAAGAGCTGGTGGATGAGGCCATA
CGCTGTAAGCTGAAGATCCTGCAGAATGACGGGGTCGTCAATAGTCCCTG
TGCTCGACCCAGAAAAACCAGCCACGCCCTTGTTCCTTTAGGAGGGCAGA
CTTTTCATGTGTGACAAGCTGTACCTGGTGGACCAAAAAGGCCAAAAGAGATT
ATCCCAAAGGCTGACATACCAAGTCCCAGAAAAGAGTTTCAGTGCTTGCGC
CATTGGTTGTAAGGTGTATATAACGGGAGGAA--GGGGTTC-CGAGAATG
GTGTATCCAAGGACGTATGGGTTTATGATACTGTTTCATGAGGAATGGTCC
AAAGCAGCACCTATGCTCATTGCCAGGTTTGGCCATGGTTCTGCGGAGCT
CAAACACTGCCTTTATGTTGTTGGAGGTCACACAGCAGCAACTGGCTGCNNNNNNNNNNNNNNNNNNNG
GAGGAATACATTGTCGTTTTTTAGCCGTTCCACTACTAGGCTTATATTGAA
CGAAGCAGAGTTGATAATGGCATTAGCGCAAGAGTTTCAGATGCGAGTGG
TTACGTTTTCCCTGAAGACCAGTCCTTTGCTAGCATTGTCCAAGTTATA
AGTGGAGCCTTTATGCTAGTTAGCATGCATGGCGCACAGCTAATCACCTC
ACTATTTTTGCCTAGGGGTGCTGTAGTTGTTGAATTGTTTTCCATTTGCAG
TCAACCCAGAACAGTATACCCCTTACAAAACATTGGCGTCCCTTCTGGT
ATGGACTTGCACTATATACCATGGAGAAACTCAAATGAAGAGAATACAAT
CACCCATCCTGATAGGCCATGGGAGCAAGGCGGCATCAGTCACTTGAAA
AATCAGAACAAGAACGGATATTGGCCAGCAAAGATGTCCCGCGACACTTG
TGTTGTCGTAACCCGGAGTGGCTTTTCCGAATTTACCAGGATACGTTAGT
GGATATACCATCATTTTTGGACGCGGTCAA---GGAAGGCATGAAA---A
CTAAACCAATTTTTGAAAAA---GTCCAAAACGGCAACTTTGGTCCACCCA
GGACGCTTCGCGAGGCGCAGTGTCAAACCTTCAGTACAGACATCAAATGA
GGCGAACTTACAGTGTCTTGGCAAATACCGTGGAAATTTAAAGTTTTTGA
AAGTAAGAGAGGTCAAGTACGAAGTGNNNNNNNNNNAAGAAGGACCAGAACAAGGGTACT
CTGGAAGACCAGATTATCCAGGCCAACCCGGCCTTAGAGGCTTTCGGAAA
CGCCAAGACCGTTCGCAACGACAACCTCGTCCCGGTTTGGGAAGTTTATCC
GGATCCACTTCGGGACGAGCGGGAAGCTGTCGTCTGCCGACATCGAGACC
TACCTCCTGGAGAAGTCCCGAGTACGTTCCAGCTCAAAGCGGAACGGAA
CTACCACATCTTCTACCAGATCCTGTCCAATCAGAAGCCGGAGCTGCTGG
ACCTGCTGCTCATACCAATAACCCGTATGATTACTCGTACATCTCTCAG
GGCGAGGTCACCGTCGCCTCCATCAACGACTCCGAGGAGCTCATCGCCAC
CGACAGCGCCTTCGACGTGCTCGGGTTCCTCCGGAGGAGAAGGTGGGCG
TCTACAACTCACCGGGGCCATCATGCACCACGGAAACATGAAGTTCAA
CAGAAACAACGTGAGGAACAGGCCGAACCCGACGGCACCGAGGCCGCCGA
TAAATCCGCCTTCTCATGGGTCTGAACTCAGCCGATCTCATCAAAGGTC
TGTGCCACCCCGGGTTAAAGTCGGGAATGAGTACGTGACCAAAGGCCAG
GGTGTGGACCAGGTGTACTIONNNNNNNNNNNNNNNNNNCAAGTGTGAGGAGTGCGGGAAGCACTACA
ACACCAAGCTGGGATACAAGCGGCACGTGGCCATGCACTCGGCCACTGCG
GGCGACCTGACGTGTAAGGTGTGCCTACAGAGCTACGAGAGCACCCCGGT

WCTATAGATATGGGACCCGTAGGCCACGCTGGAAGGACAACCCGAATCC
CTTCATATGCTCTATCGAAGACCCAACAAAGCAGACCAAATCAAGGGTA
TAAAGACTTACATATCATAACGGGTCACCCCAACCCACACGGGACGCCCG
GTTTATAGGCGCTACAAGCATTTGACTGGCTCTACAACCGTCTTCTGAA
CAAGTTCCTGTAATCTCCGTCCCTCATTTGCCGAAAAGCAAGCCACGG
GTCGGTGTGAGGAGGACTTTATCGAAAAACGAAAAAGACGGCTTATATTG
TGGATGAATCACATGACCAGTCACCCAGTTCTGGCCAGTACGAGGGGTT
TGAACACTTTCTGATGTGCGCCGACGACAAACAGTGGAACTAGGCAAGA
GGCGAGCGGAGAAGGACGAAATGGTGGGYGCYCACTTCATGCTCACCTT
CAGATCCCAAACGAGCACCAGGATTTACAAGACGTGGAGGAGAGGGTGA
CACCTTCAAGAAAYTCGCCCGAAAAATGGACGATAGCGTCTTGCAGCTCA
CGCATGTMGCTTCGGAGCTGGTTCGTAAACATCTGGGWGGATTTAGGAAA
GAGTTYCARCGTCTGGGTAATGCGTTTTCAGTCCATAAGCCATTTCGTTTTC
ATTGGACCCCCCTCACTGCTCGGACACCCTCAATAACGCCATCTCGCACNNNNNNNNNNNNNNNNNNNN

C

TGACCTCCCTGGGTTTCATCATTTGGCGTCCGGTGGTCCGAAACCTCCTG
ATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCGCCTACTA
TTTCCCTATTGGACCTGTGTGCGTCTGACATCCTGCGCTCGGCTATTTGCT
TCCCTTTCGTCTTCACCTCTGTAAGAATGGATCCGCCTGGACATACGGC
ACGCTAACCTGCAAAGTCATYGCCCTTCTGGGGGTGCTGTCCTGTTTCCA
CACAGCATTCATGTTGTTTTGTGTGAGCGTCACTCGCTACCTGGCCATAG
CACACCACCGCTTCTACACCAAGAGGCTGACCTTCTGGACCTGCCTGGCA
GTCATCTGTATGGTGTGGACGTTGTCGGTGGCTATGGCGTTCACCCGGT
GCTAGACGTAGGGACGTACTCGTTTATCCGCGAGGAGGACCAGTGCACGT
TCCAGCATCGCTCATTCAGGGCCAACGACTCGCTGGGCTTTATGCTGCTG
CTGGCGCTCATCCTCCTAGCCACACAGCTGGTTTACCTCAAGCTCATTIT
CTTTGTACACGACCGCAGAAAAATGAAGCCGGTCCAGTTTGTGCCTGCCG
TCAGCCAGAACTGGACCTTTTCATGGGCCAGGAGCCAGCGGGCAGGCAGCG
GCTAATTGGCTAGCCGGTGTGGTTCGCGGCCCCACCCGCCCCTCTGCT
GGGCATTCGGCAGAACAGCAACGCGGGGCCGAGACGTCTGCTGGTGC
TGGACGAGTTCAAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACGTTTTTCTTCTGGCTCTGTGGGGCCCTATCTGGTGGCCTGCTACTG
GAGGGTGTTCGCCAGGGGCCCAGTGGTCCCTTGGGGCTACCTGACCGCAG
CCGTGTGGATGAGCTTGTCCAGGCTGGGGTCAATCCGTTCATCTGCNNNNNNNNNNNNNNNNNNNN

-----CATCACTCAACAGGCGAAGTCACGGAGCGAGAA
GTAGCGCTGGGGATCAACCGTTTCGCTGATGGGATGGGCGCCTTCAAAT
CAACCACAGCTCACACGACCTGGGGTCCGG---ACAGACCGCCTTCTCAT
CCCAGGCG---CCGGGTAC-----GCCGCTTTAGGA---CACCAC
CA-----CCACGCGACCCATGTTGGCTCT---TACTCCACA-----TT

CAACTCCACACGGGACTTTCTCTTTAGAAATCGGGGGTTTGGAGACGCTG
CCGG-----GGCACAGCACAGTTTATTTCGCGTC-----A
GGAAGTTT---C-----CCCGGGCCACATGGACACTCTGAAGCGGCGGG
GCACCTGCTTTTCCCGGGCTGCACGAA---CAAGCGT-----CGT
CGTCCAACGTTGTCAACAGTCAGATGCGCTTGGGCTTCTCCGGGGATGTG
TACGGACGGGCCGAGCAGTACGGCCATGTCACCAGCCCGAGGT---CCGA
CCACTACGCGTCCACACAACACTGCACGGATACGGCCCATGAACATGAATA
TGGCCGCGGCACACCATGGAGCGGGGGCCTTCTTTAGATACATGCGGCAG
CCCATCAAACAGGAGCTCATCTGTAAGTGGATTGAACCCGAGCAGCTAAG
CAACCCCAAGAAGTCGTGCAACAAAACCTTTCAGCACCATGCACGAGCTGG
TCACCCATCTAACTGTGGAACACGTGGGGGGACCGGAGCAGACAAACCAC
ATCTGTTTCTGGGAGGAGTGTCTCCAGAGAGGGGAAACCTTTTAAAGCCAA
ATACAAACTGGTCAATCATATCCGAGTGCACACAGGGGAGAAACCCCTTCC
CGTGCCCGTTCCCGGGCTGTGGCAAA

>Elops saurus

AGCCTCTGATCCGAGCCGAATTAAGCCAACCCGGGGCGCTTCTGGGAGA
CGACCAGATTTATAATGTCATCGTCACAGCACACGCCTTTGTAATAATCT
TCTTTATAGTAATGCCAATCATAATTGGTGGCTTTGGAACTGACTGATC
CCTCTCATGATCGGAGCCCTGACATGGCGTTTCCCGAATAAATAATAT
AAGCTTCTGACTTCTACCACCCTCTTTCCTGCTGTTGTTGGCCTCTTCTG
GAGTGGAAAGCAGGAGCGGGGACCGGATGAACCGTCTATCCGCCCCGCGG
GGAAACCTCGCCCACGCGGGAGCATCCGTCGACCTAACCATCTTCTCCCT
CCACCTTGCAGGTGTGTCTTCTATCCTGGGTGCTATCAACTTTATTACTA
CAATTATTAACATGAAACCGCCAGCAATAACACAATACCAAACGCCACTA
TTCGTTTGGAGCAGTACTGATCACCGCGTTCTTCTCCTCCTATCGCTGCC
AGTGCTAGCTGCTGGCATCACAATGCTGCTAACAGACCGAAACCTGAACA
CAACCTTCTTTGACCCGGCAGGCGGAGGAGACCCAATCCTTTACCAACAC
CTATTCTGGTTCTTCGGGCACCCAGAAGTATACATTCTAATTCTCCCAGG
CTTCGGAATAATCTCACACATCGTAGCCTACTATGCAGGCAAAAAAGAAC
CATTTCGGCTACATGGGCATAGTATGGGCAATGATGGCTATTGGTCTTCTT
GGCTTTATCGTATGGGCACACCACATGTTTCACGGTAGGAATGGATGTAGA
CACACGTNNNNNTTCTGGAGAGGAACCTGCACCCCACCAACTGCCTGGGCATGC
TGCTGCTGTCGGACGCGCACCAGTGCACCAAGCTGTCGGAGCTCTCCTGG
GGCATGTGCCTGAGCAACTTCCCCACCATCTGCAAGACGGAGGACTTTCT
GCAGCTGCCCCAAGGACATGCTGGTGCAGCTCCTGTCCCACGAGGAGCTGG
AGACGGAGGACGAGAGGCTGGTGTACGAGTCGGCCCTCAACTGGGTCAAC
TACGACCTTGAGAGGAGGCACTGCTACCTCCCGGAGCTGCTGCGCACCGT
CCGCCTCGCCCTCCTGCCCCCATCTTCTCATGGAGAACGTCTCCACCG
AGGAGCTCATCAACAAGCAGGCCAAGAGCAAGGAGCTGGTGGACGAGGCC
ATCCGGTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAGCCT
GTGCGCCCGGCCAGGAAGACAAGCCACGCCCTCTTCTCCTGGGCGGCC
AGACCTTCATGTGCGACAAGCTGTATCTGGTGGACCAGAAGGCCAAAGAG
ATCATCCCCAAAGCTGACATCCCCAGCCCCGCAAGGAGTTCAGCGCCTG
CGCCATCGGCTGCAAGGTCTACGTGACGGGTGGCC--GAGGCTC-GGAGA
ACGGCGTGTCCAAAGACGTCTGGGTCTACGACACCTTGCACGAGGAGTGG
TGCAAGGCCGCGCCCATGCTCATCGCCCGTTTCGGTCACGGCTCGGCCGA
GCTGAAGCACTGCCTGTACGTGGTGGGCGGGCACACGGCCGCCACCGGCT
GCCTGCGGGCCTCGCCATCATGATGCGTACATTGTGGTTTTTCAGCCGCTC
CATCAACAGGCTCATCCTGAACGAGGCGGAGCTAATTCTGGCACTGGCGC
AGGAGTTCAGATGAGGGTGGTCAACCGTGTCCCTGGAAGAGCACTCGCTG
GCGGACATCGTTTCGGGTTGTTGGTGGGGCGTCCATGCTGGTCAAGCATGCA
TGGGGCCCAGCTCATAACCTCCCTGTTTCTACCACGTGGCGCCGCTGTGG
TGGAGCTTTTCCCGTACGCTGTAAACCCAGAGCACTATGCTCCCTACAGG

ACACTGGCCTCGCTGCCGGGCATGGACCTGCAGTACGTGGTTTGGAGGAA
TACCATGGAGGAGAACTCTGTGGCCTTTCCCGAGCGCTCCTGGGACCAGG
GTGGCATTGCACACCTGGAGAAGGAGGAGCAGGAGCGCATCCTGAAGAGC
AAGGAGGTGCCGCGACACCTGTGCTGCCGGAACCCAGAGTGGCTTTCCG
CATCTACCAGGACACCAAGGTGGACATCGCCTCCCTGCTGGACACTCTAC
G---TCAGGGGTTGACC---TCCAAGCCAAACCTCAAGAG---AGCCAGG
GCTATCAGCGCAGTCCATCCAGGCAGAGTGAGGGAGCCCAGGTGCCAGAC
CTCTGTCCAAGCCGCAATGAGGCCAAGCTGACTGTGTCCTGGCAGATCC
CCTGGAACCTCAAATACCTGAAGGTAAGGGAGGTGAAATATGAGGTGTGG
ATTGAGAAGAAGGACACCAGCAAGGGAACACTGGAGGATCAAATCATCCA
AGCCAACCCAGCGCTGGAGGCTTTTGGCAATGCAAAGACCGTAAGGAATG
ACAACCTCCTCACGTTTCGGGAAATTCATCCGCATTCATTTTGGAGTGAGT
GGTAAACTGTCCTCCGCTGACATCGAGACCTACCTGCTGGAGAAAATCCCG
AGTCACCTTTCAGCTCAAAGCTGAGAGGAACTACCATATCTTTTATCAGA
TTTTATCCAACAAGAAGCCAGAGTTGCTGGACATGTTGCTTATTACCAAC
AACCCATATGATTATGCTTACGTCTCCCAAGGAGAGGTAACAGTTGCATC
AATTGATGATACTGAGGAGCTCATTTGCCACAGACAGTGCCTTTGATGTGC
TGGGATTCACGGCAGAGGAGAAGATGGGTGTCTACAAGCTGACAGGTGCC
ATCATGCACTATGGTAACATGAAGTTCAAGCAGAAACAGCGTGAGGAGCA
GGCAGAGCCTGATGGTACTGAGTCTGCTGATAAGTCAGCCTACCTAATGG
GGCTAAACTCAGCTGACCTTGTCAAAGGACTGTGTCACCCAAGAGTCAA
GTTGGCAATGAGTATGTCACCAAGGGCCAAAGTGTGGACCAAGTTTACTA
CCCGAACAAGGAGGCCTTCAAGTGCAGGAGTGCAGGCAAGAAGTACAACA
CCAAGCTGGGCTACAAGCGTCACGTGGCCATGCATGCGGCCACCAGTGGC
GACCTCACCTGCAAGGTGTGTCTACAGAGCTACGAGAGCACGCCAGTGC
GCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCCTCGGGCGGGGCTAAGG
AGAAGAAGCACCCCTGCGACCACTGCGACCGCCGCTTCTACACGCGAAAG
GACGTGCGCCGCCACATGGTGGTGCACACTGGCCGCAAGGACTTCTTGTG
CCAGTACTGCGCCAGCGCTTTGGCCGCAAGGACCACCTGACCCGCGCAG
TGAAGAAGAGCCACTCCCAGGAGTTGCTGAAGATCAAGACGGAGCCGCCT
GACATGCTGGGCCTGCTGGGGTCTGGCTCTCCACCCTGCCCTGTGAAGGA
GGAGCTTAGCCCTATGATGTG---CATGGGTCCCTCCAAGGACTCCCTGA
TGGGCAAGCCCTTCCCCGGAG-----CCTTCCCCATGGGTATGTACAAC
CCCCAC-----CTGCAGGCCATGTCCAACCTCTGGGGTGTCC-----
-----CACCCTCCCTGGTGTCCGGTTCACTGTCTGCAGCCATGGGCA
TGGGGTGCCACATGGATTACCTAATTTATGCGTCATTTTCGTTTATGGGA
TGTTTACAAATTAGTGATGGATCAAACATAGTCAACCTTTTAGCCAGCAA
CTCTCCGAGCGTCTCCTATGCTCTGACCCAGCAAAAATATTTAGCAACT
ACAGTCCGTGAATTGGGTTCTATATTTATGAGCCCATAGAGTACTGGAAT
TCCACTGTTTCAAGGACACCTGAAGACGCTGGGCCACGGATTCAATAAGAT
TTCATGGATCGACAACACTTTTCAAGTATCTGAGGGTGGTGAATGTGAGCG
CATCAACCAAAAGCGAATTCATAACTATCCTCCAGACTTCTTTTTTAAGG
AGCCGAGAATACCAGCACTTCAAGGATGACATCATTTTTTACAAA---T
GAGGG-----ACGAGACAGAGATCATCGCATCTAGGATGTACC
TGGTGGCCAGAACCACAGAGAAGACGAGGGAGGAGGTCGTGGAGTTACTG
GAGAGACTGAGACCTCTGTCTCTTATCAACAGCATCAAGTTCATCGTCTT
CAACCTACCTTCGTTTCATGGATCGATACAGCTCCTCCGTCATTTTCYC
CYATTCGACCTCTGGGTTTCAAGCGTCTGATTGTTCTGATCCTGACATTC
TTCTGGTTCATCAATCCCCTTGGAAACTTCTGGTTGATTCTGACGGTCAC
CTCAGTGGAGCTGGGAGTTCTTGGCCTCATG-----

-----A
AGGCAGTGCGGTTCTCCTTACCATCATGTCAATCTCGGTCCAGCTGGCG
GACGGGGG-----AAGCAGGTGAC
CGTGTTCAGGAGCCGAAACCCAACTCCGAGCTGAGCTGCAAGCCGCTGT
GCCTGATGTTTGTGACGAGTCAGACCACGAGACGCTAACCGCTGTGCTG
TGGCCCGTGGTGGCCGAGCGGAACGCCATGAAGGAGAGCCGGCTCATCCT
CTCCATCGGGGGGCTGCAGCGGTCTTCCGCTTCCACTTCCGGGGCACGG
GCTACGACGAGAAGATGGTGAGAGAGATGGAGGGCCTGGAGGCCCTCAGGC
TCCACCTACATCTGCACGCTGTGTGACTCCACCAGGGCTGAGGCTTCCCA
GAACATGGTCTTCACTCCATCACCAGGAGCCACGATGAAAACCTGGAGC
GGTACGAGATCTGGAGGACCAACCCCTACTCGGAGTCTGCCGAGGAGCTA
CGTGACC CGCTCAAGGGCGTGTGCGGCCAAGCCCTTCATGGAGACCCAGCC
CACCCTGGACGCGCTGCACTGCGACATCGGCAACGCCACTGAGTTCTACA
AGATCTTCCAGGACGAGATTGGTGAGGTTACCTGAATGG---CAAC---
CCCAGCCGCGAGGAGCGCCGCCGCTGGAGGTCGGCCCTCGACAAGCAGCT
GAGGAAGAGGATGAAGCTGAAGCCGGTGATGCGGATGAACGGGAAC TACG
CCCGCCGGCTCATGACCCGGGAGGCGGTGGAGGCAGTGTGTGAGCTGGTG
CCATCGGAGGAGCGCAGGCAGGCCCTGAAGGAGCTGATGGAGCTCTACCT
GCAGATGAAG-----

NNCCAGTGGAAGG
AGAGCCCTCAGCCCTTCTCCTGCTCCATCGAAGATCCCACGAAACAGACC
AAGTTCAAGGGCATCAAGACGTACATTTTCGTACCGTGTGACGCCAGCCA
CACCGGCCGGCCCGTGTACCGCCGCTACAAGCACTTCGACTGGCTCTACA
ACCAGCTGCTGCACAAGTTCACCGTTATCTCTGTGCCCCACCTGCCTGAG
AAGCAGGCCACCGGGCGCTTCGAGGAGGACTTCATCGAGAAGCGGAAGAG
GCGGCTGATACTCTGGATGGACCACATGACCAGCCACCCGGTGTGTGCG
AGTACGAGGGCTTCGAGCACTTCCCTCATGTGTGCGGACGACAAGCAGTGG
AAGCTGGGTAAGCGGGCGGAGAGAAGGATGAGATGGTGGGCGCCCACTT
CTTGCTCACCTTCCAGATCCCCAACGAGCACCAGGACCTGCAGGACGTGG
AGGAGCGTGTAGACTCCTTCAAGGCCTTACCCGGAAGATGGATGAGAGC
GTCATGCAGCTGACGCACGTGCGCTCCGAGCTGGTGC GCAAGCACCTGGG
CGGCTTCCGCAAGGAGTTCAGAGGCTGGGCAACGCCTTCCAGTCCATCA
GCCAGGCCTTACCATGGACCCGCCCACTGCTCGGACGCCCTGAACAAT
GCCATATCACACCCACTGGCCACGTTCCCTCAAACCTGACATCCCTGGGTTT
CATCATCGGAGTCCGAGTGGTCCGCAATCTCCTGATCTCCATCCTGCTTG
TCAAAGACAAAAGCTTGCACAGAGCCCCCTACTACTTCCCTGCTGGACCTT
TGTGCCCTGACATACTCCGATCTGCCATTTGTTCCCTTTTGTTTTTCAC
CTCGGTCAAAAATGGGTCAACGTGGACGTACGGCACGCTGACCTGCAAGG
TAATCGCTTTCCCTGGGGTGCTGTGCTGCTTTTACACCCGCTTTATGCTC
TTCTGCATCAGCGTCACCCGCTACCTGGCCATCGCCCACCACCGCTTCTA
CACCAAGAGGCTGACATCTGGACCTGTCTGGCTGTCATTTGCATGGTGT
GGACGTTGTGAGTGGCCATGGCCTTCCCCCAGTTCGGATGTAGGGACC
TACTCCTTCAATAGGGAAGAGGACCAGTGCACCTTCCAGCACCGCTCCTT
CCGAGCCAACGACTCGCTGGGGTTCATGCTGCTCCTGGCCCTCATCCTCC
TCGCCACCCAGCTTGTCTACCTCAAGCTAATCTTCTTCGTCCACGACCGC
AGGAAGATGAAGCCGGTTCAGTTTCGTGCCAGCCGTCAGCCAGA ACTGGAC
CTTCCACGGCCCCGGGGCCAGTGGCCAGGCGCCGCAACTGGCTGGCGG

GTTTTGGCCGGGGCCCGACGCCGCCACCCTGCTGGGGATCCGTCAGAAC
ACTAACACGGCGGGCCGGAGACGACTGCTAGTGCTGGACGAGTTTAAAC
CGAGAAAAGGATAAGCAGGATGTTCTACATCATGACCTTCTTCTCCTGA
CCTTGTGGGGGCCCTATCTGGTGGCTGCTACTGGAGGGTGTTCGCCAGG
GGCCAGTGTTGCCGGGAGGATACCTAACCGCCCGTCTGGATGAGTTT
TGCTCAGGCCGGAGTCAATCCATTCTGCANNNNNNNNNNNNNNNGCCAAATCACGCTTCCAC
CCTGGCGCAGGGAACGGGTCTGGCACGGACC---GCAGCGTCCCACCTTAG
CAACAGCTTGTGTCCCCACAACAAGCCGAGGAGGTCGCGGCGG---CTT
CCCCGAACGATGGTTTGTACCT---CAGCCAACAATCGACTGGACTTT
GCAGCCTCGGCTTACGATGCAGCAGCAGCCGCTGATTTTGCCGGTAACGC
GGCCACATTGCTGTCTTATGCGGCCGCTGGGGTCAAGGCAC-----TTC
CACTGYCAACAGCAGGGTGTCTAGGTAGACCCTAGGTTATTACCCGGAC
CCCTCGG---GGTGG---GGCACGCGCACTCCTCCGAGTATTGC-----
----AGTAAGTCCAGCTCTGTCTCTGCTGCTGGCCCTCCAAT-----G
GGAGCAGGACTGGCG---CCTCGAACTACCTGC-----TAGATGA-
--ATCG---GACAC---CCTCTCAACTGAAAGATCTTCG---CT---TGG
TGGGTCTGAAGAC---GCCAAACCCAAAGAACT-----GTCGGA---AT
CAAACCTGGATAGAG---ACACCTTCTTCCATAAAAGTCAATTGATTCCAGC
GATTCTGGAATTTTGT---AGCAGGCCAAACGGAGAAGAATATCACCTCC
CCCTACGCCG-----GTTTCGAAACGGCTTCTCCGCTGAAAAGTG
AA-----ACCGCGAAGTACAGACAGAGAAGTGGCTTTGGGGATA
AATCCCTTTGCTGATGGCATGGGCGCTTTTAAAATCAACCACAGACCCA
CGACCTGGGCTCTGG---ACAAACAGCCTTTTCTCGCAAGCA---CCAG
GCTAC-----GCCGCTGCCCTGGGA---CACCACCA-----CCACCC
ACCCATGTCAGCTCC---TATTCCACAGCGGCGTCAATTCCACCCGGGA
CTTTCTGTTTAGAAATCGGGGCTTCGGAGACGCCACCAG-----
-TGCACAGCACAGTCTTTTTCGCTCCGC---AGCAGGAAGTTT---T---
---GCAGGGCCACATGGACACTCGGATGCCACGGGGCACCTGCTTTTCCC
GGGACTTACAGAG---CAGGCAGCCACTCACGCGTCTTCCAATGTTGTAA
ATAGTCAGATGCGTTTGGGCTTTTTCGGGGACATGTATGGTAGAGCCGAG
CAGTACGGCCATGTAACCTAGCCCCAGGT---CCGATCATTATGCTTCGAC
CCAGTGCACGGCTATGGCCCCATGAACATGAAYATGGCTGCA---CACC
ATGGGGCAGGGGCCTTCTTTCGTTACATGAGGCAACCGATAAAGCAGGAG
CTCATCTGCAAATGGATCGAACCAGCAACATTGACGAACCCGAAAAAGTC
TTGCAACAAAACCTTTCAGTACCATGCACGAGCTGGTTACGCACCTCACAG
TGGAGCATGTTGGGGGACCAGAACAATCGAATCACATCTGCTTCTGGGAA
GAGTGTCCCCGGGAAGGAAAACCTTTTAAAGCCAAGTATAAACTTGTA
TCACATCAGAGTACATAACCGCGAGAAACCTTCCCGTGCCCTTTTCTCTG
GCTGTGGCAAA

>Esox lucius

AGCCTTTTAAATCCGGGCCGAACCTAAGCCAGCCAGGGGCTCTCTTAGGTGA
CGACCAGATTTATAATGTTATCGTTACAGCCCATGCCTTTGTTATAATCT
TTTTTATAGTTATAACCGTTATAATTGGGGGTTTGGAAACTGATTAATT
CCCTAATGATTGGTGGCCCCGACATGGCCTTCCCCGCATAAAATAATAT
AAGCTTCTGACTTCTCCCCCTCTTTTACTTCTCTTAGCCTCCTCAG
GTGTTGAAGCTGGTGTGTTACTGGCTGAACAGTTTATCCGCCTTTGGCC
GGAACTTAGCACACGCAGGTGCTTCTGTAGACTTAACTATTTTCTCTCT
CCACCTGGCCGGAATTTCTTCTATCTAGGAGCTATTAATTTTATTACCA
CAATTATCAACATAAAACCCCGCCATCTCACAATATCAGACACCATTA
TTTGTGTTGAGCAGTCTGATTACAGCTGTACTTCTACTTCTGTCTCTCCC
AGTCTTAGCCGCTGGAATTACCATATTGCTCACAGACCGAAATTTAAACA
CCACATCTTTGACCCCGCTGGTGGTGGAGACCTATTCTATAACCAACAC
CTCNN

NN
NN
NNTTCTGGAGAGGAACCTGCACCCCTCCAACCTGCTGGGCATGCTGCT
CCTGTCCGACGCCACCAGTGCACCAAACGTCTGAGCTCTCCTGGGGTA
TGTGCCCTTGCAACTTCCCTGCTATCTGCAAGACAGAGGAATTCTGCAG
CTTCCCAAAGACATGGCGGTGCAGCTGTTGTCCCATGAGGAGCTGGAGAC
GGAGGACGAGAGGCTGGTTTACGAGGCCGCCCTCAACTGGGTCAACTACG
ACCTGGAGAGGAGGCACCTGCCACCTGCCGAGCTGCTGCAGACCGTCCGC
CTGGCCCTCCTTCCCAGCCTTCTCATGGAGAACGTGTCCACAGAGGA
GCTCATCAACGCCAGCTGAAGAGCAAGGAGCTGGTGGACGAGGCTATCC
GCTGCAAGCTGAAGATACTTCAGAACGACGGTGTGGTGAACAGCCCTGC
GCCCCGCCAGGAAGACCAGCCACGCCCTGTTCCCTCTGGGAGGTCAGAC
CTTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCAAGGAGATA
TCCCCAAAGCAGACATCCCTAGCCCCAGGAAGGAGTTCAGCGCTTGCGCC
ATTGGCTGTAAGGTCTATGTGACCGGTGGGA--GGGGCTC-CGAGAACGG
CGTGTCCAAAGACGTGTGGGTCTACGACACCGTGCACGAGGAGTGGTCCA
AGGCGGCACCCATGCTTATCGCCCCGTTTCGGCCACGGCTCGGCTGAGCTG
AAACACTGCCTCTATGTGGTTCGGAGGGCACACCGCGGGTACAGGCTGCCT
CCCTGCCTCTCCCTCGGGACGAGTACATTGTAAGTGTTCAGTCCGCTCAATC
AACAGACTCATCTGAACGAAGCGGAGCTGATCATGGCGTGTGTCGAGGA
GTTTTAGATGAGAACCGTAACAGTGTCTCTGGAAGAGCAAACCTTCCCCA
GCATTGTCAAAGTATCAGCGGGGGCTCCATGTTGGTTCAGCATGCACGGG
GCACAGCTGGTCTCTTCTCTTCTTCTTCCCTCCCCCGGGGGCTGTTGTAGTGGA
ACTATTCCCTTACGCAGTCAACCCGGAGCAGTACACCCCTTACAAAACCC
TGGCCCTCTTACCAGGCATGGAACCTGCAGTATGTGGCCTGGAGGAACATG
GTGGAGGAGAACTCTGTGGCCTACCCGAGAGGCCCTGGGAGCAGGGAGG
TATTGCTCATCTGGAGAAAGATGAGCAGGAGCGCATCTTGGCCAGTAAGG
AGGTACCAGACACCTTGTGTGCCGCAATCCCGAGTGGCTCTACCGTATC
TACCAGGACACTATAGTGGACATCCCTTCTTTACTGGAGGCTCTCAG---
AGAGGCTGTGAAA---ATCAGGCCAAATTTGAAGAA---GGCCAAGCCGG
CCAGCATGGTTACCCAGGCCGGGTTCAGAGAGCCTCTGTGCCAGACGTCA
GTCCAGGCCACCAAGCAGGCCAAGCTGACCCTGTCTGGCAAATCCCTG
GAACCTCAAGTACCTGAAGGTCAGGGAAGTGAAGTATGAAGTGTGGATCC
AGAAGAGGGATCCCAGCAAGGGGACCCTAGAAGATCAAATCATCCAGGCC
AACCTGCCTGAGGCTTTTGGTAATGCCAAAACAGTTAGAAATGACAA
CTCATCACGTTTTGGCAAATTCATCCGTATTCACCTTGGAAACAAGTGGA
AACTGTCTCTGTGATATTGAGACTTACCTTCTTGAGAAGTCCCGTATC
ACCTTTCAGCTCAAAGCCGAGAGGAACTACCATAATTTTCTTCCAGATATT
GTCCAACCAAAGCCAGAGCTGCTGGACATGCTGTTAATCACCAATAACC
CATATGACTACTCCTACATCTCTCAAGGAGAGGTAACAGTAGCATCCATC
AATGATTCGATGAACTGTTGGCTACTGACAGCGCCTTTGATGTACTCGG
CTTTACTGCAGAGGAGAAACAGGGGTCTACAAGTTGACAGGTGCCATCA
TGCATATGGCAAACATGAAGTTCAAAACAAAGCAGCGGGAGGAGCAGGCA
GAGCCTGACGGTACAGAAGCTGCTGACAAGTCAGCATACCTAATGGGCAT
TAACTCTGCAGATCTCATTAAGGACTTTGTCTCATCCAGAGTCAAGGTTG
GCAATGAGTATGTTACCAAAGGTCAAGGAGTAGATCAGGTCTACTACCCC
AACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTACAACACCAA
GCTGGGCTACAAGCGCCACGTGGCCATGCACTCGGCCACGGCCGGCGATC
TCACCTGCAAGGTGTGTCGTGCAGAGCTACGAGAGCACGCCGGCCCTGCTG
GAGCACCTGAAGAGCCACTCGGGCAAGTCATCCGGTGGCGCAAGGAGAA
GAAGCACCCGTGCGACCACTGTGACCGGCGCTTCTACACCCGGAAGGACG
TGCGCCGCCACATGGTTCGTGCACACCGGCCGCAAGGACTTCCTGTGCCAG
TACTGCGCCAGCGCTTTCGGCCGGAAGGATCACCTCACACGTACAGTGAA

GAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCCCGGACC
TGCTGGGCTGCTGGGCTCCGGCTCGCCTGCCTGCACCGTCAAGGAGGAG
CTCAACCCCGTGATGTGCAGCATGGGTCCCAGCAAGGACACCGTGATGAA
CAAACCCTTCCCCGGCGGGCGGCCCTTCCCCATGGGCATGTACAACGCC
ACCCG-----CTTCAGGCCATGCCCGGCCAGGCGGGGGGCAC-----
---CACCACCTCCTGATGCCCGGCCCTCTCCGCCCATGGGGATGGG
CTGTCACGTGGAGTACCTGATATATGCCTCCTTCTCCTTCATGGGATGTT
TACAGATCAGCGACGGTTCCAACATTGTCAATCTCCTCGCCAGCAACACG
CCCAGCGTCTCCTACGCCATGACACAGCAGAAGTACTTCAGTAACTACAG
CCCGGTGATCGGCTTCTACATCTACGAGCCATAGAGTACTGGAACCCA
CGGTGCAGGAGCACCTGACCACTCTGAGCCACGGCTTCAACAAGATCTCC
TGGATGGATAACTACTTTTCAGTATCTGAAGGTGGTGAATGTGAGTGCCTC
TACCAAAAAGTGATTTTCATCGCTATCCTGCAGGGATCCTTCCTGCGCAGCC
CAGAGTATCAGCACTTCATGGAGGACATCATTCTGTCCAAGACGGACGGC
G-----ACGAGATGGAGATCATCGCGTCGCGGATGTATCTGGT
GGCACGGACCACAGAGAAGACAAGGGAGGAGGTGGTTGAGCTGCTGGAGA
GGCTCCGCCCCCTCTCGCTCATCAACAACATCAAGTTCATCGTCTTCAAC
CCCACCTTCGTCTTCATGGACCGCTACAGTTCCTCCGTGGTCTCGCCCAT
CATCACGTGCGCCTTCAGCGTGCTCACCATCCTCGTCCTCACCTTCTTTC
TGGTCATCAACCCCTGGGAACTTCTGGTTGATCCTGACCGTCACCTCC
GTGGAGCTGGGGGTCTGGGTCTCATG-----

-----CCATC
CCTCGTCGGTTCGGATATGATGTGGCCCTGGTGTGCGCCCTAAAGGACCT
TGAAGAGGATATTATGGAGGGGCCGAGGGAGCGAGGCCTGGAGGACAGTG
TCTGTACCGCAGGCTTCAGTGTGGTGATTAAGGAGTCTGCGACGGCATG
GGGGACGTGAGCGAGAAGCATGGTGGAGGCCGGGCCATCCCGAAAAAGC
AGTGCGTTTCTCTTTCACCATCATGTCCGTCTCCCTCCAGGCGGAGGGAG
AGGAC-----GAGGCGGTCAACATC
TTCCAGGAGTCCAAGCCGAACCTCAGAGATGTCTGCAAGCCTCTCTGCCT
GATGTTTGTGATGAGTACAGATCACGAAACGCTGACAGCTGTCTTGGGGC
CCGTAGTGGCTGAAAGGAACGCCATGAAGAACAGTCTTATCTTGTCC
CTGGGTGGACTTTCTCGCTCCTTCCGCTTCCACTCCGAGGCACGGGCTA
TGATGAGAAGATGGTGCAGAGAGATGGAGGGTTGGAGGCCTCTGGCTCCA
CGTACATCTGCACCTGTGCGACTCCACTCGGGCTGAAGCCTCTCACAA
ATGACTCTCCACTCTGTACCCGCAACCACGACGAGAACCTGGAGCGCTA
CGAACTCTGGAGAACCAACCTTATCTGAGTCTGTTGAGGAGCTGCGAG
ACCGGGTGAAGGGCGTCTCAGCCAAACCTTTCATGGAGATCCAGCCCACC
CTGGACGCGCTGCACTGCGACATAGGCAATGCCACTGAGTTCTACAAGAT
CTTCCAGGATGAGATAGGGGAGATCTACGACAATCC---CAAC---CCCA
GCAGGGAGCAGCGTCGGAGTTGGCGGGCTGCACTCGACAAGCAGCTAAGA
CAGAAGATGAAGCTGAAGCCAGTGATGAGGATGAATGGAAATTATGCAAG
GAGGCTGATGACCCGAGAGGCTGTGGAAGCGGTGTGTGAGCTGGTGCCTT
CAGAGGAGCGTCAGGAGGCCCTGAGGGAACCTGATGGGGCTCTACCTCAAG
ATGAAGCCTGTGTGGCGCTCCACATGCCCGGCCAAGGAGTGCCAGACCA
ACTCTGCCAGTATAGCTTCAACTCCAGCGCTTCGCAGAGCTGCTTTCCA
CAGTCTTTAAGTACAGGTATGATGGGAAGATCACCACCTACCTGCACAAG
ACCTTGGCCCATGTGCCAGAGATTGTGGAGAGGGATGGCTCCATCGGGGC
CTGGGCTAGTGAGGGAAATGAGTCTGGGAATAAGTCGTACACAATTGAGA
TGGGCCCCAAAGGGCCTCAATGGAAAGACAGCCCTACCCCTTCTCCTGC
TCCATCGAGGACCCCAAGCAGACTAAGTTCAAAGGCATTAAGACTTA
CATATCCTACCGGGTGACCCCAAGCCACACAGGCAGGCCTGTTTACCGGC
GTTACAAGCACTTTGACTGGTTGTACAACCGTTTACTGCACAAGTTCCT

GTCATCTCAGTGCCCCACCTGCCCGAAAAACAGGCGACAGGGCGCTTCGA
AGAAGACTTCATCGAGAAGCGCAAGAGGCGGCTGATCCTTTGGATGGACC
ACATGACCAGCCACCAGTCCTATCACAGTACGAGGGCTTTGAGCACTTC
CTTATGTGTGCCGACGACAAGCAGTGGAAGCTAGGAAAACGGCGGGCGGA
GAAGGATGAGATGATGGGCGCCAACCTTCATGCTCACCTTCAGATCCCCA
ACGAGCACCAGGACCTGCAGGATGTGGAGGAACGCGTAGACTCTTTCAA
TCCTTCGCCAAGAAAATGGACGACAGCGTCATGCAGCTGACACATGTGGC
CTCGGAACTGGTGCGGAAGCACCTTGGAGGCTTCCGGAAGGAGTTCAGC
GGCTGGGGAACGCGTTCAGAATGTTAGTCAGGCGTTCATGCTAGACCCT
CCCCACTGCTCAGATGCCCTCAATACTGCCATCTCACACNNNNNNNNNNNTCTGCAGAATG
TCTCTCCTCGGTTTTATCATCGGCGTCGGTGTGTGCGGCAATCTCCTGAT
CTCCATTCTACTGGTCAAAGACAAAAGCCTGCACCGTGCACCCTACTACT
TCCTGCTCGACCTGTGCGCCTCGGATATCCTGCGCTCAGCCATCTGCTTC
CCCTTTGTCTTACCCTCCGTCAAGAATGGTTCCACCTGGACGTACGGCAC
GCTGACCTGCAAGGTGATCGCCTTCCCTCGGAGTGCTGTCCTGCTTTCACA
CGGCGTTCATGCTCTTCTGTGTGAGCGTGACACGCTACCTGGCCATAGCC
CACCACCGCTTCTACACCAAGAGGCTAACCTTCTGGACGTGTCTGGCAGT
CATCTGCATGGTGTGGACATTGTCTGTGGCCATGGCCTTCCCGCCAGTGC
TGGACGTGGGGACGTACTCCTTTATAAAGGAAGAGGACCAGTGTACATTC
CAGCATCGCTCGTTCGAGCCAACGACTCCCTGGGCTTTATGTTGCTCCT
AGCCCTCATCCTCCTGGCTACGCAGCTTGTCTACCTCAAGCTAATCTTCT
TCGTCCACGACCGCCGGAAGATGAAACCGGTCCAGTTTGTACCTGCCGTC
AGCCAGAATTGGACCTTCCATGGTCCCGGGGCTAGCGGCCAGGCGGCGGC
CAACTGGCTAGCGGGTTCGGCAGGGGCCCCACCCCTCCACCCCTGCTAG
GCATCAGGCAGAACAGCAACGCGGCCGGCAGGCGACGCCTGCTTGTGCTG
GATGAGTTTAAACTGAAAAGAGGATAAGTAGAATGTTCTACATCATGAC
CTTCTTCTTCTCACTCTGTGGGGACCCTATCTGGTGGCCTGCTATTGGA
GAGTGTTTGCCAGGGGCCCGGCGGTCCCTGGGGGTACCTGACTGCTGCG
GTGTGGATGAGCTTTGCCAGGCGGGTGTAAATCCCTTCATCTGCANNNNNNNNNNNNNNNNNNNACT
C
TCGCTTTCACCCTGGCGTAGGGACCGGTCCTGGCACGGACC---GCAGCG
TCCCACCTTAGTAACAGCTTGCTATCCAGCAACAAACCGAAGAGCCGACA
GTTG---CATCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCG
ACTGGACTTTGCAGCCTCGGCATACGACGCGGCCGAGCTGCTGATTTTG
CCGGTAACGCGGCCACCCTCCTGTCTACGCAGCGGCTGGAGTAAAGGCA
C-----TTCCTCTTCTACCAGGTTGCTCAAACAGGCCTCTAGGTTA
CTATGCCGACCCATCCG---GCTGG---GGCACACGCACACCACCCAGT
ACTGC-----AGTAAGTCTAGCTCTGTTCTCTTCTGCTGGCCTACA
AATTCGGTTGGTGGCAGAACAGGCA---CCTCCAACCTACCTGG-----
--TTGATGA---CGCG---GAAGC---GATTCCAACGGAGAGGTCACCC-
--AT---CGGTGGGTCGGATGAG---GCAAAACCAAAGATTT-----A
TCCGA---ACCCAACCTGGATAGAG---ACGCCGTCTTCGATAAAGTCTAT
TGACTCAAGTGATTCTGGGATCTTTG---AGCAAGCCAAACGGAGAAGAA
TTTCACCGACTGCCACACCG-----GTAACGGAAACAGTGTCCCAG
TTGAAATCTGAG-----ACAGGCGAAGTCACTGAAAGAGAAGTTGC
TTTGGGGATAAATCCGTTTGCAGACGGGATGGGCGCTTTTAAATCAACC
ACAGCTCTCACGACCTAGGCTCCGG---CCAAACGGCGTTCCTCACA
GCA---CCTGGCTAC---GCCGCCGACGACTGGGT---CACCACCA---
---CCACCCGACACACGTTAGCTCG---TACTCCACCGCAGCGTTCAACT
CAACCCGGGACTTTCTCTTTCAGAAAACCGGGGCTTCGGGGACGCGGCCAG-
-----CGCGCAGCACAGCCTCTTCGCTCAGC---AGCGGGAAG
TTT---T-----GCTGGACCACACGGACACTCAGATAACGCGGGGCACC
TGCTCTTCCCGGACTTCATGAG---CAAGCCGCGAGCCATGCGTCCCTCG

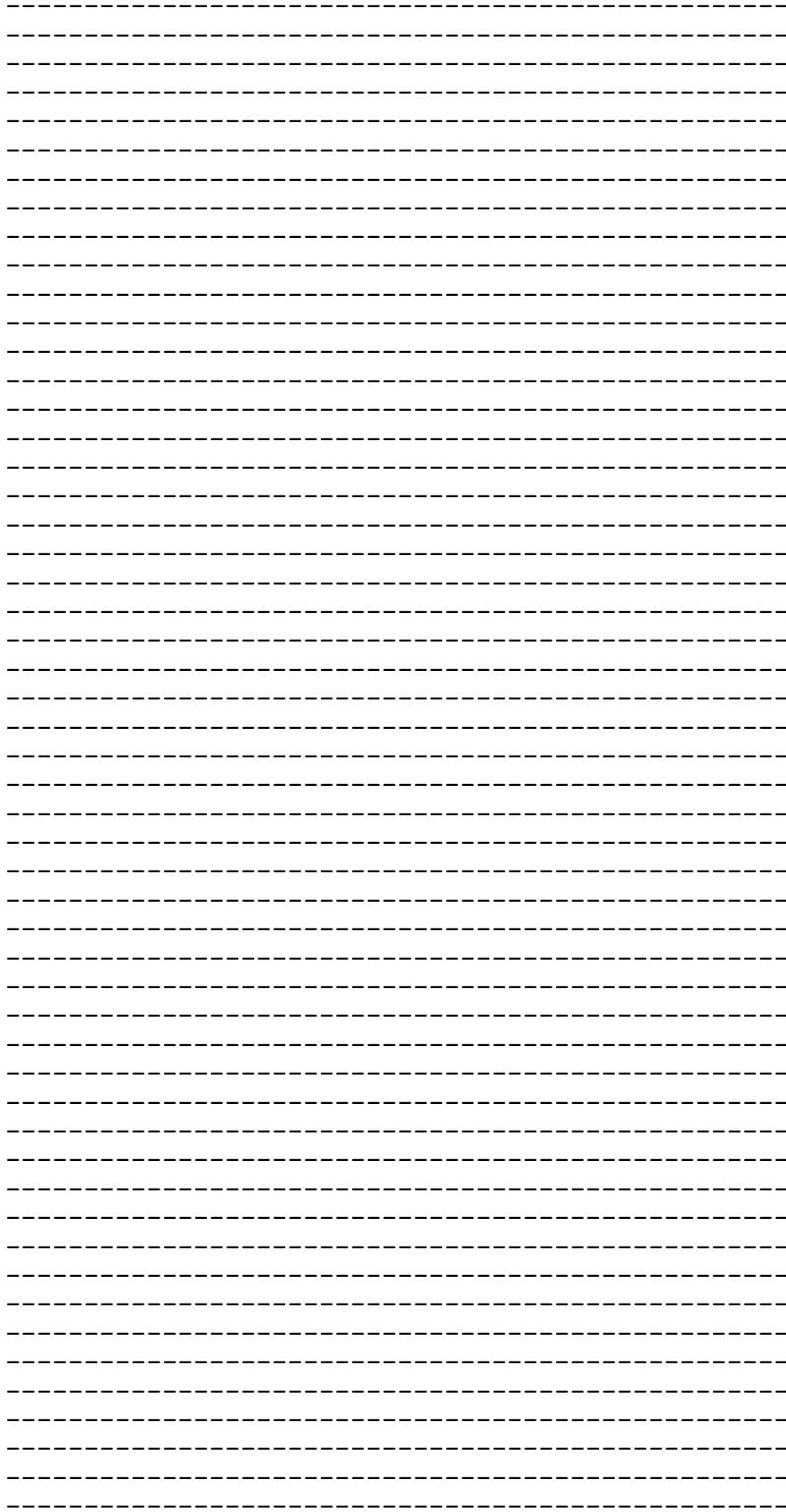
AATGTAGTCAACAGCCAGATGCGACTGGGCTTTACCGGGGACATGTACGG
CCGGGCTGACCAGTATGGCCACGTTACCAGCCCCGCT---CCGACCACT
ATGCATCCACCCAGCTCCACGGCTACGGCCCCATGAACATGAATATGGCG
GCT---CATCACGGAGCTGGGGCTTCTTCAGATACATGAGGCAGCCGAT
CAAACAAGAGCTCATCTGCAAATGGGTGCAACCCGGAGCAGTTGTGCAACC
CCAAGAAGTCTTGCAACAAAACGTTTCAGCACGATGCACGAGCTGGTGACC
CATCTTACGGTGGAGCACGTCGGTGGACCCGGAGCAGTGAACCATATCTG
TTTTTGGGAAGAGTGTGTCCGAGAAGGAAAACCATTTAAAGCCAAGTACA
AACTTGTAATCACATCAGAGTGCACACTGGAGAAAACCATTTCCCATGT
CCATTTCCCGGTTGTGGCAA

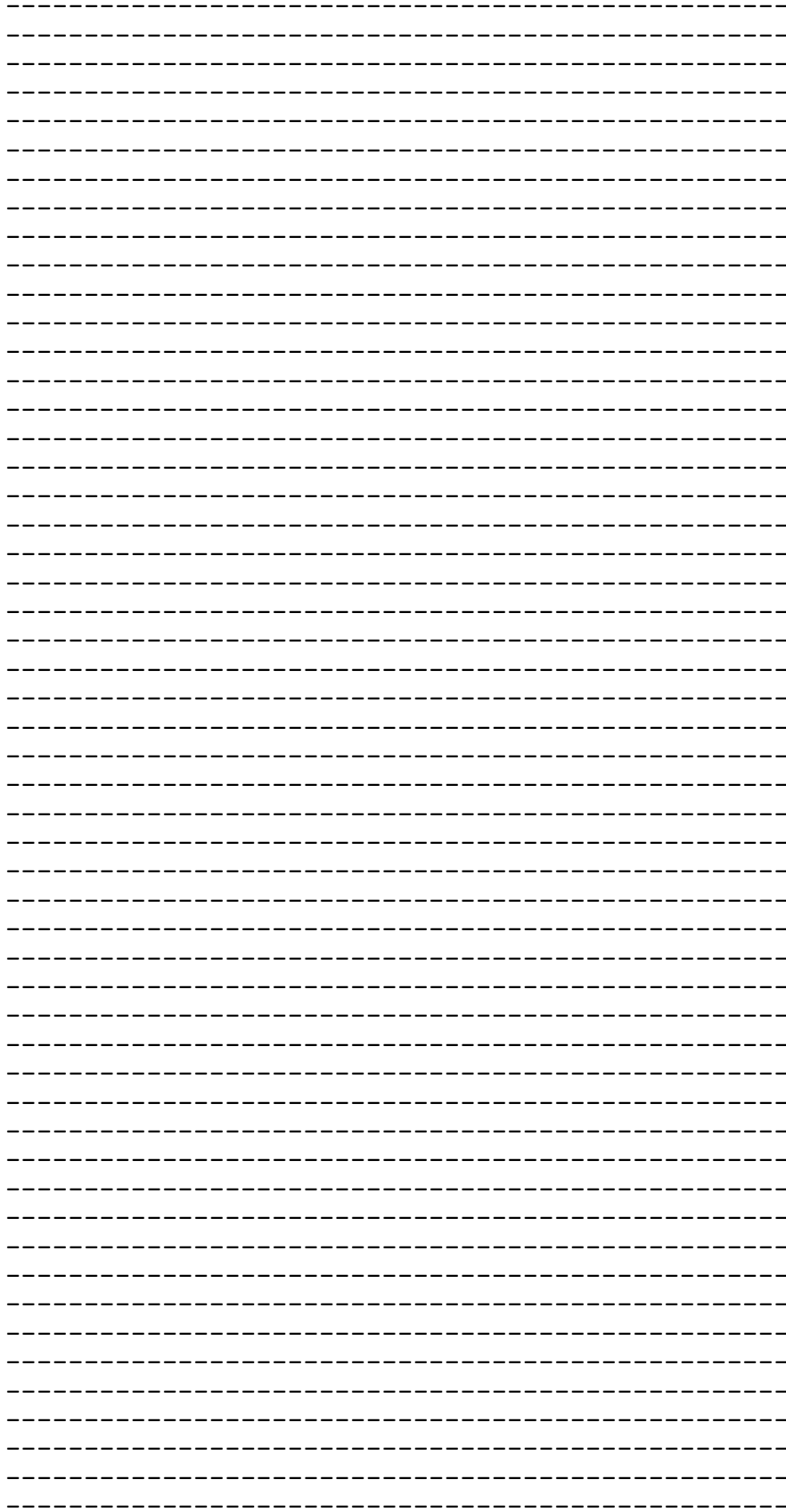
>Etheostoma atripinne

AGCTTACTTATCCGAGCCGAACCTCAGCCAACCGGGCGCACTCCTTGGAGA
CGACCAGATTTATAACGTAATTGTTACAGCGCATGCCTTTGTAATAATTT
TCTTTATAGTGATAACCAATTATGATTGGGGGTTTTGGTAACTGACTCATT
CCACTCATGATTGGCGCTCCCGACATGGCATTTCCTCGGATGAACAATAT
GAGCTTTTGACTTCTCCCCCTTCTTCCTTTTACTTCTTGCCCTCCTCAG
GAGTAGAAGCAGGGGCTGGAACCGGGTGAACCGTTTACCCCCACTGGCT
GGGAACCTGGCACACGCCGGGGCATCAGTAGATTTAACTATTTTTTCCCT
ACACCTGGCGGGGATCTCTTCGATTCTAGGTGCCATTAATTTTATTACGA
CAATTATTAACATAAAAACCCCCAGCCATCTCGCAGTACCAGACGCCCTG
TTCGTATGGGCTGTTCTAATTACCGCGTACTTCTTCTACTTTCCCTCCC
GGTGCTTGCCGCGGGTATTACCATGCTCCTTACGGATCGCAACTTAAATA
CCACCTTCTTTGACCCCGCAGGAGGGGGGATCCCATCCTCTATCAACAC
CTC-----

-----TTCTAGAAAGAAACCTTACCCAACCTAACTGCCTTGG
CATGCTGTTACTGTCTGACGCTCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGTATGTGCCCTCAGCAACTTTCCTCGCTATTTGCAAGACAGAGGAC
TTCTTCCAACCTGCCCAAAGATATGGTTGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCTCTTAACTGGA
TCAACTATGACCTGGAAAAGAGACACTGCCACCTTCCAGAGCTCCTAAAA
ACGGTCCGCCTGGCCTTGCTGCCTGCCATCTTCTCATGGAGAACGTGTC
TACAGAAGAGCTGATCAACGCAAAGCCCAAGAGCAAAGAGCTTGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAAAACGATGGCGTGGTTAAC
AGCCCGTGTGCTCGACCAAGAAAGACCAGCCATGCCTTATTTCTTCTGGG
AGGGCAGACTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCCGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGATGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTGTGGGTCTACGACACCGTCCAAGAGG
AATGGTCAAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCCAGCTTCTCCTTCTGGCTGAATACATAGTTGTGTTAGT
CGTTCAGCAACGAGGCTGATTGTGAATGAAGCAGAGCTAATCATGGCACT
AGCCAGGAGTTCCAGATGAGAGTGGTCACAGTGTCCCTGGAGGAACAGT
CTTTCCCTGGTGTGTCAGGTGATCAGCGGGGCGTCCATGTTGGTCACT
ATGCATGGGGCTCAGCTGATCACCTCACTCTTCTTCCCAAAGGAGCTGC
TGTAAGTGGAGCTGTTCCCTTTTGCAGTAAACCCAGAGCAGTACACCCCGT
ATAAAACCCTAGCCACCCTCCCAGGCATGGACCTTCACTACATCTCCTGG
AGAAAACCAAGGAGGAGAACACCATCACCCACCCAGACAGACCCCTGGGA
ACAAGGAGGCATCACTCACTTGGAGAAAAGAGGAGCGAGAGCGAATACTGG
CGAGCAAAGATGTCCCCGACACCTGTGCTGCCGCAACCCAGAGTGGCTC

TTTTCTATCACTATTATGTCTGTCTCTGTCATAGCAGACGAGGAGGAG--
-----AAAGAGGTTACCATCTTCACTG
AGCCAAAACCAAACCTCAGAACTGTCCCTGTAAGCCCTTTGCCTGATGTTT
GTGGATGAGTCAGACCATGAGACGCTGACAGCCGTCCTGGGGCCTATAGT
TGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCATATCCATGGGTG
GACTACYTCGCTCCTTTCGCTTTCAC T TCCGAGGCACGGGATATGATGAG
AAGATGGTGCGTGAGATGGAGGGCCTCGAGGCCTCAGGATCCTCCTATGT
GTGCACTCTTTGTGACTCCACTCGGGCAGAGGCCTCTGAAAACATGGTGT
TACAT TCCGTCACCCG CAGTCATGSAGAGAACC TAGATCGGTACGAAATA
TGGAGAACCAATCCTTTTTCTGAGTCTGTTGATGAGCTGCGAGACAGAGT
TAAGGGGGTCTCTGCCAAGCCCTTCATGGAGACCCAT TCCACACTGGATG
CATTGCACTGTGACAT TGGCAATGCCACTGAGT TCTACAAAATCTTCCAG
GATGAGATCGGAGAGGTGTACAAAAGGGGT---CAAC---CCCAGTCGGGA
GGAACGGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGT
TGAAGCTGAGACCGGTGATGAGGATGAATGGCAACTATGCCCGGCGGCTA
ATGACCCAAGAGGCTGTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAGGA
GAGGAGGGAGGGCCCTGAGGGAGCTCATAAGGCTCTACCTCCAGATGAAGC
CTGTTTGGCGCTCCTCCTGCCCTGCCAAGGAGTGC CCCGACCAGCTGTGT
CGCTACAGCTTTAACTCCCAGCGCTTTGCTGACATTCTCTCCTCTACATT
TAAATATAGGTATGATGGAAAGATAACCAATTACCTGCACAAGACCCTGG
CCCATGTGCCTGAAATCATAGAGAGAGAYGGATCCATAGGANNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNTCGTACACC
ATCGAGATGGGTCCCATGGGGCCCTGTGGAAGGAGAGCCACAGCCTTT
CTCCTGCTCCATTGAAGACCCCACAAAACAGACAAAAGTTCAAAGGCATCA
AGACGTACATTTCATAACAGGGTCACACCAAGCCACACGGGGCGTCCCCTC
TACAGGCCTACAAACACTTTGACTGGCTGTACAACCGTTTACTGCACAA
GTTCACTGTGATCTCCGTGCCTCACC TGCCTGAGAAGCAGGCCACGGGGC
GATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGACGACTGATACTGTGG
ATGAACCACATGACCAGTCACCCAGTCCCTCTCCCAATATGAAGGCTTCGA
GCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAAACTGGGCAAGAGAC
GGGCGGAGAAGGATGAGATGGTGGGTGCCCATTTTCATGCTGACCTCCAG
ATCCCTAATGAGCACAGGACCTACAGGATGTAGAGGAGCGGATCGACAC
CTTCAAGGCCTTCGCTAAGAAAATGGATGACAGTGTGATGCAGCTCACAC
ATGTTGCCTCGGAGCTGGTGCGTAAGCACCTGGGTGGATTTAGGAAGGAG
TTCAGCGGCTAGGTAATTCATTCCAGTCCATCAGCCAGGCTTTCATGCT
GGACCCTCCCCACAGCTCAGAGGCCCTCAACAAAGCAATCTCCCATNCTCT
CGCTACGTTCCCTCAAAC T GACCTCTCTGGGTTTCATCATTGGAGTCGGTG
TGTTTGGTAACCTCCTAATCTCCATCCTGCTGGTCAAAGACAAGAGCCTA
CACCGGGCGCCCTACTATTTCCCTGTTGGACCTCTGCGCCTCTGACATCCT
GCGCTCCGCCATCTGCTTCCCCTTGTCTTACCTCGGTCAAGAATGGAT
CAGCCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTGAGG
GTGCTGTCCCTGTTTCCACACGGCGT TATGCTKTTCTGTGTCA GTGTCAC
GCGTTACCTGGCAATCGCACACCACCGTTTCTACACCAAGAGGTTGACCT
TCTGGACTTGCTAGCTGTCATCTGCATGGTGTGGACGTTATCAGTGGCA
ATGGCGTTCCCGCCGGTGT TAGACGTAGGGACGTA CTCTTTTATCCGGGA
GGAGGACCAGTGCACGTTCCAGCATCGTTCCTTCAGGGCGAATGATTCGC
TGGGCTTCATGCTCCTGCTGGCGCTCAT TCTCCTGGCCACACAGCTGGTT
TACCTCAAGCTCATCTTCTTTGTCACGACCGTCGAAAGATGAAGCCAGT
CCAGT TGTGCCTGCTGT CAGCCAGAACTGGACCTTCCACGGGCCAGGCG
CCAGCGGGCAGGGCGCAGCCAACTGGCTGGCTGGATTCCGGTCGAGGCCCC
ACCCCGCCTACCTTGCTGGGCATTCGGCAGAACAGCAACGCAGCGGGCCG
CAGGCGTCTACTGGTGTGGATGAATTCAAACAGAGAAGAGGATAAGTA
GGATGTTCTACATCATGACGTTTTCTTCTCCTGGCACTGTGGGGGCCCTAT





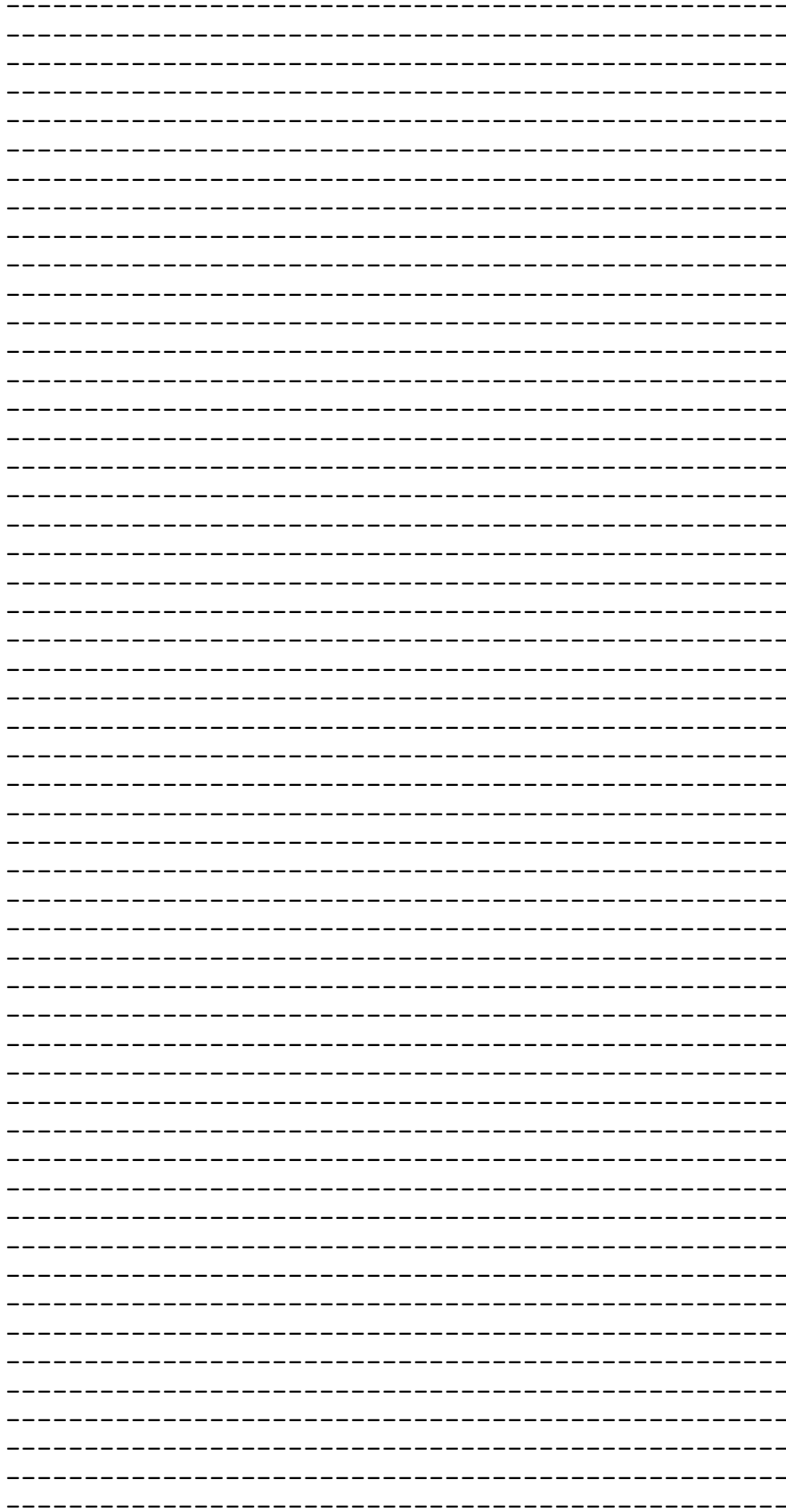
>Eurypharynx pelecanoides

AGCCTATTAATTTCGCGCTGAACTTACTCAACCAGGAGCCCTTCTTGGAGA
TGATCAGATTTATAATGTTATCGTAACAGCCCATGCTTTTGTAAATAATTT
TCTTTATGGTGATAACCAATTATAATCGGAGGATTCGGCAATTGACTAATC
CCCCAATAATTGGAGCCCCAGACATAGCATTCCCCCGTATGAACAATAT
AAGCTTCTGACTTCTCCCCCTCATTTCTTCTCCTTTTAGCCTCTTCCG
GGGTAGAAGCCGGAGCCGGCACAGGGTGAACCGTTTATCCTCCCCTAGCT
GGAAATTTAGCTCATGCCGGAGCATCAGTAGATTTAACAATCTTCTCACT
TCATCTTGCAGGAATCTCCTCAATTCCTGGGGCCATTAATTTTATTACGA
CCATTATTAATATAAAAACCCCCAGCCATTTACAAATACCAAACACCCCTT
TTTGTTGATCTGTGTTAGTCCCGCTGTCCTTACTCTTATCCCTCCC
CGTCCTAGCTGCGGGCATCACAATACTCCTAACTGACCGAAACTTAAACA
CAACATTCCTTTGATCCTGCAGGAGGGGGGACCCCATCCTTTACCAACAC
CTATTCTGATTTTTTGGGCACCCAGAAGTTTATATCTTAATTTTACCCGG
ATTCGGAATAATTTACACATTATTACCTATTACTCGGGCAAAAAAGAGC
CCTTCGGATATATGGGCATAGTTTGAGCCATAATAGCCATTGGCCTATTA
GGCTTCATCGTATGAGCCCACCATATATTCACGGTTGGCATAGATGTAGA
CACCCGTGNNNN-----

-----AGGCGAGTATATTGTGGTATTCAGTCGCT
CTCTTAATAGGCTGATCCTGAATGAGGCAGAGTTGATCCTGGCACTAGCG
CAAGAGTTCAGATGAAGGCCGTTACTGTTTCCCTGGAAGAGCAGTCCTT
TGCAGACATCGTCCGAGTCCTCAGCAGGGCGTCCATGCTGGTCAGTATGC
ACGGGGCCCAGCTTGTCACCTCTCTTTTCCCTTCCCTCGTGGGGCCGCTGTG
GTGGAGCTATACCCATATGCAGTCAACCCAGAGCATTATGCTCCCTACAG
GACACTGACCTCGCTGCCAGGCATGGACCTGCAGTATGTGGCCTGGAGGA
ACACCAGGGAGGAGAACTCTGTTACCTTCCCTGAGCGTGCTTGGGACCAG
GGTGGCATTGCACACTTGGAGAAGGAGGAGCAGGCACGTATCATGAAGAG
CAAGGAGGTGCCGCGACACCTGTGCTGTGCGGAACCCGGAGTGGCTCTTCC
GCATCTACCAGGACACCAAGGTGGACATTGCGTCTCTTCTGGATGCCCTG
CG---CCAGGGACTGACC---TCCAGGCCAGGGCCCAAGAG---GGCTAG
GCCTGCCAGCACAGTCCACCCAGGCAGGGTGGAGGGAGCCCAAGTGCCAGA

CCTCCGTCCAGGCCACTAACGAGGCCACGCTGACCGTTTCTTGGCAGATC
CCCTGGAACCTCAAATACCTGAAGGTGAAGGAGGTGAAGTATGAGGTATG
GATTCAAAGAAGGATACCAGCAAGGGGACCCTGGAGGATCAAATTATCC
AGGCAAACCCAGCGCTGGAGGCTTTTGGCAATGCCAAGACTGCGAGGAAT
GACAACTCCTCACGTTTGGGAAATTTATTCGCATTCATTTTGGAGTAAG
TGGCAAGCTGTCTCTGCTGATATAGAAACCTACCTACTCGAGAAATCTC
GTGTCACTTTTAGCTTAAATCTGAGAGGAACTATCACATTTTCTACCAG
ATCACATCCAACAAAAAGCCAGAATTGCTGGACATGCTGTTGATCACCAA
CAACCCCTACGATTATGCTTATGTCTCCCAAGGAGAGGTGACAGTTGCAT
CCATTGATGACTCAGAGGAACTGATCGCCACAGACAATGCCTTTGATGTG
CTGGGCTTACGGCGGAGGAGAAGATGGGTGTGTATAAGCTAACGGGTGC
CATCATGCATTATGGAAACATGAAATTC AAGCAGAAGCAGCGTGAGGAGC
AGGCCGAGCCTGATGGCACTGAGTCTGCTGACAAGTCAGCCTACCTGATG
GGGCTGAACCTCTGCTGACCTTCTCAAGGGAATCTGCCATCCACGGGTAA
AGTTGGAATGAGTTTGTACCAAAGGTCAAATGTGGATCAAGTCTACT
AT-----

-----NNNNNGATCTATGCCTCATTTTCTTTCATGGGATGTT
TACAAATCAGTGATGGGTCGAACATAGTCAACCTCCTGGCCACCAACTCC
CCAAGCGTATCCTACGCTCTGACCCAGCAGAAATACTTCAGCAACTACAG
TCCGGTCATTGGGTTCTACATCTACGAACCCATTGAGTACTGGAACGCCA
CGGTCCAAGAGCACCTGATGACACTGGGCCACGGATTCAATAAGATTTTCG
TGGATTGACAACCTTTTCAGTATCTGAAGGTGGTGAATGTCACCGTGTG
GACGAAAAGCGAATTCATAACCGTCCTCCAATCCTCCTCCTGAGAAGCC
CCGAGTACCAGCACTTTAAGGATGACATCATATTTTACAAAA---TGAGG
G-----ACGAGACGGAGATAATTGCGTCCCGGATGTATCTGGT
GGCCCGAACCACGGAGAAGACCCGAGAGGAGGTGGTGGAGCTCCTGGAGA
GACTGAGACCGCTCTCTCATCAACAGCATCAAATTCATCGTCTTCAAC
CCAACCTTCGTCTTCATGGATCGGTACAGCTCGTCGGTCATTTCCCCCAT
CCTTACCGCGGGCTTCAGTGTCTGATCGTCTGATCCTGACCTTCTTCC
TGGTTATCAACCCACTGGGAAACTTCTGGCTGATACTGACGGTCACCTCA
GTGGAGCTGGGAGTCTGGGCCTAATG-----



TTTGCTGACGGGATGGGAGCTTTCAAATCAACCATGGTACTCACGAACT
TAGTTCTGG---ACAACTGCTTTCTCTTCGCAGACT---CCGAGCTAC-
-GCAGCAGCTGCTTTGGGG---CATCACCA-----CCACCCGGCTCAT
GTCAGCTCC---TACTCAACCGCCGCTTCAACTCCACCAGGGACTTTCT
GTTCCGAAATCGGGGATTCGGCGACGCAGCAAG-----CGCAC
AACACAGTCTTTTTGCCTCAGC---GGCAGGAACTTT---C-----GCA
GGGGTTCATGGACTACTCAGATGCCACCGGACACCTTCTATTCCC GGACT
GCACGAG---CAGACAGCCACACATGGGTCTCCGAACGTTGTAAATGGCC
AGATGCGCCTGGGGTTTACCGGGGATATGTACGGCAGAGCAGAACAGTAT
GGGCAGGTGACGAGTCCAAGGT---CTGAACACTATGCATCGACACAGTT
GCACGTTATGGTGCTATGAAC-----ATGGCTGCA---CACCACGGGG
CTGGGGCCTTTTTTCGATTCATGAGGCAACCGAATAACAAGAGCTCATC
TGCAAATGGATAGAACCGGACCAGCTGTCGAATCCCAAAAAGTTTTGTAA
CAAAACGTTTACGACCATGCACGAGCTCGTGACTCACCTCACTGTTGAAC
ATGTTGGGGGGCAGAACAGTCAAATCACATCTTCTTTTTGGGAAGAATGT
CCCCGGGAAGGCAAGCCATTTAAACCAAATAACAAGTTT-----

>Evermannella indica

NNNACCAGATTTACAATGTAA
TCGTCACCGCCCACGCTTCGTAATAATCTTC
TTTTATAGTAATGCCAATTCTGATCGGTGGCTTTTGAAACTGACTAGTTCC
CCTGATACTCGGTGCGCTGATATGGCATTCCCACGAATGAACAACATGA
GCTTTTACTCCTTCCACCTCCTTCTTCTCCTTGCCCTCTTCGCC
GTTGAAGCAGGGGGCGGTACGGGTGAACCGTTACCCCTCTAGCCAG
CAACCTGGCTCACGCTGGAGCCTCCGTTGACCTAACCATTTCTCTCTCC
ATCTTGCCGGCATCTCCTCCATCCTGGGAGCCATTAACCTCATCACAAACC
ATTATTAACATGAAACCCAGCCATCACACAATAACAAACCCCTGTT
TGTGTGAGCCGTGCTCACTACTGCGTTCTTCTTCTTTCCCTCCCTG
TTCTAGCAGCAGGGATTACCATGCTCCTCACGGACCGCAATTTAAATAACA
ACTTCTTTGATCCTGCGGGCGGAGGGGACCAATTTCTTTACCAACACCT
ATTCTGATTTTTCGGCCATCCAGAGGTATACATCCTTATTCTCCCCGGCT
TCGGTATTATCTCTCACGTTGTCGCTACTACGCGGGGAAAAAGAACC
TTTGCTACATGGGGATGGTCTGGGCCATGATGGCAATCGGCCTCTAGG
ATTT-----
-----TTCTGGAGAGGAACCTGCACCCCTCCAACTGCCTGGGCA
TGCTGCTGCTGTGCGACGCCACCAGTGCACCAAGCTGTGCGGAGCTGTCC
TGGGGGATGTGCTCGGCAACTTCCCAGCCATCTGCAAGACGGAGGACTT
CCTCCAGTTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCACGAAGAGC

TGGAGACGGAAGACGAGAGGCTGGTTTACGAGGCGGCCCTGAACTGGGTC
AACTATGACCTGGAGAGGAGACTGCCACCTGCCGGAGCTGCTGAGAAC
CGTGCCTCTGGCCCTGCTTCCCTGCCATCTTCCCTCATGGAGAACGCTCCA
CGGAGGAACTKATCAACGCCAGGCAAGAGCAAGGAGCTGGTGGACGAG
GCCATCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAACAG
TCCCTGCGCCCGGCCAGAAAGACCAGCCACGCCCTCTTCCCTGCTGGGGG
GGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCAAA
GAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCGC
CTGCGCCATCGGCTGTAAGGTGTACGTCATGGGCGGCA--GAGGCTC-CG
AGAACGGCGTCTCTAAAGACGTGTGGGTATACGACACCGTCCACGAGGAG
TGGTCCAAGGCGGCGCCGATGATCATCGCCAGGTTCCGGCCACGGCTCCGC
CGAGCTCAAACACTGCCTCTACGTGGTCCGAGGACACACCGCGGCCACCG
GCTGCCCTCCCCGCTCTCC----GGACGAGTACATCGTGGTGTTCAGCCG
CTCCTCCACGCGGCTGATCCTGAACGAGGCGGAGCTGATCCTGGCGCTGG
CCCAGGAGTTCCAGATGCGGGTGGTGACGGTGTCCCTGGAGGAGCAGTCC
TTCCCCGGCATCGTGCAGGTCATCAGCGGGGCTCCATGTTGGTCAGCAT
GCACGGCGCGCAGCTCGTACCTCGCTCTTCCCTCCCCAGGGGGGCGCCG
TGGTGGAGCTCTTCCCCACGCCGTGAACCCGGAGCAGTACACCCCGTAC
AAGACCCTGGCCTCCCTGCCGGCATGGACCTCCAGTACGTCTCCTGGAG
GAACTATGGAGGAGAACACCGTCGCCACCCGGACAGAGCCTGGGACC
AGGGAGGCATCACCCATCTGGAGAAAAGAGGAGCAGGAGAGAATCCTGGCC
AGCAAGGACGTCCCCAGGCACCTGTGCTGCCGAACCCGGAGTGGCTCTT
CAGGATCTACCAGGACACTCTGGTGGACATCCCCCTCCTTGCTGGAGGTCC
TCAA---GGAGGGCTGAAG---ACGAGGCCGAGCTTGAAGAA---GTCC
AAGCCGGCCAGCACGTTTACCCGGGCGCGTCCGAGAGCCCCAGTGCCA
GACTTCGGTCCAGGCCACCAACGAGGCCAAGCTCACGGTGTCTGCGAGA
TCCCCGTGGAACCTCAAGTACCTGAAGGTGCGAGAGG-----
-----AAAAAGGACACAAGCAAGGGAACCCCTGGAGGATCAGATCAT
TCAGGCGAACCCCTGCGCTGGAGGCTTTCGGTAACGCCAAAACACTGAGGA
ACGATAATTCCTCCCGTTTTTGGAAAATTCATCCGAATCCACTTCGGAACC
AGCGGTAAATTGTCTCGGCGGACGTTGAGACGTACCTGCTGGAAAAGTC
GAGGTCACCTTTCAGCTCAAGGCCGAGAGGAACTACCACATCTTCTTCC
AGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGTTGATCACC
AACAAACCCTTACGACTACTGCTACATCTCCAAGGAGAAGTGACCGTAGC
GTCCATCAACGACTCCGAAGAGCTGATGGCCACCGACAGTGCCTTCGACG
TGCTCGGCTTACGCAAGAGGAGAAGATGGGAGTCTACAAGTTGACAGGG
GCCATTATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGGAGGA
ACAGGCGGAGCCTGATGGCACAGAAGCTGCCGATAAGTCGGCTTATCTAA
TGGGGCTGAATACAGCAGACCTAATCAAAGGTCTCTGCCATCCCAGAGTC
AAGGTAGGAAACGAGTATGTACCAAAGGCCAGGGTGTGGATCAAGTCTA
CTAC---ACAAGGAGGCGTTCAAGTGCAGGAGTGCAGGCAAGCATTACA
ACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCGGCCACCGCG
GGCGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACCCCGT
GCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCGTCCGGCGGCGCCA
AGGAGAAGAAGCACCCGTGCGACCACCTGCGACCGCGCTTCTACACGCGG
AAGGACGTCCGGCGGCACATGGTCTCCACACGGGCCGCAAGGACTTCCT
GTGCCAGTACTGCGCCCAGCGCTTCGGCCGCAAGGACCACCTGACGCGGC
ACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCG
CCGGACATGCTGGGTCTCCTGGGCTCCGGCTCGCCCGCGTCTCCGTCAA
GGAGGAGCTGAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCCCA
TGATGGGCAAGCCCTTCCCCAGCGGGACGCCCTTCCCCATGGGCATGTAC
AACCCGCACCAC-----CTCCAGGCCATGTCTAACCCCGGGTCCGGCA
CCCG-----CACCCCTCCCTCATGCCCGGCTCCCTGTCCGCAGCCATGG

GCATGGGCTGTCACATGGAG-----

-----GGCTACCACGCGTTTCG

AGTGGCAGCCGGCCCTCCGGAACGTGTCCCCCTCTGCCACGTGGGTATC

ATCAACGGGCTTTCCGGGTGGGCCGCTTCGGTGGACGAGGTCCCCGCCGA

CACCATTACCCGTCGGTTCGGCTACGACGTGGCCCTCGTGTGGCCCTGA

AGGACCTGGAGGACGACATCGTGGACGGGCTGAGGGAGCGCGGGCTGGAA

GACAACCCTTGACCTCGGGCTTCAGCGTCATGATCAAGGAGTCTGCGA

CGGCATGGGAGACGTCAACGAGAAGAACGGCGGGGGGCCGGCGATGCCCG

AGAAGGCCGTGCGTTTCTCCTTCACCGTCATGTCCGTCTCCGTCCGCGCC

GACGGAGAGGAG-----GAGGCGGT

CGTCGTCTTCAGGGAGCCGAAGCCCAACTCCGAAGTGTCTGTAAAGCCC

TGTGCCTGATGTTTGTGGACGAGTCTGACCACGAGACGCTCACGGCTGTC

CTGGGACCTTTGGTGGCGGAGAGGAACGCGATGAAGCAAAGCCGACTCAT

CCTCCCCGTGGGGGGGCTCCCCGCTCCTTCGGCTTCCACTTCAGAGGCT

CGGGCTACGACGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGGCCTCG

GGCTCCACCTATATCTGCACCCTCTGCGACTCCACCCGGGCGGAGGCCTC

TCACAACATGGTGCTCCACTCCATCACGCGCAGCCACGACGAGAACCTGG

AGCGCTACGAGACGTGGAGGACCAACCCCTTCTCCGAGTCCGCCGCGGAG

CTGCGAGATCGGGTCAAAGGGGTCTCCGCCAAACCGTTCATCGACACCCA

TCCGACGATGGACGCGTTGCATTGTGACATCGGTAACGCCACCGAATTCT

ACAAGATCTTCCAGGATGAGATCGGGGAGGTGTTCCGGAAGGCCAACAAC

---CCCAGCCGGGAGGAGCGGCGGGCTGGCGGGCGGCTCGACAAACA

GCTGAGGAAGAAGCTGAAGCTGAAGCCGGTGTGCGGATGAACGGGAACT

ACGCCGAAGGCTGATGACCAGGAGGCGGCGGAGGCGGTGTGCGAACTG

GTGCCCTCGGAAGAGAGACGGGAGACCCTGAGGGAGCTGATGGCGCTCTA

C-----

-----TCATACACC
ATCGACATGGGTCC-ATGGGGCCCCAGTGGAAGGCAAACCCCCAGCCATT
CGTCTGCTCAATNGAAGACCCCACCAAACAGACCAAGTTCAAGGGCATCAA
GACCTACATTTCTTACCGGGTACRCCSAGCCACACAGGGCGTCTGTGT
ACMGACGGTACAARCACTTYGACTGGCTSTACAACCGGTTACTGCACAAG
TTCACCGTSATCTCTGTGCCACCTGCCGAGAAGCAGGCCACGGGGCG
ATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGACGACTGGTCCGTGGA
TGAACCACATGACCAGTCACCCGGTSCTCTCTCAGTATGARGGCTTGGAG
CACTTCTGATGTGCGCCGACGACAAACAGTGGAACTGGGAAAGAGRCG
AGCGGAGAAGGACGAGATGGTGGCGGCCATTTTCATGCTGACCTTCCAGA
ATCCCAACGAGCACCAGGACCTTCAGGATGTAGAGGAACGGGTGGACACC
TTCAAGTCCTTCGCCAAAAAATGGACGACAGTGTGATGCAGCTCACGCA
CGTGGCCTCGGAGCTGGTGCCAAACATCTGGGAGGGTTCAGGAAGGAGT
TCCAGAGGCTKGGRAATGCCTTCCAGTCCATCAGCCAGGCTTTCACGCTG
GACCTCCCCACAGCTCAGACACCTCCACCAACGCCCTTCTCCCA-----

-----ACGTGATGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTG
CACCGGGCACCCTACTATTTCCCTGCTGGACCTGTGCGCCTCCGACATCCT
GCGCTCCGCCATCTGCTTTCCCTTCGCTTCTACTTCGGTCAAGAATGGGT
CGGCCTGGACGTACGGCAGCTGACTTGCAAGGTGATCGCCTTCCTGGGT
GTCCTCTCCTGTTTCCACACGGCGTTCATGCTGTTTTCGCTCAGCGTCAC
CCGCTACCTGGCCATCGCTCATCACCGTCTTACACCAAGAGGCTGACCT
TCTGGACCTGCCTCGCCGTACCTGCATGGTGTGGACGTTGTCCGGTGGCT
ATGGCGTTCCTCCAGTGTAGATGTAGGGACGTACTCTTTTATCCGGGA
GGAGGACCAGTGCACATTCAGCACCGCTCCTTCAGGGCAAACGATTCGC
TGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTT
TACCTCAAGCTCATCTTTTCGTCCACGACCGCCGAAAGATGAAGCCTGT
CCAGTTCGTGCCTGCCGTAGCCAGAACTGGACCTTCCACGGGCGGGGG
CCAGCGGGCAGGCGGCGGCAACTGGCTGGCTGGATTTGGCCGAGGCCCC
ACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCAGGCCG
CAGGCGTCTACTGGTGTTAGATGAGTTCAAACGGAGAAGAGGATTAGTA
GGATGTTCTACATCATGACGTTTTCTTCCTGGCTCTGTGGGGGCCCTAT
CTGGTTGCCTGCTACTGGCGGGTGTGTGCAAGGG-CCCCGTGGTCCCTGG
GGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCC-----
-----GCCAAATCCCGCTTCCAC
CCTGGCACCGGGACCGGTCTGGCACGGACC---GCAGCGTCCCACTTAG
CAACAGCTTGCTATCCCCGCAACAAGCCGAAGAGACCGCAGCAG---CCT
CCCCGCAGCGATGGTGTGTCACCC---CTGCCAAACAATCGACTGGACTTT
GCCGCTCGGCATACGATGCCGCTGCCGCGGCTGATTTTGCCGGTAAACGC

GGCCACCCTGCTGTCTTACGCAGCTGCTGGAGTCAAGGCGC-----TTC
CACTGCCCCTGCGGGGTGTTTACAGGTAGACCTCTGGGTTATTACGCCGAC
CCCTCGG---GCTGG---GGCACGCGCACTCCACCCAGTATTGT-----
----AGTAAATCCAGCTCAGTTTTGTCCTGTTGGCCAACAAATCCACTG
GGAGCAGGACTGGAA---CTTCAAATTACCTGG-----TGGATGA-
--GGGG---GACAC---GATGACAACGGAAAGGTCTCCA---CT---AAG
TGCGTCCGAGGAT---GCCAAACCTAAAGACCT-----GTCGGA---AT
CCAGCTGGATAGAG---ACACCTTCCCTCATTAAATCGATCGATTCAAGT
GATTCTGGAATTTTTG---AGCAGGCGAAACGGAGGCGAATATCACCTTC
TGCCACGCCG-----GTTTCTGAAACTGCATCTCCATTGAAAAGCG
AA-----ACAGGCGAAGTCACCGATAGAGAAGTTGGGTTGGGGTTA
AATCCCTTTGCTGACGGGATGGGCGTTTTCAAATCAACCAMGGTACTCA
CGAGCTTGCTTCTGG---ACAGACCGTTTTCTCATCACAGGCT---CCCA
GSTAC---GCAGCAGCCGTTTTGGGG---CATCACCA-----CCACCCT
GCTCATGTCAGCTCC---TACTCAACCGCAGCGTTCAACTCCACCCGGGA
CTTTCTGTTCCGAAATCGGGGATTCGGAGACGCCGCAAG-----
-TGCGCAACACAGTCTTTTTTGCCTCAGC---GGCAGGAACTTT---C---
---GCAGGGCCACATGGACACTCAGATGCCACCGGACACCTTCTTTTCCC
GGGACTGCACGAG---CAGGCAGCCACACATGGGTCTCCAAACGTTGTAA
ATAGTCAGATGCGCCTGGGGTTTACCGGGACATGTACGGCAGAGCAGAA
CAGTATGGACAGGTGACGAGTCCCAGGT---CTGAGCACTATGCTTCGAC
ACAGTTGCACGGGTATGGTGCCATGAACATGAACATGGCTGCA---CACC
ACGGGGCTGGGGCCTTTTTTTCGATACATGCGGCAACCCATTAAACAAGAG
CTTATCTGCAAGTGGATTGAACCGGACCAGCTGTCGAATCCCAAAAAGTC
TTGTAATAAAACTTTTACGACCATGCACGAGCTCGTGACTCACCTCACGG
TAGAACATGTTGGGGGACCTGAACAATCAAATCACATTTGCTTTTGGGAA
GAATGTCCCCGGGAAGGCAAGCCATTAAAGCAAATACAAACTCGTTAA
CCATATCAGAGTGCACACGGGCGAAAAGCCGTTCCCATGCCATT-----

>*Fistularia petimba*

AGCCTTCTCATCCGCGCAGAGCTCAGCCAGCCCGGTGCACTACTGGGCGA
CGACCAGATCTATAATGTAATCGTTACGGCCACGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATCATGATCGGAGGCTTCGAAACTGATTAATT
CCTCTTATGATCGGTGCCCCAGACATAGCCTTTCCCGGATAAAATAACAT
AAGCTTCTGACTTCTCCCCATCTTTCTTACTTCTATTAGCATCCTCTG
GAGTTGAAGCTGGGGCCGGAACAGGGTGAACAGTCTACCCTCCTCTTGCA
GGAAATCTGGCCCACGCTGGAGCCTCTGTAGACCTAACGATCTTCTCCCT
GCACCTAGCAGGCATCTCATCAATCCTAGGAGCAATTAACCTCATCACAA
CCATTATCAACATAAAACCTCCAGCCATCTCACAGTACCAGACACCTCTT
TTCGTCTGAGCTGTCTCATTACCGCTGTGCTTCTCCTACTTTCACTGCC
TGTTCTTGCTGCCGGCATTACCATGCTCTAACGGACCGAAATCTAAACA
CCACATTTTTTCGACCCAGCGGGAGGAGCGACCCCATCCTGTATCAACAC
CTA-----

-----NNNNNNNGAGAAACCTTACCCATCCAACCTGCTTGGCATGCTGT
TGCTTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTTCTCTGGGGC
ATGTGCCTCAGCAACTTCCCTGCTATTTGCAAGACGGAGGACTTCCCTCA
ACTGCCAAAAGATATGGTGGTTCAGCTTTTGTACACGAGGAGCTAGAAA
CAGAGGATGAGCGTCTAGTTTATGAAGCTGCCCTGAACTGGATCAACTAT
GACCTGGAAGACGGCACTGCCACCTTCCGGAGCTCCTCAGAACCGTCCG
TTTAGCTCTTTTGGCAGCGATCTTCTCATGGAGAATGTCTCAACAGAAG

TCGGCTTCTACATTTACGAGCCCATCGAGTACTGGAACGCCACGGTGCAG
GAGCACCTGAAGACTCTGAGTCACGGCTTCAACAAGATCTCCTGGATGGA
CAACTTTTTTCCACTACCTGAAGGTGGTCAACGTGAGCGCGTCCACCAAGA
GCGACTTCATCTCCATCCTCAAGGGCTCCTTCTGCGCAGCCCCGAGTAC
CAGCACTTACCGAGGACATCATCTTACCAAGA---ACCGCGACACCG-
-----ACGAGTACGACATCATCGCCTCGCGCATGTACCTGGTGGCGCGGA
CCACGGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAGAAGCTGCGC
CCGCTGATGCTGATCAACAGCATCAAGTTCATCGCCTTCAATCCGACGTT
CGTGTTTCATGGACCGCTACAGCTCCTCGGTCATCTCGCCCATCCTGACCT
CGGGCTTCAGCGTGCTCACCATCCTCATCCTCACTTCTTCTGCTCATC
AACCCCTTGAAAACCTTCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NNNGAAAAGGC
TGGAGGACAGTGCCTGCACCTC
AGGCTTTAGGGTTATGATCAAAGAATGTTGTGATGGCATGGGAGACGTGA
GTGAGAAGCACGGAGGAGGTCCAGCTGTTCTGAGAAGGCAGTACGCTTC
TCTTTCACTGTTATGTCTATTTCTGTTATGGTTGATG-----AG-----
-----GAGTACGTCACAATCTTCACTGAGC
CCAAGCCTAACTCAGAAGTGTCTTGTAGGCCCTTTGCCTGATGTTTGTG
GATGAATCAGACCATGAGACACTGACAGCTATCCTGGGGCCTATAGCTGC
AGAGCGTAACGCAATGAAAGACAGCAGACTCATCCTATCCATTGGTGGGT
TGCCTCGCTTCTTCCGCTTCATCTTCAGAGGTACAGGGTATGACGAGAAG
ATGGTTCCGGAAATGGAGGGCCTGGAAGCATCTGGGTCCACCTATGTCTG
TACATTGTGTGACTCCAGTCGAGCAGAGGCCTCTCAAATATGGTACTGC
ACTCCATCACACGGAGCCATGATGAGAAGTTAGAGCGTTATGAAATATGG
CGAACCAACCCATTCTCTGAGACTGTGGACAAGCTGCGAGACAGAGTCAA
AGGAGTATGTGCCAAGCCCTTCATGGAGACCCAGACAACACTTGATGCAT
TACACTGTGACATTGGCAATGCCACAGAGTTCTACAAAATTTTCCAGGAT
GAAATTGCGCAGGTATACAGAAAGGT---CAGT---CCTAGCCGGGAGGA
GAGGCGCAGTTGGAGGGCGGCTCTGGATAAGGAGCTGAGGAGAAAGATGA
AGCTGATAACCAGTAATGAGGATGAATGGTAATTATGCACGAAAGCTAATG
TCCATGGAGACCATAGAGGTGGTGTGTAAGTGGTACCCTCTGAAGAGAG
AAGGGAGGCCCTCAGGGAGCTCATGAGGCTATACTTCAGATGAAGCCCG
TGTGGCGAGCCACCTGTCCAGCACAGGAATGCCCTGACCAGCTGTGCCGC
TACAGCTTTAATTCCAGCGCTTGTGCTGACCTCCTCTCCTCTACTTTCAA
ATATAGGTACAATGGAAAGATAACCAATTATCTGCACAAGACCCTGGCCC
ATGTCCAGAANN
NNNTCGTACTCCATCGAGATGGCGCCGCCGGGGCCCCGGTGG
AAGGAGAGCCCGCAGCCCTTCTCTGTTCCATCGAAGACCCACCAAGCA
GACCAAGTTC AAGGGGATCAAGACGTACATCTCGTACCGGGTCACGCCGA
GCCACACGGGTGCGCCCGTGTACAGGGCGCTACAAACTTCGACTGGCTG
TACAACCGCCTGTGCACAAGTTCATGTGATCTCCGTGCCTCACCTGCC
CGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATCGAGAAGCGCA
AGCGGCGACTGATCCTGTGGATGAACCACATGACCAGCCACCCGGTGCTG
TCCCAGTACGAAGGCTTCGAGCACTTCTGATGTGCGGCGACGACAAGCA
GTGGAAGCTGGGCAAGAGGCGAGCCGAGAAGGACGAGATGGTCCGGCGCCC
ACTTCATGCTGACCCCTCAGATACCCAACGAGCACCAGGACCTCCAGGAC
GTGGAGGAGCGGGTGGACTCCTTCAAGGCGTTTGCCAAGAAAATGGACGA
CAGCGTCATGCAGCTCACCCACGTGGCGTCCGAGCTGGTCCGGAAGCACC
TCGGCGGCTTCAGGAAGGAGTTCAGCGGCTRGGGAACGCGTTCCAGTCC
ATCAGCCAGTCTTCATGCTGGACCCCGCACAGCTCGGAGGCCCTCAA
CAACGCCATCTCCACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCATTGGCGTCCGT

AGCCTACTTATCCGAGCAGAACTTAACCAACCAGGCTCTCTTCTAGGAGA
CGACCAGATTTACAATGTTATCGTGACAGCTCACGCGTTTGTAATAATTT
TCTTTATAGTAATACCTATCATAATTGGAGGATTCGGCAACTGACTGATC
CCTCTAATAATTGGGGCCCCAGATATGGCCTTCCCCGAATAAATAATAT
AAGCTTCTGACTACTCCCCCTTCTTCTTCTCCTCCTTGCCTCATCTG
GCGTAGAAGCCGGGGCTGGTACTGGATGAACTGTCTACCCACCGCTCGCT
GGCAACCTTGCCACGCAGGGGCTCTGTTGACTTAACAATCTTCTCTCT
ACACCTAGCAGGAATTTCTTCAATTCCTGGAGCCATCAATTTCACTACTA
CCATTATTAACATAAAAACCCCCAGCTATAACCCAATATCAGACTCCACTT
TTCGTGTGATCTGTCTAATCACCGCGTCTTGCTCCTCCTATCCCTCCC
TGTTCTTGCCGCCGAATTACAATGCTACTTACAGACCGAACTTAAATA
CAACTTCTTTGACCCGGCAGGAGGAGACCCCTATTCTTTACCAACAC
CTG-----

-----TTCTAGAGAGAAACCTTACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCCGAGCTCT
CCTGGGGCATGTGCCCTCGGCAACTTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAATTGGA
TCAACTATGACTTGAAAAGAGGCACCTGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTCGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTATC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAAC
AGCCCATGTGCCCGTCCGAGAAAACCCAGCCATGCCCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGATGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTTTGGGTCTATGATACGGTCCACGAGG
AATGGTCAAAGGCGGCACCCATGCTCATTGCCAGGTTTCGGCCATGGCTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTGGGAGGTCACACAGCTGCAAC
TGGCTGCCTCCCGCTTCCCCGCTCGGATGAATAACATTGTTGTGTTAGT
CGCTCAACAACGAGGCTGATATTGAATGAAGCAGAGTTAATCATGGCACT
WGCCCAGGAGTTCAGATGAGAGTGGTCACGGTGTCTCTGGAGGAACAGT
CTTTMCCAGTATAGTCCAGGTGATCAGCAGTGCTACCATGCTGGTCAGT
ATGCATGGAGCTCAGCTCATCACCTCACTCTTCCCTCCAAGAGGAGCTCT
CGTGGTGGAGCTGTTCCCTTTTCGCTGTAACCCAGAGCAGTACACCCCGT
ATAAAACCCTTGCCCTCCCTGCCAGGCATGGACCTTCACTACGTTTCTTGG
AGGAACACTAAGGAGGAGAATAACCATCACCCATCCAGACAGACCCCTGGGA
ACAAGGGGGCATCGCTCACTTGGACAAAAGAGGAGCAAGAGCGAATACTGT
TGAGCAAAGATGTCCCAGACACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGATATCCCCTCCTTCTTGGAAAGT
CCTCAA---AGAGGGCATGAAG---ACCAAGCCCAGCTTGARGAA---GT
CAAAGCCGGCCAACACAGTCCACCCGGGCGGGTCAGAGAACCCAGTGT
CAAACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCGTGGAACTCTGAAATACCTTAAGGTGAGAGAAGTGAATAACGAGG
TGTGGATCCAGAAAAAGATAACCAGCAAGGGGACCCCTGGAGGATCAAATC
ATCCAGGCGAACCCGGCCTTGGAGGCTTTCGGCAATGCCAAAACATTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTTGGTA
CGAGCGGCAAGCTGTCTGCTGCTGACATCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAATTATCACATCTTCTA
TCAGATCCTGTGCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA

CCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAAGTGACGGTC
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACGGACAGCGCATTCGA
TGTGCTTGGCTTCACTCCAGACGAGAAGATGGGCGTCTACAACTGACGG
GCGCCATCATGCACTATGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCGGATGGGACGGAGGCTGCTGATAAATCTGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCACCCCAGAG
TCAAGGTAGGAAATGAATACGTAACCAAAGGCCAAAGTGTGGACCAGGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATATGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTATGAGAGCACGCCT
GTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCAGGTGGCAC
CAAGGAGAAAAAGCACCCGTGTGACCCTGTGACCGTCGTTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGCGCCCAACGCTTGGCAGAAAAGGACCACCTGACACG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAAATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCCGGGTACCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCATTCCCCAGTGGCGCCCTTTTCAGATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCAATGTCCAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCTCCTTCTCATTCA
TGGGATGTTTACAAATCAGTGATGGATCAAATATCGTGAACCTGCTGGCT
AGTAACTCTCCAAGTGTTCGTATGCTCTGACCCAGCAAAAATACTTCAG
TAACTACAGTCTGTGATTGGGTTTTATATTTATGAGCCCATAGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAATGT
CAGTGCCTCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCCTGAGACTG-----ATGAGTATGACATTATCGCCTCACGGAT
GTACTTGGTGGCACGGACGACAGAGAAGAAGCGGAGGAGGTGGTGGAGC
TTCTGAAAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAATTCATT
GCCTTCAATCCTACGTTTCGTGTTTATGGACCGATACAGCTCCTCCGTCAT
CTCGCCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTCCTGGTTCATCAACCCCTTGGGAACTTCTGGCTCATCCTCACT
GTAACGTCCTGGAGCTGGGTGTCTTAGGTTTGTGAGGGCTTTCACAGTT
TGAATGGCAGCCCGCTCTCAAGAAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGGCTTCTGGATGGGCTTCCTCAGTGGATGACTCCCAGCT
GACACTATCACTCGGCGGTTTCGCTATGATGTGGCACTGGTGTGAGCATT
AAAAGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGCGCTTGCACCTCAGGCTCAGTGTGATGATCAAGGAATCTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGCGGACCAGTTGTTCC
TGAGAAGGCTGTACGTTTCTCTTTCACRTRTATGTCTGTCTCTATCCTGG
CAGCTGACAGGGAG-----GAAGAG
GTTACCATCTTCACAGAGCCAAAGCCGAACCTCAGAATTGTCCTGTAAGCC
CATTTGCCTGACATTTGTGGATGAGTCAGACCACGAGACGCTCACAGCCA
TCCTGTGGCCTCTTGTTCAGAGCGTAATGCAATGAAAGAGAGCAGGCTC
ATCCTATCCATTGGTGGACTGCTTCGCTCCTTCCGCTTTCCTTTCAGAGG
CACGGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CAGGGTCCACCTATATCTGCACCCCTTGTGACTCCGGTCCGGGCAGAAGCT
TCTGAAAACATGGTGCTACACTCCATTACTCGCAGTCATGAAGAGAACCT
AGAACGTTACGAAATATGGAGAACCAACCCCTTCTCTGAGTCTGCAGATG
AGCTGCGAGACAGAGTCAAAGGGGCTCTGCCAAGCCCTTCATGGAGACT
CACCCAACAATGGACGCATTACATTCGCACATAGGCAATGCCACTGAGTT

CTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTACCAAAGGT---CA
AC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGAGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGGTGAAGCTGAAACCAGTAATGAGGATGAACGGGAA
CTTTGCCCGCCGGCTAATGACCATGGAGGCTGTGGAGGCAGTGTGTGAGC
TGGTGCCCTCTGAGTTGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTC
TACCTACAGATGAARCCTGTGTGGCGCGCCACCTGCCAGCCAAGGAGTG
CCCCGACCAGCTGTGCCGCTATAGCTTTAACTCCCAGCGCTTTGCTGACC
TCCTCTCCTCTACCTTCAAATATAGGTACAATGGAAAGATACCCAATTAC
CTGCACAAGACCCTGGCCCATGTGCCGAAATCATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCGGCAAACAAATCGTACA
CCATCGAGATGGGTCCCTTAGGGCCCCGGTGGAAAGGAGAGCCACAGCCT
TTCTGCTGCTCCATTGAAGACCCCCACTAAACAAACAAAGTTCAAAGGCAT
CAAGACGTACATTTTCGTACCGTGTACGCCRAGCCACACTGGGCATCCTG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTTCGAGGAAGACTTTATCGAGAAGCGCAAGAGGCGACTGATACTGT
GGATGAACCACATGACCAGTCACCCAGTCCTCTCCAGTATGAAGGCTTC
GAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAACTGGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTGGGTGCCCATTTTCATGCTGACCCTCC
AGATCCCCAACGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGGTCGAC
TCCTTCAAGGCCTTCGCTAAGAAAATGGATGACAGCGTGATGCAGCTCAC
GCATGTCGCCTCGGAGCTGGTGCCTAAGCACCTGGGTGGGTTTCAGGAAGG
AGTTCCAGCGACTGGGAAATGCCTTTCAGTCTATCAGCCAGGCGTTCATG
CTGGACCCTCCCCACTGCTCAGAGACCTTCAACAACGCCATCTCCCACNNNNNNNNNNNNNNNTC
AAACTGACCTCTCTGGGTTTCATCATTTGGAGTCGGTGTGGTTGGAAACCT
CCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACAGAGCGCCCT
ACTACTTCCCTGCTGGACCTGTGCGCCTCTGATATCCTACGCTCCGCCATC
TGCTTCCCTTTTGTCTTACCTCGGTCAAGAATGGATCTGCCTGGACCTA
CGGCACGCTGACCTGCAAGGTGATCGCCTTTCTGGGTGTCTCTCCTGTT
TCCACACGGCGTTTATGCTGTTCTGTGTGTCAGTGTACACGCTACCTGGCC
ATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCT
AGCTGTCAATTTGCATGGTGTGGACGTTATCAGTGGCTATGGCGTTCCCGC
CGGTGCTAGACGTAGGGACGTACTTTTCATCCGGGAGGAGGACCAGTGC
ACCTTCCAGCACCGTTCCCTCAGGGCSAATGATTCGYTGGGCTTCATGCT
CCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCA
TCTTCTTCGTCCACGACCGTCCGAAAGATGAAGCCCCTCCAGTTCGTGCCT
GCTGTGAGTCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGC
GGCCGCAACTGGCTGGCTGGATTTGGTTCGAGGCCACCCCGCCTACTC
TGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGCCGGCGTCTGCTG
GTATTGGATGAGTTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACAT
CATGACGTTTTTCTCCTGGCGCTGTGGGGGCCCTACCTGGTCCGCTGCT
ACTGGCGGGTGTGTTGCGAGGGGCCCTGTGGTCCCTGGAGGCTACCTGACA
GCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAACCCTTTCATCTG
TATCTTCTCAAACAGGNNNGCCAAATCTCGCTTTCACCCTGGCATGGGGACTG
GTCCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTATCC
CCGCAGCAAACCGAGGAGCCACTGTTGCCACCCCCCGCAGCGATGGTT
TGTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACG
ACGCCGCT-----GATTTCCGCCGTAACCGGGCCACCTTGCTGTCC
TACGCAGCGGCCGGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAGG
CTGCTCCAACCGGCCCTTGGCTATTACGCAGACCCGTCAG---GCTGG-
--GGAGGACGCACGCCGCCGAGTACTGCGGCGTGAACAGCAAATCCAGC
TCGGTCTTTTCTGCTGGCCACTAACTCTATCGGAGGCAGAGCGGGTA-
--CC---AACTACCTGG-----CTGAGGA---GGGA---GACTC--

-CATCCCGACGGAGCGGTCACCG---AT---CGGCGGCTCGGAGGAG---
ACCAAACCCAAAGACATGAC---ATCAGA---GTCGAACTGGATAGAG--
-ACGCCGTCCTCGATTAAGTCCATCGACTCAAGCGATTCTGGTATCTTTG
---AACAGGCCAAAAGGAGAAGGATCTCACCTTCTGCCACGCCA-----
---GTTTCAGAGACAGTGTCCCCGCTAAAATCAGAGCATCACTCAACAGG
GGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCCTTCGCAGATG
GGATGGGCGCTTTCAAATAAAACCACAGCTCCCACGATATTGGCTCCGG-
--ACAGACGGCGTTTTCTCCCAGGCG---CCCGGCTAC---GCAGCAGC
CGCCCTGGGA---CACCACCA-----CCACCCGACCCACGTTGGCTCT-
--TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAAT
CGGGGATTTCGGGACGCCACCGG-----CGCGCAGCACAGTTT
GTTTCGCCCTC-----CGGAAGTTT---C-----GCAGGCCACATG
GACACTCAGATGCAGCGGGGCACCTGCTCTTTCCGGGGCTCCACGAG---
CAAGCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCT
GGGCTTCTCGGGGGACATGTACGGACGGGCCGACCAGTACGGCCACGTTA
CAAGCCCAGCGGT---CCGACCACTACGCCTCGACCCAGCTGCACGGCTAC
GGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCCTT
CTTTTCGATACATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGA
TCGAGCCGGAGCAGCTGACAAATCCCAAAAAGTCGTGCAACAAAACTTTT
AGCACGATGCACGAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGG
ACCGGAGCAGACCAACCACGTCTGCTTCTGGGAGGATTGCGCCCGAGAAG
GAAAGCCATTCAAAGCCAAATACAAACTTGTAAATCATATCAGAGTACAC
ACCGGAGAAAAGCCCTTTCCGTGTCCGTTCCCCGGCTGTGGCAAA

>Gadella jordani

AGTCTTCTTATCCGAGCCGAATTAAGCCAGCCCCGGTGCCCTTTTCGGTGA
CGACCAAATTTATAACGTAATCGTCACGGCCCATGCTTTTCGTAATAATCT
TTTTTATAGTTATAACCCATTATGATCGGTGGATTTGGAAACTGATTAATT
CCACTAATGATTGGAGCCCCGACATAGCCTTCCCCCGTATAAATAATAT
AAGCTTCTGACTCCTCCCCCCTCTTTCCTATTACTCTTAGCATCCTCAG
GAGTAGAAGCAGGAGCAGGGACAGGATGAACTGTCTATCCCCATTAGCG
GGTAACCTGGCCCACGCAGGTGCTTCCGTAGACTTGACCATCTTTTCCCT
ACATTTAGCAGGAGTTTCCTCAATCTAGGGGCAATCAACTTTATTACAA
CTATTATTAATATGAAACCACCCGAGTGTGCAATATCAAACACCTTTA
TTCGTCTGATCCCTCCTAATTACAACGTTCCTTCTTTTAGCACTTCC
TGTTTTAGCCGCGGAATTACAATACTTCTTACAGACCCGTAACCTTAACA
CCTCTTTCTTCGACCCTGCTGGAGGAGGAGACCCCATCTTATACCAACAC
TTATTCTGATTCTTTGGCCACCCCGAAGTCTACATTTTAATTCTTCCAGG
CTTTGGAATGATCTCCCATATCGTAGCATATTATTCAGGTAAGGAGAGC
CCTTCGGTACATGGGAATAGTATGAGCTATAATAGCAATTGGTTTCCTT
GGCTTCATCGTTTGAGCCCACCATATGTTTACCGTTGGGATAGACGTTGA
CACACGGGC---TTCTCGAGAGGAACCTTACCCGACCAACTGCCTTGG
CATGCTGCTGCTGTCCGACGCCCACCAGTGCACCAAGCTTTCCGAGCTCT
CTTGGAGCATGTGCCGAGCAACTTCCCTGCCATATGCAAGACAGAGGAT
TTTCTCCAACCTGCCAAAGATATGGTTGTGCAACTTTTATCCCACGAGGA
GCTGGAGACAGAAGAYGAGAACTTGTTTACGAGGCCGCACTCAACTGGG
TCACCTATGACCTGCAAGGGAGGCACCCCACTTGCCCGAACTGCTGAAA
ACAGTGGCTCTGGCTCTTCTCCCCGCCATCTTCTCATGGAAAATGTCTC
CACGGAAGAGCTGATAAACACCCAGAGCAAGAGCAAGGAGCTGGTGGACG
AGGCCATATGCTGCAAGCTGAGGATCCTGCAGAAAGACGGCGTGGTCAAC
AGCCCGTGCGCCCGTCCGAGGAAGACCAGCCATGCGCTCTTTCTGCTGGG
AGGGCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCCGACATACCCAGCCCGCGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGCAAGGTGTACATCACGGGCGGGC---GGGGCTC-

AAGCTTCTGACTTCTTCCTCCATCTTTCCTGCTCCTTTTAGCATCCTCTG
GTGTAGAAGCTGGGGCTGGAACAGGCTGAACTGTCTATCCACCTTTAGCC
GGAAACCTCGCTCATGCTGGGGCATCTGTTGATCTCACTATTTTTTCTCT
TCATCTAGCAGGGATTTTCATCAATCTTGGGGCAATTAATTTTATTACCA
CAATTATTAATATGAAACCTCCGGCAATTTACAGTACCAAACACCCCTA
TTTGTGTGAGCAGTACTAATTACAGCTGTGCTTCTACTATTATCTCTCCC
CGTCTTAGCAGCTGGTATCACAATACTTCTAACTGACCGTAATCTTAATA
CTTCTTTCTTTGACCCTGCTGGAGGAGGTGATCCCATTTTATAACCAACAC
TTA-----

-----TTCTGGAGAGGAACCTCCACCCGACCAACTGCCTGGG
CATGCTGCTGCTTTCCGACGCCACCAGTGCATCAAGCTCTCGGAGCTGT
CCTGGAGCATGTGCTGAGCAACTTCCCGCCATATGCAAGACGGAGGAG
TTTCTCCAACCTGCCCAAAGACATGTTTGTGCAGCTTTTGTCCCACGAGGA
GCTGGAGACGGAGGACGAGAAACTTGTTTACGAGGCCGCGCTTAACTGGG
TCACCTACGACCTGCAAGGAAGGCACCCCCACTTGCCGGAGCTTCTGAAA
ACGGTGCCTGCTGGCCCTTCTCCCCGCGTCTTCTCATGGAGAACGTCTC
CACCGAGCCACTGATAAACAGCCAGACCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCTGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGCCCGTGCGCCCGTCCCAGGAAGACCAGCCACGCGCTCTTCTGCTGGG
AGCCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCCGACATCCCGAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGCTGCAAGGTGTACATCACGGGCGGGC--GGGCTC-
GGAGAACGGCGTGTCCAAGACGTGTGGGTGTACGACACGGTGCAGGAGG
AGTGGTCCAAGGCGGCGCCCATGCTGATCGCCCGCTTCGGCCACGCTCG
GCGGAGCTGAAGCACTGCCTGTACGTGGTGGGCGGGCACACGGCCGCCAC
GGGCTGCTTCCCGCCCTCTCCGTCCGGAGGATTACATCGTGGTTTTCTCC
CGCTCCACCACGAGGTTGATCCTGAATGAGGCGGAGTTGATCATGGCACT
AGCCCAGGAGTTTCAGATGAGGGTCTTGACGGTGTGCTGGAGGAGCAGT
CGTTTGCCAGCATAAGTGCAGGTGATCAGCGGGGCGTCCATGCTGTTGAGC
ATGCACGGCGCTCAGCTCGTACGGCACTGTTTCTACCCCGAGGGGCCGC
CGTGGTGGAGCTGTTCCCTATGCGGTGAACCCCTGAGCAGTACACCCCGT
ATAAGACCCTGGCCTCCCTGCCGGGCATGGACCTGCAGTACGTCTCCTGG
AGGAACCTCATGGAGGAGAACACGGTCAACCATCCGGAACGGCCCTGGGA
CCAAGGGGGGATCGTGCACCTGGAGAAGGAGGAGCAGGAGCGCATAACAGG
TCAGCAAGGACGTCCCAGGCACCTGTGCTGTGCGGAACCCAGAGTGGCTT
TATAGGATCTACCAGGACACTTTGGTAGACATCCCTTCACTCCTAGAAGT
GCTGAA---GGAGGGCCTCAA---ACCAGGCCAGCGTGAAAA---GA
ACAAGGCGGCCAGCACCGTTCAACCAGGGCGAGTCAGAGAACCCCAATGC
CAGACCTCTGTCCAGGCCACCAACGAGGCCAAACTCACAGTGTCTGCGCA
GATCCCGTGAACCTGAAGTTCTTGAAGGTGCGCGAGGTGAAGTATGAGG
TGTGGATACAGAAGAAGGATGCCAACAAAGGGACTCTGGAGGATCAAATC
ATCCAGGCCAACCTGCGCTAGAGGCCCTTCGGTAATGCCAAAACCTGAG
GAATGACAACCTCTCGTTTTGGAAAGTTCATCCGGATTCACTTCGGGA
ACAGCGGCAAGCTTAGCTCTGCAGACATCGAGACCTACCTGCTTGAAGG
TCCAGAGTCACTTTCCAGCTGAAGTCTGAGAGGAACTATCACATATTCTT
CCAGATCTTGTCCAATCAGAAGCCGGAGCTGTTGGACATGCTGTTAATTA
CCAACAACCCCTACGATTACTCCTACATCTCCCAAGGAGAGGTAACCGTC
GCCTCCATCAACGACTCTGAGGAGCTCATAGGCACTGATAGTGCCTTTGA
TGCTCTCGGCTTACCCCTGGAAGAAAAGATGGGGGTGTACAAGCTGACTG
GTGCCATCATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGCGAG

-----GGCTACCACGACTTCGAGTGGCA
GCCGGCCCTGAGGAACGKTKCCCCGACTGCCACGTGGGCATCGTCGACG
GCCTCTCGGGCTGGGCGGCCTCGGTGGACGACTCCCCGGCGGACACCATC
ACCCGCCGCTTCCGCTACGACGTGGCCCTGGCGTCCGCCCTGAAGGACCT
GGAGGAGGACATCCTGGCGGGCCTGAGGGAGCGCGGCCTGGAGGACGGCG
CCGCCGCCACCCACTTCAGCGTCATGGTCAAGGAGTCCTGCGACGGCATG
GGCGACGTGAGCGAGAAGCACGGCGGGCCGGCCGTCCCCGAGAAGGC
GGTGCCTTCTCCTTCACCGTCATGTCCGTCTCCGTCCAGGCGGAGGGGC
GGGAG-----GAGGCCGTGACGGTG
TTCAGGGAGGCCAAGCCCAACTCTGAGCTSTCCTGCAAGCCCCTGAGYCT
GATGTTTCGTGGACGAGTCAGACCACGAGACGCTCACGGCCATCCTGGGCC
CGGTGGTGGGCGAGCGGGACGCCATGAAGCGGAGCCGGCTCCTS YTGACC
CTGGGGGGCCTCCAGCGGTCTTCCGCTTTCACTTCGGGGCAGCGGCTA
CGAYGAGAAGATGGTGC GCGAGATGGAGGGGCTGGAGGCCTCGGGCTCCA
CCTACATCTGCACCTGTGCGACTCCACGCGGGCGGAGGCCTCGTCCAAC
ATGGTGCTCCACTCCATCACCCGACGCCACGAGGAGAACCTGGAGCGCTA
CGAGGTGTGGAGGACCAACCCGTACGCCGAGTCGGCCGACGAGCTGCGAG
ACCGGTGAAGGGGGTCTCCGCCAAACCCTTCTGGAGACCCAGCCCACC
CTGGACGCGCTGCACTGCGACATCGGCAACGCCACAGAGTTCTACAAGAT
GTTCCAGGACGAGATCGGGGAAGTGTTCGGGAAGCC---CAAC---CCCA
GTCGGGAGGAGAGGCGCAGCTGGCGGGCGGCCCTGGACAAACARCTCAGG
AAGAAGCTGAAGCTGAAACCGGTYATGCGCATGAACGGGAACTACGCCCG
CCGCTGATGACCCAGGAGGCGGTGGAGGTGGTGTGTGAGCTGGTCCCCT
CGGAGGAGAGGCGGCTGGCCCTCCAGGAGCTCATGGCCTGTACATCCAG
ATGAAGCCGGTGTGGCGGGCCTCCTGCCAGCCAAGGAGTGCCCGGACCA
GCTGTGTGCTACAGCTTCAACTCGCAGCGCTTCGCCGAGCTCCTCTCCA
CCACSTTYAAGTACAGATACGACGGCAAGATCACCAACTACCTCCACAAA
ACGCTGGCCCATGTGCCTGAGATCATAGAGAGGGACGGGTCCATTGGAGC
GTGGGCCAGTGAGGGGAATGAGTCGGGTAACAAG-----

-----NNNNNNNNNNNTTCTTAAACT
GACCTCTTTGGGTTTTATCATTGGTGTGGCGTGGTCGGCAATTCCTAA
TCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGCGCTCCCTACTAT
TTCTGTTGGACCTGTGCGCTTCGGACATCCTGCGCTCAGCCATTTGCTT
CCCCTTGTCTTACCTCAGTCAAGAATGGCTCGACGTGGACCTACGGCA
CGTTACCTGCAAAGTGATTGCCTTCCTGGGCGTCTCTCCTGCTTCCAC
ACGGCCTTCATGCTATTCTGTGTCAGTGTACACGCTACCTGGCCATCGC
CCACCACCGCTTTTACACCAAGCGGCTGACTTTCTGGACGTGCTCGCGG
TCATCTGCATGGTGTGGACCCTGTCTGTGGCAATGGCCTTTCCGCCAGTG

CTGGACGTGGGGACGTACTCGTTCATCCGCGAGGAGGACCAGTGCACGTT
CCAGCATCGCTCGTTCGGTGCCAACGACTCGCTGGGTTTCATGCTCCTGC
TGGCGCTCATCCTCCTGGCCACACAGCTGGTCTACCTCAAGCTCATCTTC
TTTGTCCACGACCGGCGAAAGATGAAGCCAGTCCAGTTTGTACCAGCTGT
CAGCCAGAACTGGACCTTTCACGGACCCGGCGCCAGCGGCCAGGCGGCAG
CCAACTGGCTGGCTGGATTTGGCCGCGGCCGACGCCACCTACCTTGCTA
AACATCCGTCAAAACAGCAACGCGGCAGGCCGCGAGGCGTCTGCTGGTGCT
GGATGAGTTCAAAACAGAGAAGCGGATTAGCAGAAATGTTTTACATCATGA
CCTTTTTCTTCTTGGCGCTGTGGGGACCCTATCTGGTAGCGTGCTACTGG
CGGGTGTGTGCTCGTGGACCCGCCGTCCCTGGGGGCTACCTGACTGCTGC
CGTGTGGATGAGCTTTGCCAGGCGGGCGTCAACCCCTTTATCTGCATCT
TCTCCACAGGGAGGCCAAATCTCGATTTACCCCTGGCGTAGGGACCGGC
CCTGGCACAGACC---GCAGCGTCCCACTTAGCAACAGCTTGCTATCTCC
GCAACAAACCGAGGAGCCACAGTTG---CTTCCCACAGCGTTGGTTTG
TCACC---CTGCCAATAACCGACTGGACTTTGCAGCCTCGGCATACGAT
GCCGCTGCTGCWGCTGATTTTGCCGTAACGCAGCCACCTTGCTATCCTA
CGCAGCGGCTGGAGTAAAGGCGC-----TACCGCTGCCACAGCAGGTT
GTTCAAATAGGCCACTTGTTATTATGCCGATCCGTCAG---GGTGG---
GGCGCCGGACACCTCCTCAATACTGT-----AGTAAATCCAGTTC
AGTACTCTCTTGTGGCCAGTAATTCTGTTGGCGGGAGAACAGCTA---
-----ACTACCTGG-----CGGATGA---TGTT---GACGC---C
CTTCCCACAGAGAGATCACCC---AT---TGGAGGTTCCGAGGAG---AC
AAAACCTAAAGACTT-----GTCAGA---ATCAAGCTGGATAGAG---A
CGCCATCTTCAATAAAGTCAATTGATTCAAGTGATTCTGGAATCTTTG--
-AGCAAGCCAAACGAAGAAGATTTACCGTCTGCCACTCCA-----
-GTTTCAGAGACTGTGTCCCCGTTGAAATCTGAA-----

-----GCTTTCAAAATCAACCATAGTTCACATGATTTGGGCTCTGG---
GCAAACCTGCATTTTCGTCCCAAACA---CCAGGCTAC---GCTGCCGCTG
CCCTTGA---CACCATCA-----CCACCCTACTCATGTGCTAGCTCT---
TATTCGACTGCAGCTTTCATTTCTACACGGGACTTCTCTTCAGAAATCG
GGGTTTGCAGATGCCACCAG-----TGCACAGCACAGCCTGT
TTGCCTCCGC---AGCGGGAAGTTT---T-----GCAGGACCACATGGR
CACTCTGATGCCGCGAGGACACCTGCTCTTCCCGGACTTCATGAG---CA
AGCCGCAAGCCACGCATCCTCAAATGTTGTAAATAGTCAAATGCGATTGG
GTTTTTCGGGGGACATGTATGGACGTGCCGATCAATATGGCCACGTTTCT
AGCCCAAGGT---CCGATCATTACGCGTCAACCCAATTGCATGGTTATGG
TCCTATGAACATGAATATGGCCGCA---CATCATGGTGCAGGGGGCCTTCT
TCCGATACATGAGGCAGCCCATCAAACAAGAGCTAATCTGCAAGTGGATT
GAACCGGAACAACTGGCAAACCCAAAAAAGTCATGCAACAAACTTTCAG
CACAATGCATGAGCTCGTGACCCATCTAACAGTGGAACATGTGCGGGGGC
CGGAGCAGTCAAACCACATTTGCTTCTGGGAAGAGTGTCCC-----

>Galaxiella nigrostriata

AGCTTATTAATTTCGAGCCGAGCTAAGCCAACCTGGGACCCTTTTAGGTGA
CGACCAGATTTATAACGTAATTGTAACCGCACACGCCTTTGTAATAATCT
TTTTTATGGTGATAACCGATTATAAATGGTGGTTTTGGTAACTGATTGGTG
CCTCTGATAATTGGAGCTCCAGATATAGCATTTCACGCATGAATAATAT
AAGCTTTTACTTCTTCCACCCTCTTTTCTTCTTATTAGCGTCTTCCG
GAGTTGAAGCTGGGGCTGGCACAGGATGAACAGTTTACCCGCCCTTAGCG
GGGAACCTAGCTCATGCTGGAGCCTCTGTAGACCTGACAATTTTTTCCCT
TCACCTGGCAGGAATTTCTTCGATTTTAGGTGCAATTAACCTTTATTACTA

CAATTATTAATATAAAAACCCCCAGCAGTTTCACAATATCAAACCCCTTA
TTTGTATGGTCCGTTTTAATTACAGCTGTACTCCTCCTTCTTTCTTTGCC
AGTTCTTGCTGCAGGAATCACGATACTATTAACCGACCGAAATTTAAACA
CAACTTTCTTCGACCCCGCGGGAGGAGGCGACCCCTATCTTATAACCAGCAC
TTGTTTTGATTTTTTTGGACATCCC GAAGTCTATATTCCTTATTTTACCCGG
CTTCGGAATAATTTACACATTGTCGCTTATTACTCAGGCAAAAAAGAGC
CATCTGGTTACATAGGAATAGTTTGAGCTATGATGGCAATCGGCCTATTA
GGCTTCATTGTTTGAGCCACCATATATTTACAGTCGGTATAGACGTAGA
TACTCGAGNNNN-----

NNNGGCTAATCCTCAACGAGGCCGAGGTGATC
CTGGCCCTGGCC CAGGAGTTCAGATGAGGGTGGTGACGGTGTGCGCTGGA
GGAGCAGTCCTTCTCCGCCATCGTTCAGGTCTCAGCAGGGCCTCCATGC
TGGTGAGCATGCACGGAGCCAGCTCATCACCTCACTGTTCTCCCCCGG
GGGGCCGTGGTGGTGGAGCTTCCCGTTCGCCGTCAACCCCGAGCAGTA
CACGCCTTACAAGACCCTGGCTTCCCTGCCGGGCATGGACCTCCACTACG
CCGCCTGGAGGAACCACCTGGAGGAGAACACGGTGACCCACCCGGACAGG
CCCTGGGACCAGGGGGGCATCGCTCACCTGGAGAAGGAGGAGCGGGAGCG
CATCGTGGCCAGCCGGGACGTTCCCCGGCACCTGTGCTGCCGGAACCCAG
AGTGGCTCTTCCGGATCTACCAGGACACCAGGGTGGATGTGCCCTCCCTC
CTGGAGCTCCTGCG---GGAGAACCCTGAAG---ACCCGACCAGCCTGAA
GAA---GGCCAGGCCCGCCAGCACCGTCCACCCGGGCGGGTCCGCGAGG
CCCGGTGCCAGACGTCCGTCCAGGCCGCAACGAGGCCAAGCTGACAGTT
TGGTGGCAGATCCCGTGGAACCTGAAGTACCTGAAGGTCAGGGAGGTGAA
GTNNNNNNNNNNNNNNNNNNAAGAAAGATCCAAGCAAGGGGACCC TGAGGATCAAATCATT CAGGCA
AATCCAGCACTGGAAGCTTTTGGTAATGCCAAAAC TGTGAGAAACGACAA
CTCATCCCGCTTTGGTAAATTCATCCGAATTC ACTTTGGA ACTACTGGAA
AATTATCTTCTGCTGACATAGAGACTTACCTACTTGAAAAATCACGTGTT
ACTTTTCAGTTAAAGTCAGAGAGGAACTATCACATCTTCTTTTCAGATCCT
GTCCAATCAAAGCCAGAGCTGTTGGACATGCTTTTAATCACCAACAATC
CCTATGACTATGCCTATATCTCCCAGGGAGAGGTTACAGTACAATCAATT
AATGATGCAGAGGAGTTGATGGCCACAGACAGTGCCTTTGATGTGCTGGG
CTTTACTCAAGAAGAAAAAATGGGCGTCTACAAATTGACCCGGTGCCATCA
TGC ACTACGAAACATGAGGTTCAAGCAAAGCAGCGTGAAGAGCAGGCT
GAGCCGGATGGTACAGAAGCTGCTGACAAATCCTCTTACCTGATGGGTCT
AAATTC TGACAGCCTTATTAAGGGCTTTGT CATCCCAGAGTCAAAGTTG
GCAATGAGTATGTTACCAAAGGTCAAGGTGTAGATCAAGTCTACTAT---

ACGCTGGCCCACGTGCCTGAGATCATAGAAAGAGACGGGTCCATCGGGG
GTGGGCCAGCGAGGGGAACGAGTCCGGTAACAAG-----

-----GGCGAAGTCACAGAGAGAGAAGTAGCATTGGGGATAAACCG
TTTGCAGACGGAATGGGCGCTTTCAAAATCAACCACAGTTCACATGATTT
GGGCTCTGG---GCAAAGTGCATTTTCGTCCCAAACA---CCAGGCTAC-

--GCTGCGGCTGCCTTGGGA---CACCATCA-----CCACCCTACTCAT
GTCAGTTCA---TATTCGACCGCAGCTTTCAATTCCACCCGGGACTTTCT
CTTCAGAAATCGGGGTTTTGCAGATGCCACCAG-----TGCCC
AGCACAGTCTGTTTGCCTCCGC---AGCGGGAAGTTT---T-----GCA
GGACCACATGGACACTCTGATGCCGCAGGACACCTGCTCTTCCCAGGACT
TCATGAG---CAAGCCGCGAGTCATGCGTCCTCAAATGTTGTGAACAGTC
AAATGCGATTGGGCTTTTCTGGGGACATGTATGGACGTGCCGATCAATAT
GGCCACGTTTCTAGCCCAAGGT---CCGACCATTATGCGTCGACCCAATT
GCATGGTTATGGTCCATGAACATGAATATGGCCGCA---CATCACGGTG
CGGGGGCCTTCTTCCGATACATGAGGCAGCCCATCAAACAAGAGCTAATC
TGCAAGTGGATTGAACCGGAACAACCTGGCAAACCCCAAAAAGTCTTGCAA
CAAACTTTTCAGCACAAATGCATGAGCTCGTGACCCATCTAACAGTGGAAC
ATGTCGGGGGGCCTGAGCAGTCAAATCACATTTGCTTCTGGGAAGAATGT
CCCCGAGAAGGAAAACCATTCAAAGCAAATACAACTTGTAATCATAT
TAGAGTACACACCGGAGAA-----

>*Gambusia affinis*

AGCCTACTGATCCGGGCCGAACCTCAGTCAGCCAGGCACACTTCTTGGAGA
CGACCAGATCTACAATGTAATCGTTACAGCTCATGCTTTTTGTAATAATCT
TTTTTATAGTTATAACCCATCATAATTGGAGGGTTTGGTAACTGACTAGTC
CCCCTAATAATTGGTGCCCCAGACATAGCCTTTCACGAATAAAACAACAT
AAGCTTTTGAATTAATCTCCCCCTCATTTCTCCTCCTTGCATCTTCTG
GGGTTGAAGCAGGGGCAGGAACAGGCTGAACTGTCTATCCCCCTCTTGCA
GGTAACCTAGCACATGCCGGACCTTCTGTAGACCTAACCATCTTTTCCCT
TCACCTAGCGGGCATCTCCTCTATTCTGGGAGCTATCAATTTTATTACCA
CCATTATTAATATAAAAACCTCCCGCAGCCTCCCAGTACCAAACACCATTG
TTTGTGTGGGCAGTCCTAATTACAGCTGTACTCCTCCTTCTTTCCCTTCC
AGTTCTTGCCCGCAGGTATTACTATGCTTCTTACAGATCGAAACCTAAACA
CCACTTTCTTTGATCCAGCGGGGGCGGAGACCCAATCCTCTATCAACAC
CTGTTC-----

-----TTCCTGGAGAGAAACCTTCATCCGTCCAACCTGTCTTGG
CATGCTGTTGCTGTCTGACGCCCACCAGTGTACAAAGCTGTCAGAGCTCT
CCTGGGGCATGTGTCTAAGCAACTTCCCTGCCATTTGCAAGACAGAGGAC
TTTCTCCAATTGCCCAAAGATATGGTAGTGCAGCTTTTGTACACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAATTGGA
TTAACTATGACCTAGAAAAGAGGCACGTCTACCTCCCAGAGCTTCTGAGA
ACGGTTCGTCTCGCCTTACTGCCTGCCATCTTTCTGATGGAAAAATGTTTC
AACAGAAGAGCTGATTAATGATCAGGCCAAAAGCAAAGAACTGGTTGATG
AAGCTATTCGCTGCAAGCTGAAGATCCTACAGAATGATGGCGTGGTCAAC
AGCCCATGTGCTCGACCTAGAAAAACCAGCCATGCCCTTTTCTGCTTGG
CGGACAGACATTCATGTGTGACAAAATTGTACCTGGTAGACCAGAAAGCCA
AAGAGATAATCCCAAAGGCTGACATCCCCAGTCCCAGGAAGGAGTTCAGT
GCCTGTGCCATTGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGATC-
AGAGAACGGTGTTCCAAAGACGTATGGGTCTACGACACTGTGCATGAGG
AATGGTCCAAAGCAGCACCTATGCTCATCGCCAGGTTCCGGCCATGGCTCC
GCGGAGCTGAAACACTGCCTATATGTTGTTGGAGGACACACAGCGGCAAC
GGGCTGTCTCCAGCCTCTCCGTCCAGATGAATACATCGCTTTGTTTAGT
CGCTCGACAACAAGATTAATTCTGAATGAAGCAGAATAATAATGGCCTT
AGCCAGGAGTTCCAGATGAGAGTGGTTACAGTATCCCTGGAGGAACAGT
CTTTTCTTAGTATCATCCAGGTGATTAGTGCTGCTTCCATGTTGGTCAGC

CATCATAAATGGGCTGTCAGGATGGACATCTTCGTTAGATGACTCCCCAG
CTGACACCATCACCCGGCGCTTTCGCTATGATGTGGCGCTTGTTGGAGCA
CTGAAGGACCTTGAGGAGGACATCATGGAAGGTCTGAGAGACACTGGGAT
GGAAGATAGCGCTTGCACCTTGGGCTTTAGAGTCATGATCAAGGAGTGCT
GTGATGGCATGGGTGATGTTAGCGAAAAGCATGGTGGAGGACCAGCTGTT
CCTGAGAAGGCTGTTGCGTCTCTCTTCACTGTTATGTCTGTCTCTATCCA
GGCTGAAGATGAACAG-----GAGG
AGGTCACAATTTTACAGAGCCAAAGCCCAACTCTGAACTATCCTGTAAG
CCCCTTTGCCTTATGTTTGTGGATGAGTCTGACCACGAGACTCTCACTGC
TGTTTTGGGGCCTATAGTTGCAGAGCGAAATGCGATGAAAGAGAGCAGGC
TCATTTCTATCTATGGGCGGCATGCCACGCTCCTTTCGCTTCCACTTCAGG
GGCACAGGGTATGATGAAAAGATGGTGCCTGAAATGGAGGGCCTGGAAGC
TTCGGGATCTACATATATCTGTACTTTGTGTGACTCCAGTCGAGCAGAGG
CTGCTCAAAACATGGTGTTACACTCCATCACCCGCAGCCATGATGAGAAT
CTGGAACGTTATGAAATATGGAGAACCAATCCCTTTTCTGAGTCTGTAGA
TGAGCTACGAGACAGAGTCAAAGGAGTCTCAGCCAAGCCCTTTCTGGAGA
CCCAGCCCACGCTAGATGCATTGCACTGCGACATAGGCAATGCCACTGAA
TTCTACAAAATCTTCCAGGATGAAAATGGAGAAGTGTTTAAGAACC---
CAAC---CCCAGCAGAGAGCAACGGCGCAGCTGGAGGGCAGCCTTGGATA
AACAGCTGAGGAAGAAGATGAAGCTTAAACCAGTATGAGGATGAATGGG
AACTATGCCCGAAGGTTAATGACCATGGAGGCTACCGAGGTGGTTTTGTGA
ACTGGTGCCCTCAGAGGAGAGGAGAGAGGTCCTGAGGGAACATGAGGC
TCTACCTCCAAATGAAACCTGTGTGGCGTGCCACCTGTCCAGCCAAGGAG
TGCCCTGACCAGCTGTGCCGCTACAGTTTTAACTCCAGCGCTTTGCCGA
CCTGCTCTCCGCTACCTTCAAGTACAGGTATAACGGAAAAATAACCAATT
ACCTGCACAAGACCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGGA
TCTTTTGGAGCCTGGGCCAGCGAGNNNNNNNNNNNNNNNNNNNTCATATACCATTGAGATGGGTTCCAC
T

GGGACCTCAATGGAAGGCAAATCCAAGGCCATTCATCTGCTCTATTGAAG
ACCCAACCAAACAGACAAAGTTCAAGGGTATCAAGACCTACATATCGTAC
CGAGTGACGCCGAGCCACATAGGCCGGCCAGTTTACAGACGATACAAACA
CTTTGACTGGTTGTACAACCGTTTGTGTCACAAGTTCCTGTGATCTCTG
TGCCCTCACCTCCCTGAGAAGCAGGCCACTGGTCCGTTTCGAGGAAGACTTC
ATCGAGAAGCGTAAGAGGCGACTGATACTGTGGATGAACCACATGACCAG
CCACCCAGTCTCTCGCAGTATGAAGGCTTTGAGCACTTTCTGATGTGTG
GTGATGATAAGCAGTGGAAACTGGGTAAGAGGCGGGCAGAGAAGGACGAG
ATGGTGGGAGCCATTTTCATGCTGACCCTTCAGATCCCCAACGAACACCA
GGACCTTCAGGACGTCGAGGAGAGGGTTGACAACCTCAAGACTTTCGCCA
AGAAAATGGACGACAGTGTGATGCAGCTCACGCACGTTGCCTCAGAGCTC
GTCCGTAAGCACCTGGGCGGGTTCAGGAAGGAGTTCAGCGACTTGGGAA
TGCCCTCCAGTCTATTAGCCAGGCTTTCACACTGGACCCACCCTACAAGT
CAGATGCCCTCAACAACGCCATCTCCACNNNNNNNNNNNTTTCCTCAAATTAACCTCCCT
GGGTTTCATCATTGGAGTCGGTGTGGTAGGGAACCTCCTGATCTCAATCC
TGCTGGTTAAAGACAAGAGCCTGCACCGGGCACCTACTATTTCTACTG
GACCTGTGCGCCTCGGATATCCTACGCTCCGCTATCTGCTTCCCCTTTGT
CTTACCTCTGTAAAGAATGGATCTGTCTTAACCTACAGCATACTGACCT
GCAAAGTGATCGCCTTCCCTCGGTGTGCTCTCCTGTTCCATACAGCATTC
ATGCTCTTCTGCGTCAGCGTACCCGCTACCTGGCCATCGCGCATCACCG
CTTCTACACCAAGAGGCTGACGTTCTGGACGTGCTTGGCCGTCAATTGCA
TGGTGTGGACGTTGTGCGTGGCCATGGCGTTCCTCCGGTGTAGACGTC
GGGACGTACAGTTTCATCCCGGAGGAGGACCAGTGTACGTTTCAGCACCG
CTCCTTCCGGGCGAACGACTCGCTGGGCTTCATGCTCCTGCTGGCGCTCA
TCCTTCTGGCCACGCAGCTGGTTTTACCTCAAGCTCATCTTCTTCGTCCAC

GACCGCCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCCGTTAGCCAGAA
CTGGACCTTCCATGGGCCGGGCGCCAGCGGGCAGGCGGGCGCCAACCTGGC
TGGCCGGGTTTTGGCCGGGCCCCACCCCGCCTACTTTGCTGGGGATCCGA
CAGAACAGCAACGCAGCGGGCCGCAGACGTCTTCTGGTGCTCGATGAGTT
CAAAACGGAGAAGAGGATTAGTAGGATGTTCTACATAATGACATTTTTCT
TCTTGGCTCTGTGGGGGCCCTACCTGGTTGCCTGCTACTGGCGCGTGTTT
GCCAGGGGCTCTGTGGTCCCTAGAGGGTACCTGACAGCAGCCGTGTGGAT
GAGCTTTGCCAGGCCGGGGTCAATCCTTTCATCTGCATCTTCTCCAACA
GGGAGGCCAAATCTCGCTTTCACCCCTGGCGTGGGGACTGGTCTTGGCAGC
GAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTGTCCCCGCAGCAAAG
CGAGGAGCCCACTGTTGCCACCCCCCGCAGCGTTGGTTTTGTCACCC---
CTGCCAACAACCGACTGGACTTTGCCGCCTCGGCATACGACGCCGCC---
-----GATTTCCGCCGTAACGCGGCCACCTTGCTGTCTACGCAGCGGC
CGGAGTAAAGGCTC-----TCCCCCTCCCGACAGCGGGCTGCTCCAATC
GGCTCTTGGCTATTACGCAGACCCGTCTG---GCTGG---GGAGGACGC
ACGCCACCACAGTACTGCGGGCTAAACAGTAAATCCAGCTCGGTCTTTTC
CTGCTGGCCGACCAACTCTCTTGGAGGCAGGGCGAGCA---CC---AACT
ACCTGT-----CGGAGGA---GGGA---GACTC---TATCGCGACC
GAGAGTACCCG---AT---CGGTGTTTCGGAAGAG---ACCAAACCCAA
AGACATCAC---ATCAGA---GTCCAGCTGGATAGAG---ACGCCGTCGT
CSATAAAGTCGATTGATTCCAGCGATTCTGGGATCTTTG---AACAGGCC
AAAAGAAGACGGATCTCCCCCTTGCCACCCG-----GTCTCAGA
GACAGTGTCCCCATTAAAATCCGAGCATCACTCAACAGGAGAGGTGGCGG
AGCGGGAAGTGGCGCTGGGGATCAACCCTTTCGCGGACGGCATGGGCGCC
TTCAAGATCAACCACAGCTCCCACGACATCAGCTCCGG---GCAGACAGC
GTTCTCATCCCAGGCT---CCCGCTATGCAGCGGCGGCCGCCCTGGGA-
--CACCACCA-----TCACCCGACCCACGTCGGTTCC---TACTCCAG
GCGGCGTTCAACTCCACCAGAGACTTCTCTTCAGAAATCGGGGTTTCGG
GGACGCGGCTGG-----GGCGCAGCACAGCCTGTTTGCCTC--
-----CGGCAGCTT---C-----GGGGGCGGCACGGACATTCGGAC
GCGGCGGGGCACCTACTCTTCCAGGGCTCCACGAG---CAGGCGGCGAG
CCACGCGTCCCTCCAACGTGGTGAACAGCCAGATGCGACTGGGCTTCTCAG
GGGACGTGTACGGCCGGGCTGATCAGTATGGGCATGTCACGAGCCCGCGT
T---CCGATCACTACGCATCCACACAGCTACACGGCTACGGCCCCATGAA
CATGAATATGGCTGCG---CACCACGGAGCGGGGCCTTTTTCCGCTACA
TGAGGCAGCCCATCAAGCAGGAGCTCATCTGCAAGTGGATCGAGCCGGAG
CAGTTGACAAACCCCAAAAAGTCGTGTAACAAAACTTTCAGCACCATGCA
CGAGCTGGTGACTCACCTGACAGTGGAGCACGTGGGGGGCCTGAACAGA
CGAACCATATCTGCTTTTGGGAGGACTGCTCCAGAGAAGGGAAGCCCTTT
AAAGCCAAATACAAACTTGTAATCACATCAGAGTGCACACCCGGAGAAAA
GCCCTTCCGCTGTCCGTTTCCCGGCTGCGGCAAA

>Gasterosteus aculeatus

AGCCTTCTAATTTCGAGCTGAATTAAGTCAACCCGGAGCTCTCCTTGGGGA
CGACCAAATTTATAACGTAATTGTTACAGCCCATGCTTTCGTAATAATCT
TCTTTATAGTTATAACCAATCATGATCGGAGGCTTTGGCAACTGACTTATC
CCCCAATGATCGGAGCCCCCGATATAGCATTTCCACGAATAAACAACAT
GAGCTTCTGATTGCTCCCACCCTCTTCTTACTTCTCCTTGCCCTCTTCAG
GGGTGAAGCTGGTGCAGGGACAGGGTGAACAGTTTATCCACCCCTCTCT
GGGAACCTCGCCCATGCAGGTGCTTCAGTCGACCTAACAATCTTTTCACT
TCATCTTGCAAGGATTTTCATCAATTCGGGGCAATCAACTTCATTACCA
CAATTATTAACATGAAACCTCCCGCTATTTCTCAGTACCAAACGCCCTTT
TTCGCTGATCTGTTCTCATCACTGCAGTCCTTCTTCTCCTATCCCTGCC
CGTCTTGCAAGCCGAATCACTATGCTTTTAAACAGACCGAAACTTAAACA

CCACTTTCTTCGACCCAGCAGGGGGTGGAGACCCAATTCTTTACCAACAC
TTATTTTGATTCTTCGG-----

NNNGTGCA
CCAAGCTGTCCGAGCTCTCCTGGGGCATGTGCC
TCAGCAATTTTCCCGCCATTTGCAAGACAGAAGACTTCCTCCAGCTGCCC
ACAGATATGGCGGTGCAGCTGTTGTCACACGAGGAGCTGGAGACGGAAGA
CGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGATCAACTACGACCTGG
AGAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGGACTGTCCGTCTGGCC
TTGCTGCCCGCCATCTTCCTCATGGAGAACGTCTCGACAGAAGAGCTGAT
CAATCCCAGCCCAAGAGCAAGGAGCTGGTGGACGAGGCCATCCGATGCA
AGCTGAAGATCCTGCAGAACGACGGCGTTCGCAACAGCCCCTGTGCCCGG
CCCAGAAAGACCAGCCACGCCCTGTTCTTCTGGGAGGTTCAGACGTTCAT
GTGTGACAAGTTGTACCTCGTGGACCAGAAAGCCAAGGAGATCATCCCA
AGGCTGACATCCCCAGCCCAGGAAGGAGTTCAGCGCCTGCGCCATCGGC
TGCAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAACGGCGTGT
CAAAGACGTGTGGGTTTACGACACCGTCCACGAGGAGTGGTGAAGGCGG
CGCCGATGCTCATCGCCCGCTTCGGCCACGGCTCGGCAGAGCTGAAACAC
TGCCCTACGTGGTGGCGGTCACACGGCGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGATGATTAC
GTCGTCGTGT

TCAGTCGCTCGGCAACGAGGCTGATACTGAACGAAGCTGAGCTAATCCTG
GCGCTGGCCAGGAGTTCAGATGAGAGTGGTACGCGTGTCCCTGGAGGA
TCAGTCCTTCCCCGGTATCGTCCAGGTGATCAGCGGCGCCTCCGTGTTGG
TCAGTATGCACGGCGCTCAGCTCATCGCGTTCGCTTTCCTCCCCAGAGGG
GCGACCGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAACAGTACAC
CCCGTATAAAACCCTGGCCACCCTTCGGGAATGGACCTTCACTATATCT
CCTGGAGGAACACTAAGGAGGAGAACCATCACCCACCAGACAGACCC
TGGGAGCAGGGGGCATCGCTCACTTGGAGAAGGAGGCAAGAGCGCAT
ACTGGCAGCCGAGACGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGT
GGCTTCCGGATCTACCAGGACAGTTGGTGGACATCCCCTACTTCCTG
GAGACCCTTAG---AGAGGGCATGAAG---ACAAAGCCCAGCGGGAAGAA
---GTCAAAGCCGGCCAGCACAGTCCACCCGGGCGGTGAGGGAGCCGC
AGTGTACAGACCTCGGTACAACCAACGAGGCTAAACTCACAGTTTCC
TGGCAGATCCCATGGAATCTGAAATACCTAAAGGTGAGAGAGGTGAAGTA
CGAGGTGTGGATCCAGAAACGGGACACTAGTAAGGGGACGCTGGAGGACC
AGATTATCCAGGCCAACCCGGCACTGGAGGCCTTTGGAAATGCCAAAACG
CTGAGGAATGACAACCTCATCTCGTTTTGGGAAATTCATCCGAATCACTT
TGGTACAAGTGGGAAGCTGTTCATCTGCCGATATCGAGACTTACCTGCTGG
AAAAGTCCCAGTGCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATC
TTCTACCAGATCCTCTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCT
GATACCAACAACCATACTACTCCTACATCTCCCAGGGAGAGGTGA
CGGTGGCCTCCATCAATGACTCGGAGGAGCTGCTGGCCACCAGACAGCGCC
TTTGACGTGCTGGGCTTCACTCCGGAGGAGAAGATGGGTGTCTATAAACT
CACCGGGGCCATTATGCACTACGGCAACATGAGGTTCAAACAGAAGCAGC
GCGAGGAGCAGGCTGAGCCGGACGGGACCGAGGCCGCTGATAAAACAGCC
TACTTGATGGGGCTGAACCTGCGGACCTCATCAAGGGGTGTGTGCATCC
CAGGGTGAAGGTGGGAATGAATACGTAACCAAAGGTCAAAGTGTGGACC
AAGTCTACTACCAAACAAGGAAGCCTTCAAGTGTGAGGAGTGCCGGGAAG
CACTACAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGC
CACGTCAGGGGATCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCA

CACCCGTGCTCCTGGAGCACCTCAAGACCCACTCCGGAAAGTCTTCGGGT
GGCGCAAGGAGAAGAAGCACCCGTGCGACCACTGTGACCGCCGTTTCTA
CACGCGCAAGGACGTGAGACGACACATGGTGGTCCACACGGGCCGAAAAG
ATTTCTCTGCCAGTACTGTGCCAGCGCTTTGGCAGRAAGGACCATCTG
ACGCGTCACGTTAAGAAGAGCCACTCACAGGAGCTGCTGAGGATCAAGAC
GGAGCCTTCGGATATGTTAGGTCTTTTAGCGTCCGGGTACCGCCCTGCT
CTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGTATGGGTCCCAACAAA
GACCAATGATGGGCAAACCGTTCCTTAGCGGGGCCCTTTTCCGATGAG
CATGTACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGG
TGGGTACCCG-----CACCCATCCCTGATGCCCGGTCCCTTGCTGCA
GCTATGGGTATGGGTGCCACATGGAATATCTGATATACGCCTCTTTTTC
GTTTCATGGGATGTTTACAGATCAGCGATGGATCAAACGTAGTGAACCTCT
TGGCAAGTAACCTCCGAGTGTTCGTACGCTATGACGCAGCAGAAATAC
TTCAGCAACTACAGTCCCCTGATTGGGTCTACATTTATGAGCCCGTCGA
GTACTGGAACTCCACGGTGCAGGAACACCTGAAGACCCTGAGTCATGGTT
TCAACAAGATCTCTTGGATGGACAACTTTTTCCACTACCTGCGTGTGGTA
AATGTGAGTGCCTCGACCAAGAGTGACTTCATCTCCATCCTCAAGGGCTC
CTTCCCTTCGAGCCCAGGTACAGCACTTCAATGAGGACATCATATTTT
CCATGA---ACCGCGAAACCG-----AAGAGTACGACATTATCGCCTCG
CGGATCTACCTGGTGGCGCGACAGCAGAGAAGAAGCGAGAGGAGTGGT
GGAGCTTCTGGAAAAGCTTCGACCGTGGATGCTGATCAACAGCATCAAGT
TCATTGCATTCAATCCTACGTTTGTGTTCATGGACCGCTACAGCTCCTCT
GTTATCTCACCCATCCTGACCTCAGGCTTTCAGCGTACTCACAATCCTCAT
CCTCACTTTTCTTCTGGTTCATCAATCCGTTGGGAAACTTCTGGCTCATCC
TCACGTAAACGTCCGTGGAGCTCGGCGTCTTGGGTTGATGNNNNNNNNNNNNNNGAATGGCAA
CCAGCWCTCAAGAACGTGTCTACGTCTGCACCGTGGCATCATTAATGG
GCTCTCTGGATGGCCCTCCTCGGTGACGACTTCCCTGCTGACACCACCA
CTCGACGTTTTCGGTACGACGTGGCTCTGGTGTGACGTTTTAAAGGATCTG
GAGGAGGACATCCTGGAGGGGTTGAGAGAGAGCGGCATGGAAGACAGCGC
TTGCACCTCAGGCTTTCAGCGTCATGATCAAGGAGTCTGACGGCATGG
GGGACGTCAGCGAGAAGCAGCGGAGGACACCAGTTCCTGAGAAGGCT
GTGCGTTTTTCTTTACTGTCTGTCTGTCTGTGCTGGCAGACGAGGA
GGTG-----GAAGAGGTTACCATCT
TCACTGAGCCAAAGCCAAACTCAGAAGTCTGCTGTAAGCCTCTTTGCTTG
ATGTTTCGTGGATGAGTCGAACACGACGCTCACAGCTGTCTGCGGGCC
AATAGTTGCCGAGCGCAATGCGATGAAAGAAAGCAGGCTCATCTCTCCG
TGGGCGGACTCCCTCGTCTCTCCGCTTTCACTTTCAGGGGACGGGATAT
GATGAGAAGATGGTGCAGGAGGTAGAGGGCCTGGAGGCGTCAGGGTCCAC
CTACGTCTGCACTCTTTGTGACTCCACTCGCGCGGAGGCCTCTAAAAACA
TGGTGTGCACTCCATCACCCGAGTCACGAAGAGAACCCTGGATCGTTAC
GAGATATGGAGAACCAACCCGTTTTCTGAATCTGTGGAGGAGCTGCGGGA
CAGAGTCAAAGGGATCTCTGCCAAACCCTTCATGGAGACCCAGCCACGA
TGGATKCACTGCACTGTGACATCGGCAACGCCACAGAGTTCTACAAGATC
TTCAGGACGAGATCGGGGAGGTGTACCGAAAGGT---CAAC---CCCAG
TCGGGAAGAACGGCGAAGCTGGAGGGGCGCTGGACAAACAGCTCAGGA
CGAAGATGAAGCTCAAACCGGTGATGAGGATGAATGGGAACTACGCCCCG
CGGCTAATGACCCAAGAGGTGCTGGAGGTGATTTGTGAGCTGGTGCCTC
CGAGGAGAGGAGGGAGGCCCTGAGGGAGCTGATGAGGCTCTACATCCAAA
TGAAGCCTGTGTGGCGGCCACCTGCCCGGCAAGGAGTGCCCCGACCAG
CTCTGCAGCTACAGCTTTAACTCCAGCGCTTTCGCGACCTTCTCTCCTC
CACCTTCAAGTACAGGTACAACGGAAAGATAACCAACTACTTGACAAGA
CTTTGGCCCATGTGCCTGAAATCATAGAGAGANNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNCGTACACCATCGAGATG

GGCCCCCTGGGGCCCCCTGTGGAAGGAGAGCCRCAGCCGTTCTCCTGCTC
CRTYGAGRACCCACGAAACAGACCAAGTTCAARGGCATCAAGACGTACA
TCTCGTACCGGGTACGCCGAGYCACACGRGMATCCCGTCTACAGGCGC
TACAAACATTTGACTGGCTCTACAACCGCTGCTGCACAAGTTCACTGT
GATCTCCGTGCCTCACCTGCCCGAGAAGCAGGCCACGGGGCGATTTGAGG
AAGACTTCATCGAAAAGCGCAAGAGGGCGACTGGTACTGTGGATGAAACAC
ATGACCAGCCACCCGGTCTCTCCAGTATGAGGGCYTYGARCACTTTCT
GATGTGCGGCGAYGACAAGCAGTGGAAAGCTCGGCAAGAGGGCGGGCGGAGA
AGGACGAGATGGTGGGAGCCATTTTCATGTTGACCTGCAGATCCCCACC
GAGCACCAGGACCTYCAGGATGTGGAGGAGCGCATCGACACCTTCAAGTT
CTTCGCCAAGAAGATGGACGACAGCGTGATGCAGCTCACGCACGTCGCCT
CGGAGCTGGTGCGCAAGCACCTGGGCGGGTTCAGGAAGGAGTTCCAGCGG
CTGGGAAATTCTTTCCAGTCCGTGAGCCAGGCGTTCATGCTTGATCCTCC
CCAAAGTTCAAGAGCCCTCAACAAAGCCATCTCCCATCCTCTCGCCACGT
TCCTCAAAGTACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTCGGA
AACCTCCTGATCTCCATCCTGCTCGTCAAAGACAAGAGTCTGCACCGAGC
GCCCTACTATTTCTGCTGGACCTGTGCGCCTCTGACATCCTGCGCTCTG
CCATTTGCTTCCCCTTTGTCTTACCTCGGTCAAGAATGGATCCGCCTGG
ACGTATGGCAGCTGACCTGCAAAGTATCGCCTTCTGGGTGTGCTCTC
CTGTTTCCACACGGCGTTTATGCTCTTCTGCGTCAGCGTCACGCGTACC
TGCCATCGCGCACACCCTTCTACACCAAGAGGCTGACCTTCTGGACC
TGCCTAGCCGTATCTGCATGGTGTGGACGTTGTCGGTGGCCATGGCCTT
CCCGCCGGTGTCTGACGTGGGGACGTACTCTTTTCATCCGGGAGGAGGACC
AGTGCACGTTCCAGCACCGCTCCTTCAGGGCGAATGATTTCGCTGGGCTTC
ATGCTCCTGCTGGCGCTCATCCTCCTGGCCACGCAGCTGGTTTACCTCAA
GCTCATCTTCTTCGTCCACGACCGTCCGGAAGATGAAGCCCGTCCAGTTTG
TGCCCTGCCGTARCCAGAAGTGGACCTTCCACGGGCTGGTGGCAGCGGG
CAGGCGCGGCCAACTGGCTGGCCGATTCGGTCGAGGCCACCCCGCC
TACCTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTC
TGCTGGTATTGGATGAGTTCAAACAGAGAAGAGGATTAGCAGGATGTTT
TACATCATGACGTTTTTCTTTCTGGCGCTATGGGGCCCTACCTGGTCGC
CTGCTACTGGCGGGTGTGTTGCAAGGGGCCCCGTGGTCCCCGGAGGCTACC
TGACGCGCCCGTGTGGATGAGCTTTGCCAGGCGGGGTCAATCCTTTC
ATCTGCNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCCTGGCGTG
GGGACCGGCCCTGGCAC
GGAGC---GCAGCGTCCCACTCGGCAACAGCTTGTCTCCCCGCAGCAA
CCGACGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC--
-CTGCCAACACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCC--
-----GATTTCCCGGCAACGCGGCCACCTTGTGTCTTACGCAGCGG
CCGGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGTCCAAC
CGGGCCCTTGGCTATTACGCGGACCCGTCGG---GCTGG---GGAGGACG
CACGCCCGCGCAGTACTGCGGYGTCAACAGCAAATCCAGCTCGGTCTTTT
CCTGCTGGCCCCGAAACTCTATCGGTGGCAGAGCAGGCA---CC---AAC
TACCTGG-----CCGAGGA---GGG---GACTC---CATCACGAC
GGAGAGGTCCCG---AT---CGTCGGCTCGGAMGAG---AGCAAAGCCA
AAGACATGAC---GTCCGA---GTCGAGCTGGATAGAG---ACGYCGTCC
TCCATTAAGTCAATTGATTCAAGCGATTCTGGTATCTTTG---AACAGGC
TAAGAGGAGAAGGATCTCACCTTCTGCCACGCCG-----GTTCTG
AGACAGTGTCCCCGTAAAGTCTGAGCATCACTCAACAGGCGAAGTCACA
GAGAGAGAAGTAGCGTTGGGGATCAATCCGTTTCGCGGATGGGATGGGCGC
CTTCAAATAAACCACAGCTCCACGACATCGGCTCCGG---ACAAACGG
CGTTTCTCTCAGGCG---CCCGGTAC---GCAGCGGCCGCCCTGGGA
---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCAC
GGCGGCTTCAACTCCACCAGGGACTTCTCTTCAGAAATCGGGGTTTCG

GGGACGCCACCGG-----GGCGCAGCACAGTTTGTTCGCCTC-
-----CGGGAGTTT---C-----GCAGGGCCACATGGACACTCGGA
TGCAGCGGGGCACCTGCTCTTCCCAGGACTCCACGAG---CAAGCGGCGA
GCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCG
GGGGACATGTACGGGCGGGCCGACCAGTACGGCCACGTTACAAGCCCGCG
GT---CCGACCACTACGCATCGACCCAGCTGCACGGCTACGGCCCCATGA
ACATGAATATGGCCGCG---CACCACGGAGCGGGGCCTTCTTTTCGATAC
ATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGA
GCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGATGC
ACGAGCTCGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGCAG
ACCAACCACATCTGCTTCTGGGAGGAATGCGCCGAGAAGGAAAAGCCGTT
CAAAGCCAAATACAAACTTGTGAACCATATCAGAGTACACACCCGGAGAAA
AGCCCTTCCCGTGTCCGTTCCCCGGCTGTGGCAA

>Gazza minuta

AGCCTGCTTATCCGGGCAGAATTAAGCCAACCCGGCGCCCTCCTCGGAGA
CGACCACATCTACAATGTTATCGTCACCGCCCATGCATTCGTAATAATTT
TTTTTATAGTCATACCTATTATGATTGGAGGCTTTGGCAACTGACTAATC
CCCCAATGATCGGGGCCCTGATATGGCATTCCCCCGAATAAATAACAT
AAGCTTTTGGCTTCTGCCTCCCTCGTTTCTGCTGCTGTTAGCATCTTCCG
GCATTGAAGCTGGTGCTGGCACAGGGTGGACAGTCTACCCCTTTGGCG
GGGAATCTTGCCCATGCAGGAGCTTCTGTTGACCTGACAATCTTCTCACT
ACACTTGGCTGGGATTTCCCTCAATTTTAGGGGCAATCAACTTTATTACAA
CAATCATTAATATAAAAACCCCTGCAATTTTACAATTCCAAACCTTTTG
TTTGTGGGCTGTGCTTATCACAGCCGTGCTTCTTCTACTTTCCCTTACC
AGTTCTCGCAGCCGGCATCACTATGCTCCTAACAGATCGAAATCTAAACA
CTACTTCTTCGACCCTGCAGGAGGGGGAGACCCAATTCTGTACC-----

-----TTCCCTTGAGAGAAACCTTCACCCATCCAACCTGCCTTGG
CATGCTGCTGCTGTCCGATGCCACCAGTGCACCAAGCTATCTGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCCTGCTATTTGTAAGACGGAGGAC
TTCCCTCCAACCTGCCCAAAGATATGGTGGTCAACTTTTGTACATGAGGA
GTTAGAGACAGAAGATGAGAGACTCGTTTACGAAGCTGCTCTCAACTGGA
TCAACTATGACCTGGAAGAGAGGCACTGTCACCTTCCAGAGCTTCTGAGA
ACGGTGCCTCTGGCCCTGCTGCCTGCCATCTTCTCATGGAGAATGTGTC
CACAGAAGAGCTCATCAACACCCAGGCCAAGAGCAAGGACCTGGTAGATG
AAGCCATCCGTTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTCAAC
AGCCCGTGTGCCAGACCGAGAAAAACAGTCAATGCCCTCTTCTCTGCG
AGGTCAGACTTTTATGTGCGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATAACCAAGGCTGACATTTCCAGCCCTCGGAAGGAGTTCAGC
GCTTGTGCCATTGGTTGTAAGGTATACATCACTGGTGGGA--GAGGGTC-
TGAGAATGGCGTGTCCAAAGATGTGTGGGTCTATGACACTGTCCATGAAG
AATGGTCAAAGGCAGCACCCATGCTCATTGCTCGGTTTGGCCATGGGTCC
GCAGAGCTGAAACACTGCCTGTACGTTGTGGGAGGTCACACAGCCGCAAC
CGGTTGCCTTCCCTGCCTCTCCATCCGGAGGAGTACATTGTTGTGTTTCAGC
CGCTCGACAACAAGGCTGATATTGAATGAAGCAGAGCTAATCATGGCACT
GGCCAAGAATTCCAGATGCGAGTCGTACAGTATCCCTGGAGGACCAGT
CGTTCCCCAGTATCGTCCAGGTGATCAGCAGCGCTACTATGCTGGTCACT
ATGCATGGAGCTCAACTTATCACATCGTTTTTCCCTTCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCAT
ACAAGACCCTTGCCCTCCCTACCAGGTATGGACCTTCATTATGTCTCCTGG

AGGAATACCAAGGAGGAGAACACCATCACCCATCCAGACAGGCCCTGGGA
GCAAGGGGGCATCGTGCACCTGGAGAAGGAGGAGCAGGAAAGAATCATGA
GGAGCAAAGATGTCCCAGGCATCTGTGCTGCCGCAACCCAGAGTGGCTC
TTTCGGATCTATCAGGACACTCTGGTGGACATCCCGTCCTTCTGGAGGT
CCTCAA---GGAGGGCATGAAA---ACAAAGCCCATCTTGAAGAA---AT
CAAAGCCAGTCACCACAGTCCACCCGGGCCGGGTCAGAGAAGCCAGTGT
CAGACCTCTGTACAAGCTGCTAACGAGGCCAAACTCACAGTCTCCTGGCA
GATCCCGTGGAAATCTGAAATACCTGAAGGTGAGGGAGGTGAAATATGAGG
TGTGGATCCAGAAAAAGACAGCAGCAAAGGGACCCCTGGAGGACCAGATC
ATCCAGGCCAATCCTGCTCTGGAGGCCTTCGGCAACGCCAAGACGCTGAG
GAATGACAACCTCATCACGTTTTGGAAAATTCATCCGAATTCACTTTGGTA
CAAGCGGCAAACCTTTCATCTGCCGACATTGAGACGTACCTGCTGGAGAAG
TCAAGAGTCACTTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCCCAAGGAGAAGTAACAGTC
GCCTCCATTAACGACTCGGAGGAGCTGATGGCCACTGACAGCGCCTTCGA
TGTGCTTGGCTTACCGCAGAGGAGAAGATAGGTGTTTACAAGCTGACGG
GCGCCATCATGCACTATGGCAACATGAAGTTCAAGCAGAAACAGCGTGAG
GAGCAAGCTGAGCCAGATGGCACCGAAGCTGCTGATAAATCTGCATACCT
GATGGGGCTGAACTCCGCTGACCTCATCAAAGGGCTCTGCCACCCCGAG
TCAAAGGTAGAAAACGAATACGTCACCAAAGGTCAGAGTGTAGATCAGGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGAGGAGTGTGGCAAGCATA
CAACACCAAGCTGGGATACAAGCGTCATGTGGCCATGCACTCCGCCACGG
CAGGCGACCTCACCTGCAAGGTGTGCATGCAGACCTACGAGAGCACGCCC
GTGCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGCGGCAC
CAAGGAGAAGAAACACCCGTGCGACCACTGCGACCGCCGCTTCTACACGC
GGAAGGATGTCAGGCGGCACATGGTGGTCCACACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
GCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCCGACATGCTGGGCCTGCTCGCGTCCGGGTCCGCCCGCTGCTCCGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGACTGCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCCGGGGGGCCCCGTTTCAGATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCGAATTCGGGGTGGGT
CACCCG-----CACCCGTCCCTGATGCCCGGCCGCTGTCTGCGGCCAT
GGGCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAAATCAGT
GATGGATCGAACA
TTGTGAACCTGCTAGCTAGTAACTCTCCGAGTGTTCGTATGCTCTGACC
CAGCAAAAATACTTTAGTAACTACAGCCCTGTGATTGGCTTTTATATTTA
TGAGCCCATAGAGTACTGGAACCTACAGTGCAGGAGCACCTGAAGACTC
TGAGTCATGGCTTCAACAAGATCTCTGGATGGACAACCTTTTCCATTAC
CTGCGGGTGGTGAACGTGAGTGCCTCAACCAAGAGCGACTTCATCACCAT
CCTCAAGGGCTCATTCCTGCGCAGCCMGAGTACCAGCACTTCACTGAGG
ACATCATATTCTCCAAGA---ATCGCGAGACAG-----ACGAGTATGGC
ATCATCGCCTCTCGGATGTACCTGGTGGCGAGGACGACAGAGAAGAAGCG
CGAAGAGGTGGTGGAGCTCCTGGAGAAGCTTCGCCCTTTGATGCTGATCA
ACAGCATCAAATTCATCGCCTTCAATCCCACGTTTGTGTTTATGGATCGC
TACAGCTCGTCCGTCATCTCGCCCATCCTGACCTCAGGATTCAGCGTGCT
CACAATCCTCATCCTCACTTTCTTCTGGTTCATCAACCCCTGGGAAACT
TCTGGCTCATCCTCACTGTAACGTCCGTGGAGCTGGGTGTCTTGGGTCTG
ATGGGCTTTCACCAGTTTGAATGGCAGCCAGCACTCAAGAATGTATCTAC
ATCTTGCAATGTTGGCATTATTAATGGACTCTCTGGATGGACCTCCTCAG
TGGATGACGCCCCAGCTGACACCATAACACGTCGTTTCCGCTACGACGTG
GCTCTAGTGTGAGCACTAAAGGACCTGGAGGAGGACATCATGGATGGGCT

GAGGGAGCAAGAGATGGAGGACAGTGCTTGCCTTTCAGGTTTCACTGTCA
TGATCAAGGAGTCTTGGCGATGGCATGGGTGACGTCAGTGAGAAGCACGGA
GGAGGACCAGCTGTTCCGGAGAAGGCTGTGCGTTTCTCTTTCCTATCAT
GTCTATCTCAGTGAGGACAGATG---AGGAG-----
-----AAAGAAGTCACTATCTTTCACAGAGATGAAGCCAAACTCA
GAGCTGTCTTGTAAAGCCCCTCAGCCTCACATTTGTGGATGAGTCAGACCA
TGAGACACTCACAGCCATCCTGTGGCCTATTGTTGCAGAGCGTAACGCGA
TGAAAGAGAGCAGGCTGATCCTGTCCATTGGCGGACTGCTTCGCTCCTTC
CGCTTTCATTTTCAGAGGCACAGGATATGATGAGAAGATGGTACGTGAGAT
GGAGGGCCTCGAAGCCTCAGGGTCCACTTACATCTGCACACTTTGTGACT
CAAGTCGAGCGGGGGCCTCTGAAAACATGGTGTGCATGCCATAACTCGG
TCCCATGAAGAAAACCTAGAGCGATACGAGATATGGAGAAGCAACCCTT
TTCTGAGTCAGCAGATATGCTTCGAGACAGAGTCAAAGGCGTCTCTGCTA
AGCCCTTCATGGAGACACATCCACGATGGACGCATTACACTGCGACATC
GGCAACGCCACTGAGTTCTACAAAATCTTCCAGGATGAGATCGGGGAGGT
GTTTGAAGAGCC---CAAT---CCCAGCCGGGATGAGCGCCGACGCTGGA
GGGCAGCCCTGGATAAACAGCTGAGGAAGAAGCTGAAGCTCAAACCGGTG
ATGAGGATGAATGGGAACATGCCCGCCGGCTAATGACCACAGAGGCTGT
GGAGGCGGTGTGTGAGCTGGTGCCCTCAGAGGCAAGGAGGGAGGCCCTGA
GGGAGCTGATGGAGCTCTACCTCCAGATGAAGCCTGTGTGGCGAGCCAGC
TGCCCGCCAAGGAGTGCCCCGACCAGCTGTGCCGTTACAGCTTCAACTC
CCATCGCTTTGCTGACCTTCTGTCTTCCACCTTCAAATATAGGTACAAAG
GCAAGATACCAATTACCTGCACAAGACCCTGGCCCATGTGCCTGAAATC
ATAGAGAGAGATGGATCCATAGGAGCCTGGGCCAGTGAGGGGAACGAGTC
AGCTAACAAATCATACCCATAGAGATGGGTCCCTTGGGTCCCAGGTGGA
AGGAGAGCCCTCAGCCTTTCTCCTGCTCCATTGAAGACCCTACAAAACAG
ACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTACCGGGTGACGCCGAG
CCATACGGGGCACCCAGTCTACCGGCGCTACAAACACTTTGACTGGCTGT
ACAACCGCCTGCTGCACAAGTTCACTGTGATCTCCGTGCCTCACCTGCC
GAGAAGCAGGCCACGGGGCGATTTCGAGGAAGACTTCATCGAGAAGCGCAA
GAGGCGACTGATACTGTGGATGAACCACATGACCAGCCACCCGGTCTCT
CCCAGTACGAAGGCTTCGAGCACTTCTGTGATGTGCGCCGACGACAAGCAG
TGGAACCTGGGCAAGAGACGGGCGGAGAAGGACGAAATGGTTGGCGCCCA
TTTCATGCTGACTCTGCAGATCCCCAACGAGCACCACCAAGACCTTCAGGACG
TGGAGGAGCGTATCGACTCCTTCAAGTCCTTCGCAAAGAAGATGGACGAC
AGCGTGATGCAGCTGACACACGTGGCCTCGGAGCTGGTTCGTAAGCACTT
GGGTGGCTTCAGGAAGGATTTTCAGCGACTGGGAAACGCCTTTCAGTCCA
TCAGCCAGGCATTCATGCTGGACCCCCGCACTGCTCAGAGGCCCTCAAC
ANNNNNNNNNNNNNNN-----

-----TTTCTAGAGAGAAAACCTTCATCCATCTAACTGCCTAGG
CATGCTGTTGCTGTCTGATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGTCTCAGCAACTTTCCGGCTATTTGCAAGACAGAAGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGG
TCAACTATGACTTGGAAAGGAGGCACTGCCATCTGCCAGAGCTGCTGAGA
ACGGTTCGCCTGGCCCTGCTACCTGCCATCTTCCCTCATGGAGAATGTCTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTCGTGGATG
AGGCCATCCGGTGAAGCTAAAGATCTTGCAGAATGACGGTGTGGTTAAC
AGCCCCGTGTGCTCGGCCGAGAAAAACCAGCCATGCCCTTTTTCTGTTGGG
AGGTCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGACCAGAAGGCAA
AAGAGATCATCCCCAAGGCTGATATCCCCAGTCTTAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGTGGCA--GAGGCTC-
AGAAAAATGGTGTGTCTAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCAGATTTGGTTCATGGCTCT
GCTGAGCTGAAACACTGCCTTTATGTAGTAGGAGGTCACACGGCAGCAAC
TGGCTGCCTCCCAGCCTCTCCCTCCGGATGAATATATTGTAGTGTTCAGC
CGTTCAACAACAAGGCTGATTCTGAACGAAGCGGAGCTAATCATGACGCT
GGCCAGGAATTTTCAGATGAGAGTGGTTACGGTCTCCCTGGAGGAACAAA
CTTTCCCCAGCATCGCCAGGTGATCAGTGGGGCTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTGTACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTAGAGCTGTTCCCTATGCTGTCAACCCAGAACAGTACACCCCAT
ATAAAACCTCGCTCCTTACCAGGCATGGATCTTCAATATGTTTCCTGG
AGGAACACTATAGAGGAGAACACTGTCACCCACCCAGACAGACCTTGGGA
AGAAGGAGGCATCTCCATTTGGAAAAGGACGAGCAAGAGCGAATACTGG
CCAGCAGGGATGTGCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTTCGAATCTACCAGGACACTTTGGTGGACATCCCTTTCATTCCCTGGAGGT
CCTCAA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GG
CCAAGCTGGCCAGCACGGTTCATCCAGGCCGGGTCAGAGAACCCCAAGTGC
CACACCTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGATAACAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCCGCGCTGGAGGCTTTTGGTAACGCCAAAACAGTGAG
GAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGAATTCATTTGCGAA
CCAGTGGCAAGTTGTCTCTGCTGATATTGAAACTTACTTATTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCATATCTTCTT
CCAGATATTGTCCAATCAGAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CTAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAACGACTCAGAGGAGCTGATGGCCACTGACAGCGCCTTTGA
TGTGCTTGGCTTTACTCAAGAGGAGAAGATGGGAGTATATAAGCTGATTG
GTGCCATTATGCACTATGGCAACATGAAGTTTAAGCAGAAGCAGCGTGAG
GAGCAGGSTGAGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCTTACCT
TATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTATGCCATCCCAGAG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCANNNNNNNNNNNNNNNNNNNNNCCAAACAAGGAGGC
CT

TCAAGTGCAGGAGTGTGGCAAGCACTACAACACCAAGCTGGGATACAAA
CGCCATGTGGCCATGCACTCTGCCACAGCAGGGGACCTCACCTGTAAAGT
GTGCATGCAGAGCTATGAGAGCACGCCGGTGTCTCTGGAGCACCTTAAGA
GCCACTCGGGGAAGTCCCTCGGGTGGCGCAAGGAGAAAAAACCCCATGC
GACCACTGCGACCGCGTCTTCTACACACGGAAGGATGTGAGACGGCACAT
GGTGGTCCACACGGGCCGAAAAGACTTCCTGTGCCAGTACTGTGCCCAGC
GCTTTGGCAGGAAGGACCACCTGACACGCCACGTAAAGAAGAGCCACTCG

CAGGAGCTGCTGAAGATCAAGACGGAGCCTCCAGATATGTTAGGTCTTTT
AGGTTCGGCTCGCCGCCATGCTCTGTCAAGGAGGAGCTTAGCCCTATGA
TGTGCAGCATGGGTCCCAACAAAGACCCCATGATGGGCAAACCCCTCCCC
AGCGGGACCCCTTCCCATGGGCATGTACAACCCACCAC-----CT
CCAGGCCATGTCCAATTCTGGGGTGGGTACCC-----CACCCCTCC
TGATGTCTAGCTCCCTGTCTGCAGCTATGGGCATGGGCTGTCACATGGAA
TATCTCATTTATGCCCTTTTCTCATTCATGGGATGTTTACAAATCAGTGA
TGGCTCAAACATTGTGAACTTGCTGGCTAGTAACTCTCCGAGCGTTTCGT
ATGCTCTGACCCAGCAGAAATACTTCAGTAACTACAGTCCCGTGATTGGA
TTTTACATTTACGAGCCATTGAGTACTGGAACCCACAGTGCAGGAGCA
CCTGAAGACACTGAGTCATGGCTTCAACAAGATATCCTGGATGGACAACT
TCTTCCACTACCTGCGGGTGGTGAACGTAAGCGGTCAACCAAGAATGAC
TTTTATCAGCATCCTCAAGGGCTCTTTCCTGCGCAGCCCGGAGTACCAGCA
CTTCACTGAGGACATCATCTTCTCCAAGA---ACCGTGAGAGTG-----
ATGAGTATGACATTATTGCCTCACGCATGTACCTAGTGGCGCGGACCACA
GAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAGAAACTGCGTCCACT
GATGCTGATCAATAGCATCAAGTTCATCGCCTTCAACCCACCTTTGTTT
TCATGGACCGCTACAGTCTCTCAGTCATCTCGCCATCCTGACCTCAGGC
TTCAGCGTGTTACCATCCTCATCCTCACTTTCTTTCTGGTCATCAACCC
CTTGGGGAACCTTCTGGCTCATCCTCACAGTTACTTCTGTGGAGCTGGGTG
TCTTGGGTTTAAATGGGCTATCATCTATTGAATGGCAGCCGGCCCTCAAG
AATGTGTCTGCATCCTGTCTATGTGGCATTATTAATGGGCTCTCAGGATT
GGCTGCCCTTGGTGGATGACATCCCAGCTGACACCATTACTCGACGGTTTC
GCTACGACGTGGCCCTGGTATCAGCCTTAAAGGATCTGGAGGAGCACATC
ATGGAGGGACTGAAAGAGTGTGGGCTGGAAGACAGTGCTTGCACCTCAGG
CTTCAGTGTTCTGATCAAGGAATCTTGTGACGGCATGGGAGATGTCAGCG
AAAAGCACGGGGGAGGGCCAGTGGTCCCCGAGAAGGCTGTACGCTTCTCT
ATTACTGTTATGTCTGTCTCTGTCTTGGCAGATGGAGAGGAA-----
-----GAGGCAGTTACCATCTTTACCGAGCCAA
AGCCCAACTCAGAAGTGTCTGTAAAGCCCCTAAGCCTGATGTTTGTGGAT
GAGTCAGACCATGAGACACTCACTGCTGTCTGGGACCTTTAGTTGCAGA
GCGTAATGCAATGAAGCAGAGTCAACTCATCCTTCTATGGGTGGCCTCC
CTCGTCTTCCGCTTCCACTTCAGAGCCACAGGATATGATGAGAAGATG
GTGCGTGACATGGAGGGCCTGGAGCCTCAGGCTCCACCTATATCTGCAC
TCTGTGTGATTCCAGTCGAGCAGAAGCCTCTCACAACATGATCCTACTACT
CCATCACCCGCAACCACGGTGAGAACCCTGGAGCGTTATGAAATATGGAGG
ACCAACCCCTTTTCTGAGTCTGTTGAGGAGCTGCGAGACCGGGTCAAAGG
GGTCTCTGCCAAGCCCTTTATGGAGACCCAGCCACTATTGATGCATTAC
ACTGCGACATTGGTAATGCAACAGAGTTCTACAAAATCTTCCAGGATGAG
ATTGGGGARGTGTACCAGAAGGC---CAAC---CCCACCCGGGAGGAGCG
GCGGAGATGGCGAGCAGCTCTAGACAAGCACCTGAGGAAGAAGATGAAGC
TTAAACCAGTGATGAGGATGAATGGGAACTATGCCCGGAGGCTAATGACC
CAAGAGGCTGTGAAGGTGGTGTGTGAGCTGGTACCCTCAGAAGAGAGGCG
AGAGGCCCTGAGGGAGCTCATGGGGCTCTACGTCCAGATGAAGCCTGTGT
GGCGCGCTACCTGCCAGCCAAGGAATGCCCTGACGAGCTGTGCCGCTAC
AGCTTTAACTCCCAGAACTTTGCCAATCTCCTCTCCACTACCTTCAAATA
TAGGTACAATGGAAAAGATCACCAATTATCTGCATAAGACCCTCGCCCATG
TCCCCGAAATCATTGAAAGAGATGGCTCTATAGGAGCCTGGGCCAGCGAG
GAAAACGAGTCAGCAAACAAATCGTACACCATTGAGATGGCTCCAAAGGG
GCCCCAATGGAAGGAGAGTCTCAGCCTTTCTCCTGCTCCATTGAAGACC
CCACAAAACAGACCAAGTTCAAAGGCATCAAGACCTACATTTTCGTACCGG
GTCACACCGAGCCACACAGGGCGTCCCGTCTACAGACGCTACAAACACTT
TGACTGGCTGTACAACCGCTTGCTGCACAAGTTCCTGTGATCTCGGTGC

CCCACCTGCCTGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATC
GAGAAGCGTAAAAGACGACTGATTCTGTGGATGAACCACATGACCAGTCA
CCCAGTCCTCTCCAGTACGAGGGATTTGAGCACTTCCTTATGTGTGCTG
ACGACAAGCAGTGGAAGCTGGGTAAGAGGCGGGCGGAGAAGGACGAGATG
GTGGGCGCCACTTCATGCTGACCTTCCAGATTCTAACGAGCATCAGGA
TCTCCAGGATGTGGAGGAGCGGGTTGACTCCTTCAAGTCCTTTGCTAAGA
AAATGGACGACAGCGTCATGCAGCTCACACATGTTGCCTCGGAGCTGGTG
CGTAAGCACCTGGGTGGATTAGGAAGGAGTTCCAGCGGCTAGGAAATGC
CTTCCAGTCCATCAGCCAGGCGTTCATGCTGGAACCTCCGCACAGCTCTG
ATGCCCTCAACAACGCCATCTCCCACCTCTCTCGCACGTTCTCAAACCTG
ACCTCCCTGGGTTTCATCATTGGAGTCGGTGTGGTTCGGGAACCTCCTGAT
CTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGCGCACCTACTACT
TCCTGCTAGACCTGTGCGCCTCCGACATCCTGCGCTCTGCCATCTGCTTC
CCCTTCGTCTTACCTCTGTCAAGAATGGATCCGCCTGGACCTATGGCAC
GCTCACCTGCAAAGTGATCGCCTTCCCTCGGCGTGCTCTCCTGTTCCACA
CAGCGTTCATGCTATTCTGTGTGTCAGTGTCACTCGCTACTTGGCTATTGCA
CATCACCGCTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGT
CATCTGCATGGTGTGGACGTTGTGTCAGTAGCCATGGCTTTTTCCCCGGTGC
TGGACGTAGGGACGTACTCCTTTCATCCGGGAGGAGGACCAGTGCACATTC
CAGCACCGTTCCTTTCAGGGCCAATGACTCACTAGGCTTCATGCTCCTGCT
GGCACTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCT
TTGTCCACGACCGTCGGAAGATGAAGCCCGTCCAGTTCGTGCCTGCCGTC
AGCCAGAACTGGACCTTCCATGGGCCAGGCGCCAGTGGGCAGGCGGCGGC
TAACTGGCTCGCTGGATTTGGGAGAGGCCCCACCCCGCCTACCTTGCTGG
GCATCCGGCAGAACAGCAACGCGGCGGGCCGAGGCGTCTGCTGGTGTGCTG
GATGAGTTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGAC
GTTTTTCTTCTGCGTGTGGGGGCCCTATCTGGTAGCCTGCTACTGGC
GGGTGTTTGAAGGGGCCCGTAGTCCCGGGGGCTACCTGACGGCAGCC
GTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCATTCATCTGCATCTT
CTCTAACAGGGAGGCCAAATCTCGCTTTCACCTGGCGTGGGGACTGGTC
CTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCG
CAGCAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGT
CACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACG
CGGC-----GATTCGCCGGTAACGCGGCCACCTTGCTGTCCTAC
GCAGCGCCGGAGTGAAGGCTC-----TTCCTCTGCCGGCTGCAGGCTG
CTCCAACCGGCCTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---G
GCGGACGCACGCCCGCAGTACTGTAGCGTAAACAGCAAACCAAGCTCG
GTCCTTTCCTGCTGGCCCTCTAACTCTGTGCGCGGCAGAGCAGGCG---C
C---AACTATCTGG-----CCGAGGA---CGGA---GACGC---CA
TCCCCGACGGAGAGATCCCCG---AT---CGGTGGCTCCGAGGAG---ACG
AAACCCAAGGACCT-----GTCGGA---GTCGAGCTGGATAGAG---AC
GCCGTCTCCATTAAGTCAATTGATTCAAGCGATTCTGGTATCTTTCG---
AACAGGCCAAAAGGAGAAGAATCTCGCCCTCTGCCACGCCG-----
GTTTCAGAAACTGTGTCCCGTTAAAATCTNNNCATCACTCAACAGGCGAAGT
CACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGGACGGGATGG
GCGCCTTCAAATCAACCACAGCTCCACGATATTGGCTCCGG---ACAG
ACGGCGTTTTCTCCAGGCG---CCCGGCTAC---GCAGCGGCCGCCCT
GGGA---CATCATCA-----CCACCCGACCCACGTTGGCTCT---TACT
CCACGGCGGCTTTCAACTCCACCCGGGACTTTCTCTTTAGAAATCGGGGT
TTCGGAGACGCCACCGG-----GGCGCAGCACAGTTTGTTCGC
CTC-----CGGAAGTTT---C-----GCAGGGCCACATGGACACT
CAGATGCCGCGGGACACCTGCTCTTCCAGGACTCCACGAG---CAAGCA
GCGAGCCATGCGTCTTCTAATGTGGTCAACAGCCAGATGCGATTGGGCTT

CTCGGGGGACATGTATGGTCGGGCCGACCAGTATGGCCACGTTACAAGCC
CAAGGT---CCGACCCTATGCTTCGACCCAGTTGCACGGCTATGGCCCC
ATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCCTTCTTTTCG
ATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGC
CGGAGCAACTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACG
ATGCATGAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGA
GCAGTCCAACCACATCTGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAAC
CATTCAAAGCCAAATACAAACTTGTAATCATATCAGAGTACACACCGGA
GAGAAACCCTTTCCGTGTCCGTTTCCCGGCTGTGGCAA

>*Gigantactis vanhoeffeni*

AGCCTATTAATCCGCGCCGAGCTCAGCCAACCAGGCGCCCTCTTGGGTGA
CGACCAGATTTATAATGTGATTGTCACAGCCCATGCCTTTGTAATAATCT
TCTTTATGGTAATACCCATTATGATTGGGGGATTTGGGAATTGATTAATC
CCCCAATAATCGGTGCCCTGATATGGCCTTTCCCGCATGAATAATAT
AAGCTTCTGACTACTCCCCCCTCTTTCCTCCTCCTCCTCGCCTCATCGG
GGGTAGAGGCCGGGGCGGGCACTGGGTGAACAGTTTACCCGCCTCTGTCTG
GGCAATTTAGCTCATGCTGGGGCCTCTGTAGATCTAACAATCTTCTCCCT
TCACCTAGCAGGGGTGTCTCAATTTTAGGGGCCATCAACTTCATTACAA
CTATTATTAATATAAAAACCCCTGCCACCTCTCAATACCAAACGCCACTA
TTCGTATGATCAGTCCATAACACAGCAGTCCCTTCTACTCTCTCTGCC
TGTCCTTGCTGCCGGTATTACCATACTTTTAACTGACCGCAACCTAAACA
CAACCTTCTTTGACCCCGCAGGGGGGGCGACCCCGTCTCTACCAGCA-

-----TTCCTGGAGAGGAACCTTACCCGTCTAACTGCCTCGG
CATGCTGTTGCTGTCTGACGCACACCAGTGCACCAAGCTGTCTGGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCCATTTGCAAGACAGAGGAC
TTTCTCCAACCTGCCAAAAGATATGGTGGTGCAGCTCTTGTACACGAGGA
GTTAGAGACCGAAGACGAGAGACTTGTATGACGCCGCCCTCAATTGGA
TCAACTATGACCTGGAGAAGAGGCACCTGCCACCTTCCAGAGCTTTTGAGA
ACGGTCCGCCTGGCCCTGCTGCCTGCCATCTTCTCATGGAGAATGTCTC
CACAGAAGAGCTGATCAACGCCAAGCCAAGCAAGGAGCTGGTGGACG
AGGCGATCCGCTGCAAGCTGAAGATCTTGCAGAACGACGGCGTCTAAAC
AGCCCGTGTGCTCGACCAAGAAAAACAGCCACGCCCTTTTCTCCTGGG
CGGTCAGACGTTTATGTGTGACAAGCTGTATCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGCCGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGCAAGGTGTACATCACTGGAGGGA--GGGGCTC-
AGAGAACGGCGTGTCCAAGACGTGTGGGTCTACGACACGGTCCACGAGG
AATGGTCCAAGGCGGCGCCCATGCTCATCGCCAGGTTCCGGCCACGGCTCC
GCAGAGCTCAAACACTGCCTCTACGTGGTGGGAGGTCACACCGCGGCCAC
CGGCTGCCCTCCCGCCTCTCCGTCCGGTGAATACATTTGTTGTGTTTCAGT
CGTTCAACAACCAGACTGGTRCTGAATGAAGCGGAGCTRATCATGGCACT
GGCTCAGGAGTTCCAGATGAGAGTGGTACAGTATCCCTGGAGGAGCAGT
CRTTCCCTAGTATCATCCAGGTGATCAGCAGCGCTACCATGTTAGTTCAGT
ATGCATGGAGCTCAACTCATCACCTCACTCTTCCCTCCCCAGAGGAGCTGT
CGTGGTGGAGCTGTTCCCTTTGTCAGTGAACCCAGAGCAGTACACCCCGT
ATAAAAACCTYGCCTCCCTTCCGGGCATGGACCTTCATTATATCTCCTGG
AGGAACACTAAGGAGGATAACACCATCACCCACCCAGACAGGCCCTGGGA
ACAAGGGGGTATTGCTCACTTGGATAAGGAGGAGCAAGAACGAATACTAA
TGAGTAAAGACGTGCCAGGCATCTGTGCTGCCGGAACCCAGAGTGGCTC
TTCAGGATCTATCAGGACACATTGGTGGACATTCCTTCCTTCCCTGGAAGT

CATCAA---AGAGGACATGAAG---ACAAAGCCCAACTTGAAGAA---GT
CAAAGCCGGCCAGCACACTCCACCCGGGCGGGTCAGAGAACCTCTGTGT
CAGACCTCAGTTCAAACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATACCGTGAATCTGAAGTATCTGAAGGTCAGAGAGGTGAAGTACGAGG
TG-----AAAAGAGACACCAGCAAGGGGACCCTGGAGGATCAAATC
ATCCAAGCAAACCCGGCGTTGGAGGCCTTTGGCAACGCCAAAACAGTGAG
GAATGACAACCTCATCCCCTTTGGAAAGTTCATCCGAATCCACTTTGGTA
CAAGCGGCAAGCTGTGCTGTCGCGACATCGAAACGTACCTGCTGGAGAAG
TCCCGTGTTACCTTCCAGCTCAAGGCTGAGAGAACTATCACATCTTCTA
CCAGATCCTGTCCAACCAGAAACCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAATCCCTACGACTACTCCTACATCTCCCAAGGAGAGGTAACCGTC
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACGGACAGCGCCTTCGA
TGTGCTCGGCTTCACTCCCGATGAGAAGGTGGGCGTCTATAAACTCACAG
GTGCCATCATGCACTATGGCAACATGAAGTTCAAACAGAGGCAGCGCGAG
GAGCAGGCGGAGCCCGATGGGACGGAGGCCGCTGATAAGTCAGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAGGGGCTGTGTCATCCCCGAG
TCAAGGTGGGGAATGAGTATGTCACCAAAGGTCAAAGTGTGGATCAAGTC
TACTATCCCAACAAGGAGGCCCTTCAAATGTGACGAGTGTGGGAAGCATA
CAACACCAAGCTGGGATACAAGCGCCATGTTGCCATGCATTCAGCCACGG
CGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGACAGCACACCC
ATGCTCCTGGAGCACCTGAAGAGCCACTCTGGGAAGTCCTCAAGTGGCAC
CAAGGAGAAGAAACACCAGTGCACCATTGTGACCGGCGTTTTCTACACGA
GGAAGGATGTGAGACGCCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTCTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGACCATCTGACACG
CCATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAAATCAAGACAGAGC
CCCCGATATGTTAGGTCTTCTAGCTTCTGGGTACCACCCTGTTCTGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGTATGGGTCCCAACAAAGACCC
CATGATGAGCAAACCCTTTCCAGTGGGGCCCTTTTCCAATGGGCATGT
ACAACCCTCATCAC-----CTCCAGGCCATGTCGAATTCGGGGTAGGT
CACTCC-----CACCCATCCCTGATGCCAGTTCTTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAGTACCTCATCTACGCCTCTTCTCATTCA
TGGGATGTTTACAATCAGCGATGGATCAAATATCGTGAACCTGCTGGCA
AGTAACTCTCCAAGTGTTCATATGCTCTGACACAGCAAAATACTTTAG
TAACTATAGTCCAGTCATTGGGTTTTACATTTATGAGCCTATCGAGTACT
GGAATCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACTTTTTCACTACCTGCGGGTGGTGAATGT
GAGGCATCAACCAAGAGCGACTTCATCTCCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATTTTCTCAAAG
A---ACCGTGAGACCG-----ATGAGTACGACATCATCGCCTCGCGGAT
GTACTTGGTGGCACGGACTACAGAGAAGAAGCGTGAAGAAGTGGTGGAGC
TCCTGGAAAACTCCGTCCACTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAATCCTACGTTTGTGTTTTCATGGACCGCTACAGCTCCTCCGTCA
CTCACCATCCTGACGTCAGGATTCAGCGTACTACAATCCTCATCCTCA
CTTTCTCCTGGTCATCAACCCCTTGGGTAACCTTCTGGTCTATCCTCACT
CTAACGTCTATGGAGCTGGGCGTTTTGGGTTTTGATGNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNCTTCCAATGTTGGC
ATTATTAATGGTCTCTCTGGATGGGATTCCTCAGTGGATGACTCCCCAGC
TGACACCATCACTCGACGTTTTCGCTATGATGTGGCACTGGTAGCAGCAT
TAAAGGATCTTGAGGAGGACATCATGGAAGGACTGAGAGAGAAGGGAATG
GAGGACAATGCTTGTA-----ACTTCACTGCCATGATCAAAGAAATCCTG
TGATGGCATGGGCGACGTGAGGAGGACATGGTGGAGGACCAGCTATCC
CTGAGAAGGTTGTGCGTTTTCTTTCCTTCACTGTTATGTCGGTGTCTTTCCTC
GCAGACAGTCAGCAG-----GAAGA

>Gigantura indica
AGCCTGCTTATCCGAGCGGAAGCTCAGCCAACCCGGCGCCCCTTTTAGGCGA
TGACCAGATCTACAACGTTATCGTTACCGCCCACGCCTTCGTAATGATTT
TCTTTATGGTAATGCCATCATGATTGGCGGGTTCGGGAAGTACTTATC
CCCCTTATAATCGGAGCCCCGACATGGCATTTCGCCGAATGAACAACAT
GAGCTTCTGGCTCTTACCTCCCTCTTTCCTGCTGCTCCTGGCCTCCTCTG
GAGTAGAAGCCGGGGCCGGAACGGGCTGAACCGTTACCCACCCCTCTCC
GGCAACCTCGCGCATGCGGGTGCCTCCGTAGACCTAACCATTTTCTCCCT
ACATCTGGCGGGTGTTTCTTCCATCCTCGGTGCTATCAACTTTATCACGA
CAATCTTAACATGAAACCCCGCTATTACCCAATACCAGACCCCTTA
TTCGCTGATCAGTCTTATCACAGCCGTCCTACTACTGCTCTCTCTACC
AGTCCCTGCGGGCGGAATCACTATGCTCCTCACAGACCGAAACTTAAACA
CAACCTTCTTCGACCCCGCAGGCGGGGGGACCCCATTTCTTTACCAACAC
CTATTCTGGTTCCTCGGACACCCGGAGGTATAATCCTTATCCTCCCTGG
ATTCCGCATGATCTCCACATTGTTGCCTACTACTCGGGGAAAAAGAAC
CTTTCGGCTACATGGGCATGGTCTGGGCAATAATGGCCATCGGCCTTCTT
GGCTTCATTGTCTGAGCCCATCACATGTTTACAGTAGGCATGGACGTAGA
CACACGTGCTTATTCCTGGAGAGGAACCTGCACCCATCCAAGCTGCTTGG
CATGCTGCTGCTGTCAGATGCCCACCAGTGCACCAAGCTGTCAGAGCTGT

CCTGGGGTATGTGTCTCAGCAACTTCCCTGCCATCTGCAAGACAGAGGAC
TTCTCCAGCTTCCCAAAGACATGGTGGTGCAGCTTCTGTCCCACGAGGA
GCTGGAGACGGAGGATGAGAGACTGGTTTACGAGGCTGCCCTTAACTGGG
TCAACTACGACCTGGAGAGGAGACACTGCCACCTGCCGGAGCTGCTGAGG
ACCGTGCGCCTGGCCTTGCTTCCC GCCATCTTCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAAGTAAAGAGCAAGGAGTTGGTGGACG
AGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAATGATGGTGTGGTCAAC
AGTCTTGTGCCCCGCCAGGAAGACCAGCCATGCCCTCTTCTTGCTGGG
AGGACAGACCTTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTCTACGTCACGGGCGGGA--GAGGCTC-
CGAGAACGGCGTGTCTAAAGATGTGTGGGTCTACGACACCGTCCATGAGG
AGTGGTCTAAGGCAGCACCTATGCTCATTGCCAGGTTTGGCCACGGCTCT
GCTGAGCTCAAACACTGTCTCTATGTGGTTCGAGGACACACAGCAGCCAC
CGGCTGCCTCCCAGCCTCTCCGTCTAGATGAGTACATCGTAGTGTTCAGT
CGTTCTACAACAAGGCTGATTCTAAACGAAGCAGAACTGATCCTGGCACT
GGCCCAAGAGTTTCAGATGAGGGTGGTTACAGTGTCCCTAGAGGATCAGT
CTTTCCCCAGCATCGTCCAGGTGATCAGCGGGGCTCCATGTTGGTTAGT
ATGCACGGAGCTCAGCTCGTACCTCCCTCTTCCCTCCCTAGAGGAGCTGC
TGTAAGTGGAGCTCTTCCCCTATGCTGTGAATCCAGAACAGTACACCCCGT
ACAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCCTGG
AGGAACACCGTTGAGGAGAACACTGTCGCTCACCCGGACAGACCCCTGGGA
CCAAGGAGGCATCGCCATTTGGAGAAAGAAGAGCAGGAGAGAATCCTAG
CCAGCAAGGATGTCCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATCCCCCTCCTTCCCTGAAGT
CCTCAA---GGAGGGCCTGAAG---ACGAGGCCAAACTTGAAAA---GT
CCAAGCCTGCCAGCACAGTTCACCCGGGCCGGGTCAGAGAACCCCAAGTGC
CAGACATCACTCCAAGCCACCAATGAG-CTAAGCTCACTGTATCCTGGCA
GATCCCCTGGAACCTGAAGTACCTAAAGGTGCGAGAGGTGAAGTACGAGG
TATGAATCCGGAAAAAGGATTCAAGCAAGGGAACCCCTGGAGGATCAGATT
ATCCAGGCAAACCCCTGCCCTGGAGGCTTTTGGAAACGCCAAAACAGCGAG
GAACGATAATTCTTCCCGTTTTGGTAAATTCATCAGAATTCACTTTGGAA
CCAGTGGKAAACTGTCCCTCTGCGGACATTGAGACCTACCTGCTGGAGAAG
TCACGGGTCACTTTTCAGCTTAAGGCAGAGAGAAATACCACATCTTCTA
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAACCCCTTATGACTACTCCTACATCTCCAAGGAGAAGTAACCGTA
GCATCCATCAACGATTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCAAGAGGAGAAGATGGGAGTCTACAAGTTGACAG
GGGCCATTATGCACTATGGCAACATGAAGTTCAAGCAAAGCAGCGTGAG
GAACAGGCTGAGCCTGATGGTACAGAAGCTGCTGATAAGTCAGCTTATCT
CATGGGGTTGAATTCAGCAGACCTCATCAAAGGACTCTGCCATCCCAGAG
TCAAAGTAGGAAATGAGTATGTCACCAAAGGCCAGGGTGTAGATCAGGTC
TACTAC---ACAAGGAGGCCTTCAAGTGTGAGGAGTGC GGCAAGCACTA
CAACACCAAGCTGGGGTACAAGCGCCACGTAGCCATGCACTCCGCCACGG
CGGGGGACCTCACCTGCAAAGTGTGCATGCAGAGTTACAAAAGCACGCCG
GCGCTCCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCTCCTCGGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGTTCGCTTCTACACGC
GGAAGGACGTCAGGCGACACATGGTTCGTCACACGGGCGCAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACGCG
GCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAACGGAGC
CTCCGGATATGTTGGGTCTCCTGGGCTCCAGCTCGCCGCCTTGCTCTGTC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCCCTTCCCAGCGGGACCCCCCTTCCCATGGGCATGT

ACAACCCCCACCAC-----CTCCAGGCCATGTCTAATCCCGGGGTGGGC
CACCCC-----CACCCCTCCCTGATGCCCGGTTCCCTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATACCTGATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGCGACGGATCCAACGTTGTCAACCTGTTAGCC
AGCAACTCCCCAGTGTATCGTACGCTCTGACCCAGCAGAAGTACTTCAG
TAACTACAGCCCTGTAATCGGTTTCTACATCTACGAACCCATCGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAGAACTCTGGGCCAAGGCTTTAAC
AAGATCTCCTGGATGGACAATACTTCCACTACCTGAAGGTAGTGAACGT
GACCGCCTCCACCAAGAGCGACTTCATCACCATCCTCAAAGGCTCCTTCC
TGAAGAGCCCGGAGTACCAGCACTTCACTGAGGACATCATCTTCTCAAAG
A---AAGGCG-----AGGAGTATGACATCATCGCATCCAGGAT
GTACCTGGTAGCGCGGACTACGGAGAAGACCCGGGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTCCGCCCTTCTCCCTCATCAACAGCATCAAGTTCATC
GTCTTCAACCCACCTTCGTCTTTCATGGACCGTTACAGCTCTTTCAGTCGT
ATCACCATTCTCACCTCGGGCTTCAGTGTGCTCACCATCCTCATCCTCA
CCTTCTTCCCTGGTTCATCAACCCCTGGGGAACCTTTTGGTTGATCCTGACG
GTGACCTCTGTGGAGCTGGGTGTTCTGGGCCTGATGGGCTACCACACGTT
CGAGTGGCAGCCGGCCCTCAAGAACGTGTCCCGTCCCTGCCATGTGGGTA
TCATCAACGGGCTCTCCGGATGGGCTGCCTCGGTGGAGGACGCCCCCTCC
GACACCATCACTCGTTCGGTTTTCGCTACGACGTGGCCCTGGTGTTCGGCCCT
GAAGGACCTAGAGGAAGACATCATGGAAGGACTGGCGGAGCGTGGGCTGG
AAGACAGCGCTTGCACCTCAGGCTTCAGAGTTATGATCAAGGAGTCTGC
GATGGCATGGGAGATGTCAGCGAGAAGCACGGCGGAGGACCACCGACGCC
TGAGAAGGCTGTGCGTTTCTCTATCACCGTCATGTCCGTCTCTGTCCAGG
CCGACGGAGAGGAG-----GAGCCG
GTCGTTCATCTTCAGGGAGCCCAAGCCCAACTCTGAACTGTCCTGTAAGCC
CCTCTGCCTGATGTTTGTGGATGAGTCTGACCACGAGACACTCACCGCCG
TTCTGGGGCCTTTGGTAGCGGAGAGGTATGCGATGACGCAGAGTCGACTC
ATCCTTTTCATTGGGTGGCCTCCCCGCTCTTTCCGCTTCCACTTCAGAGG
CACGGGCTACGACGAGAAGATGGTGCAGAGATGGAAGGTCTAGAGGCCT
CAGGCTCCACCTATATCTGCACTCTTTGTGACTCCACTCGGGCAGAAGCC
GCTCACAACATGGTGCTCCACTCTGTACCCCGCAGCCACGACGAGAACCT
GGAGCGCTACGAGATATGGAGGACCAACCCCTTCTCGGAGTCGGCCGTGG
AGCTGCGAGACCGGGTCAAAGGGGTCTCCGCCAAACATTTATGGAGACC
CACCCGACTCTGGATGCATTACACTGTGACATAGGTAACGCCACTGAATT
CTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTTCAGGGGGC---CA
AC---CCGAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTTGATAAG
CAGCTGAGGAAGAAAGTGAAGCTGAAACCTGTGATGCGGATGAATGGGAA
CTATGCCCCAAGGTTGATGACCCAGGAGGCTGTGGAGGCGGTGTGTGAAC
TGGTGGCCTCGGAAGAGAGGAGGGCAGCCCTGAGGGAGCTGATGGGGCTC
TATATCCAGATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTACAGCTTTAACTCACAGCGCTTCGCTGATC
TCCTCTCCTCCACGTTTAAATACAGGTATGATGGAAAGATCACCAACTAC
CTGCACAAGACCCTGGCCACGTCCCTGAAATTATAGAAAGAGACGGTTC
CATCGGAGCCTGGGCCAGCGAGGGGAACGAGTCTGCGAACAAG-----

-----ACAGGCGAAGTCACAGAGAGAGAAGTGGCTTTGGGG
ATCAATCCGTTTCGCAGACGGGATGGGCGCCTTCAAAAATAAACCACAGCTC
TCATGACATTGGCTCCGG--GCAAACGGCGTTCCTCCCAGGCG--C
CCGGCTAC--GCAGCGGCCGCCCTGGGA--CACCACCA-----CCAC
CCGACCCACGTCAGTCT--TATTCCACGGCAGCTTTCAACTCCACCCG
GGACTTTCCTTCCGAAATCGGGGCTTCGGAGACGCCACCAG-----
----CGCGCAGCACAGTTTGTTTCGCCTCCGC--CGCGGAAGTTT---C
-----GCAGGGCCACATGGACTCTGATGCCCGGGCCACCTGCTCTT
CCCCGGGCTCCACGAG--CAAGCCGCGAGCCACGCGTCGTCCAACGTTG
TAAACAGCCAGATGCGACTGGGCTTTTCTGGGGACATGTACGGGCGGGCC
GACCAGTATGGCCACGTTACAAGCCCAAGGT--CCGACCACTATGCTTC
GACCCAACCTTCATGGCTATGGCCCCATGAACATGAATATGGCCGCT---C
ACCACGGAGCAGGGGCCTTCTTCCGCTACATGAGGCAGCCGATCAAACAA

GAGCTCATCTGCAAGTGGATTGAACCGGAGCAGCTGGCGAATCCCAAAAA
GGCGTGCAACAAAACTTTTAGCACGATGCACGAGCTCGTGACCCACCTGA
CGGTGGAGCATGTGGGGGACCGGAGCAGTCGAACCACATTTGCTTCTGG
GAAGACTGTGCCCCGAGAAGGGAAACCATTCAAAGCCAAATACAAACTTGT
AAATCATATCAGAGTTCACACCGGAGAAAAACCGTTCCTCGTCCGTTCC
CCGGCT-----

>Glaucosoma hebraicum

AGCCTGCTAATTCGAGCAGAGCTCTGTCAGCCGGGCGCCCTCTTAGGGGA
CGACCAAATCTATAACGTTCATCGTTACGGCACATGCCTTCGTAATAATTT
TCTTTATAGTAATACCAATCATGATTGGAGGCTTCGGAAATTGACTGGTG
CCTCTTATGATTGGTGCCCCGACATGGCTTTCCCCGAATAAACAACAT
AAGTTTCTGACTTCTTCGCCCATCTTTCTTCTCCTTCTCGCCTCCTCGG
GCGTAGAGGCTGGTGCTGGAACCGGATGAACTGTTTATCCCCCTCTGGCA
GGAAACTTAGCTCATGCAGGGGCATCAGTCGACTTAACCATCTTTTCTCT
CCATCTGGCAGGTATCTCCTCAATTCGGGTGCAATTAACCTTTATCACAA
CAATTATTAATATGAAGCCCCCTGCCATCTCTCAGTATCAAACCTCCTCTG
TTCGTATGGGCGGTACTGATTACTGCAGTACTTCTTCTTCTTTCTCTCCC
AGTCCCTTGCCGCCGGCATTACAATGCTTCTCACGGACCGGAACCTAAACA
CTACCTTCTTCGACCCATCCGGAGGAGGGGACCCCATTTCTTTACCAACAC
CTCTTT-----

-----TTCCTGGAGAGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCCGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCAGCCATTTGCAAGACAGAGGAC
TTCCCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTTGAGACAGAAGATGAGAGACTGGTTTATGAAGCCGCCCTTAACCTGGA
TCAACTATGACCTGGAAAAAAGGCACCTGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGCCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGCGTTGTTAAC
AGTCCGTGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCTGACATTCAGTCCCAGGAAGGAGTTCAGC
GCCTGCGCAATCGGCTGCAAGGTGTACATCACTGGCGGGA--GAGGCTC-
AGAGAACGGTGTGTCTAAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTGAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCACGGCTCC
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACTGCAGCAAC
TGGCTGCCTCCCGCCTCTCCGTCT-----

-----GCAAAAGACAGCAGCAAGGGGACGCTGGAGGATCAAATC
ATCCAGGCGAACCCGGCGCTGGAGGCCTTCGGGAACGCCAAAACGCTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACCTCGGTA
CGAGCGGGAAGCTGTCGTCTGCTGACGTCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTGAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCGGAGCTCCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAGGGAGAGGTGACGGTC
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGA
TGTGCTCGGCTTCACTCCAGACGAGAAGATGGGCGTCTACAAACTGACCG
GCGCCATCATGCACTACGGAAACATGAAGTTCAAAACAGAAGCAGCGCGAG
GAGCAGGCGGAGCCTGACGGGACGGAGGCGGCTGATAAGTCTGCTTACCT
GATGGGTCTGAACTCTGCTGACCTGATTAAGGGGCTGTGCCATCCCAGAG
TGAAGGTCGGAAACGAATACGTACCAAAGGCCAAAGCGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCACGTGGCCATGCACTCTGCCACAG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACACCT
GTGCTCTTGGAGCACCTCAAGAGCCACTCTGGGAAGTCTTCGGGTGGCAC
CAAGGAGAAAAAACCCCGTGTGACCCTGTGACCGTCTGTTTTCTACACAC
GGAAGGATGTGAGACGACATATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAATACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACACG
TCATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCCGATATGTTAGGTCTTTTAGCGTCTGGGTACCACCCTGCTCTGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCGCCGGTGGGGCTCCTTTCGGATGAGCATGT
ATAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGTGTGAGT
CACCCG-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGTTGTCACATGGAATATCTCATCTACGCCTCTTCTCATTCA
TGGGATGTTTTACAAATCAGTGATGGATCAAATATTGTGAATCTGCTGGCT
AGTAACTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGTCCGGTGATTGGGTTTTACATTTATGAGCCCATCGAGTACT
GGAACTCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCTTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTGCCTCGACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCAGAGTACCAGCACTCACAGAGGACATCATATTCTCCAAG
A---ACCGCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGAT
GTACTTAGTGGCACGAACCACAGAGAAGAAGCGTGAAGAGGTGGTGGAGC
TTCTGGAGAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCTACATTTGTGTTTCATGGACCCTACAGCTCCTCTGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTACTACAATCCTCATCCTTA
CTTTTTCTTGGTCATTAATCCCTTGGGGAACCTCTGGCTCATCCTCACT
GTAACATCCGTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAGAAATGTGTCTACATCTTGCAATGTAGGCA
TTATTAATGGGATCTCTGGATGGGCTTCCTCTGTGGATGACTCCCCGGCT
GACACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCAAT
AAAGGATCTGGAGGAGGACATCATAGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGTACGTGCACCTCAGGCTTCAGTGTGATGATCAAAGAATCTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCC
TGAGAAGGCCGTACGTTTCTTTCACTATTATGTCAGTCTCTGTCTG
CAGATGAGGAGGAG-----GAAGAG
GTTACCATCTTACCAGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCC
CCTTTGCCTAACGTTTGTGGATGAGTCAGACCACGAGACACTTACTGCCG
TCCTGGGGCCTATAGTTGCAGAGCGCAATGCAATGAAAGAGAGCAGACTC

ATCCTATCCGTGGGTGGACTACCTCGCTCCTTCCGCTTTCACCTCCGAGG
CACCGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CAGGGTCCTCCCATATCTGCACTCTTTGTGACTCCAGTCGGGCAGAGGCC
TCTGAAAACATGGTGCTACACTCCGTCACCCGCAGCCACGAAGAGAACCT
AGAACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGCAGATG
AGCTGCGAGACAGAGTCAAAGGGGTGTCTGCCAAGCCTTTCATGGAGACC
CATCCCACCCTAGATGCATTACACTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATTGGGGAGGTATACAAAAGGT---CA
AC---CCCAGCCGGGAGGAACGACGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAA
CTATGCCCGCAGGCTAATGACCCAGGAGACTGTGGAGGTGGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTC
TACCTCCAGATGAAGCCTGTATGGCGTGCCACCTGCCAGCCAAGGAGTG
CCCCGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCACTTTGCCGACC
TCCTCTCCTCTGCCTTCAAATATAGGTACAACGGAAAGATAACCAATTAC
CTGCACAAGACCCTGGCCCATGTGCCCTGAAATCATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAGGGGAATGAGTCGGCAAACAAATCGTACA
CCATCGACATGGGCCCTTGGGTCCCGGTGGAAGGAGAGCCACAGCCG
TTCTCCTGCTCCATTGAAGACCCCAAAAACAGACAAAGTTCAAAGGCAT
CAAGACGTATATTTTCGTACCGGGTCACGCCGAGCCACACAGGACGTCCTG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCCCACCTGCCAGAGAAGCAGGCCACGGG
CCGATTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGT
GGATGAACCACATGACCAGTCAACCAGTCCTCTCCAGTATGAAGCCTTT
GAGCACTTTCTGATGTGCGCTGATGACAAACAGTGGAACCTGGGCAAGAG
ACGGGCAGAGAAGGACGAGATGGTGGGGGCCATTTTCATGCTGACCCTCC
AGATCCCCAACGAGCACCAAGACCTTCAGGATGTGGAGGAACGAATCGAC
TCCTTCAAGGCCTTTGCTAAGAAAATGGATGACAGCGTGATGCAGCTCAC
ACATGTTGCCTCGGAGCTGGTGCGCAAGCACCTGGGAGGATTCAGGAAGG
AGTTCCAACGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCGTTTATG
CTGGACCCTCCCCACTGCTCAGAAACCTTCAACAACGCCATCTCCCATNNNNNNNNNCG
TTCTCAAACCTGACCTCTCTGGGTTTCATCATCGGAGTCGGTGTGGTTGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAG
CGCCCTACTATTTCTTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCC
GCCATCTGCTTCCCCTTTGTCTTACCTCTGTCAAGAATGGATCTGCCTG
GACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTGT
CCTGTTCCACACGGCGTTTATGCTGTTCTGTGTGTCAGTGTACGCGCTAC
CTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGAC
CTGTCTAGCTGTGATCTGCATGGTGTGGACGTTGTGAGTGGCTATGGCGT
TCCCACCGGTGCTAGACGTAGGGACGTACTCTTTTATCCGGGAGGAGGAC
CAGTGCACATTCAGCACCGTTCCCTTCAGGGCGAATGATTCTCTGGGCTT
CATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTCTTCGTCACGACCGTCGAAAGATGAAGCCTGTCCAGTTC
GTGCTGCTGTGTCAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGG
GCAGGCGGCGGCAACTGGCTGGCTGGATTTGGTTCGAGGCCCCACCCCGC
CTACTTTGCTGGGCATACGGCAGAACAGCAACGCAGCAGGCCCGCCGGCGT
CTTCTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTT
CTACATCATGACGTTTTTCTTCCCTGGCTCTGTGGGGGCCCTATCTGGTGC
CCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTGGTCCCTGGGGGCTAC
CTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCGTT
CATCTGCATCTTCTCCAANNNNNNNGCCAAATCTCGCTTTCACCCCTGGCATGGGGAC
TGGTCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTAT
CCCCGACGAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGG

TTTGTACCC---CTGCCAACAAACCGACTGGACTTTGCTGCCTCGGCATA
CGACGCCGCC-----GATTTGCGCCGGTAACGCGGCCACCTGCTGT
CCTACGCAGCGGCCGGAGTGAAGGCTC-----TCCCCTGCCGACTGCA
GGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGACCCGTCAG---GCTG
G---GGAGGACGCACGCCGCGCAGTACTGTGGCGTAAATAGCAAATCCA
GCTCGGTGTTTTCTGCTGGCCCGCTAACTCTATCGGTGGCAGAGCGGGC
A---CC---AACTACCTGG-----CCGAGGA---GGGA---GACTC
---CATCCCAGCGGAGAGGTCACCG---AT---CGGCGGCTCGGAGGAG-
--ACCAAACCCAAAGACCTGAC---ATCAGA---GTCGAGCTGGATAGAG
---ACGCCGTCTCCATTAAGTCCATCGATTGAGCGATTCTGGTATCTT
TG---AACAGGCCAAAAGGAGAAGAATCTCACCTTCTGCCACGCCG----

GTTTCAGAGACAGTGTCCCCTTAAAATCGGAGNN
NNNAACCACAGCTCC
CACGATATCGGCTCCGG---ACAAACGGCGTTTTCTCTCAGGCG---CC
CGGCTAC---GCAGCGGCCGCCCTGGGA---CACCACCA-----CCACC
CGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGG
GACTTTCTCTTCAGAAATCGGGGTTTTGGGGACGCCACCGG-----
---GGCGCAGCACAGTTTGTTCGCCCTC-----CGGAAGTTT---C-
-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTC
CCGGGGCTCCACGAG---CAAGCGGCAGCCATGCGTCTTCCAACGTGGT
CAACAGCCAGATGCGACTGGGCTTCTCGGGGGACATGTACGGACGGGCCG
ACCAGTACGGCCACGTTACGAGCCCGCGCT---CCGACCACTATGCTTCG
ACCCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCA---CA
CCACGGAGCAGGGCCCTTCTTTCGATACATGAGGCAGCCGATCAAACAAG
AGCTCATCTGCAAGTGGATCGAGCCGAGCAGCTGACGAACCCCAAAAAG
TCGTGCAACAAAACCTTTTAGCACGATGCACGAGCTGGTGACCCATCTGAC
GGTGGAGCATGTGGGGGGACCAGGAGCAGACCAACCACATCTGCTTCTGGG
AGGACTGCGCCAGAGAAGGGAAGCCATTCAAAGCCAAATACAAACTTGTA
AATCATATCAGAGTACACACCGGAGAAAAGCCCTTCCCCTGTCGGNNNNNNNNNNNNNNNNNNNNNN

>*Gnathonemus petersii*

AGCCTACTCATCCGAGCGGAACCTAAACCAACCTGGAGCCCTACTTGGGGA
TGACCAGATTTATAATGTTATCGTACACAGCACACGCCTTCGTAATAATTT
TCTTCATGGTAATGCCATTATGATCGGCGGCTTCGGCAACTGATTAATC
CCCCATCATGCTCGGCGCTCCTGACATAGCATTCCCTCGAATGAACAACAT
AAGCTTCTGACTCCTGCCCCATCGTTCCTTCTTCTACTGGCCTCTTCTG
GCGTAGAAGCTGGGGTTCGGTACGGGGTGAACCGTTTATCCACCGCTAGCC
GGTAACCTTGCCCATGCTGGAGCCTCCGTAGACCTAGCCATTTTCTCACT
TCACCTGGCCGGGGTCTCTTCCATCCTTGGTTCAATTAACTTTATTACCA
CAATTATCAACATAAAACCCACAGCAATTTCCCAATACCAAACCCCATTG
TTTATTTGAGCCCTGCTAGTAACCACCGTCTTCTACTGCTGTCAATTACC
AGTCTTAGCTGCAGGAATTACGATATTACTGACAGATCGGAACCTAAACA
CAACATTCCTTGATCCGGCAGGCGGAGGAGACCCAATCCTCTACCAACAC
TTANNN
NN
NN
NN-----

>Gonorynchus greyi

AGCCTCTTAATCCGGGCCGAGCTAAGCCAACCAGGCTCCCTATTAGGCGA
TGACCAAATCTATAACGTCATTGTCACGGCACACGCCTTCGTTATGATCT
TCTTTATAGTGATAACCCATTCTAATTGGGGGTTTCGGGAATTGACTAATT
CCCCCATGATTGGGGCCCCAGACATGGCCTTCCCTCGAATGAATAACAT
GAGTTTCTGACTACTTCCCCCTCTTTCCTTCTTCTTTTAGCCTCCTCGG
GGGTCGAAGCCGGGGCAGGGACCGGGTGAAGTGTCTACCCACCCCTAGCC
GGCAACCTCGCTCACGCAGGGGCTCGGTAGACCTAACTATTTTCTCCCT
CCACCTCGCGGGTGTATCCTCTATTCTAGGGGCTATTAAGTTCATCACAA
CTATCATCAACATGAAACCTCCGGCTATTTCCCAATACCAAACCTCCGCTA
TTCGTATGGGCGGTTCTAATTACGGCCGTGCTACTTCTTCTGTCCCTTCC
AGTACTAGCTGCCGGCATTACCATACTTCTTACGGATCGAAATCTGAACA
CTACCTTCTTTCGACCCAGCGGGGGAGGAGATCCCATCCTCTACCAACAC
TTGTTTTGATTCTTTCGGGCACCCCCGAAGTTTATATTCTAATTCTACCCGG
CTTTGGGATGATCTCCACATCGTTGCTTACTACTCAGGTAAAAAAGAGC
CGTTCGGCTACATGGGCATGGTCTGGGCTATGATGGCAATTGGCCTTCTA
GGCTTCATTGTCTGAGCCACCACATGTTTACAGTTGGAATGGACGTCGA
CACCCGGGNNNNNNNNNNNNNNNAGAACTTTCATCCATCCAAGTGCCTGGGAATGCTGCTGCTTT
CAGATGCCACCAGTGCACGCAGCTCTCGCAGCTGTCCTGGAGCATGTGC
CTGAGCAACTTCCCTGCCATCTGCAAAACAGAGGAGTTCCCTGCAGCTTCC
CAAGGATATGCTGGTCCAGCTCCTGTGCACGAGGAGCTGGAGACGGAGG
ACGAGCGGCTGGTCTATGAGTCAGCTCTCAACTGGGTGAAGTATGACCTG
GAGAGCGGCACTGCCACCTTCCCTGAACTGTTGCGCACAGTGCCTTGGC
ACTTCTGCCCGCCATCTTCCCTGATGGAGAACGTCTCCACCGAGGAGCTAA
TCAACGCACAGGCTAAGAGCAAAGAGCTAGTGGATGAAGCCATCCGCTGC
AAGCTGCGAATCTTGCAGAACGACGGCGTGGTCAACAGCCCCTGTGCCCG
TCCACGAAAGACCAGCCATGCTCTTTTCTTGTGGGCGGGCCCACCTTCA
TGTGTGACAAGCTCTACCTGGTAGATCAGAAGGCCAAGGAGATCATCCCC
AAGGCAGACATCCCCAGCCACGCAAGGAGTTCAGTGCCTGCGCCATTGG
CTGCAAGGTGTACGTGACAGGTGGTC--GTGGCTC-AGAGAACGGTGTGT
CTAAGGATGTGTGGTCTATGACACCGTGCACGAGGAGTGGTCCAAAGCG
GCGCCCATGCTGATCGCTCGGTTTGCCATGGCTCAGCTGAGCTGCGTCA
CTGTCTTACGTGGTGGGGGTACACAGCCGCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCGATGACTA
CATAGTAG
TTTTTCAGTCGTTCTGCTAATAGGCTCATCCTAAATGAGGCAGAGTTGCTT
CTAGCCCTGGCACAGGAATTCCAAATGAGGACAGTCACTGTGTCCCTTGA
GGAGCAGTCATTTGCTAGCATTGTCCAAGTCATCAGTGGAGCATCCATGC
TGGTCAGCATGCATGGAGCCCAACTGATCACCTCCATGTTCTTCCGACGA
GGTGCTGCTGTGGTAGAGCTCTACCCCTATGCAGTAGACCCGGAGCACTA
CGCTCCTTACAAGACACTAGCCTCCTTGCCAGGCATTGACATTCAAGTATA
TTGCATGGAGAAACAACCTTGGAGGAGAACTCTGTGGCCTACCTGAGCGC
CCCTGGGACCAGGGTGGAAATTTACATCTGGAGAAGGAGGAGCAGGAGCG
CATAGTTAACAGCAGGGAGGTGCCAGGCACCTGTGTTGCCGCAACCCAG
AATGGCTCTATAGGATCTACCAGGACACAATAGTGGACATCCCTTCCCTTG
CTGGAGTTCTCAG---GGAAGGTCTGAAG---ATCAAGCCTAATCTAAA
AAA---GACTAAGGCTGCCAGCACAGTTTCATCCTGGACGAGTTTCGAGAGC
CCAAGTGCCAGACTTCAGTGCAGGCCACCAATGAGGCTAAACTGTCAGTG
TCATGGCAGATCCCGTGGAACCTCAAGTACCTAAAAGTTAGAGAGGTCAA
ATATGAGGTATGGATACAGAAGAAGGATACCAGTAAGGGAACCCCTGGAGG
ATCAAAATATCCAGGCTAACCCTGCCCTGGAGGCTTCGGAAATGCTAAA
ACGGTGAGAAATGACAATTCCTCTCGCTTTGGAAAAGTTCATACGTATTCA
TTTTGGCACAAGTGGTAAATTGGCYTCTGCTGACATAGAGACCTACCTGC
TTGAAAAATCTCGAGTAACTTTTCAGCTCAAAGCAGAGAGGAATTACCAC

ATCTTTTTTTCAGATTCTGTCCAATGAAAAGCCAGAGTTGCTAGACATGAT
GTTGGTTACGAATAATCCTTATGATTACTCCTACATCTCCCAAGGAGAAG
TTACTGTTCAATCCATCAATGACAATGAAGAGCTATTAGCTACAGACAGT
GCTTTTGTGATGTACTTGGCTTTACCTTGGAAAGAAAAAATGGCGGTCTACAA
GTTGACAGGTGCAATAATGCATTATGGCAACATGAAGTTTAAGCAGAAGC
AGCGGGAGGAGCAAGCAGAACCAGATGGTACAGAGTCTGCCGACAAGTCA
GCTTACCTAATGGGGCTAAACTCTGCAGATCTYGYAAAGGGACTCTGCCA
CCCGAGGGTCAAGGTCTGGCAATGAATATGTACAAAAGGGCAGAGTGTGG
ATCAAGTCTACTACNNTACAAAGAGGGCCTTTAAGTGTGAGGAGTGTGGCAA
GAACTACAACACCAAGCTGGGCTACAAGCGCCACGTGGCCATGCACTCGG
CCACGGCGGGTGAACCTCACCTGCAAGGTGTGCCCTGCAGAGCTACGAGAGC
ACGCCGGGCGCTGTGGAGCACCTGAAGAGCCACTCGGGCAAGTCCTCGGG
CGGCGCAAGGAGAAGAAGCACCCGTGCGACCCTGCGACCGGGCGTTCT
ACACGCGCAAGGACGTGCGGGCGCCACATGGTGGTGCACACCGGACGCAAG
GACTTCCTGTGCCAGTACTGCGCCAGCGCTTCGGCCGCAAGGACCACCT
GACGCGGCACGTGAAGAAAAGCCACTCGCAGGAGTGTGAAGATCAAGA
CGGAGCCGCAGGACATGCTGGGGCTGCTGGGGCTCGGGATCTCCACCCTGT
GCCATCAAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGCAGCCGGCAA
GGACCCCATGATGGCCAAGCCCTTCCCTGCGGGCACCCCTTCCCCATGG
GCATGTACAACACCCATCAC-----ATCCAGGCCATGTCCAGCCCTGGA
GTGGGCCAC-----CACCACCTCTCTGGTGCCGGGCTCCTTGTCTGC
TGCTATGGGAATGGGCTGNNNNNNNNNNTACCTGATCTATGCCTCCTTCTCATTCATGGG
ATGTTTACAAATCAATGATGGCCTGAACATTGTGAACCTGTTGGCCAGTA
ATTACCCAGTGTGTCTGTTTGCCTCTGACGCAGCAGAAGTACTTCAGCAAC
TACAGTCCAGTGATTGGCTTTTATATCTATGAGCCCATAGAGTACTGGAA
CTCCACTGTGCAGGAGCACCTCAAGACTCTGGGCCAGGGCTTCAACAAGA
TCTCCTGGATCGATAACTACTTTCACTACCTTAAGGTGGTGAACGTCAGC
GCGTCAACCAAAAGCGATTTTCACTAATCCTCAAGACGTCTTTCCTSA
AAGCCAGAGTATCAGCACTTCCACCGACGACATCATCTTCTCCAAAA---
CCGGG-----ACGAGTATGACATCATCGCGTCGCGGATGTAC
CTGGTGGCCAGGACGACGGAGAGGACGCGGGAGGAGGTGGTGGAGCTGCT
GGAGAGGCTCCGGCCGCTGTCCCTCATCAACAGCATCAAGTTTCATCGTCT
TCAACCCACCTTCGTCTTTCATGGACCGCTACAGCTCCTCCGTCATCTCC
CCCATCCTGACATCGGGCTTCAGCGTCCTGACCATTTAATCCTCACCTT
CTTCTGGTTCATCAACCCGCTGGGGAACTTCTGGTGTGATCCTGACGGTCA
CCTCCGTGGAGCTGGGCGTCCCTGGGGCTGATGNNTGATGATGTG
NNNTGATGATGTG
CCAGCGGA
CACCATTGCCCGTCTGTTTCCGCTATGACGTAGCTCTGGTGTCTGCGCTGA
AAGACATGGAGGAGGACATCATGGAGGGTCTGAGGGAGAGAGGGCTGGAT
GACAGCACCTGCACCTCTGGTTTCATAGTGATGATCAAAGAGTCTTCCGGA
CGGTATGGGGGATGTCAGCGAGAAACATGGAGGTGGACCAGCTGTTCAG
AGAAAGCAGTGAGGTTCTCGTTCACGGTGTATGTCCATCTCTGTCCATGCA
GAAGGTAAGGAG-----GAAGCCGT
CACCATCTTCCAGGAGCGAAAGCCAACTCCGAGCTGTCCTGCAGGCCTC
TATGTCGTATGTTTGTGATGAGTCAGACCATGAGACGCTCACGGCCATC
CTGGGCCCTGTGGTGGCTGAACGGAGAGCCATGAAAGAGAGCCGGCTGAT
CTTGTCGTAGGGGGCTTGAACGTTCTTTCAGGTTTCAGTTCCGGGGCT
CAGGCTATGACGAAAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTCA
GGGTCCACCTACGCTGCACCTTGTGCGACTCCACCCGAGCTGAGGCCTC
CAAGAACATGGTGTGCTGACTCCATCACCCGAAACCATGACGAGAACCCTG
AGCGCTACGAAGTGTGGAGGACCAACCCTTACTCTGAGTCTATTGAGGAG
CTCAGAGACAGGGTCAAGGTGTCTCAGCCAAGCCCTTCATGGAGACCCA

CCCCTAATGATTGGAGCCCCGACATGGCCTTCCCTCGAATGAACAACAT
AAGCTTCTGACTCCTTCCCTCCTTCCCTTCTCCTGCTCGCCTCTTCTG
GGGTAGAAGCCGGTGCTGGAAGTGGTTGAACGGTTATCCCCCTCTAGCA
GGAAATCTTGCTCACGCCGGTGCGTCTGTAGACCTAACAAATCTTCTCCCT
TCACTTAGCCGGTATCTCATCAATCTAGGGGCCATCAACTTTATTACAA
CTATCATTAACATGAAGCCTCCTGCTATCTCCCAATACCAAACCCCACTA
TTTGTATGAGCTGTGCTGATTNCAGCCGTCTTGCTCCTGCTTTCTCTCCCC
GTCCCTCGCTGCCGGAATTACAATGNTTNTGACAGATCGAAATCTAAACACCA
CTTTCTTTGACCCCGCAGGAGGAGGTGATCCTATTTCTCTATCAACATCTG
TTC-----

-----NNTTGGAGAAGAACCCTTCATCCATCAAACCTGCCTTGGCATGCTG
TTGCTGTCCGATGCTCATCAGTGCACCAAGCTCTCAGAGCTTTCTGGGG
CATGTGCCTCAGCAACTTCCCYGCTATTTGCAAGACAGAGGACTTCCCTCC
AACTGCCCAAAGATATGGTGGTACAGCTTTTGTACATGAGGAGCTAGAG
ACAGAAGATGAGAGACTGGTRTATGAAGCTGCCCTGAACTGGATCAACTA
TGATTTGGAAAAGAGGCACAGCCACCTCCCAGAACTCCTGAGGACTGTTT
GTCTGGCTCTGCTTCCAGCCATCTTTCTGATGGAGAACGTATCCACWGAA
GAGCTTATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATGAAGCTAT
CAGGTGTAAGCTGAAGATCCTRCAAAAATGATGGYGTGTAAACAGCCCAT
GTGCCAGGCCAAGAAAACCAGCCATGCCCTGTTTCTTCTGGGTGGGCAG
ACCTTCATGTGCGACAAACTGTACTTGGTGGATCAGAAAGCCAAAGAGAT
TATCCCTAAAGCTGACATCCCAGCCCKAGGAAAGAGTTTAGCGCCTGTG
CCATTGGCTGTAAAGTGTACATTACTGGTGGCA--GAGGCTC-TGAGAAT
GGTGTGTCCAAAGATGTGTGGGTCTACGACACAGTCCATGAGGAATGGTC
CAAGGCRGCACCCATGCTGATTGCAAGTTTGGTCATGGTTCTGCTGAGC
TGAAACACTGCCTGTATGTGGTAGGAGGTCATACTGCTGCAACTGGCTGC
CTTCCAGCCTCTCCATCAGGACGAGTACATTGTTGTGTTTCTGATCGATCAA
CAACGAGACTGATCCTGAATGAAGCGGAGCTGATCATGGTGTGCTGGCCAG
GAGTCCAGATGAGGGTGGTACCGTGTCTCTGGAGGAGCAGTCCCTCCC
CAGCATCGTGCAGATGATCAGCGGGCGTCCATGTTAGTCAGCATGCATG
GAGCCAGCTCATTACCTCACTCTTCCCTCCCAGGAGAGCTACCGTGGTG
GAGCTCTTCCCCTTGTGTGAACCCGGAGCAGTATACCCCTACAAGAC
CCTGACCTCTCTGCCAGGCATGGACCTTCACTACATCGCCTGGAGGAACA
CGATGGAGGAAAACACCATCACCCACCCAGACAGAGGCTGGGAACAAGGG
GGCATCACTCACCTGGAGAGGGACGAGCAAGACCGGATCTTGGCCAGCAA
AGACGTCCCAGACACTTGTGTGCTGCCGGAACCCGAGTGGCTCTTCCGGA
TCTACCAGGACACCCCTGGTGGACATCCCTTCTTTCTTGGAAAGTCTCAA-
--AGAGGGAATGAAG---ACAAAGCCAGCATGAAGAA---GTCTAAGCC
AGCAAGCATGGTCCACCCGGGCCGGGTGCGGGAGCCGCAGTGTGACACCT
CCGTACAAACCACCAATGAGGCTAAACTGACAGTCTCTTGGCAGATCCCC
TGGAATCTGAAGTACCTGAAGGTGAGGGAGGTGAAGTATGAAGTCTGGAT
CNNNAAAAGGACACCAGCAAGGGGACCCTGGAGGATCAAATCATCCAGGCTA
ACCCTGCGCTGGAGGCCCTTGGAAAACGCCAAAACCTTGAGAAATGACAAC
TCATCACGTTTTTGGAAAATTCATCCGAATTCACCTTCGGTACGAGCGGCAA
GCTGTGCTCTGCCGACATCGAGACGTACCTACTGGAGAAGTCTCGAGTCA
CCTTTCAGCTCAAGGCTGAGAGGAAC TACCACATCTTTTACCAGATCCTG
TCCAACCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACCAACAACCC
TTACGACTACTCCTACATCTCCAAGGAGAGGTAACAGTCGCCTCCATCA
AYGAYGCCGAGGAGCTGATGGCCACTGACAGCGCCTTTGACGTSCTGGGC
TTCACTCCGGAGGAGAAGATGGGCGTCTACAAAACCTGACYGGCGCCATCAT

GCACTACGGAAACATGAAGTTTAAAGCAGAAGCAGCGGAGGAGCAGGCTG
AGCCAGATGGGACGGAGGCTGCAGATAAATCCGCTTACCTCATGGGGCTG
AACTCTGCTGACCTCATCAAAGGACTGTGCCATCCAGAGTCAAGGTCGG
GAATGAATACGTCACCAAAGGACAAAGTGTGGACCAGGTCTACTACCCCA
ACAAGGAGGCCTTTAAATGTGAGGAGTGTGGGAAGCACTACAACACCAAG
CTGGGCTACAAGCGCCATGTGGCCATGCACTCCGCCACTGCCGGGGACCT
CACCTGTAAGGTGTGCATGCAGACGTACGAGAGCACGCCGGTTCTCCTGG
AGCACCTGAAGAGCCACTCCGGGAAGTCCTCTGGAGGCGCCAAGGAGAAG
AAACACCCGTGTGACCACTGCGACCGCGCTTCTACACCAGGAAGGACGT
AAGACGCCACATGGTTCACACCGGGGCGGAAGGACTTCCTGTGTCAGT
ACTGTGCCCAGCGCTTGGCAGGAAGGACCACCTGACGCGCCACGTGAAG
AAGAGCCACTCCCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCTGATAT
GCTGGTTCCTTGGCATCAGCGTCGCCCCCTGCTCCGTGAAGGAGGAGC
TCAGCCCTATGATGTGCGGCGTGGGGCCCAACAAAGACCCCATGATAGGC
AAACCCCTTCCCTGGGGGCCCCCTTCCCCATGGGCATGTACAACCCCA
CCAC-----CTCCAGGCCATGTCAGGCCCC-----

--

CACCCGTCCCTGATGCCCCCTCCCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTACCTCATTT
ATGCCTCTTTC

TCATTCATGGGATGTTTACAAATCAGTGATGGATCCAATATAGTGAACCT
GCTGGCTAGTAACTCCCGAGTGTAACCTATGCTATGACCCAGCAGAAAT
ACTTCAGCAACTATAGTTCCTGTGATCGGGTTTTACATTTATGAGCCAATT
GAGTACTGGAACTCCACAGTACAGGATCACCTGAAAACCTCTGAGTCATGG
TTTTAACAAGATCTCCTGGATTGACAATTTCTTCCACTACTTGAGGGTGG
TGAATGTGAGTGCAACAACAAAAGCGATTTTCATCACYATACTCAAGGGC
TCTTTCCTGCGCAGCCAGAGTATCAGCACTTCACCGAGGATATTATATT
CTCCAAGA---ACCGTGAGACCG-----ATGAGTACGACATCATCGCTT
CTAGGATGTACTTGGTGGCGCGGACGACGGAGAAGAAGCGCGAAGAAGTG
GTGGAGCTTCTGGAGAACTTCGTCCACTAATGCTTATCAACAGCATCAA
GTTTCATTGCCTTCAACCCTACGTTTGTGTTTCATGGACCGCTACAGCTCTT
CTGTGATCTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTC
ATCCTCACTTTTTTTCTGGTTATCAATCCCTTGGGGAACCTTCTGGCTCAT
TCTCACGGTAACCTCTGTAGAGCTCGGTGTTTTGGGTTTAAATGGGATTC
ACCAGTTTGAATGGCAACCAGCTCTCAAAAATGTGTCCACTTCTTGCAAT
GTAGGCATTATTAACGGGCTCTCTGGATGGGCCTCATCGGTGGATGACTC
CCCAGCTGACACCATCACTCGTCCGTTTCGCTATGATGTGGCACTGGTKT
CAGCGTTAAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGT
GGGCTGGAAGACAGTGTCTGACTTCAGGCTTCAGTGTCTGATCAAGGA
ATCCTGTGACGGCATGGGTGATGTCAGCGAAAAGCATGGCGGAGGACCAG
CTGTTCCTGAGAAGGCTGTGCGTTTTCTTTTACCATCATGTCTGTCTCT
GTAAGGGCAGAGACTAAGGAG-----
-GAAGACATTACCCTTTTACCGAGCCAAAGCCAAACTCGGAGCTGTCCT
GTAAACCCCTCTGCCTGACATTTGTGGATGAGTCAGACCATGAGACACTC
ACAGCAGTCTGAGCCCCGTAGTTACAGAGCGTAAAGCAATGGCAGAAAG
CAGGCTCATCCTATCCATAGGTGGACTGCCTCGCTCATTCCGCTTTCCT
TCAGAGGCACAGGATATGATGAGAAGATGGTACGTGAGATGGAGGGCCTT
GAGGCTTCAGGGTCCACCTATATCTGCACTCTTTGTGACTCCACTCGAGC
AGAGGCCTCTCAAAAATGGTGTGCACTCTGTCAACCCGAGTCACGACG
AAAACCTGGAGCGCTATGAAATCTGGCGAACCAATCCCTATTCTGAGTCT
GTGGAGGAGCTGAGAGAAAGAGTAAAGGGGGTATCAGCCAAACCCCTCAT
GGAGACTCAACCAACGCTTGACGCTCTGCATTGTGACATTGGCAATGCCA
CTGAGTTCTACAAAATCTTCCAAGACGAGATTGGAGAGGTGTACGAAAAG
GT---CACT---CCTAGCCGTGAGGAACGGCGCAGCTGGAGGGCAGCCTT

AGATAAACAGCTGAGGAAGAAGATGAAGCTCAAACCGGTGATGAGGATGA
ATGGAAACTATGCCCAGCTGATGACCATGGAGGCTGTGGAGGTGGTG
TGCGAGTTGGTGCCCTCAGAGGAGAGGAAAGAGGCCCTGAGGGAGCTCAT
GAGACTGTACCTCCAGATGAAGCCTGTCTGGCGTGCCACCTGCCAGCCA
AGGAGTGCCCTGACCAGCTGTGCCGCTACAGCTTAACTCTCAGCGCTTT
GCAGACCTCCTCTCTCCACCTTCAAGTACAGGTATAATGGAAAGATAAC
AAATTACCTGCACAAGACCCTGGCCCATGTGCCGAAATCATAGAGAGAG
ATGGATCCATAGGGGCCCTGGGCCAGTGAGGGGAACGAATCAGCNNNNNNNTCGTACA
ACATCGAGATGGGACCCTTGGGGCCTCGGTGGAAGGACAGCCACAGCCT
TTCAACTGCTCTATCGAAGATCCAACATAACAGACAAAGTTCAAGGGTAT
CAAGACGTATATTTTCATACCGGGTCACACCGAGCCACACAGGACGACCTG
TGTACAGACGCTACAAACACTTCGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTTCCCTCACCTGCCTGAGAAGCAGGCCACRGG
GCGATTTGAAGAAGACTTCATTGAGAAGCGAAAGAGACGATTGATACTCT
GGATGAACCACATGACCAGCCACCCAGTCCTCTCCAGTACGAAGGCTTT
GAGCACTTTCTGATGTGTGCCGACGACAAACAGTGGAACCTGGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTAGGTGGACACTTTATGCTGACCCTCC
AGATTTCCAACGAGCACCAGGATCTTCAGGACGTAGAGGAGCGCATTGAC
TCCTTCAAGTCCTTTGCTAAGAAAATGGACGACAGCGTGATGCAGCTCAC
GCACGTTGCCTCGGAGCTGGTTTCGTAACACCACGGCGGGTTTCAGGAAGG
AGTTCCAGCGACTTGGAACGCCTTCCAGTCTGTCAGCCAGGCGTTCATG
CTGGACCCTCCGCACAGCTCTGACACCTTCAACAACGCCATCTCACACCC
TCTCGCTACGTTCCCTCAAACCTGACCTCTTTGGGTTTTATCATCGGAGTCG
GTGTGGTTCGGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
TTGCACCGAGCGCCCTATTATTTCTGCTGGATTTGTGTGCGTCCGATAT
CCTGCGCTCCGCCATCTGCTTCCCCTTCGCTTTCACCTCGGTCAAGAATG
GATCCGCGTGGACGTACGGGACGCTGACCTGCAAAGTCATCGCCTTCCTG
GGTGTGCTCTCCTGTTTCCACACGGCATTATGCTATTCTGTGTTAGCGT
CACRCGCTACCTAGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGCTTGGCTGTCACTGTCATGGTTTGGACGTTGTCAGTG
GCGATGGCGTTCCCGCCGGTGTGGACGTAGGGACGTACTCGTTTATCCG
CGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCGAACGATT
CGTTGGGATTTCATGCTCCTGCTGGCGCTCATCCTCCTCGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTGTCCACGACCGCCGAAAAATGAAGCC
CGTCCAGTTTGTGCCCGCCGTCAGCCAGAACTGGACCTTCCACGGGCCAG
GCGCAAGCGGGCAGGCGGCGGCAAACCTGGCTGGCCGGCTTCGGCCGAGGC
CCTACTCCGCCTACTTTGCTGGGAATCCGGCAGAACAGCAACGCAGCGGG
CCGCCGGCGTCTTTTGGTGTGGATGAGTTCAAACAGAGAAGAGGATTA
GTAGGATGTTCTACATCATGACGTTTTTCTTCTCCTGGCGCTCTGGGGGCC
TATCTGGTGCCTGCTACTGGCGGGTGTGTTGCGAGGGGCCCGTGGTCCC
CGGGGGCTACCTGACGGCAGCTGTGTGGATGAGCTTTGCCAGGCTGGAG
TCAATCCGTTTCATCAGCATCTTCTCCAACAGCGAGGCCAAATCTCGCTTT
CACCTTGGCGTGGGGACTGGGCCTGGCACAGAGC---GCAGCGTCCCACT
CGGCAACAGCTTGCTCTCCCCGAGCAGAGCGAGGAGCCCACTGTTGCCA
CCCCCCGAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGTGCTGCCTCGGCATACGACGCCGCG-----GATTTCCGCCGGTAA
CGCCGCCACCTTGCTGTCTACGCGGCGGCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCGGGCTGCTCCAACCGGCTCTTGGCTATTACGCA
GACCCATCGG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGG
CGTCAACACCAAATCCAGCTCGGTCTTTTCTGCTGGCCCACTAACTCTC
TCGGTGGCAGGGCAGGAG---CC---AATTACCTGT-----CCGAG
GA---GGGT---GACTC---CATCCCCACGGAGAGGTCACCA---AT---
CGGCGGCTCGGAGGAG---ACCAAACCCAAAGACATGAC---GTCAGA--

-----GGATAAAAAACATTGTCGTGTTTCAGT
CGTTCAACCACGAGACTAATCCTGAACGAAGCAGAGCTCATCATGGCGCT
GGCCAGGAGTTTCAGATGAGGGTGGTGACGGTAAACCTGGAGGAGCAGG
CGTTCCCCAGCATCGTCCAGGTGATCAGCAGCGCCACCATCTTAGTCAGC
ATGCACGGAGCTCAACTCATCACCTCACTCTTCCCTGCCAGAGGAGCCGT
TGTGGTGGAGTTGTTCCCTTCCGCTGTGAACCCGGAGCAGTACACCCCAT
ATAAACTCTCGCTTCCCTTCCGGGCATGGACCTTCATTACATCTCCTGG
AGGAACACTGTGGAGGAGAACACTGTCACCCACCCAGACAGGCCCTGGGA
ACAAGGGGGTATCGCTCATTTGGATAAAGAGGAGCAGGAACGAATCCTGG
CGAGTAAGGATGTGCCAGGCATCTCTGCTGCCGAAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACAGTTTGTGGACGTCGCCCTCTCTCCTAGAAGT
CCTTAA--AGAGGGCATGAAT--GCAAAGCCCAACTTGAGGAA--GT
CAAAACCGGCCAGCACGCTGCACCCGGGCAGGGTCAGAGAACCCAGTGT
CAGACTTCAGTTCAAACCAGCAGCGAGGCTAAACTCACGGTCTCCTGGCA
GATACCGTGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGACGCCAACAAGGGGTCCCTGGAGGATCAGATC
ATCCAGGCGAACCCGGCGCTGGAGGCCCTTCGGGAACGCCAAGACGCTCCG
GAACGACAACCTCGTCCCGCTTCGGGAAGTTCATCCGAATCCACTTCGGCA
CCAGCGGGAAGCTGTGCTCTGCCGACATCGAGACGTACCTGCTGGAGAAG
TCCCGGGTACCTTCCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAACCAGAAGCCGGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCGCAGGGGGAGGTGACCGTC
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACGACAGCGCCTTCGA
CGTGCTCGGCTTACCCCCGACGAGAAGATGGGCGTCTACAAGCTGACGG
GTGCCATCATGCACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGCGAG
GAGCAGGCCGAGCCGGACGGGACGGAGTCCGCGGACAAATCGGCCTACCT
GATGGGGCTGAACTCCGCCGACCTCATCAAAGGGCTGTGCCACCCAGGG
TCAAAGTGGGGAACGAGTACGTACGAAAGGCCAGAGCGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAATGCGATGAGTGTGGGAAGCACTA
CAACACCAAGCTAGGATAACAAGCGCCATGTGCGCATGCATTCCGCCACAG
CAGGGGATCTCACCTGTAAGGTGTGCATGCAGACCTACGACAGCACGCCG
GTGCTCCTGGAGCACCTGAAGAGCCACTCTGGGAAGTCCTCAGGTGGCAC
CAAGGAGAAGAAACACCAGTGTGACCCTGTGATCGGCGTTTCTACACAA
GGAAGGACGTGAGACGCCACATGGTGGTCCACACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTAAAAATCAAGACGGAGC
CCCCAGACATGTTGGGCCTCCTGGCTTCGGGGTCGCCACCATGCTCCGTG
AAGGAGGAGCTTAGCCCCCTGATGTGCGGTATGGGGCCCAACAAAGACCC
CATGATGGGCAAACCCCTTCCAGCGGGGCCCTTTTCCAATGGGCATGT
ACAACCCTCACCAC-----CTGCAGGCCATGTCTCATTCTGGGGTGGGT
CATTCA-----CACCCGTCCCTGATGTCCAGCCCCCTGTCTGCAGCTAT
GGGCATGGGCTGTCCATGGACTACCTCATCTACGCTTCTTTCTCATTCA
TGGGATGTTTACAAATCAGTGACGGGTGCAATATCGTGAACCTGCTGGCG
AGTAACTCTCCAAGTGTCTCATATGCTCTGACCCAGCAAAAATACTTCA
TAACTACAGTCCGGTTCATTGGGTTTACATTTATGAGCCCATCGAGTACT
GGAACCTCGACAGTGCAGGAGCACCTGAAGACTTTGAGTCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGCGCATCAACCAAGAGCGACTTCATCAACATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATTTTTTCAAAG
A---ACCGCGAGACCG-----ACGAGTACGACATCATCGCCTCACGGAT
GTACTTGGTGGCGGGACTACAGAGAAGAAGCGCGAGGAAGTGGTAGAGC

TTCTGGAAAACTTCGCCCGTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAACCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCGGTCAT
CTCGCCATCCTGACCTCAGGATTCAGCGTGCTCACAAATCTTCATCCTCA
CTTTGTTCCTGGTCATCAACCCCTGGGTAATTTCTGGCTCATCCTCACT
GTAACGTCGGTGGAGCTGGGCGTCTGGNNNNNNNN-----

-----TCTTACACCATGAG
ATGGGTTCCGTGGGGCCCCGATGGAAGGAGAGCCACAGCCGTTTCCTG
TTCCGTTGAAGACCCACAAAACAGACAAAGTTCAAGGGTATCAAGACGT
ACATTCATACAGGGTGACACCAAGCCACTCTGGGCGTCCCGGTGTACAGA
CGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGTTCAC
TGTGATCTCTGTGCCTCATCTGCCCCGAGAAGCAAGCCACGGGGCGTTTG
AGGATGACTTCATTGAGAAGCGCAAGAGGCGACTGATACTGTGGATGAAC
CACATGACCAGTCACCCAGTCCTCTCCCAGTATGAGGGCTTTGAGCACTT
TCTGATGTGCGCTGACGACAAGCAGTGGAAACTGGGAAAGAGACGGGCAG
AGAAAGACGAGATGGTGGGAGCCCATTTTCATGCTGACTCTCCAGATCCCT
AATGAGCACCAGGACCTTCAGGATGTGGAGGAGCGGATCGACTCCTTTAA
GTTCTTTGCTAAAAAGATGGATGACAGCGTGATGCAGCTCACGCACGTTG
CCTCGGAGCTGGTGCCTAAGCACCTGGGCGGGTTTCAGGAAGGAGTTCCAG
AGGCTGGGAAATGCCCTCCAGTCTATCAGCCAGGCGTTCATGTTGGACCC
TCCCAGAGCTCAGAGACCTTCAACAACGCCNNNNNNNN-----

GCTAATCTAGCCCATGCCGGAGCATCCGTAGACCTAACTATCTTCTCACT
CCACCTAGCAGGCGTTCATCAATCTCGGAGCCATTAACCTTATTACCA
CAATTATTAACATAAAACCCCCAGCCATCTCACAAATACCAAACCCACTT
TTCGTGTGATCAGTGCTTGTTACTGCAGTACTGCTACTATTATCTCTGCC
AGTCTTAGCCGCAGGAATCACTATACTACTTACAGACCGAAATCTAAACA
CAACTTCTTTGATCCAGCAGGAGGAGGAGACCCAATCCTTTACCAACAC
CTANNN
NN
NN
NN-----

-----GGACGAGTATATTGTGGTCTTCAGCCGCTCCGTT
AACAGGCTGATCCTGAACGAGGCAGAGCTGATCCTGGCACTAGCCAGGA
GTTTCAGTTGAAGGTCGTTACAGTGTCCCTAGAGGAACAGTCTTTTGCAG
ACATCATCCGAGTCATTAGCAGGGCATCTATGCTGGTCAGTATGCACGGG
GCCAGCTGGTCACTTCTCTCTTCCCTTCCCCGTGGCGCTGCTGTGGTGA
GCTCTTTCCATATGCCGTCAACCCAGAGCATTATGCTCCCTACAAGACAC
TCACCTCGCTGCCAGGCATGGACCTGCAGTATGTGGCCTGGAGGAACACC
AAGGAGGAGAAGTCTGTGACCTTCCCCGAGCGTGCCTGGGACCAGGGCGG
CATTGCACACTTGAGAGGAGGAGCAGGAACGTATCCTGAAGAGCAGCG
AGGTGCCGCGACACCTGTGTGCTGTCGGAACCCGGAGTGGCTCTTCCGCATC
TACCAGGACACCAAGGCGGACATTGCATCCCTACTGAAGCACTGCG---
CCAGGGACTGACC---TCCAGGCCAGGGCCAAAAG---GGCTAGGCCCA
GCAGCACAGTCCACCCAGGCAGGGTGAGGGAGCCCAAGTGCCAGACCTCC
GTCCAGGCTACCAACGAGGCCAAGCTGACCCTGTCCCTGGCAGATCCCGTG
GAACCTCAAGTACCTGAAGGTCAGGGAGGTGAAGTATAGAGTCNNNNNNNNAAGAAGG
ATACCAGCAAGGGCACACTGGAGGATCAAATCATCCAGGCTAACCAGCG
CTGGAGGCTTTCGGCAATGCTAAGACTGCGAGGAACGATAACTCCTCGCG
TTTTTGGGAAATTCATCCGCATTCATTTTGGAGTAAGTGGAAGCTTTCCT
CTGCTGACATCGAAACTTACCTGCTTGAGAAATCTCGTGTCACTTTCAG
CTCAAAGCCGAGAGGAACTATCACATCTTTTACCAGATTATGTCCAACAA
AAAGCCTGAATTGCTGGACATGATGTTGATTACTAACAACCCATACGATT
ATGCTTACGTCTCCCAAGGAGAGGTGACAGTCCGTCATCGATGACTCA
GAGGAACTGATCGCCACAGACAGTGCCTTTGATGTGCTGGGATTACAGC
TGAGGAGAAGATGGGTGTCTACAAGCTGACAGGTGCTATCATGCACTATG
GAAATATGAAATTCAGCAGAGGCAGCGTGAGGAGCAGGCTGAGCCTGAT
GGCACTGAGTCTGCTGACAAGTCAGCCTACCTGATGGGGTTGAACTCAGC
CGACCTTCTCAAAGGACTTTTGCCACCCAAAGGGTTAAAGTGGGGAATGAGT
ATGTCACAAAGGGCCAAAGTGTGGATCAGGTTTACTTTCCCAAC-AAGAG

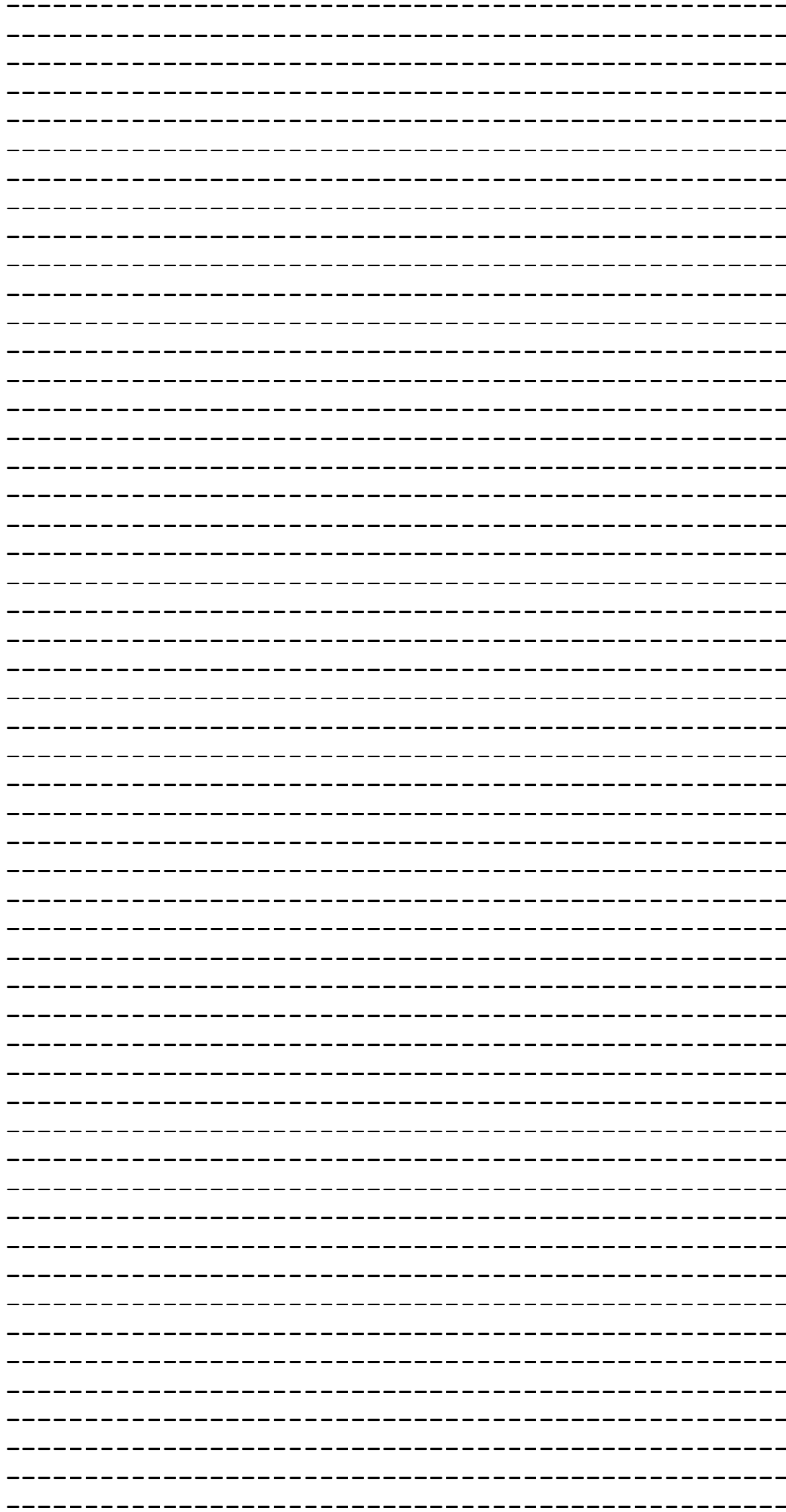
-----TCATACACCATCGAGATGGGCCCCTGGGG
CCCCCAGTGGAAGGAGAGCCCCAGCCCTTCTCCTGTTCCATCGAGGACC
CCACCAAACAGACTAAATTCAAGGGGATAAAGACCTACATCTCGTACCGC
GTGACGCCAGCCACACAGCTCAGCCCGTATAACGCCGCTACAAGCACTT
CCACTGGCTCTACAACCGGTTGCTACACAAGTTCACGGTCATCTCCGTGC
CACACCTGCCCCGAGAAGCAGGCCACGGGCCGCTTCGAGGAGGACTTCATC
GAGAAGCGGAAGAGGGCGGCTCATCCTGTGGATGGACCACATGACCAGCCA
CCCGGTGCTGTGCGCAGTACGAGGGCTTCGAGCACTTCCTCATGTGCGCCA
ACGACAAGCAGTGGAAGCTGGGCAAGCGGCGGGCGGAGAAGGAAGAGTTG
GTGGGCGCGCACTTCATGCTCACCTTCCAGATCCCCAGCGAGCACCAGGA
CCTGCAGGACGTGGAGGAGCGCGTGGACTCCTTCAAGGCCTTCGCCAAGA
AGATGGACGACAGCGTGCTGCAGCTCACACACGTGGCGTCCGAGCTGGTT
CGGAAGCACCTGGGCGGTTTTCCGGAGGGAGTTCCAGCGGCTGGGGAACGC
CTTCCAGTCCATCAGCCAGGCCTTCACCCTGGACCCTCCCTACTGCTCCG
ACGCCCTCAACACCGCCATCNNNNNN-----

>Harpadon nehereus

AGCCTTTTGGATCCGCTGAGCTGAGCCAGCCGGGGGCCCTGCTCGGTGA
CGATCAAATTTATAACGTAATCGTTACTGCCACGCCCTTCGTAATAATTT
TCTTTATAGTAATGCCAATTATGATCGGGGGCTTTGGAAATTGACTCATT
CCCCGATGATCGGTGCCCGGATATGGCGTTTTCCCAAATGAATAACAT
AAGCTTTTGGACTCCTCCCACCCTCTTCCTTCTTCTCTTGGCATCATCGG
GAGTCGAAGCAGGGGCTGGAACCGGCTGAACAGTCTATCCTCCGTTAGCG
GGAAACCTTGCTCACGCCGGGGCCTCTGTAGATCTAACCATCTTCTCGCT
ACACTTGGCTGGGATTTCCCTCTATTTGGGAGCCATTAATTTTATTACGA
CAATTATCAATATAAAACCTCCCGCCATTTACAATAACCAGACACCCCTC
TTTGTGGGGCTGTACTGATTACGGCTGTCTTCTCCTCCTCCTTACC
CGTTCTTGCAGCCGGAATACAATGCTCTTAACGATCGAAATCTTAATA
CCACCTTCTTTGACCCTGCAGGGGGCGGGATCCCATCCTCTATCAGCAC
TTATTCTGATTCTTTGGCCACCCCGAAGTGTATAATTTAATCCTCCCTGG
ATTCGGCATGATCTCCACATTGTAGCCTACTACGCAGGGAAGAAAGAGC
CGTTTGGCTATATGGGCATGGTCTGGGCAATGATGGCAATCGGCCTATTA
GGTTTCATCGTCTGGGCCACCACATGTTTACNNNNNNNNNNNNNNNNNNNN
NN
NN
NN
ACGGAGGACTTCCCTGCAACTCCCCAAAGACATGGTCATACAGCTTCTGTC
CCACGAAGAGCGGGGAGACAGAGGATGAGAGGATGGTGTATGAGGNAGCCAT
TCACTGGGTCAACTATGACGGGGAGAGGAGGCACTGCCACCTACCAGAAC
TTCTGAGGACAGTTAGTCTAGCCCTTCTCCCAGCCATTTTCTCATGGAG
AATGCTCCACGGAGGAGCTGATCAATAACCAGACCAAAGCAAGGAGCT
GGTGGACGAGGCCATTCGCTGCAAGTTGAGAATCCTCCAGAACGACGGGG
TGGTCAACAGTCCCTGTGCCAAACCTAGAAAGACCAGCCATGCCTTGTTC
CTTCTGGGAGGGCAGACTTTCATGTGTGACAAACTTACTTGGTGGATCA
AAAGGCCAAGGAGATCATTCCCAAGGCTGACATCCCAGTCCCAGGAAGG
AGTTCAGTGCTTNTGCCATCGGGTGTAAAGGTNTACGTGACAGGTGGAA--GT
GGCTC-TGAGAACGGAGTGTCCAAANACGTGTGGGTGTTAGACACCATCCA
TGAGGAGTGGTTACAAGGAGCACCCAGCGANNNNNNNNNNNNNNNNNNNNN
NN
NN
-----AG
ATGCGTACATTGTTGTGTTTAGTTCGTCGAGACAAGGCTGATTCTAAAC
GAAGCAGAGTTGATCCTCGCGCTGGCCCAAGAGTTTCAGATGAGGGTGGT
TACCGTGTCTTGGAGGAGCAAACCTTTCCCAGCATTATCCAGGTGATCA
GCAGTGCCTCCATGCTAGTTAGTATGCATGGAGCTCAGCTCGTCACGTCT
CTCTTTCTCCCAGAGGAGCTGCCGTGGTGGAGCTTTTTCCCTAYGCTGT

GAACCCAGAACAGTACACCCCATACAAAACCCCTTGCCTCCCTGCCAGGCA
TGGACCTTCAGTACGTTTCGTGGAGGAACACGATGGAAGAGAACACTGTG
GCCACCCTGAAAGACCGTGGGACCAAGGAGGTATCGCCCACTTAGACAA
GGAAGAACAGGAGCGAATCTTAGCCAGCAAAGATGTCCCAAGGCACCTGT
GCTGCCGCAACCCAGAGTGGCTTTTCAGGATTTACCAGGATACTCTGGTG
GACATCCCGTCCTTCATGGAGGTCTTAA---GGAGGGTCTGAAA---AC
GAGGCCGAGCTTGAAGAA---GTCCAAGCCGACCAGCACAGTTCACCCGG
GACGGGTGAGAGAACCTCAGTGCCASACATCAGTCCAAGCCACTAATGAG
GCTAAACTCACAGTATCCTGGCAGATCCCGTGGAACTTAAGTACTTAAA
GGTGCAGAGGTGAAGTACGAGGTTTGGATCCCGAAAAAGGATCCCAGCA
AGGGAACCCTGGAAGATCAAATCATTAGGCAAACCCTGCACTGGAGGCT
TTTGGTAATGCCAAAACAGTGAGGAATGATAATTCTCCCGCTTTGGGAA
ATTCATTGCAATTCACCTTTGGAAAYAAGTGGGAAGCTGTCCTCTGCGGACA
TTGAAACGTACCTGTTGGAAAAATCCCGGGTCACTTTTCAGCTTAAGGCA
GAGCGGAATTATCATATCTTCTTCCAGATCTTATCCAACCATAAGCCAGA
GCTGTTGGATATGCTGTTGATCACCAACAACCCCTATGACTACTCATTCA
TCTCCCAAGGAGAGGTGACAGTAGCGTCCATCAACGATGCAGAGGAGCTG
ATGGCCACTGACAGTGCCTTCGATGTACTCGGCTTCACTCTAGAAGAGAA
GTTGGGAGTCTACAAGCTGACAGGGGCTATCATGCACTACGGCAACATGA
AGTTCAAGCAGAAGCAACGCGAGGAACAGGCTGAGCCTGATGGCACAGAG
GCTGCTGATAAGTCAGCTTACCTAATGGGGCTGAACTCAGCTGACCTCAT
TAAAGACTCTGTATCCAGAGTTAAGGTAGGAAATGAGTATGTAACTA
AAGGTCAGGGTGTAGATCAAGTCTACTACCCCAACAAGAGGCCTTCAAG
TGCGAGGAGTGTGGCAAGCACTACAACACCAAGCTGGGATACAGGCGCCA
TGTGGCCATGCACTCCGCCACCGCAGGGGACCTCACCTGTAAAGTCTGCA
TGCAGAGCTACGAGAGCACGCCGGTGTCTCTGGAACACCTCAAGAGCCAC
TCGGGGAAGTCTCGGGCGGCCAAGGAGAAGAAGCACCCATGTGATCA
CTGCGACCGTCCGTTTACACGCGGAAGGACGTGAGGCGGCACATGGTCCG
TCCACACGGGCCGAAAGGACTTCTGTGCCAGTACTGTGCCCAACGCTTC
GGCAGGAAGGACCACCTGACGCGACACGTGAAAAAGAGCCACTCGCAAGA
GCTGCTGAAGATCAAGACGGAGCCTCCGGATATGTTGGGTCTCCTGGGCT
CTGGTTCGCCTCCCTGCTCCGTCAAGGAGGAGCTGAGTCCCATGATGTGT
AGCATGGCTCCCAATAAAGACCCGATGATGGGGAAGCCGTTTCCCAGTGG
GACGCCCTCCCTATGGGGATGTACAACCCTCACCCAC-----CTCCAGG
CCATGTCTAACCCTGGGGTTGGCCATCCT-----CACCCCTCCCTGATG
CC-----C-----TATCT
CATCTACGCCTCCTTCTCATTTCATGGGATGTTTACAGATCAGCGACGGGT
CGAACATTGTCAACCTGCTGGCCAGCAACTCCCCGAGCGTCTCGTATGCG
CTCACGAGCAGAAATACTTACGCAACTACAGCCCCGTCATCGGGTTTTTA
CATCTATGAACCCATTGAGTACTGGAACTCGACGGTGCAGGAGCACCTGA
AGACACTGAGCCACGGCTTCAACAAGATCTCCTGGATGGACAACCTTCTTC
CAGTACCTGCGGGTGGCGAACGTGAGCGCGTCCACCAAGGCTGACTTCGT
CACCATCCTCCGGGGCTCCTTCCCTGCGCAGCCCTGAGTACCAGCACTTCA
CTGAGGACATCATCTTCTCCAAGA---ACCGCGAGAGCG-----ACGAG
TACGACGTATCGCTCCCGCATGTACCTGGTGGCGCGCACCCACGGAGAA
GAAACGCGAGGAGGTGGTGGAGCTCCTGGAGAAGCTGCGGCCATTGATGC
TCATCAACAGCATCAAGTTCATTGCCTTCAACCCACCTTCGTCTTCATG
GACCGTTACAGCTCCTCCGTCTGCTCGCCATCCTCACCTCTGGCTTCAG
CGTGCTCACCATCCTCATCCTCACCTTCTTCCCTCGTCATTAACCCGCTGG
GGAACCTTCTGGCTCATCTTGACGGTCACGTCCGTGGAGCTGGGCGTGCTG
GGCCTCATGGGGTACCATCCATTCTAATGGCAGCCAGCTCTTAGGAACGT
GTCACCATCCTGTATGTGGGTATCATTAATGGGCTCTCTGGATGCACCA
CGTCTGTGGAGGACTCTCCGGTGCACACTATAACCCGTCGTTTTTCGCTAT

NNNGCTTGGCATGTTGTTGCTGTCTGATGCCACCAATGTA
CCAAGCTGTCAGAGCTCTCCTGGGGCATGTGCCTGAGCAACTTCCCTGCT
ATTTGCAAGACAGAGGACTTCTCCAAGTCCCAAAGATATGGTGGTGCA
GCTTTTGTACATGAGGAGTTAGAGACAGAAGATGAGAGACTGGTTTATG
AAGCTGCCCTTAAGTGGATCAACTATGACCTGGAGAGGAGGCACTGCCAC
CTTCCAGAGCTCCTAAGAACAGTTCGCCTCGCTTTGCTGCCTGCCATCTT
TCTGATGGAGAATGTCTCAACAGAAGAGCTGATTAATGCCAGCCCAAGA
GCAAAGAGCTGGTGGATGAAGCTATCCGCTGTAAGCTGAAGATCCTGCAA
AATGATGGTGTGTTAACAGCCATGTGCTCGACCAAGAAAACTAGCCA
TGCCCTCTTTCTTCTGGGAGGGCAGACTTTCATGTGTGACAAGTTGTATC
TGGTGGACCAGAAGGCCAAAGAGATCATAACCAAAGCTGACATTCCCAGC
CCCAGGAAGGAGTTTAGTGCCTGTGCCATTGGCTGTAAAGTGTACATCAC
CGGTGGGA--GAGGCTC-TGAGAAATGGTGTGTCCAAAGATGTATGGGTGT
ACGACACTGTCCACGAGGAATGGTCCAAAGCAGCTCCCATGCTCATCGCC
AGGTTTGGTTCATGGCTCTGCAGAGTTGAAACACTGTCTATACGTAGTAGG
AGGTCACACTGCCCAACAGGCTGCCCTCCCGNNNNNNNNNNNNNGGATGAATACATTGTCTGTG
TTCAGTCGTTTCGACAACAAGGCTGATAATAAATGAAGCAGAGCTTATCAT
GGCGTTAGCACAGGAGTTCCAGATGAGAGTGGTGACAGTATCCCTGGAGG
AACAGTCTTTTTCCAGTATCATCCAGGTGATCAGTGGTGTCTTCTATGTTA
GTCAGCATGCACGGAGCTCAGCTTATCACTTCACTCTTCCTCCCAAGAGG
AGCTGCTGTAGTGGAGCTATTCCCATTGCTGTGAACCCAGAGCAGTACA
CCCCATATAAAACCCCTTGCCACCCCTCCAGGCATCGACCTACATTATATT
TCCTGGAGGAACACTAAGGAGGAGAACACCATCACTCACCCAGACAGACC
GTGGGAGCAAGGAGGCATCGCTCACTTGGAGAAGGAGGAACGAGAGCGAA
TACAGGCCAGTAAAGACGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAG
TGGCTCTTCAGGATCTACCAGGACACTTTAGTCGACATCCCTTCCCTTTT
GGAAGTTCTCAA---AGAGGGCATGAAG---GCTAAGCCAAGCTTGAAGA
A---GACAAAGCCATCTGCTGTGCGTGACCCGGCCGGGTTAGAGAACCC
CAATGTCAGACCTCAGTACAACCCTAATGAGGCTAAACTCACAGTCTC
CTGGCAGATTCCCTGGAATCTGAAATATCTAAAGGTAAGAGAGGTCAAAT
ACGAAGTGTGGATCCAGAAAAAGACACCAGCAAGGGGACACTGGAGGAT
CAAATCATCCAGGCCAACCCCTGCTCTGGAAGCCTTCGGCAATGCCAAAAC
GGCAAGGAATGACAACCTCATCTCGTTTTGGAAAAATTCATCCGAATACATT
TTGGTACCAGTGGCAAACCTGTCTGCTGATATTGAGACGTATCTGCTG
GAGAAGTCACGTGTCACCTTTCAGCTGAAGGCTGAGAGGAACTACCACAT
CTTCTACCAGATTCTGTCCAATCAGAAGCCAGAATCCTAGACATGCTGC
TGATCACTAACAATCCATATGACTACTCCTACATCTCCCAAGGAGAGGTC
ACAGTTGCCTCCATCAACGACTCTGAGGAGCTGATGGCCACAGACAGCGC
CTTCGATGTGCTCGGCTTCACTCCAGAGGAGAAGATGGGCGTCTATAAAC
TGACCGGTGCCATCATGCACTACGGAAACATGAAGTTCAAACAGAAGCAG
CGTGAGGAGCAGGCTGAACCTGATGGCACGGAGGCTGCTGACAAATCGGC
TTACCTAATGGGGCTGAACTCCGCTGACCTCATCAAAGGTCTTTGCCATC
CCAGAGTCAAAGTAGGAAATGAGTATGTTACCAAAGGCCAAAGTGTGGAT
CAAGTCTACTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGG
GATATAAGCGCCATG
TGGCCATGCACTCTGCCACAGCAGGTGATCTCACCTGTAAAGTGTGCATG
CAGAGCTATGAGAGTACACCTGTTCTCCTGGAGCACCTCAAGAGCCACTC
TGGGAAGTCTTCAGGTGGGGCCAAGGAGAAAAAACACCCGTGTGACCACT
GTGACCGGCGTTTTTACACGCGTAAGGATGTGAGACGGCACATGGTAGTA



GCTGGAGACAGAGGATGAGAGACTGGTGTATGAAGCTGCTCTAAACTGGA
TCAACTATGACCTAGAAAAGAGGCACTGCCACCTTGCAGAGCTTCTGAGA
ACAGTCCGCCTTGCTCTGCTGCCTGCCATCTTTCTGATGGAGAACGTTTC
AACGGAGGAGTTGATCAATGCCCAGGCCAAGAGCAAGGACCTGGTGGATG
AAGCAATCCACTGTAAGCTGAAGATTCTGCAGAATGATGGGGTTGTTAAC
AGCCCATGTGCTCGACCACGAAAGACCAGCCATGCTCTGTTCCCTTCTAGG
AGGACAGACTTTCATGTGTGACAAAATTGTACCTGGTCGACCAGAAAGCCA
AAGAGATTATCCCCAAAGCTGACATCCCGAGCCGAGGAAGGAGTTCAGT
GCCTGTGCGATAGGCTGTAAGGTCTACATCACTGGAGGAA--GAGGCTC-
AGAGAACGGTGTGTCTAAAGACGTGTGGGTCTATGACACCGTCCATGAAG
AATGGTCCAAAGCAGCTCCAATGCTCATCGCCAGGTTTGGCCATGGCTCT
GCAGAGCTAAAGCACTGCCTGTATGTGGTAGGAGGTCACACTGCTGCAAC
CGGCTGCCTCCCGGCATCACCATCGGGAGGACTACATTGTTGTGTTTCAGT
CGTTCGACGACGAGGCTCATTCTGAATGAAGCAGAGCTAATAATGGCTCT
GGCCAGGAACTCCAGATGAGAGTGGTCACCGTGTCACTGGAGGAGCAGT
CTTTTCCAGTATTGTCCAGGTGATCAGTGGTGGCTTCCATTTTAGTCAGC
ATGCATGGAGCCCAGCTTGTACAGTCACTCTTCCCTCCCAGGGGAGCCAC
GGTGGTTGAGCTGTTCCCATTTGCTGTGAACCCAGAGCAGTACACACCAT
ACAAAACACTCGCCTCCCTTCCAGGGATGGACCTTCACTATATCTCGTGG
AGGAACACTAAGGAGGAAAACACCATCACCATCCAGACAGAGCCTGGGA
GCAAGGAGGCATCGCTCATCTGGAGAAGGAGGAGCAGGAGAGAATCCTGG
CCAGTAAAGAGGTTCCGAGGCACCTGTGTTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTTTGGTGGACATCCCTTCCTTGCTAGAAAT
GCTCAA---AGAGGCCAGAAAG---ACCAAGGCCAActTCAAGAA---AT
CCAAGCCAGCCAGCACAGTTCACCCAGGACGAGTCAGAGAAGCCAAATGT
CAGACCTCGGTACAAACAAGGAACGAGGCTAAACTCACAGTGTCTGGCA
GATACCNTGGAATCTAAAATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNAAAAAAGAC
ACGAGCAAGGGGACCTGGAGG
ATCAGATCATCCAGGCCAACCCGGCTCTGGAGGCTTTCGGCAACGCCAAG
ACGTCCAGAAACGACAACTCGTCTCGGTTTGGAAAATTCATTCGCATCCA
CTTTGGCACAAGCGGCAAACCTGTCCCTCGGCAGACATCGAGACATACTTC
TGGAAAAGTCCCGTGTACGTATCAGCTGAAGGCTGAAAGGGACTATCAT
ATCTTCTATCAGATCCTGTCCAATCAGAAGCCGGAGCTGCTTGACATGCT
GCTGATCACCAACAACCCCTACGACTACTCCTACATCTCCCAAGGAGAAG
TAACGGTGGCCTCCATCAACGACTCCGAGGAGCTCATGGCTACAGACAGT
GCCTTTGACGTGCTTGGCTTACCAGCAGAGGAGAAGACGGCTGTTTATAA
ACTCACCGGCGCCATCATGCACTATGGAACCTGAAGTTCAAACAGAAAC
AGCGTGAGGAGCAGGCGGAGCCTGACGGGACGGAGGCTGCTGATAAATCT
GCTTATCTGATGGGCTGAACTCTGCCGACCTCATCAAAGGCTGTGTCA
CCCGGAGTCAAGGTAGGAAATGAATANNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
AAGAAGGCCTTCAAGTGTGAG
GAGTGTGGGAAGCACTACAACACCAAGCTGGGCTACAAGCGCCACATGGC
CATGCACTCTGCGACCGCCGGGATCTGACCTGTAAAGTGTGCATGCAGA
GCTACGAGAGCACGCCCGTTCTCTGGAACACCTCAAGAGCCACTCTGGG
AAATCTTCGGGAGGCGCAAGGAGAAGAAACACCCGTGTGACCACTGTGA
CCGCCGTTTCTACACCAGGAAGGATGTGAGAAGGCACATGGTGGTCCACA
CGGGACGAAAGGACTTCCTGTGCCAGTACTGTGCCACAGCGCTTTGGCAGG
AAGGACCACCTGACCCGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCT
GAAGATCAAGACGGAGCCACCAGATATGTTAGGTCCTGGCGTCTGGAT
CACCTCCCTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGTGGCATG
GGTCCCAACAAAGATCCCATGATGGGCAAGCCGTTCCCCAGTGGAGCTCC
TTTCCCAATGGGCATGTACAACCCACACCAC-----CTCCAGGCGATGT
CCAACACCGGGTGGGTCACCCT-----

AAATGACAACCTCATCCCGTTTTGGAAAGTTCATCCGAATTCACCTTGGTA
CAAGCGGCAAGCTGTCATCTGCTGACATCGAAACGTACCTGCTGGAGAAG
TCACGCGTTACCTTCCAGCTCAAGGCTGAGAGAAAATTATCACATCTTCTT
CCAGATCCTGTCAAATCAGAAACCAGAGCTGCTGGACATGCTGCTCATCA
CCAACAATCCCTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGTGC
GCCTCCATCAACGACTCAGAAGAGCTGATGGCCACGGACAGCGCCTTCGA
TGTGCTCGGCTTACCCCGGAAGAGAAGATGGGCGTCTATAAACTCATAG
GTGCCATCATGCACTATGGCAACATGAAATTCAAACAAAAGCAGCGTGAG
GAGCAGGCCGAGCCAGATGGGACGGAGGCCGCTGATAAATCCGCTTACCT
CATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGTACCCCAGAG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCAAAAGTGTGGATCAAGTC
TACTACCCTAACAAGGAGGCCTTCAAATGTGATGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTTGCCATGCATTCCGGCCACGG
CGGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGACAGCACACCC
ATGCTCTTGGAGCACCTGAAAAGCCACTCTGGGAAGTCCTCAAGTGGCAC
CAAGGAGAAAAAACACCAGTGCAGCCACTGCGACCGGCGTTTTCTACACAA
GGAAGGACGTGAGGCGCCACATGGTGGTCCACACAGGCCGAAAGGACTTC
CTCTGTCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACACG
CCATGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAAATCAAGACGGAGC
CTCCGGATATGTTAGGTCTTTTAGCTTCTGGGTACCGCCGCTGCTCCGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGTATGGGTCCCAACAAAGACCC
CATGATGAGCAAACCCTTTCCGAGTGGGGCCCTTTTCCGATGGGCATGT
ACAACCCTCATCAT-----CTCCAGGCCATGTCTAATTCTGGGGTAGGT
CACTCA-----CACCCGTCCCTGATGCCACCTCTTTGTCTGCAGCTAT
GNNNNNNNNNNNNNNNNNNNNNTACCTCATCTACGCCTCGTTCTCATTCATGGGATGTTTACAAATCAGT

G

ATGGGTCAAATATCGTGAACCTGCTGGCAAGTAACTCTCCAAGTGTTTCA
TATGCTCTGACACAGCAAAAATACTTACAGTAACTACAGTCCAGTCATTGG
GTTTTACATTTATGAGCCCATCGAGTACTGGAAGTGCACAGTGCAGGAGC
ATCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAAC
TTTTTCCACTACCTGCGGGTGGTGAACGTGAGTGCATCAACCAAGAGCGA
CTTCATCACCGTCTGAAGGGCTCCTTCCTGCACAGCCAGAGTACCAGC
ACTTCACTGAGGACATCATTTTTCTCAAAGA---ACCGCGAGACCG-----
-ACGAGTACGACATCATCGCCTCGCGGATGTACTTGGTGGCAGAGACTAC
GGAGAACAAGCGTGAAGAGGTGGTGGAGCTCCTGGAGAAACTCCGTCCAC
TGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCTACGTTTGTG
TTCATGGACCGCTACAGCTCCTCTGTATCTCACCCATCCTGACGTCAGG
ATTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCCCTGGTCATCAACC
CCTTGGGTAACCTTCTGGCTCATCCTCACTCTAACGTCATGGAGCTGGGC
GTCTTGGGTTTGATGGGCTTCCACCAGTTTGAATGGCAGCCAGTCCTCAG
GAACGTGTCTACATCTTGCAATGTGGCATTATTAACGGTCTCTCTGGAT
GGGATTCCTCAGTGGATGACTCCCCAGCTAACACCATCGCTCGACGGTTT
CGCTATGATGTGGCACTGGTATCAGCATTGAAGGATCTGGAGGAGGACAT
CATGGTGGGACTGAGAGAGAACGAAATGGAAGACAATGCTTGCA-----
GCTTCACTGTATGATCAAAGAATCCTGTGATGGCATGGGCGATGTCACT
GAGAAGCACGGTGGAGGGCCAGCTGTCCCCGAGAAGGTCGTGCGTTTCTC
TTTACCGTTATGTCTGTCTCTTTCCTAGCAGACAGTCAGGAG-----
-----GAAGAGGTACCCGTCTTACAGAGCCA
AAGCCAAACTCAGAAGTGTCTGTAAAGCCCTTTGGCCTGATGTCTGTGGA
TGAAGCAGACCACGAGACACTCACAGCCATCCTGTGTCTGTAAATGTCAG
AGCGCAACGCAATGAAGGAGAGCAGGCTCATCCTGTCCATTGGTGGACTT
CCTCGTCTCTTCCGCTTTCATTTTCAAGAGGCACAGGATACGATGAGAAGAT
GGTGCCTGAGATGGAGGGCCTCGACGCCTCTGGGTCCACCTACATTTGCA

CTTGCTGTCTTACGCAGCGGCCGAGTGAAGGCTC-----TTCCGCTGC
CGACTGCGGGCTGCTCCAATCGGGCTCTTGGCTATTACGCAGATGCGTCA
G---GCTGG---GGAGGACGCACGCCGCCGAATACTGTGGCGTGAACAG
CAAGTCCANCTCGGTCTTTTTCTGCTGGCCCTCCAACACTATCGGAGGCAG
AGCCGGA---CC---AACTACCTGG-----CCGAGGA---GGGG-
--GACTC---GATCCCCACGGAGAGGTCACCG---AT---CGGCGGCTCG
GAGGAG---GCCAAACCCAAAGACATCAC-----GTCGAACTG
GATGGAG---ACGCCATCATCCATTAAGTCCATTGATTCCAGCGACTCTG
GGATCTTTG---AACAGGCCAAAAGGAGACGGATCTCACCTTCTGCCACG
CCG-----

CTCTCAGACACGGTGTCCCCGTNN
NNNAAACCACACCTCCCTC
GATCTTGGCTCAGG---ACAAACGGCGTTTTCTCCAGACG---CCCGG
CTAC---GCTGCAGCCGCCCTGGGA---CACCATCA-----CCACCCGA
CGCACGTTGGCTCT---TACTCCACGGCCGCTTTCAACTCCACCCGGGAC
TTTCTCTTTCAGAAATCGAGGCTTCGGGGACGCCACCGG-----
AGCGCAGCACAGTTTTGTTGCGCTC-----CGGCAGTTT---C----
--GCGGGGCCACATGGACACTCGGATGCAGCAGGGCACCTGCTCTTCCCC
GGGCTCCACGAG---CAAGCGGCGAGCCACGCGTCTCCAACGTGGTCAA
CGGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCAGACC
AGTATGGCCACGTACAAGCCC GCGT---CCGACCCTACGCCCTCGACC
CAGTTGCACGGCTACGGCCCATGAACATGAATATGGCCGCG---CACCA
CGGGGCCGGGGCTTCTTTGATACATGAGGCAGCCGATCAAACAGGAGC
TCATCTGCAAGTGGATCGAGCCAGAGCAGCTGGCCAACCCAAAAAGTCG
TGCAACAAAACTTTCAGCACGATGCACGAGCTCGTGACGCATCTGACGGT
GGAGCACGTTGGCGGACCGGAGCAGACGAACCACGCTCTGCTTCTGGGAGG
ACTGCCCCAGGGAAGGGAATCCNN
NN

>Hime japonicus
AGCCTCTTAATTTCGAGCAGAGCTTAGTCAACCAGGGGCCCTTCTTGAGAGA
CGATCAAATTTATAACGTAATTGTTACCGCACACGCATTTGTTATAATTT
TCTTTATAGTAATACCAATTATAATTGGGGGTTTTGGCAACTGACTGATT
CCCCAATGATCGGGGCCAGATATGGCGTTTCTCGAATAAAATAACAT
AAGCTTCTGACTTCTTCCCCCTCTTTTCTGTTGCTACTAGCTTCTCTG
GCGTTGAAGCTGGAGCCGGAACCGGCTGAACAGTGTACCCCCCTTAGCT
GGGAACCTGGCACACGCCGGGCTTCTGTAGATCTGACCATCTTCTCCCT
TCACCTAGCCGGGATCTCCTCAATCCTAGGTGCAATCAACTTTATTACTA
CTATCATTAACATAAAACCCCCGCGATTTCTCAGTACCAGACGCCCTT
CTAGTTTGAGCTGTTCTAATCACGGCCGCTCCTACTTCTTTCCCTCC
CGTCTTGGCAGCAGGCATCACTATACTTCTAACAGATCGAAATCTTAATA
CAACATTTTTTGACCCGGCAGGCGGGGAGACCCAATCCTTTATCAACAT
CTATTCTGATTTTTTGGACACCCAGAGTTTACATCTTAATTTTACCCG
GTTTGGGATAATCTCCCATATTGTGCGCTACTACGCCGTAAGAAAGAGC
CCTTTGGCTACATGGGAATAGTCTGAGCCATAATAGCAATCGGGCTTCTT
GGGTTTATTGTTTGGAGCCACCACATATTTACAGTAGGCATGGATGTCGA
CACACGAGCCTATTCCTTGAGAGGAACCTGCACCCATCCAACCTGCTTGG
CATGCTGCTGTTGTCAGACGCCACCAGTGCACAAAGTTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAATTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTCCAGTTGCCAAAGACATGGTAGTGCAGCTTCTGTCCCATGAGGA
ACTGGAGACTGAAGATGAGAGACTGGTTTACGAGGCTGCCCTCAACTGGG
TCAACTATGACCTTGAGAGGAGACACTGCCACCTGCCAGAGCTGCTGAGA
ACCGTGCGCCTGGCCTTGCTTCCCGCTATCTTCTGATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAGGCAAGAGCAAGGAGCTGGTGGACG

AGGCCATCCGCTGCAAACCTGAAGATCCTGCAGAATGACGGAGTGGTCAAC
AGTCCCTGTGCCCCGCCAGAAAGACCAGCCACGCCCTCTTCCCTGCTGGG
AGGACAGACCTTCATGTGTGACAAGCTATACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTCTACGTACAGGCGGGC--GGGGCTC-
AGAGAACGGTGTGTCTAAAGACGTGTGGGTCTACGACACCGTCCATGAGG
AGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCACGGCTCT
GCTGAGCTCAAACACTGCCTCTATGTGGTGGGAGGACACACAGCAGCCAC
CGGCTGTCTCCAGCCTCTCCCTCTAGATGCGTACATTGTCGTGTTTCACT
CGCTCTACAACGAGGCTGATTCTCAACGAAGCAGAGCTAATCCTGGCGCT
GGCCAAGAGTTTCAGATGAGGGTGGTTACGGTGTCCCTGGAGGAACAAG
CTTTCCCCAGCCTCGTCCAGGTGATCAGCGGGGCTCCATGTTGGTTAGT
ATGCATGGAGCTCAGCTCGTACCTCACTCTTCCCTCCCTAGAGGAGCTGC
TGTGGTGGAGCTCTTCCCTATGCTGTGAATCCAGAGCAGTACACCCCGT
ACAAAACCCTAGCCTCCCTGCCAGGCATGGAACCTCAATATGTCTCCTGG
AGGAACACTGTTGAGGAGAACACCGTCTCCACCCAGACAGGCCCTGGGA
CCAAGGTGGCATTGCCACTTGGAGAAAAGAAGAACAGGAGCGTATCCTAG
CCAGCAAGGATGTCCCCAGGCACCTTGTGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGATACTCTGGTGGACATCCCCCTCCTTCATAGAAGT
ACTTAA---AGAGGGCCTGAAG---ACAAGACCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTACCCGGGCCGAGTCAGAGAACCCAGTGC
CAGACATCAGTCCAAGCCACAAWCGAGCCTAAGCTCACGGTGTCCGGCA
GATCCCGTGGAAACCTTAAGTACCTGAAGGTGCGAGAAGT-AAGTACGAGG
TGTGATCCAGGAAGAAGGATACAAGTAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCACTGGAGGCTTTTGGTAATGCCAAAACACTGAG
GAACGACAACCTCCTCCCGTTTTGGGAAATTCATCCGAATTCACTTTGGAA
CCAGTGGGAAGCTGTCTCTGCGGACATTGAGACTTACCTGCTGGAGAAA
TCACGGGTACCTTTTCACTGAAGTCAGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAACCCCTATGACTATTCCCTACATCTCGCAAGGAGAGGTAACGTGA
GCATCCATCAATGATTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGTTTCACTCAAGAGGAGAAGCTGGGTGTCTACAAGTTGACGG
GGGCTATCATGCACATATGGCAACATGAGGTTCAAGCAGAAGCAACGCGAG
GAGCAGGCTGAACCTGATGGCACAGAGGCCGCTGATAAATCAGCCTACCT
AATGGGGCTGAATTCAGCTGATCTCATCAAAGGACTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTTACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCTTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCCGCCACCG
CTGGTGACCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCT
GTTCTCCTGGAGCACCTCAAGAGCCACTCTGGCAAGTCCTCAGGTGGAGC
CAAGGAGAAGAAACACCCATGTGACCACTGTGACCGTCTGTTTCTACACAC
GGAAGGATGTGAGAAGACACATGGTGGTCCACACAGGCCGGAAGGATTTT
CTGTGCCAGTATTGTGCCAGCGCTTCGGCAGGAAGGATCACCTGACACG
CCATGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAAATTAAGACTGAGC
CTCCTGACATGTTAGGTCTTTTAGCTTCAGGGTCAACCGCTTGTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGTGCCATGGGTACCAATAAAGACCC
CATGATGGGTAAAGCTTTCCCTAGTGGGGCCCCATTTTCAATGGGCATGT
ACAACCCCAACCAT-----CTTCAGGCCATGTCAAATCTGGGGTGGCT
CACCCA-----CACCAACCCTGATGCCCGGCTCCCTGTCTGCAGCAAT
GGGCATGGGCTGTACATGGAGTATCTCATCTACGCCTCWTTCTCMTTCA
TGGGATGTTTACAAAATCAGCGACGGGTCAAACATTTGTGAACCTGCTGGCC
AGTAACTCTCCGAGCGTYTCGTACGCTCTGACCCAGCAGAAGTACTTCAG
CAACTACAGTCCCGTGATCGGGTCTACATCTACGAGCCCATCGAGTACT

-----TCTTACACTATTGAGA
TGGGGCCGCGGGGGCCCCAGTGGAAGAGAGCCCCAGCCGTTTTCTTGC
TCCATAGAGGACCCACCAAGCAGACCAAATTCAAGGGCATAAAGACATA
CATATCCTACCGGGTGACGCCAGCCACACGGGCCACCCTGTATAACGCC
GTTACAAGCACTTTGACTGGCTGTACAACCGGCTACTGCACAAGTTTACC
GTCATCTCCGTGCCCCACCTCCCAGAGAAGCAGGCCACCGGGCGCTTCGA
GGAGGACTTCATCGAGAAGCGAAAACGGCGGCTGATCCTCTGGATGGATC
ACATGACCAGCCACCCCGTCCTCTCGCAGTACGAGGGCTTCGAGCACTTC
CTCATGTGTGCCGACGACAAGCAGTGGAAGCTGGGCAAGCGGGCGGCAGA
GAAGGACGAGATGGTGGGCGCCACTTCATGCTCACCTTCCAGATCCCCA
ACGAGCACCAGGACCTGCAGGACGTGGAGGAGCGGGTGGACACCTTCAAG
GCGTTCGCCAAGAAGATGGACGACAGTGTCTGCAGCTCACTCACGTGGC
CTCGGAGCTGGTGCGCAAGCACCTGGGCGGGTTCCGCAAAGAGTTCAGC
GGCTGGGGAATGCTTCCAGTCCATCAGCCAGGCCCTTACCCTGGACCCA
CCATACAGCGCTGACGCCCTGAACAACGCCATCTCCACCCCTTGTAC
ATTCTCAAACCTGACCTCCCTGGGCTTCATCATTGGTGTGGCGTGGTTG
GCAACCTCCTGATATCCATCCTGCTCATCAAAGACAAAAGCTTGCACAGA
GCTCCCTACTACTTCCCTGCTGGATCTCTGCGCTTCAGACATACTGCGCTC
CGCTATCTGTTTCCCTTCGTGTTTACCTCCGTCAAAAACGGCTCGTTGT
GGACCTACGGCACACTCACCTGCAAAGTGATCGCTTTCCTGGGAGTCCTC
TCCTGCTTCCACACCGCCTTCATGCTGTTCTGCATCAGCGTGACCCGGTA
CCTGGCAATCGCCACCACCGCTTCTACACAAAACGGCTGACGTTCTGGA
CCTGCCTGGCCGTCATCTGCATGGTGTGGACGCTGTCAGTGGCCATGGCC
TTCCCCCGGTGCTGGACGTGGGGACGTACTCCTTCATCAAGGAGGAGGA
CCAGTGTACCTTCCAGCACCGTTCCCTTCAGGGCCAACGACTCGCTGGGGT
TTATGTTGCTCCTGGCCCTCATCCTCCTCGCCACGCAGCTTGTCTACCTC
AAGCTAATATTCTTCGTCCATGACCGCAGGAAGATGAAACCAGTTCAGTT
TGTGCCGTGCCGTCAGCCAGAAGTGGACTTTCATGGTCCCAGGGCAAGCG
GTCAGGCAGCTGCCAAGTGGCTGGCAGGGTTCGGGCGAGGCCCGACGCCA
CCCACCTGCTGGGGATACGGCAAAAACCAACGCAGCCGGCAGGAGGCG
GCTACTGGTGTGGACGAGTTCAAAAACCGAGAAGAGGATCAGCAGGATGT
TCTATGTCATGACGTTCTTCTTCTGACCCTCTGGGGGCCCTACTTGATC
GCGTGCTACTGGAGGGTGTTCGCCCGGGTCTGGCCGTGCCTGGGGGCTA
CCTGACGGCCCGCGTCTGGATGAGTTTTGCCAGGGGGGGTCAACCCGT
TCATCTGCATTTTCTCCAACCGAGAGGCCAAATCCCGCTTCCACCTGGC
GCCGGGACCGGTCTGGCACGGACC---GCAGCGTCCCCTTAGCAACAG
CTTGCTGTCCCCGCAACAAGCCGAGGAGACCGCAGCGG---CCTCCCCG
AGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCCGCG
TCGGCATAACGATGCCCGCCGCTGCTGATTTTGTGGTAACCGGGCCAC
CCTGCTGTCTTACGCAGCTGCTGGAGTAAAAGCAC-----TTCCACTGC
CCACTGCAGGGTGTCTCAGGCAGACCTCTGGGTATTTATGCAGATCCCTCG
G---GATGG---GGCACGCGTACTCCGCCCCAGTACTGC-----AC
TAAATCAAGCTCCGTTCTCCCTGCTGGCCCTCAAATTCGGTCCGGGAGTA
GGACTGGCA---CATCTAACTACGTGG-----TGGACGA---AGGT

---GAAAC---CCTGGCAACGGAGCGATCTCCA---CT---GGGTGGAAC
CGAAGAC---GCGAAACCAAAGACCT-----GTCGGA---ATCTAGCT
GGATAGAG---ACACCTTCTTCCATAAAGTCAATTGATTTCGAGTGATTCT
GGGATTTTTG---AACAGGCAAAACGGAGACGAATATCACCCCTCCGCTAC
GCCT-----GTGTCAGAAACCTCATCCCCACTAAAAAGCGAA----
-----ACAGGCGAAGTCACCGACAGAGAAGTTGCTTTGGGGATAAATCCG
TTCGCTGATGGAATGGGCGCTTTTAAAATTAACCACAGTACCCACGATCT
TGGTTCCTGG---GCAAACGGCATTACTTCGCAGGCG---CCAGGCTAC-
--GCCGCCGCTGCCCTGGGA---CATCATCA-----TCACCCACCCAT
GTCAGCTCC---TACTCAACAGCCGCTTCAACTCAACCCGGGACTTCTT
GTTTCGAAATAGGGGTTTTGGAGACGCAACGAG-----CGCAC
AGCATAGTCTGTTCCCTCCGC---AGCAGGCGGCTT---T-----GCA
GGGCCACATGGACACTCAGATGCCACAGGACACCTGCTCTTCCCGGGACT
TCATGAG---CAAGCAGCTAGTCACGCCACATCCAATGTTGTAAATAGTC
AAATGCGACTGGGCTTTTCTGGAGAAATGTACGGCAGGCCAGAGCAGTAC
GGCCATGTAACAAGCCCAAGGT---CCGATCACTATACTTCTACCCAGTT
ACATAGCTATGGTCCCATGAACATGAATATGGCTGCT---CACCATGGGG
CAGGGGCCTTCTTTCGGTACATGAGACAACCGATAAAACAAGAGCTCATC
TGCAAATGGGTTGAACCGGAACAACCTGACGAACCCGAAAAAGTCTTGCAA
CAAACTTTTTAGTACAATGCACGAACTAGTTACTCATCTCACAGTGGAAC
ACGTTGGGGACCTGAACAGTCGAATCATATTTGTTTTTGGGAAGAGTGT
CCAAGGAAGGAAAACCTTTTAAAGCCAAGTACAACTTGTAAACCATAT
TAGAGTGCACACTGGCGAGAAACCGTTTCCATGTCCATTCCCTGGCTGTG
GGAAA

>Histiophryne cryptacanthus

AGTCTACTAATCCGCTCAGAACTAAGCCAGCCGGGCGCATTACTTGGAGA
TGACCAGATTTACAATGTCATCGTTACAGCACACGCCTTTGTAATGATCT
TCTTCATAGTTATGCCGATCATGATCGGGGCTTTGGCAACTGACTCATC
CCCCAATAATCGGCGCCCCAGACATAGCCTTCCCCCGAATAAACAACAT
AAGCTTCTGGCTTCTCCCCCATCTTTCCTCTTACTTCTTGCATCCTCAG
GAGTCGAAGCAGGAGCAGGAACAGGCTGAACTGTTTACCCCCCTCTCGCT
GGCAACTTAGCCCATGCCGGAGCCTCCGTTGACCTACCATCTTCTCCCT
TCACCTAGCAGGAGTCTCCTCTATCCTGGGAGCAATTAACCTTTATTACCA
CCATCATCAACATAAAGCCCCCTGCCATCACACAATACCACACCCCTTA
TTTTGTTGAGCCGTAAGTAAACCGCAGTCTTACTCCTCCTCTCCCTTCC
AGTTCTCGCTGCTGGAATTACAATGTCCTCACCGATCGAAACCTGAATA
CCACCTTCTTTGACCCTGTGCGAGGAGGAGACCCCATCCTTTATCAACAC
CTCTTCTGATTTTTTGG-----

-----TTTCTAGAGAGAAACCTTACCCATCCAACCTGCCTTGG
GATGCTGTTGCTGTCAGATGCACACCAGTGCACCAAGCTATCCGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTTCCTGCTATTTGCAAGACTGATGAC
TTTCTCCAACCTGCCAAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GTTAGAGACTGAAGATGAGAGACTTGTTTATGAAGCTGCCCTCAACTGGA
TCAACTACGACCTGGAAAAGAGGCAGGGTCACCTTCCAGAACTTTTGAGA
ACAGTCCGACTGGCTTTGTTACCTGCTATCTTTCTCATGGAGAACGTCTC
TACAGAAGAGCTGATCAATTCCAACCCAAGAGCAAGGAATTGGTGGATG
AAGCCATCCGTTGTAACTGAAGATCTTGCAGAATGATGGTGTGTTAAC
AGTCCATGTGCTCGACCAAGAAAAACAGCCATGCTTTTTTCTTCTGGG
TGGGCAGACATTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAGATCATCCAAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTTAGC

CTGGGTGTGCTTTCTTGTTCACACGGCGTTTATGCTGTTCTGCGTCAG
CGTCACGCGCTACCTGGCCATCGCGCATCACCGTTCTACACCAAGAGGT
TGACCTTCTGGACCTGCCTGGCCGTCATCTGCATGGTGTGGACGTTGTCG
GTGGCCATGGCGTTCCTCCTGCTGGACGTAGGGACGTACTCGTTTAT
CCGCGAGGAGGACCAGTGCACCTTCCAGCACCGCTCGTTCAGGGCGAACG
ATTGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAG
CTGGTTTACCTCAAGCTCATCTTCTTCGTTACAGACCGCCGAAAGATGAA
GCCTGTCCAGTTTCGTCCTGCTGTCAGCCAGAATTGGACCTTCCACGGGC
CAGGCGCCAGTGGGCAGGCAGCGGCCAAGCTGGTGGCCGGGTTCGGTCGA
GGTCCAACCCCGCTACCTTGTGGGCATTCCGCAGAACAGTAACGCGGC
GGGCCGAGCGTCTGCTGGTGTGGATGAGTTTAAAACGAGAAGAGGA
TTAGTAGGATGTTCTACATCATGACGTTTTTCTTCCCTGGCGCTGTGGGG
CCCTACCTGGTTCGCTGCTACTGGCGGGTGTGGCGAGGGGGCCCGTGGT
TCCTGGGGGGCTACCTGACGGCGCCGTGTGGATGAGCTTGGCCAGGCTG
GGGTCAATCCTTTCATCTGCATCTTCTCCAACAGGGAGGCCAAAATCTCGC
TTTACCTGGCATGGGACTGGTCTGGCACGGAGC---GCAGCGTCCC
ACTCGGCAACAGCTTGTATCCCCGAGCAAACCGAGGAGCCACTGTTG
CCACCCCGCAGCGATGGTTTGTCCACCC---CTGCCAACAACCGACTG
GACTTGTGCTGCCTCGGCATACGAAGCCGCC-----GATTTGCGCCGG
TAACGCGGCCACCTTGTCTCTACGCAGCGCCGGAGTAAAGGCTC---
---TTCCCTGCCGACTGCAGGCTGCTCCAATCGGCCTCTTGGCTATTAC
GCAGACCCGTGAG---GCTGG---GGGGACGTACGCCCGCGAGTACTG
TGGCGTGAATAGCAAATCCAGTTTCGGTCTTTTCTTGTGCGCCCTCTAACA
CTATCGGAGGCAGAGTGGGCA---CC---AATTACCTGG-----CT
GAGGA---GGGA---GACTC---TATCCCCAGGAGAGGTCACCG---AT
---CGGCGCGTCCGGAGGAG---ACCAAACCCAAAGACATCAC---GTCAG
A---GTCGAATTGGATAGAG---ACGCCGTCCTCTATTAAATCAATCGAT
TCGAGTGATTCTGGAATCTTTG---AACAGGCCAAAAGGAGAAGAATTTCT
ACCTTCTGCAACGCCA-----GCCTCAGAGACAGTGTCCCGTTAA
NNNNNNNNNATCACTCAACAGGCGAAGTACAGAGAGAGAAGTGGCGTTGGGGATAAA
TCCGTTGCGCGATGGGATGGGCGCCTTCAAATAAACACAGCTCTCAGG
ATATTGGCTCCCG---ACAAACGGCGTTTTTCTCCTCCAGACG---CCCGGC
TAC---GCAGCGCCCGCCCTGGGA---CACCACCA-----CCACCCGAC
TCACGTTGGCTCT---TACTCCACGGCTGCTTTCAACTCCACAGGGACT
TTCTCTCAGAAATAGAGGATTTCGGGGATGCCACCGG-----A
GCGCAGCACAGTTTGTTCGCGTC-----CGGGAGTTT---C-----
---GCAGGGCCACATGGACACACAGATGCAGCGGGGACCTGCTCTTCCCCG
GGCTCCACGAG---CAAGCGCGACCCACGCGTCTTCCAACGTGGTCAAC
AGCCAGATGCGACTGGGCTTCTCGGGGACATGTACGGACGGGCCGACCA
ATACGGCCACGTTACAAGCCCGCGGT---CCGACCACTATGCTTCGACCC
AGTTACACGGCTACGGCCCTATGAACATGAATATGGCCGCA---CACCAC
GGAGCCGGGGCCTTTTTCGATATATGAGGCAGCCGATCAAACAAGAGCT
CATCTGCAAGTGGGTCGAGCCGGAGCAGCTGACAAAATCCCAAAAAGTCTT
GCAACAAAACTTTTAGCAGATGCACGAGCTCGTGACCCATCTGACGGTG
GAGCACGTGGTGGACCGGAGCAGACGAACCACGCTGCGCTCTGGGAAGA
CTGCTCAGAGAAGGGAAGCCATTCAAAGCCAANNNNNNNNNNNNNNNNNNNNNNNN
NN
>Histiopterus typus
AGCCTACTCATTCGGGCAGAACTTAGCCAGCCCGGCGCCCTCTTGGGGGA
CGACCAGATTTATAATGTAATTGTTACAGCACATGCATTTGTAATAATTT
TCTTTATAGTAATAACCAATTATGATCGGAGGATTTGGAACTGACTTCTT
CCCCTAATAATCGGCGCCCCCGACATGGCATTTCGCCGAATAAATAACAT
GAGCTTTTGGACTTCTCCCCCATCATTCCTCCTCCTGCTTCCCTG

AACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAGTCAAGGTAGG
AAATGAATACGTCACCAAAGGCCAAAGTGTGGATCAAGTCTACTACNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNGGGA
AGCACTACAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCT
GCCACGGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAG
CACACCCGTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGG
GTGGCACCAGGAGAAAAAACACCCGTGCGACCACTGTGACCGTCGTTTC
TACACGCGGAAGGATGTGAGACGGCACATGGTAGTCCACACGGGCCGAAA
GGACTTCCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATC
TGACACGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAG
ACGGAGCCTCCTGATATGTTAGGTCTTTTAGCGTCGGGGTACCACCCTG
CTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACA
AAGACCCCATGATGGGCAAACCGTTCGCCAGTGGGGCCCCCTTCGCGATG
GGCATGTACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGG
GGTGGGTACCCA-----CACCCGTCCCTGATGCCAGTTCCCTTGTCTG
CAGCTATGGGCATGGGCTGCCACANNN
NNNNNNNNNNNNNNNNNNNNNGTGAATCTGCTGGCTAGTAACTCTCC
GAGTGTTCGTATGCTCTGACCCAGCAGAAATACTTCAGTAACTACAGTC
CCGTGATTGGGTTTTACATTTACGAGCCCATCGAGTACTGGAACCAACG
GTGCAGGAGCACCTGAAGACTCTGAGTCATGGATTCAATAAGATCTCCTG
GATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCGTCAA
CCAAGAGCGACTTCATCACCATCCTCAAGGGTCCCTCCTGCGCAGCCCG
GAGTACCAGCACTTCACTGAGGACATCATATTTCCAAGA---ACGCGA
GACTG-----ATGAGTACGACATTATCGCCTCACGGATGTAAGTGGTGG
CGCGGACGACAGAGAAGAAGCGTGAAGAGGTGGTGGAGCTTCTGGAGAAG
CTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCC
TACGTTTTGTGTTTCATGGACCCTACAGCTCCTCTGTCATCTCGCCCATCC
TGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCCTG
GTCAATCAACCCCTTGGAAACTTCTGNNN
NN
TATTAAT
GGGCTCTCTGGATGGGCTTCCTCGGTGGATGACTGCCAGCTGACACCAT
CACTCGTCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCAATAAAGGATC
TGGAGGAGGACATCATGGAGGGCTGAGAGAGAGTGGGATGGAAGACAGT
ACGTGCACCTCGGGCTTCAGTGTGATCAAGGAATCTTGTGATGGCAT
GGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGTTGTTCTGAGAAGG
CGGTACGTTTTCTTCACTGTTATGTCTGTCTCTGTCTGCGCAGACGAT
GAGGAA-----GAAGAGGTACCAT
CTTCACAGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAGCCCTTTGCC
TGACCTTTGTGGATGAGTCAGACCATGAGACACTCACAGCCGTCCCTGGGG
CCTATAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCTATC
CGTGGGTGGACTACCTCGCTCCTTCCGCTTTCACTTCAGAGGCACAGGAT
ACGATGAGAAGATGGTGGCTGAGATGGAGGGCTCGAGGCCTCAGGGTCC
TCCTATATCTGCACTCTTTGTGACTCCAGTCGGGCAGAAGCCTCTCAAAA
CATGGTGTACTACTCGGTCACCCGAGTCATGAAGAGAACCTAGAACGTT
ACGAAATATGGAGAACCAACCCCTTTCTGAGTCTGTAGATGAGCTGCGA
GACAGAGTCAAAGGGTCTCTGCCAAGCCCTTCATGGAGACCCATCCCAC
GCTGGATGCATTACACTGTGACATGGCAATGCCACTGAGTTCTACAAA
TCTTCCAGGACGAGATCGGGGAGGTGTACCAAAAGGT---CAAC---CCC
AGCCGGGAGGAACGGCGGAGCTGGAGGGCAGCCCTAGATAAAACAACAGG
GAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAACCTTGCCC
GCAGGCTAATGACCCAGGAGGCTGTGGAGGTAGTGTGCGAGCTGGTGGCC
TCAGAGGGAAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTCTACCTCCA

GTTCGCCAGCATCGTTCAGGCGATCAGCGGGGCGTCCATGCTGGTCAGCG
TCCATGGAGCCCAGCTGATCAGCTCCCTGTTCTGCCGCGTGGCGCTGCC
GTGGTGGAGCTCTTCCCCTACGCCGTCAACCCGGAGCAGTACACTCCGTA
CAAAACCCTGGCTCTGTTACCAGGCATGGACCTCCAGTACGTGGCTTGGA
GGAACACCATGGAGCAGAACTCGGTGGCCTACCCCGAGCGCGCTGGGAC
CAGGGTGGCATCGCCACCTGGAGAAGGAGGAGCAGGAGCGCATCCTGGC
GAGCGACGAGGTGCCGCGCACCTGTGCTGCCGCAACCCGGAGTGGCTCT
TCCGGATTTACCAGGACACCCAGGTGGACGTCCCTCCTTGCTGGAGGTC
CTCCG---AGAAAATCTGAAG---GCCAAGCCTAACCTGAGAAA---GGC
CAAGGCAGCTAGTACAGTACACCCGGTAGAGTCAGGGAGCCCAAGTGCC
AGACCTCGGTCCAGGCCACCAACGAGGCCAAGCTGACAGTGTCTGGCAG
ATCCCTGGAACCTCAAATACCTGAAGGTCCGGGAGGTCAA-----
-----AAGAAGGATGCCAGCAAAGGGACCTTGGAGGATCAAATCA
TTCAAGCTAACCCAGCACTGGAGGCTTTTGGCAATGCCAAAACAGTGAGA
AATGACAACCTCCTCACGCTTTGGGAAGTTCATTCGTATTTCATTTTGGAA
GAGCGGCAAACCTCCTCTGCTGACATAGAACTTACTTGCTTGAGAAAT
CCCGTGTGACCTTTCAGCTCAAATCGGAGAGGAACTACCACATCTTCTTC
CAGATATTGTCCAATGAAAAGCCAGAGCTGCTGGACATGCTGTTGATTAC
CAACAACCTTATGATTATTGCTTCATCTCCCAAGGAGAAGTAACAGTTA
AATCTATCAATGACAGTGAGGAGTTGCTTGCCACTGACAGTGCCTTTGAT
GTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACAGG
TGCCATTATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAGG
AGCAGGCAGAGCCTGATGGCACTGAGGCAGCTGACAAGTCAGCCTACCTG
ATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCCAGGGT
CAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTCT
ATTACCCCAACAAGGAGGCCCTTCAAGTGCGAGGAGTGCGGCAAGCACTAC
AACACCAAGCTGGGCTACAAGCGGCACGTGGCCATGCACTCGGCCACGGC
GGGCGACCTCACCTGCAAGGTGTGCCCTGCAGAGCTACGAGAGCACGCCGG
CGCTGCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCGTGGGCGGCGCC
AAGGAGAAGAAGCACCCGTGCGACCCTGCGACCGCCGCTTCTACACGCG
CAAGGACGTGCGCCGCCACATGGTGGTGCACACGGGCCGCAAGGACTTCC
TGTGCCAGTACTGCGCGCAGCGCTTCGGCCGCAAGGACCACCTGACGCGC
CACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCC
TCCGGACATGCTGGGCCCTGCTGGGCTCGGGCTCGCCGCCCTGCGCCATCA
AGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGCCCGGCAAGGACCCC
ATGATGGCCAAGCCCTTCCCAGCGGCACCCCTTCCCATGGGCATGTA
CAACCCCAACAC-----CTCCAGGCCATGTCCAACCCCGGAGTGGGCC
AC-----CACCCTCCCTGGTGCCCGGCTCCCTGTGCGCCGCCATG
GGGATGGGCTGCCACATGGAGTACCTGATTTACGCTTCCTTCTCGTTCAT
GGGATGTTTACAAATCAGCGACGGATCCAACATAGTCAACCTTTTGGCCA
GCGACTCGCCGAGCGTGTCTGATGCTCTGACCCAGCAGAAGTATTTACG
AACTACAGCCCAGTGATAGGGTTCTACATCTATGAGCCATTGACTACTG
GAACGCCACTGTGCAGGAGCACCTCAAGACACTGGGCCAGGGGTCAATA
CGATATCGTGGATCGATAATTACTTTCAGTATCTGAAGGTGACGAACGTC
AGCGGTCGACCAAAAGCGACTTCATCGCCGTCTCAAGACCTCGTTCCT
GAGGAGTCCCGAGTATCAGCACTTCACGGACGACATCATCTTCTCCAAA
---CGGGG-----ACGACTTCAACATCATCGCGTCCAGGATG
TACCTGGTGGCGCGGACCACGGAGAAGACCCGGGAGGAGGTGGTGGAGCT
GCTGGAGAGGCTCCGCCCTCTCTCGCTCATCAACAGCATCAAGTTCATCG
TGTTCAACCCACCTTCGTGTTTCATGGACCGCTACAGCTCCTCGGTGGTC
TCGCCATCATGACGTCGGGTTTCAGCGTCTGACCATCCTCGTGTCTAC
GTTCTTCTCGTGTCAACCCCTGGGAACTTCTGGTTGATACTGACCG
TCACCTCAGTGGAGCTGGGGTCTGGGCCTGATG-----

-----TCCTACAC
CATAGAGATGGGCCCAAGAGGGCCTCAGTGGAAGGAGAGTCCCCAGCCTT
TCGCTTGCTCTATCGAGGACCCCACTAAGCAAACCAAGTTCAAGGGGATT
AAGACTTACATATCGTATCGCGTGACTCCCAGCCACGTCGGCCGGCCTGT
GTACCGTCGCTACAAGCACTTCGACTGGCTGTATAACAGGTTGCTGCACA
AATTCACCGTCATCTCTGTGCCCCATCTGCCCGAGAAGCAGGGCACC
CGTTTCGAGGAGGACTTTATCGAAAAGCGTAAGAGGGCGGTCATCCTCTG
GATGGACCACATGACCAGTCAACCCCGTCCTCTCGCAGTACGAGGGCTTCG
AGCACTTCTTCATGTGCGGSGACGATAAACAGTGGAAGCTGGGCAAGCGG
AGGGCGGAGAAGGACGAGATGGTGGGAGCCCACTTCATGCTCACCTTCCA
GATCCCCAACGAGCACCAGGACCTGCAGGACGTGGAGGAGCGGGTGGACT
CCTTCAAGGCCTTCGCCAAGAAGATGGACGACAGCGTCATGCAGTTGACG
CACGTGGCCTCAGAGCTGGTGCCAAACACCTGGGAGGGTTCCGCAAAGA
GTTCCAAAGGCTGGGGAAGTCTCCAGTCCATCAGCCAGGCTTTCATGC
TGGACCCCCCTACAGTCCGACGCCCTGAATAACGCCATCTCCCAC---

-----GCCAAATCCCGCTTTC
ACCATGGCGTCGGCACGGGGCCTGGCACGGACC---GCAGCGTCCCCTC
---AACAGCTTGCTCTCCCGCAACAACCGATGAGACCGCAGTGG---C
CTCCCGCAGCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGACT
TTGCCGCTTCGGCATAACGATGCCGCCGCTGCAGCTGATTTTGCCGGTAAC
GCGGCCACCCTTCTGTCGTACGCAGCTGCCGGAGTGAAAGCGC-----T
CCCCTGCCACTGCAGGCTGCTCCAACAGGGCCCTGGGCTATTACGCGG
AACCGCCAG---GGTGG---GGCACACGCACTCCACCGCAGTACTGT---
-----AGTAAATCAAGCGCGGTTCTCTCATGCTGGCCCGCAATTCCGT
TGGGTGCAGAACATCCA---CCTCCAATTACCTGG---TTGGCTTGGACG
A---CGGG---GACGC---TATCGCACCTGAGAGGTCACCT---CT---C
GGGGGGCAGACGAA---GCCAAGCCAAAAGACCT-----GTCGGA---
GTCAAGCTGGATAGAG---ACCCCGTCTTCAATTAAGTCAATCGACTCAA
GTGATTCTGGGATCTTTG---AGCAGGCCAAACGGAGGAGGATTTGCCA
TCTGCTACACCG-----GTTTCAGAGACGTCGTCCCATTAAAATC
AGAA-----ACAGGCGAAGTCACAGACAGAGAAGTGGCTTTAGGGA
TAAATCCATTTCGCCGACGGGATGGGCGTTTTCAAAATCAACCACAGCTCC
CACGATATTGGCTCTGG---TCAAACGGCGTTTGCCTCGCAGGCG---CC
CGGCTAC---GCAGCCGCTGCCCTGGGA---CACCATCA-----CCACC
CAACACATGTCAGCTCC---TACTCCACCGCGGCGTTCAACTCCACCCGG
GACTTTCTCTTTTCGGAATCGGGGATTTCGGAGACGCCTCTAG-----
---CGCGCAGCACAGTCTCTTCGCTCAGC---TGCGGGAAGTTT---C-
-----GCTGGGCCACATGGACACACCGATGCCACGGGACACCTGCTCTTC
TCGGGACTGCACGAG---CAAGCGGCGACCCACGCGTCTTCGAACGCGGT
GAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACATGTACGGCAGAGCCG
AGCAGTATGGTCACGTAACGAGCCCCCGGT---CCGAGCACTACGCTTCG
ACTCAGTTGCACGGCTACGGCCCCATGAACATGAATATGGCTGCC---CA
CCACGGGGCAGGGGCCTTCTTCCGTTACATGAGGCAGCCGATCAAACAAG
AGCTCATCTGCAAGTGGGTGCAACCAGAGCAGCTGTGCAATCCGAAAAG
TCCTGCAACAAAACCTTTCAGCACGATGCATGAGCTCGTGACCCACCTCAC
AGTGGAACATGTCCGGGGACCGGAACAGTCGAATCACATTTGCTTTTGGG
AAGAGTGTCCGCGAGAAGGGAAACCATTTAAAGCCAAGTACAAACTTGTA
AATCATATCAGAGTGCACACCGGA-----

>Hoplostethus atlanticus
AGCTTACTCATCCGAGCTGAGCTTAGCCAACCTGGGGCGCTCTTAGGAGA
CGACCAGATTTACAATGTTATTGTTACAGCACATGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATTATGATCGGTGGTTTTGGGAACTGACTTGTT
CCCTTAATGATTGGAGCTCCTGATATAGCATTTCCTCGAATAAATAATAT
GAGCTTTTGACTCCTCCCCCTTCATTCCTTCTCCTCCTTTCTCCTCCG
GAGTTGAAGCAGGGGGCCGGAACAGGATGAACAGTTTACCCGCCCCCTCGCA
GGAAACCTCGCCCACGCAGGGGCTCCGTAGACCTAACCATCTTCTCCTT
ACATCTGGCAGGTGTTTCTCAATTCGGGGGCCATTAACCTTCATTACAA
CCATTATTAATATGAAGCCTCCAGCCATTTCCCAGTATCAAACCCCCCTG
TTCGTATGATCCGTTTTAATTACAGCAGTCTCCTCCTTTTATCCCCTCC

CGTCCTTGCAGCCGGCATCACCATGCTCCTTACAGACCGAAACCTAAATA
CAACCTTCTTTGATCCCGCAGGAGGAGACCCCATTTTATAACCAACAC
CTGTTCTGATTCTTTGGCCACCCC-----

-----TTTCTAGAGAGAAACCTTCATCCATCTAACTGCCCTGGG
CATGCTGTTGCTGTCTGATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCGGCTATTTGCAAGACAGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGG
TCAACTATGACCTGGAAAGGAGGCACTGCCATCTGCCAGAGCTGCTGAGA
ACGGTTCGCCTGGCCCTGCTACCTGCCATCTTCCCTCATGGAGAATGTCTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCGCTGCAAGCTAAAGATCTTGCAGAATGACGGCGTGGTTAAC
AGCCCCGTGTGCTCGGCCGAGAAAAACCAGCCATGCCCTTTTTCTGTTGGG
AGGTCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGACCAGAAGGCAA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGTGGCA--GAGGCTC-
AGAAAAATGGTGTGTCTAAAGATGTATGGGTCTATGACACCGTCCAAGAGG
AATGGTCCAAGGCAGCGCCCATGCTCATCGCCAGATTTGGTCCACGGCTCT
GCTGAGCTGAAACACTGCCTTTACGTAGTAGGAGGTCACACGGCAGCAAC
CGGCTGCCTCCCAGCCTCTCCCTCCGGATGAATACATTTGTAGTGTTCAGC
CGTTCATCAACAAGGCTGATTCTGAACGAAGCGGAGGTAATCATGACGCT
GGCCAGGAATTTTCAGATGAGAGTGGTTACGGTCTCCCTAGAGGAACAAA
CTTTCCCCAGCATCGCCAGGTGATCAGTGGGGCTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTGTACCTCACTCTTCCCTCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTATGCTGTCAACCCAGAACAGTACACCCCAT
ATAAAACCTCGCCTCCCTACCAGGCATGGACCTTCAATATGTTTCCCTGG
AGGAACACTGTAGAAGAGAACACTGTCACCCACCCAGACAGATCCTGGGA
AGAAGGAGGCATCGCCATTTGGAAAAGGACGAGCAAGAGCGAATACTGG
CCAGCAAGGATGTCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTACCAGGACACTYTTGGTGGACATCCCTTCATTCCCTGGAGGT
CCTCAA---AGAGGGCCTGAAG---ACCAGGCCAGYTTGAAGAA---GG
CCAAGCTGGCCAGCACGGTTCATCCAGGCCGGGTGAGAGAACCCAGTGC
CACACCTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTTTCCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGATACCGACAAGGGGACACTGGGGGATCAAATC
ATCCAGGCAAACCCCTGCGCTGGAGGCTTTTGGTAACGCCAAAACAGTGAG
GAATGACAACCTCATCCCGTTTTTGGAAAATTCATCCGAATTCACCTTGGAA
CCAGTGGCAAGCTGTCCCTGTCTGATATTGAAACTTACCTATTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTT
CCAGATATTGTCCAATCAGAAGCCAGAGCTGTTGGACATGATGTTGATCA
CCAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAATGACTCAGAGGAGCTGATGGCCACTGACAGCGCCTTTGA
CGTGCTTGGCTTTACTCAAGAGGAGAAGATGGGAGTATATAAGCTGATTG
GTGCCATTATGCGCTATGGCAACATGAAGTTTAAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCTGACGGAACAGAGGCTGCCGATAAGTCAGCTTACCT
TAAGGTGGTGAATTATGCAGACCTCATCAAAGGGTANAGCCATCCCAGAGT
CAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGNNNNNNNNNNNNNNNNNNNNCCCAACAAGGAGGC
CTTCAAGTGCAGGAGTGTGGCAAGCACTACAACCAAGCTGGGATACA
AGCGCCATGTGGCCATGCACTCTGCCACAGCAGGGGACCTCACCTGTAAA
GTGTGCATGCAGAGCTATGAGAGCACGCCGGTGTCTCTGGAGCACCTTAA

GAGCCACTCGGGGAAGTCCTCGGGCGGGCCCAAGGAGAAGAAACACCCAT
GCGACCACTGCGACCGCCGTTTCTACACAAGGAAGGATGTGAGACGGCAC
ATGGTGGTCCACACGGGCGGAAAAGACTTCTGTGCCAGTACTGCGCCCA
GCGCTTCGGCAGGAAGACCACCTGACACGCCACGTAAAGAAGAGCCACT
CGCAGGAGCTGCTGAAGATCAAGACAGAGCCTCCAGATATGTTAGGTCTT
TTAGGTTCTGGCTCGCCGCCGTGCTCTGTCAAGGAGGAGCTTAGCCCTAT
GATGTGCAGCATGGGTCCCAACAAAGACCCCATGATGGGCAAACCCCTTCC
CCAGTGGGACCCCTTCCCATGGGCATGTACAACCCCCACCAC-----
CTCCAGGCCATGTCCAATTCTGGGGTGGGCCACCC-----CACCCCTC
CCTGATGTCTGGCTCCCTGTCTGCAGCTATGGGCATGGGCTGTCACATGG
AATATCTCATCTATGCCTCTTCTCATTTCATGGGATGTTTACAAATCAGT
GATGGCTCAAACATTGTGAACTTGGCTGGCTAGTAACTCTCCGAGCGTTTC
ATATGCTCTGACCCAGCAGAAATACTTCAGTAACTACAGTCCCGTGATTG
GATTTTACATTTACGAGCCATTGAGTACTGGAACCCACAGTGCAGGAG
CACCTTAAGACACTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAA
CTTCTTCCACTACCTGCGGGTGGTGAACGTGAGCGCGTCGACCAAGAATG
ACTTTATCAGCATCCTCAAGGGCTCTTTCCTGCACAGCCCGGAGTACCAG
CACTTCACTGAGGACATCATCTTCTCCAAGA---ACCGTGAGAGTG----
--ATGAGTATGACATTATTGCCTCGCGCATGTACCTGGTGGCGCGGACCA
CAGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAGAAACTGCGTCCA
CTGATGCTGATCAATAGCATCAAGTTCATCGCCTTCAACCCACCTTTGT
TTTCATGGACCGCTACAGCTCCTCAGTCATCTCGCCCATCCTGACCTCAG
GCTTCAGCGTGCTCACCATCCTCATCCTCACTTTCTTCTGTCATCAAC
CCCTTGGGGAACCTTCTGGCTCATCCTCACAGTTACTTCTGTGGAGCTGGG
TGCTTGGGTTTNNNNGGCTATCATCTATTGCAATGGCAGCCGCCCCCAAGAA
TGTGCTGCATCCTGCCATGTGGGCATTATTAATGGGCTCTCTGGATTGG
CTGCCCTGGTGGATGACTCCCCGGCTGACACCATTACTCGACGGTTTCGC
TACGACGTGGCCCTGGTATCAGCCTTAAAGGATCTGGAGGAGCACATCAT
GGAGGGACTGAAAGAGTGTGGGCTGGAAGACAGTGCTTGCACCTCAGGCT
TCAGTGTATGATCAAGGAATCTTGTGACGGCATGGGAGATGTCAGCGAG
AAGCACGGGGGAGGGCCGATGGTCCCTGAGAAGGCTGTACGCTTCTCTAT
TACTGTTATGTCTGTCTCTGTCTGCTGGCAGATGGAGAGGAA-----
-----GAGGCGTTACCATCTTTACCGAGCCAAAG
CCCAACTCAGAAGTGTCTGTAAAGCCCTAAGCCTGATGTTTGTGGATGA
GTCAGACCATGAGACGCTCACTGCTGTCCTGGGACCTTTACTTGCAGAGC
GTAAAGCAATGAAGCAGAGTCAACTCATCTACCTATGGGTGGCCTCCCT
CGCTCCTTCCGCTTCCACTTCAGAGCCACAGGATATGATGAGAAGATGGT
GCGTGACATGGAGGGCTGGAGGCCTCAGGTTCCACCTATATCTGCACTC
TGTGTGATTCCGGTCGAGCAGAAGCCTCTCACAACATGATACTACACTCC
ATCACCCGCAGCCACGATGAGAACCTGGATCGTTATGAAATATGGAGGAC
CAATCCCTTTTCTGAGTCTGTTGATGAGCTGCGAGACCGGGTCAAAGGGG
TCTCTGCCAAGCCCTTTATGGAGACACAGCCACTATTGATGCATTACAC
TGCGACATTGGTAATGCCACAGAGTTCTACAAAATCTTCCAGGATGAGAT
TGGGGAGGTGTACCAAGAAGT---CAAC---CCCACCCGGGAAGAACGGC
GGAGCTGGCGAGCAGCCCTAGACAAGCACCTGAGGAAGAAGATGAAGCTT
AAACCAGTGATGAGGATGAATGGGAACACGCCCCGGAAGCTAATGACCCA
GGAGGCTGCGGAGGTGGTGTGTGAGCTGATACCCCTCAGAAGAGAGGAGAG
AGGCCCTGAGGGAGCTTATGGGGCTCTACATCCAGATGAAGCCTGTGTGG
CGCGCTACCTGCCAGCCAAGGAATGCCCTGACGAGCTGTGCCGCTACAG
CTTTAACTCCCAGAACTTTGCCAATCTCCTCTCCACCACTTTCAAATATA
GGTACAATGGAAAGATCACCAATTATCTGCATAAGACCCTCGCCCATGTC
CCTGAAATCATCGAAAGAGATGGCTCTATAGGAGCCTGGGCCAGTGAGGG
GAATGAATCAGCAACAANTCGTACACCATTGAGATGGCTCCAAAGGGGCC

CCAATGGAAGGAGAGTCCTCAGCCTTCTCCTGCTCCATTGAAGACCCCA
CAAAACAGACCAAGTTCAAAGGCATCAAGACCTACATTTTCGTACCGGGTC
ACACCGAGCCACACAGGGCGTCCCGTCTACAGACGCTACAAACACTTTGA
CTGGCTGTACAACCGCTTGTGTCACAAGTTCACTGTGATCTCGGTGCCCC
ACCTGCCTGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATCGAG
AAGCGTAAAAGACGACTGATTCTGTGGATGAACCACATGACCAGTCACCC
AGTCTCTCCCAGTATGAGGGATTTGAGCACTTCCCTTATGTGTGCTGACG
ACAAGCAATGGAAGCTGGGTAAGAGGGCGGGCGGAGAAGGACGAGATGGTG
GGCGCCACTTCATGTTGACCTTCCAGATTCCTAACGAGCATCAGGATCT
CCAGGATGTGGAGGAGCGGGTTGACTCCTTCAAGTCCTTTGCTAAGAAAA
TGGACGACAGCGTCAATGCAGCTCACACATGTTGCCTCGGAGCTGGTGAGA
AAGCACCTGGGTGGATTCAGGAAGGAGTTCCAGCGGCTAGGAAATGCCTT
CCAGTCTATCAGCCAGGCGTTCATGCTGGAACCTCCCCACAGCTCTGATG
CCCTCAACAACGCCATCTCCACNNNNNNNNNACGTT-CTCAAACGACCTCTCTGGG
TTTCATCATTGGAGTCGGTGTGGTCGGGAACCTCTGATCTCCATCCTGC
TGGTCAAAGACAAGAGCCTGCACCCGCGCGCCCTACTACTTCTGCTAGAC
CTGTGCGCCTCCGACATCCTGCGCTCTGCCATCTGCTTCCCCTTCGTCTT
CACCTCTGTCAAGAAATGGATCCGCCTGGACCTATGGCACGCTCACCTGCA
AAGTGATCGCCTTCTCGGCGTGTCTCCTGTTTCCACACGGCGTTCATG
CTATTTCTGTGTACAGCTCACTCGCTACCTGGCTATTGCGCATCACCGCTT
CTACACCAAGAGGCTGACCTTTTGGACCTGTCTAGCTGTCTATCTGCATGG
TGTGGACGTTGTGAGTAGCCATGGCTTTTCCCCGGTGCTGGACGTAGGG
ACGTACTCTTTTCATCCGGGAGGAGGACCAGTGCACATTCAGCACCGTTT
TTTCAGGGCCAATGACTCACTGGGCTTCATGCTCCTGCTGGCACTCATCC
TCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCTTTGTCCACGAC
CGTCGGAAGATGAAGCCCGTCCAGTTTGTGCCTGCCGTGAGCCAGAAGT
GACCTTCCATGGGCCAGGCGCCAGTGGGCAGGCGGCTGCTAACTGGCTCG
CTGGATTTGGGAGAGGCCCCACCCCGCCTACCTTGTAGGCATCCGGCAG
AACAGCAACGCGGCGGGCCGAGGCGTCTGCTGGTGCTGGATGAGTTCAA
AACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCC
TGGCGTTGTGGGGCCCTATCTGGTAGCCTGCTACTGGCGGGTATTTGCA
AGGGGCCCGTAGTCCCGGGGGCTACCTGACGGCAGCCGTGTGGATGAG
CTTTGCCAGGCTGGGGTCAATCCATTCATCTGCATCTTCTCTAACAGGG
AGGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGGTCTTGGCACGGAG
C---GCAGCGTCCCACCTCGGCAACAGCTTGTATCCCCGCAGCAAACCGA
GGAGCCACTGTTGCCACCCCGGCGAGCGATGGTTTGTACCC---CTG
CCAACAACCGACTGGACTTTGTGCTGCCTCGGCATAACGACGCGGCC-----
---GATTTCCGCGGTAACGCGGCCACCTTGTGTCTTACGCAGCGGCGG
AGTGAAGGCTC-----TTCTCTGCGGGCTGCAGGCTGCTCCAACCGGC
CTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GGCGGACGCACT
CCGCCGAGTACTGTAGCGTAAACAGCAAACCAAGCTCGGTCTTCTCTG
CTGGCCCTCTAACTCTGTGCGGCGGAGAGCAGGCG---CC---AACTATC
TGG-----CCGAGGA---CGGA---GACGC---CATCCCGACGGAG
AGATCCCCG---AT---CGGTGGCTCCGAGGAG---ACGAAACCCAAGGA
CCT-----GTCGGA---GTCGAGCTGGATAGAG---ACGCCGTCTCCA
TTAAGTCAATTGATTCAAGCGATTCTGGTATCTTCG---AACAGGCCAAA
AGGAGAAGAATCTCGCCCTCTGCCACGCCG-----GTTTCAGAAAC
TGTGTCCCCGTTAAAATCTNNNCATCACTCAACAGGCGAAGTCACAGAGAGAG
AAGTGGCGTTGGGGATAAATCCGTTTCGCGGACGGGATGGGGCGCTTCAA
ATCAACCACAGCTCCACGATATCGGCTCCGG---ACAGACGGCGTTTTC
CTCCAGGCG---CCCGGCTAC---GCAGCGGCCGCACTGGGA---CACC
ATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCT
TTCAACTCCACCCGGGACTTTCTCTTTAGAAATCGGGGTTTCGGAGACGC

CACCGG-----GGCGCAGCACAGTTTGTTCGCCTC-----
-CGGAAGTTT---C-----GCAGGGCCACATGGACTCAGATGCCGCG
GGACACCTGCTCTTCCCAGGACTCCACGAG---CAAGCAGCGAGCCACGC
GTCTTCTAATGTGGTCAACAGCCAGATGCGATTGGGCTTCTCGGGGGACA
TGTACGGTTCGGCCGACCAGTATGGCCACGTTACAAGCCCAAGGT---CC
GACCACTATGCTTCGACCCAGTTGCACGGCTATGGCCCCATGAACATGAA
TATGGCCGCA---CACCACGGAGCAGGGGCCTTCTTTCGATACATGAGGC
AGCCGATCAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAACTG
ACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGTACGATGCATGAGCT
GGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGTCCAACC
ACATCTGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAACCATTCAAAGCC
AAATACAACTTGTAATCATATCAGAGTACACACCGGAGAGAAAACCCTT
TCCATGTCCGTTTCCC GGCTGTGGCAA

>Howella zina

-----TTCCTGGAAGGAAACCTTACCCGACTAACTGCCTCGG
CATGCTGTTGCTGCTGACGCCCACAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGCGATGTGTCTCAGCAACTTCCCCGCTATTTGCAAGACGGAGGAC
TTCCCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTCTGTACACAGAGGA
GCTAGAGACAGAAGACGAGAGACTGGTTTATGAAGCTGCCCTAACTGGA
TCAACTACGACCTGAAAAGAGGCACTGCAACCTCCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAACGCCACAGGCCAAGAGCAAGGAGCTGGTGGACG
AAGCTATCCGCTGCAAGCTGAAGATCCTGCAGAACGATGGCGTCGTCAAC
AGCCCGTGTGCTCGGCCGAGAAAACCAGCCATGCCCTCTTCCTTCTGGG
AGGGCAGACGTTTATGTGTGACAAGCTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATACCCAGCCCAAGAAAGGAGTTCAGT
GCCTGCGCCATTGGCTGTAAGGTGTACATCACCGGTGGCA--GAGGCTC-
AGAGAACGGTGTGTCCAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTCAAGGCAGCACCATGCTCATCGCCAGGTTTCGGCCACGGCTTT
GCGGAGCTGAAACACTGCCTCTACGNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNGGATGAATACATTGTTGTGTTCAGT
CGTTCGACAACGAGGCTGATACTGAATGAAGCGGAGCTAATCATGGTGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTATCCCTGGAGGAAACAGT
CTTTCCCCAGTATCGTCCAGGTGATCAGCGGAGCTTCCATGTTAGTTCAGT
ATGCACGGAGCTCAGCTCATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTCTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
ATAAAACCCTTGCCCTCGCTTCCAGGCATGGACCTTCACTATGTCTCCTGG

AGGAACACTAAGGAAGAGAACACTATCACCCACCCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGG
TGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCAGAATCTACCAGGACACTTTGGTGGACATCCCTTCCTTCTGGAAGT
CCTCAA---AGAGGGCATGAAG---ACAAAGCCAGTTTGAAGAA---GT
CAAAGCCGGCCAGCACAGTACACCCAGGCCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCGTGGAACCTGAAATACCTGAAGGTGAGAGAGGTCAAATATGAAG
TG-----AAAAAAGACACCAGCAAGGGGACGCTGGAGGATCAAATC
ATCCAGGCGAACCCGGCAGTTGAGGCCTTTGGCAATGCCAAAACCTTGAG
AAATGACAACCTCGTCTCGTTTTGGAAAATTCATTCGAATTCAGTTCGGTA
TGAGCGGCAAGTTGTGCTCCGCCGACATCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGGACTACCATATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTCCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTGACGGTT
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACCGACAGTGCCTTCGA
CGTGCTCGGCTTTACTCCAGACGAGAAGATGGGCGTCTATAAACTGACCG
GTGCCATCATGCACTACGGAAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGTCCGACGGGACAGAGGCTGCTGATAAATCAGCTTACCT
GATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTGGATCAAGTC
TACTACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGAAGCACTACAACACCAAGCTGGGATATA
AGCGCCATGTTGC
CATGCACTCGGCCACGGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGA
CCTACGAGAGCACGCCTGTGCTCTTGGAGCACCTCAAGAGCCACTCCGGG
AAGTCTTCGGGTGGCACCAAGGAGAAAAAACACCCGTGCGATCACTGTGA
CCGTCGCTTCTACACACGGAAGGATGTGAGAAGGCACATGGTGGTCCACA
CGGGCCGAAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGG
AAGGACCATCTGACGCGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCT
GAAGATCAAGACGGAGCCTCCTGACATGTTAGGTCTTTTAGCGTCGGGGT
CACCACCCTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATG
GGTCCCAACAAGACCCCATGATGGGCAAACCGTCCCCAGTGGGGCCCC
GTTCCCGATGGGCATGTACAACCCCCACCAT-----CTCCAGGCCATGT
CTAATCTGGGGTGGGTCACCCA-----CACCCGTCCCTGATGCCACT
TCCTTGTCTGCAGCTATGGGCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
TGGCTAGTAACTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATAC
TTCAGTAACTACAGTCCCGTAATTGGGTTTTACATTTACGAGCCCATAGA
GTACTGGAACGCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCT
TCAACAAGATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTG
AATGTGAGTGCCTCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTC
CTTCTTGCGCAGCCCAGAGTACCAGCACTTCACCGAGGACATCATATTCT
CCAAGA---ACCGCGAGACTG-----ATGAGTATGACATTATTGCCTCA
CGGATGTACTTGGTGGCACGGACGACAGAGAAGAAGCGTGAAGAGGTGGT
GGAGCTTCTGGAGAACTTCGTCCGTTGATGCTGATCAACAGCATCAAGT
TCATTGCCTTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGTTCCTCT
GTCATCTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCAT
CCTCACTTTCTTTCTGGTCATCAACCCCTTGAAAACCTTCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNT
CTTGCAA
CGTCGGCATCATTAACGGGCTCTCCGGATGCTCTTCCTCGCTGGACGACT
CCCCTGCCGACACCGTCACTCGGCGGTTTCGCTACGATGTGGCTCTGGTG
TCGGCGATGAAGGACCTGGAGGAGGACATCATGGAGGGGCTGAGGGACAG

NN

NN-----

-----GGAGGAGTACATYGTAGTATTCAGTCGCTCAACG
ACAAGACTCATTCTCAACGAAGCAGAACTGATTATGGCACTGTCCCAGGA
GTTTCAGATGAGGGTCGTCACTGTGTCCCTTGAAAGAGCAACCTTCCCCA
GTATAGTCCAGCTTATCAGTGGTGCCTCAATGTTGGTCAGTATGCATGGG
GCTCAGCTTGTACCTCACTCTTCTCCTCCCAGAGGAGCAGTGGTGGTTGA
GCTCTTCCCTATGCTGTGAACCCAGAACAGTACACCCCTTATAAAAACCC
TCGCCTCCTTACCGGGGATGGACCTGCAGTACGTTCTTCTGGAGGAATACG
ATGGAGGAAAACACCATCACCCACCCAGATAGATCCTGGGACCAAGGAGG
CATCGCCACCTGAAAAAGGATGAGCAAGAGCGAATCCTTCCAGCAAGG
ATGTCCCAGCGGCACCTGTGCTGCCACAACCCAGAATGGTTCTTCCGAATC
TACCAGGACACTCTGGTGGACATCCCTTTCATTTCTGGAGGTCTCAA---
AGATGGCCTGAAGATCACCCAGACCAAGCCTAAAAA---GGCCAAGCCAG
CCAGCACAGTACATCCAGGCCGGGTCAGGGAAGCACAGTGTCAAACCTCA
GTCCAAGCCACCAACGAAGCTAAACTCACGGTCTCCTGGCAGATCCCATG
GAACCTGAAATACCTGAAGGTGAGAGAGGTCAAATACGAAGTGTGGATCC
AGAAGAGGGACCGGAGCAAGGGGACCCCTGGAGGATCAAATCATCCAGGCC
AACCCCGCTCTGGAGGCCTTTGGGAACGCCAAAACCATCCGCAACGACAA
CTCGTCCCCTTTCGGGAAGTTCATCCGCATCCACTTCGGGACGAGCGGCA
AGCTGGCGTCCGCCGACATCGAGACCTACCTGCTGGAGAAGTCGCGCATC
ACCTTCCAGCTCAAGGCCGAGCGGAACTACCACATCTTCTTCCAGATCCT
GTCCAACGAGAAGCCTGAGCTGCTGGAGATGCTGCTGATCACCAACAACC
CGTACGACTACAGCTACATCTCCCAGGGGGAGGTGACGGTGGCGTCCATC
AACGACAACGAGGAGCTGATCGCCACCGACAGCGCCTTCGACGTGCTGGA
ATTCACCCAGGAGGAGAAGATGTCCATCTACAAGCTGACCGGCGCCATCA
TGCACTACGGCAACATGAGGTTCAAGCAGAAGCAGCGCGAGGAGCAGGCC
GAGCCCAGGACCGAGGAGCCGATAAGTCGGCGTACCTGATGGGGCT
GAACTCGGCCGACCTCATCAAAGGACTCTGCCACCCCGAGTCAAGGTGG
GAAACGAGTATGTCACGAAAGGCCAGGGTGTAGACCAAGTCTACTAC---

>Hypomesus pretiosus

AGCCTCCTTATCCGAGCCGAGCTTAGCCAACCTGGCGCTCTTCTGGGGGA
CGACCAGATTTATAATGTTATCGTCACTGCACACGCTTTTGTATAATCT
TTTTTATGGTTATAACCAATTATGATTGGAGGGTTTGGTAACTGGCTTATC
CCCCTTATGATCGGGGCCCCAGACATGGCATTCCCCCGTATGAACAACAT
GAGCTTCTGACTCCTCCCTCCCTCTTTCCTTCTTCTTTTGGCCTCCTCCG
GGGTCGAAGCAGGGGCCGGAAGTGGTTGAACAGTTTACCCTCCGCTTGCG
GGGAATCTCGCCCATGCGGGAGCTTCCGTAGATTTGACCATTTTTTCTCT
CCATCTTGCAGGAATCTCCTCTATTTTAGGGGCAATTAACCTTATCACAA
CTATTATTAACATGAAACCCCTGCCATTTCCCAGTACCAGACTCCTTTA
TTCGTTTGGGCCGTTCTAATTACAGCTGTCCTTCTTCTTTTCCCTTCC
AGTGCTAGCTGCTGGGATTACTATGCTTCTCACAGACCGAAACCTCAACA
CCACCTTCTTTGACCCTGCCGGGGAGGGGACCCCATCTGTACCAGCAT
CTATTCTGATTCTTCGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NN-----

-----GGACCAGTACATCGTGGTGT
TCAGTCGTTCCCAAACCAGGCTGATCCTCAACGAGGCCGAGCTGATCCTG
GCGTTGGCGCAGGAGTTCCAGATGAGGGTGGTGACGGTCTCCATGGAGGA
CCAGACCTACCCCAGCATYGTGCGGGTTATMAGCGGCGCCTCCATGCTCG
TCAGCATGCACGGAGCTCAGCTCGTCACCTCGCTCTTCCTCCCCAGAGGG
GCGGCTGTGGTGGAGCTCTTCCCTACGCGGTGACCCCTGAGCAGTACAC
GCCTTACAAGACTTTGGCCACCTTGCCAGGCATGGACCTCCAGTATGTCTG
CCTGGAGGAACACCATGGAGGAGAAC TCCGTGGCTCACCCAGATAGACCC
TGGGATCAGGGGGCATCGCTCACCTGGACAAGGACGAGCAGGAGCGCAT
CCTGGCCAGCAGAGAGGTGCCAGACACCTTTGCTGCAGAAACCCAGAGT
GGCTGTTCCGCATCTATCAGGACACCCGGTTGGACATCCCCTCTCTGCTG
GACGTCCTCAG---GGAGAGCCTGAAG---ACCAGGCCAACCTCAAGAA

---GACCCGGCCTGCCAGCACTGTTTCATCCAGGCAGGGTGAGGGAGCCTC
AGTGCCAGACCTCAGTCCAGGCTRCCAACGAAGCCAAGCTCACAGTATCC
TGGCAGATCCCTTGGAACTCAAGTACTTGAAGGTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGA
GAGATCCCAG

CAAGGGAACCTTGGAGGATCAAATCATTTCAGGCTAACCTGCCTTGGAGG
CTTTTGGTAATGCCAAAACATTGAGGAATGACAACTCGTCACGATTTGGA
AAATTTATCCGGATTCACCTCGGAACCAGTGGCAAGCTGTCCTCAGCTGA
CATAGAGACTTATCTTTTGGAAAAGTCACGTGTCACCTTCCAACCAAGT
CGGAAAGGAATTACCATATTTTCTTTCAGATCTTGTCCAATAAAAAGCCA
GAGCTGTTGGACATGCTTCTGATTACCAACAACCCATATGACTACTCGTA
CATCTCCAAGGAGAGGTAACAGTAGCATCTATCAATGATGCTGATGAGT
TGATGGCCACTGACAGTGCCTTTGATATCCTTGGCTTTACTCAAGAGGAG
AAAATGGGGGTCTACAAGTTGACAGGAGCTATCATGCATTTTGGCAACAT
GAAGTTCAAGCAAAAAGCAGCGTGAGGAGCAGGCAGAGCCTGACGGCACTG
AGGCGGTGACAAGTCAGCTTACCTAATGGGGCTGAACTCTGCAGATCTT
GTGAAAGGACTCTGCCATCCCAGGGTCAAGGTTGGCAATGAGTATGTCAC
CAAAGGGCAGGGTGTAGATCAAGTCTACTACCCAAAACAAGGAGGCCCTCC
GCTGCCAGGACTGTGGGAAGCACTACAACACCAAGCTGGGCTACAAGCGC
CATGTGGCCATGCACTCAGCCACAGCAGGGGATCTCACCTGCAAGGTGTG
CCTGCAGAGCTACGAGAGCACGCCGGCGCTGCTGGAGCACTTGAAGAGCC
ATTCGGGGAAGTCGTCGGGCGGTGCTAAGGAGAAGAAGCACCCCTGCGAC
CACTGCGACCGCCGCTTCTACACGCGCAAGGACGTACGCCGCCACATGGT
GGTGCACACGGGCCGCAAGGACTTCCCTGTGCCAGTACTGCGCCCAGCGCT
TTGGCAGGAAGGACCACCTCACGAGACACGTGAAGAAGAGCCACTCCAG
GAGCTGCTGAAGATCAAGACAGAGCCGCCAGACCTGCTGGGGCTGTTGGG
GTCTGGACC-----CATCAAGGAGGAGCTCAGCCCCATGATGT
GCAGCATGAGCTCCACCAAGGACCCCTTATGGCCAAGCCCTTCCCGGA
GGGACGGCTTCCCCATGGGCATGTACAACCCCCACCAC-----CTCCA
GCCCCTGCCAGCCCCGGAGGGGGGCAC-----CACCCCTCCCTGA
TGCCAGCTCCCTGTCTGCCGCTATGGGCATGGGCTGCCACATGGACTAT
CTGATCTACGCTCCTTCTCCTTTATGGGGTGTCTGCAGATCAGCGACGG
GTCCAACGTGGTCAACCTGCTGGCCACTAACTCTCCAGCGTCTCCTACG
CCATGACGCAGCAGAAATACTTCAGCAACTACAGCCCTGTGATCGGCTTC
TACATCTACGAGCCGATTGAGTACTGGAACCTCCACGGTGCAGGAACACCT
GAGGACGCTGGGACAAGGCTTCAATAAGATCTCCTGGATCGATAACTACT
TCCACTACCTGAAGGTGGTGAACGTGAGCGCCTCCACCAAGAGCGACTTC
ATCTCCATCCTCAAAGGCTCATTCTGCAGAGCCCGAGTACCAGCACTT
CAYGGAGGACATCATCTTCTCCAAGA---ACGGCG-----AGG
AGTACGACATCATCGGTCCAGGATGTACCTGGTGGCCAGGACCACGGAA
AAGACACGCGAGGAAGTGGTGGAGCTTCTGGAGAGACTCCGCCCCCTGTC
GCTCATCAACAGYATCAAGTTCATCGTGTTCACCCACCTTCGTCTTCA
TGGRTCGCTACATCTCCTCCGTCATCTCGCCATCCTCACCTCTAGCTTC
AGCGTCTCACCATCCTCATCTCACCATCTTCTGGTGGTTCAGCCCCCT
GGGAACTTCTGGCTGATCCTGACAGTGACGTGGTGGAGCTAGGCGTGC
TAGGCTGATG-----

-----GTCAGCGAGA
AGCACGGAGGGGGCCGGCCATTCTGAAAAGGCCGTCCGCTTCTCCTTC
ACCGTCATGTCCGTCCTCGTCTGGCCGAGGGGGAAGAG-----
-----GAAGCAGTCACCGTCTTCAGAGAGCAGAAGC

CCAAC TCGGAGATGTCCTGCAAACCTCTCTGTCTGATGTTTGTGGACGAG
TCGGACCACGAGACCCTGACGGCCATCTTGGGGCCTGTGGTGGCCGAGAG
GAACGCCATGAAGAACAGCCGCCTCATCCTGGCCATGGGCGGCCCTCCCTC
GCTCCTTCCGCTTCCACTTCAGGGGCACAGGCTACGACGAGAAGATGGTG
CGCGAGATGGAGGGCCTGGAGGCTTCAGGCTCCACCTACGTCTGCACCCT
CTGCGACGCCACCAGAGCTGAGGCTCCCAGAACATGGTGCTCCACTCAG
TCACCCGCAGCCACGACGAGAACCTGGACCGCTACGAGCTGTGGAGGACC
AACCTTACTCTGAAATCGGCGGACGAGCTGCGAGACCGGGTAAAAGGGGT
CTCCGCCAAGCCATTTCATGGAGACCAGCCACATTTGGACGCGCTGCACT
GTGACATCGGCAACGCCACTGAGTCTACAAGATCTTCCAGGACGAGATC
GGGGAGGTGCATTGCAGGCC---CAAC---CCGAGCAGGGAGGAGCGTCG
GAGCTGGAGGGCGGCTCTGGACAAGCAGCTC-----

-----TCATACACCATTGAGATGGGCCCCAAAGGGCC
CCAGTGAAAAGAGAGCCCTCAGCCTTTCTCCTGTTCTGTGGAGGACCCTA
CCAAACAGACCAAGTTCAAGGGCATCAAGACCTATATATCTTACCGGGTC
ACCCCCAGCCATACAGGGCGACCCGTCTACCGCCGGTACAAGCACTTTGA
TTGGCTGTACAACCGTCTGCTGCATAAGTTTACCGTCATCTCTGTGCCTC
ACTTGCCAGAGAAACAGGCCACAGGGCGTTTTGAAGAGGACTTCATCGAG
AAGCGAAAAGACGGTTGGTCATCTGGATGGACCACATGACCAGTCATCC
TGTCCTTTTCACAGTACGAGGGCTTGGAACACTTCCCTCATGTGTGCTGATG
ACAAGCAGTGGAAGCTGGGCAAGCGGCGGGCGGAGAAAGATGAGATGGTG
GGTGCCCACTTCATGCTGACCTTTCAGATTTCCAACGAGCACCAGGATCT
ACAGGACGTGGAGGAGCGGTGGATACCTTCAAGTCCTTTGCTAGGAAA
TGGATGAAAGCGTCATGCAGCTGACCCACGTCCCTCAGA ACTGGTTCGA
AAACACCTGGGTGGATTTCAGGAAGGAGTTCAGCGCCTGGGAAATGCGTT
CCAGTCCATCAGCCAGGCATTTCATGCTGGACCCCTCCCATCGGTCGGATG
CCCTCAACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNNGACCTCCTGGGCTTTCATCATCGA
GGT

CGGAGTGGTCGGCAATCTTCTGATCTCCATCCTACTGGTCAAAGACAAGA
GCCTACACCGAGCGCCCTACTACTTCTTACTGGACCTGTGCGCCTCTGAC
ATCCTGCGTTCCGCCATCTGCTTCCCCTTCGTGTTACCTCCGTCAAGAA
TGGTTCCACCTGGACGTACGGAACCCTAACCTGCAAGGTGATCGCCTTCC
TGGGCGTGCTGTCTGCTTTCACACGGCCTTTATGTTGTTCTGTGTCAGC
GTGACCCGCTACCTGGCCATCGCCACCATCGCTTCTACACCAAGAGGCT
GACCTTCTGGACGTGCTTGGCCGTCATCTGCATGGTGTGGACGCTGTGAG
TGGCCATGGCCTTCCCCCGGTGCTGGATGTGGGGACGTA CTCTTCATC
AGAGAGGAAGACCAGTGCACCTTCCAGCACCAGCTCCTTCAGAGCCAACGA
TTCCCTGGGCTTTATGCTGCTGCTCGCCCTCATCTTCTGGCCACGCAGC
TAGTCTACCTCAAGCTCATCTTTTTTCGTCCACGACCGCCGGAAGATGAAA
CCGGTCCAGTTTGTGCGGGCGGTTCAGCCAGAACTGGACCTTCCACGGGCC
GGGGGCCAGCGGCCAGGCGGCGGCTAACTGGCTGGCGGGCTTTGGGAGAG
GCCCCACTCCGCCACCCTTCTAGGCATCAGGCAGAACAGCAACCGGGCG
GGCCGCAGACGACTCCTGGTGCTGGATGAGTTCAAGACAGAGAAGAGGAT
CAGCCGGATGTTTACATCATGACCTTCTTCTTCTTCCCTGGCACTGTGGGGGC
CCTATCTGGTGGCCTGCTACTGGAGAGTGTTCGCCAGGGGCCCCGCTGTG
CCGGCGGGCTACCTGACTGCCGCGGTGTGGATGAGCTTCGCCACAGCGGG

GGTCAACCCCTTCATCTGCATCTTCTCCAACAGGGAGGCCAAATCTCGCT
TTCACCCTGGCGTAGGGACTGGTCCTGGCACGGACC---GCAGCGTCCCA
CTTAGTAACAGCTTGCTATCCCCGCAACAAACCGAAGAGCCCACAGTTG-
--CTTCCCCACAGCGTTGGTTTTGTCACCC---CTGCCAACAACCGACTGG
ACTTTGCCGCCTCGGCATACGATGCTGCCGCTGCTGCAGATTTTGCCGGC
AACGCGGCCACCTTGCTGTCTACGCAGCGGCTGGAGTGAAGGCGC----
--TTCCCCTCTCCACGGCAGGTTGCTCCAACAGACCGCTCGGGTATTACG
CCGACCCGTCAG---GCTGG---GGCGCCCGTACGCCACCACAGTACTGT
-----AGCAAGTCGAGCTCCGTTCTCTCATGCTGGCCCACGAATAC
TGTTACCGGCAGAATGGGCC---CGTCCAGTTACTTGG-----CCG
AGGA---GGGA---GACGC---CATTCCCACAGAGCGGTCTCCA---AT-
--AGGGCGTCAGACGAG---GCAAAAACAAAAGACTT-----GTCCGA
---ATCCAGCTGGATAGAG---ACGCCGTCTTCAATAAAGTCAATTGATT
CCAGTGATTCTGGAATCTTTG---AGCAAGCAAAAACGGAGAAGAATTTCT
CCGTCTGCCACACCA-----GTTTCGGAGACAGTGTCCCCGTTAAA
ATCCGAG-----ACAGGCGAAGTCACAGAAAAGAGAAGTGGCTTTGG
GGATAAATCCGTTTCGCAGACGGGATGGGTGCTTTCAAAATCAACCACAGT
TCGCATGATCTTGGCTCCGG---GCAAACACTGCATTTTCTCCCAAGCG--
-CCCGGTAC---GCAGCCGCTGCCCTGGGA---CATCACCA-----CC
ACCCGACTCATGTGAGTTCT---TACTCTACGGCGGCTTTCAATTCACC
CGGGATTTTCTCTTCAGAAATCGAGGCTTCGGAGACGCTACCAG-----
-----CGCTCAGCACAGTCTCTTCGCCTCCGC---AGCGGGAAGTTT--
-T-----GCAGCCCCACATGGACACTCAGATGCAGCGGGACACCTGCTC
TTCCCAGGACTTCACGAG---CAAGCCGCCASCCATGCTTCTCAAATGT
TGTTAATAGTCAGATGCGATTGGGCTTTTTCGGGGGACATGTACGGCAGAG
CCGACCAGTATGGCCACGTTACCAGCCCGCGGT---CCGACCACTATGCT
TCGACCCAGTTGCATGGCTATGGCCCTATGAACATGAATATGGCCGCG--
-CATCATGGAGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATAAAAC
AAGAGCTGATCTGCAAGTGGATCGAACCGGAGCAACTAACGAACCCAAAA
AAGTCGTGCAACAAAACTTTTAGCACAAATGCACGAGCTCGTCACCCATCT
GACTGTGGAGCATGTGGGAGGACCGGAGCAGTCGAACCACATTTGCTTCT
GGGAAGAGTGTGCCCGAGAAGGAAAACCATTCAAAGCCAAATACAAACTT
GTGAACCACATCAGAGTGCACACCGGAGAGAAACCATTTCCATGTCCATT
TCCAGGTTGTGGCAA

>Hypoptychus dybowski

AGCCTTCTTATTCGAGCTGAGCTAAGTCAGCCTGGTGCTCTTCTTGCGA
CGACCAGATTTACAATGTTATCGTTACTGCCACGCTTTCGTTATAATCT
TCTTTATAGTCATGCCAATCATGATCGGAGGCTTCGGCAACTGACTTATC
CCTTTAATAATCGGGGCCCTGATATAGCATTTCCTCGAATAAAACAACAT
AAGTTTTTGGCTTCTTCCCCCTTCTTTTCTTCTCCTTTTAGCTTCTTCTG
GGGTGAGGCGGGAGCTGGAACAGGTTGAACTGTTACCCGCCCTTTCT
GGAAACCTTGCCACGCAGGTGCTTCAGTTGACCTAACAAATTTTTCCCT
GCACCTAGCTGGGATTTCTTCTATTCAGGTGCTATCAATTTCAATACCA
CAATTATTAACATAAAACCCAGCTATTTCCCAATACCAAACACCCCTG
TTCGTTTGGTCTGTGCTGATTACTGCAGTCCTCCTTCTTGTCCCTCCC
GGTTTTAGCAGCCGGAATCACCATGCTCTAACAGACCGTAACCTAAATA
CAACCTTCTTTGACCTGCCGGAGGCGGAGACCCCATCCTTTACCAACAC
TTATTCTGATTCTTCGGTCA-----

ACAACCCCCACCAT-----CTCCAGGCTATGTCTAATTCAGGGGCGGGT
 CAGCAG-----CACGCGTCCCTGATGCCCGGCCCTTGTCTGCAGCTAT
 GGGTATGGGCTGCCACATGGAATATCTCATCTACGCCTCTTTTTCATTCA
 TGGGATGTTTACAGATCAGCGATGGATCAAACATAGTGAACCTGTTGGCA
 AGTAACTCTCCGAGTGTTCGTACGCTATGACCCAGCAGAAATACTTCAG
 TAACTACAGTCCTGTGATTGGCTTTTACATTTATGAGCCCATCGAGTACT
 GGAACTCCACGGTGCAGGAGCACCTGAAGACCCTGAGTCATGGTTTCAAC
 AAGATCTCTTGATGGACAACCTTTTCCACTACCTGCGCGTAGTAAATGT
 GAGCGCGTGCACCAAGAGTGACTTCATCTCCATTCTCAAGGGGTCCTTCC
 TTTCGAGCCCGGAGTACCAACATTTCACTGAGGACATCATATTTTCCCTTG
 A---ACCGCAGACAG-----AAGAGTACGACATTATCGCTTCGCGGAT
 GTACCTTGTGGCACGGACGACAGAGAAGAAGCGGGAGGAGGTGGTGGAGC
 TTCTGGAAAAGCTTCGTCTTTGATGCTGATCAACAGCATTAAAGTTTATT
 GCCTTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCTTCTGTGTCAT
 CTCGCCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
 CTTTCTTCCCTGGTCATCAACCCGTTGGGTAACTTCTGGCTCATCCTCAGC
 GTAACGTCCTGTGGAGCTTGGCGTCTTGGGCTTGACANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCAGCWCTCA
 AGAAT
 GTGTCTACATCTTGCAATGTTGGCATTATYAATGGGCTCTCTGGATGGGC
 TTCTCGGTGGATGACATCCAGCTGACACCATCACTCGGCGGTTTCGGT
 ACGATGTGGCCCTGGTGTGAGCATTAAAGGATCTGGAGGAGGACATCATG
 GAGGGGCTCAGAGAGAGTGCCATGGAAGACAGTGCTTGACCTCAGGCTT
 CAGTGTGTCATGATCAAGGAATCCTGTGATGGCATGGGCGATGTCAGCGAGA
 AGCACGGTGGAGGACCACCTGTTCCCTGAGAAGGCTGTGCGTTTTTCTTTC
 ACTGTTATGTCCGTCTCCGTGCTGGCAGACGAGGAGGTG-----
 -----GAAGAGTTACCATCTTTACTGAGCCAAAGC
 CAAACTCAGAACTGTCTGTAAGCCCTCAGCTTGATGTTTCGTGGATGAG
 TCAAACCATGAGACACTCACAGCTGTCTTGGGGCCAATAGTTGCAGAGCG
 TAATGCAATGAAAGAAAGCAGGCTCATTCTTCCGTGGGCGGACTACCTC
 GCTCCTTCCGCTTTCACCTCAGAGGCACAGGATATGATGAGAAAATGGTG
 CGCGAGATAGAGGGCCTGGAGGCCCTCAGGCTCCACCTACGTCTGCACTCT
 TTGTGACTCCACGCGGGCAGAGGCTTCTAAAAACATGGTGCTACACTCCA
 TCACTCGCAGTCATGAAGAGAACCTAGATCGTTACGAAATATGGAGAACC
 AACCCATTTTCTGAATCTGTAGATGAACTGCGGGACAGAGTCAAAGGGAT
 CTCTGCCAAACCCTTCATGGAGACCCAGCCACGCTGGATGCATTACACT
 GTGACATTGGCAATGCCACTGAGTCTACAAAATCTTCCAGGACGAGATC
 GGGGAGGTATAACAAAAGGT---CAAC---CCTAGTCCGGAGGAACGGCG
 GAGCTGGAGGGCAGCGCTGGATAAACAGCTCAGGACGAAGATGAAACTTA
 AACCGGTGATGAGGATGAATGGGAACTACGCCCCGAGGCTAATGACTCAA
 GATGTGGTAGAGGTGATTTGTGAGCTGGTGCCGTGAGGAGAGGAGAGA
 GGCCCTGAGGGAGCTGATGAGGCTTACATCCAAATGAAGCCTGTGTGGC
 GCGCCACCTGCCCTGCCAAGGAGTGCCCCGACGAGCTGTGCCGCTACAGC
 TTAACTCCAAACGCTTTGGCCGACCTTCTCTCCTTACCTTCAAATATAG
 GTATAATGAAAAGATAACCAACTACTTGACACAAGACGTTGGCCCATGTGC
 CTGAAATCATAGAGAGANNNTC
 GTACACCATCGAGATGGGGGCCCCGGGGCCC
 CTGTGGAAGGAGAGCCCCGCGGCCGTCTCCTGCTCCATCGAGGACCCCAT
 CAAACAGACAAAGTTCAAGGGCATCAAGACGTACATCTCGTACCGGGTGA
 CGCCGAGCCACACGGCGCGCCCCGTCTACCGGCGCTACAAGCACTTCGAC
 TGGCTGTACAACCGGCTGCTGCACAAGTTACCCGTGATCTCCGTGCCCCA
 CCTGCCCGAGAAGCAGGCCACGGGGCGCTTCGAGGAGGACTTCATCGAGA
 AGCGCAAGCGGGGCGTGCATCCTGTGGATGAACCACATGACCAGCCACCCG
 GTGCTCTCCAGTACGAGGCTTCGAGCACTTCTGATGTGCGCCGACGA

CAAGCAGTGGAAAGCTGGGCAAGAGGCGGGCGGAGAAGGACGAGATGGTGG
GCGCCACTTCATGCTGACCCTGCAGATCCCCGGCGAGCACCAGGACCTG
CAGGACGTGGAGGAGCGCGTCGACACCTTCAAGGCC TTCGCCAAGAAGAT
GGACGACAGCGTGATGCAGCTGACGCACGTGCCTCGGAGCTGGTGCGCA
AGCACCTGGGCGGCTTCAGGAAGGAGTTCAGCGGCTGGGCAGTTCCTTC
CAGTCCGT CAGCCAGGCGTTCACGCTGGACCCGCCAACAGCTCGGAGGG
CCTCAACAAAGCCATGTGCGACNCTCTCGCCACGTTCCTCAAACCTGACCTC
TCTGGGTTTCATCATTTGGAGTGGGTGTGGTTCGAAAACCTCCTGATCTCCA
TCCTGCTCGTCAAAGACAAGAGTCTCCACCGAGCGCCCTACTATTTCTCTG
CTGGACCTGTGCGCTCTGACATCCTGCGCTCTGCCATCTGCTTCCCCTT
TGCTTACCTCGGTCAAAAATGGATCCGCCTGGACCTATGGCACGCTGA
CCTGCAAAGTGATCGCCTTCTSGGTGTGCTTTCTGTTTTCCACACGGCG
TTTTATGCTGTTCTGCGTCAGCGTCACGCGCTACCTGGCCATCGCACACCA
CCGCTTCTACACCAAGAGGCTGACCTTCTGGACCTGCCTAGCCGTCATCT
GCATGGTGTGGACGTTGTGCGGTGGCTATGGCGTTCCCGCCGGTGCTCGAC
GTAGGGACGTA CTCTTTCATCCGGGAGGAGGACCAGTGCACGTTCCAGCA
CCGTTCCCTTCAGGGCGAATGATTCGCTGGGCTTCATGCTCCTGCTGGCGC
TCATCCTCCTGGCCACGCAGCTGGTCTACCTCAAGCTCATTTTTCTTTGTC
CACGACCGTCGGAAGATGAAGCCCGTCCAGTTTTGTGCCTGCTGTTAGCCA
GAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGCGGCCGCAACT
GGCTGGCCGGATTTGGTTCAGAGGCCACCCCGCCTACACTGCTGGGCATC
CGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTACTGGTATTGGATGA
GTTCAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTT
TCTTTCTGGCGCTTTGGGGGCCCTACCTGGTTCGCTGCTACTGGCGGGTG
TTTGCAAGGGGCCCGTGGTCCCTGGGGGCTACCTGACGGCCCGCGTGTG
GATGAGCTTTGCCAGGCTGGGGTCAATCCTTTTCATCTGCNNNNNNNNNNNNNNNNNNNGCCAAATCTC
GCTTTCACCCTGGCGTGGGGAGCGCTCCTGGCACGGAGC---GCAGCGTC
CCACTCTGCAACAGCTTGCTCTCCCCGCAGCAAAGCGACGAGCCCCCTGC
TGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGAC
TGGACTTTGCTGCCTCGGCATACGACGCCGCC-----GATTTGCGC
GGCAACGCGGCCACCTTGCTGTCTACGCGGCGGCCGGAGTGAAGGCTC-
-----TTCCCCTGCCGGCGGGCTGCTCCAACCGGCCTCTTGGYTATT
ACGCAGACCCGTCGG---GCTGG---GGAGGACGCACGCCGCCGAGTAC
TGTGGCGTCAACAGCAAATCCAGCTCGGTGTTTTCTGCTGGCCCGCGAA
CTCGATCGGTGGAAGAGCGGCCG---CC---GGCTACCTGG-----
CCGAGGA---GGGG---GACTC---CATCGCCACGGAGAGGTCGCCG---
AT---CGTCGGCTCGGACGAG---GCCAAAGCCAAAGACATGAC---GTC
CGA---GTCGAGCTGGATAGAG---ACGCCGTCTCCATCAAGTCGATCG
ATTTCGAGTGATTCTGGTATCTTTG---AACAGGCCAAAAGGAGGAGGATC
TCACCTTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTT
GAAATCTGAGCATCACTCAACAGGCGAAGTACGGAGAGAGAAGTGGCGT
TGGGGATCAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAACCAC
AGCTCCACGACATCGGCTCCGG---ACAAACGGCGTTCTCCTCCCAGGC
A---CCCGGCTAC---GCAGCGGCCGCCCTGGGA---CACCATCA-----
-CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCC
ACCAGGGACTTTCTGTT CAGAAATCGGGGTTTCGGGGACGCCGCCG---
-----GGCGCAGCACAGTTTGTTCGCCTC-----AGGGAGTT
T---C-----GCGGGGCCACACGGACACTCGGACGCGGCGGGCCACCTG
CTCTTCCCGGACTCCACGAG---CAAGCGGCGAGCCATGCGTCTCCAA
CGTGGTCAACGGCCAGATGCGCCTGGGCTTCTCGGGGGACATGTACGGGA
GGGCCGAGCAGTACGGCCACGTACAAGCCCGCGGT---CCGACCCTAC
GCTTCGACCCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGC
G---CACCACGGAGCGGGGCCCTTCTTTTCGATACATGAGGCAGCCGATCA

AGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCT
AAAAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAGCTCGTGACCCA
TCTGACGGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACATCTGCT
TCTGGGAGGAATGCGCCAGAGAAGGGAAGCCGTTCAAAGCCAAATACAAA
CTTGTAATCATATCAGGGTACACACCGGAGAGAAGCCCTTCCCCTGTCC
GTTCCCCTGGCTGNNNNNNN

>Icichthys lockingtoni

-----TTCCTAGAGAGGAACCTTCACCCGACTAATTGCCTTGG
CATGCTGTTGCTGTCTGACGCTCACCAAGCTGTCAGAGCTCT
CTTGGGGCATGTGCCCTCAGCAACTTCCCCTATTTGCAAGACAGAGGAC
TTCCCTCAACTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAAGTGA
TCAACTATGACCTGGAAGGAGGCACTGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTTGCCCTGCTGCCCCGATCTTTCTGATGGAGAATGTCTC
GACAGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCTATCCGCTGTAAGCTGAAGATCCTKCAGAATGACGGCGTTGTTAAC
AGCCCGTGTGCTCGACCAAGAAAACCAGCCATGCTCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATYATCCCGAAGGCGGACATTTCCAGCCCAAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTATGGGTCTATGACACCGTCCAGGAGG
AATGGTCCAAAGCGGCGCCCATGCTCATCGCCAGGTTTGGTTCATGGCTCT
GCAGAGCTGAAACACTGCCTGTAYGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCCTCCCTGCTTCTCCATCCGGATGAATACATCGTTGTGTTTCA
CGTTCAACAACAAGGCTGATACTGAACGAAGCCGAGCTAATCATGGTGCT
GGCCAGGAGTTCCAGATGAGAGTGGTACAGTTTCCCTAGAGGAACAGT
CTTTCCCAGCATTGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACCCCAT
ATAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTTCAATTATGTTTCCCTGG
AGGAACACTCAGGAGGAGAACACTGTCACCCATCCAGACAGACCCCTGGGA
ACAAGGAGGCATCACTCACTTGGAGAAGGAGGAGCAGGAGCGAATTCCTGA
CCAGCAAAGACGTCCCAGGCACTTGTGCTGCCCAATCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTAGACATCCCCTCCTTCCCTGGAAGT
CCTCAA---GGAGGGAATGAAG---ACCAAGCCAGCTTGAAGAA---GT
CCAAACCAGCCAGTACAGTCCATCCGGGCGGGTAAGACAAGCCAGTGT
CAGACCTCAGTACAAACCACCAATGAGGCTAAACTCACAGTCTCCTGGCA

GATCCCGTGAATCTGAAATACCTGAAAGTAAGAGAGGTGAAGNNNNNNNNNNNNNNNNNNNAAAAGAG
ACACCAGCAAGGGAACCTCTGGAGGATCAAATCATCCAGGCGAACCCGGCG
CTGGAGGCCTTCGGAAACGCCAAAACGCTGAGAAACGACAACTCGTCCCG
TTTTGGAAAATTCATCCGAATTCACCTTCGGAAACAGCGGCAAGCTGTCGT
CCGCTGACATCGAGACGTNCNTGCTGGAGAAGTCTCGTGTACCTTTCAGCT
CAAGGCTGAGAGGGANTACCACATCTTTTACCAGATCNTGTCCAATCAGAAG
CCAGAGCTGCTGGACATGCTGTTAATCACCAACAACCCGTACGACTACTC
CTACATCTCCCAAGGAGAGGTAACGGTCACCTCCATCAACGACTCGGAGG
AGCTGATGGCCACCGACAGTGCCTTCGATGTGCTCGGCTTCACTCCGGAG
GAGAAGATGGGCGTNTATAAACTGACCGNGCCATCATGCACTACGGCAACA
TGAAGTTCAAGCAGAAGCAGCGTGAGGAGCAGGCTGAGTCTGACGGGACG
GAGGCTGCTGATAAATCAGCTTACTTGATGGGGCTGAACTCCGCTGACCT
CATCAAAGGGCTGTGCCATCCCAGAGTCAAGGTAGGAAACGAGTACGTCA
CCAAAGGCCAGAGTGTGGACCAAGTCTACTACCCCAACAAGGAGGCCTTC
AAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGCG
ACATGTGGCCATGCACTCTGCCACGGCAGGGGATCTCACCTGTAAAGTGT
GCATGCAGAGCTACGAGAGCACACCTGTTCTCCTGGAGCACCTCAAGAGC
CACTCGGGGAAGTCTCGGGCGGAGCCAAGGAGAAAAAGCACCCGTGCGA
CCACTGCGACCGACGTTTCTACACGCGGAAGGATGTGAGACGGCACATGG
TGGTCCACACGGGCCGAAAGGACTTCNTGTGCCAGTACTGTGCCCAGCGCT
TTGGCAGGAAGGATCACCTGACCCGCCATGTGAAGAAGAGCCACTCGCAG
GAGCTGCTGAAGATCAAGACGGAGCCTCCTGATATGTTAGGTCTTTTAGC
TTCGGGGTACCACCTTGCTCTGTGAAGGAGGAGCTTAGCCCCATGATGT
GCGGCATGGGTCCCAACAAAGACCCCATGATGGGCAAACCGTTCCCAGT
GGTGCCCTTTTCTATGGGCATGTACAACCCCCACCAC-----CTTCA
GGCCATGTCTAATCTGGGGTGGGTCTATCCA-----CACCCGTCCCTGA
TGCCAGCCCCCTGTCTGCAGCTATGGGCATGGGCTGTCACATGGAATAT
CTCATCTACGCCTCTTTTTTCATTCATGGGATGTTTACAAATCAGTGATGG
ATCAAACATTGTGAACCTGCTGACTAGTAACTCTCCAAGTGTTCGTACG
CTCTGACCCAGCAGAAATACTTCAGCAACTACAGTCCCTGTGATTGGGTTT
TACATTTATGAGCCCATTGAGTACTGGAACCTCCACGGTGCAGGAGCACCT
GAAGACTCTGAGTACGGCTTCAACAAGATCTCCTGGATGGACAACTTTT
TCCACTACCTGCGGATGGTGAATGTGAGTGCCTCGACCAAGAACGACTTT
ATCACCATCCTCAAGGGCTCCTTCCCTGCGCAGCCAGAGTACCAGCACTT
CACTGAGGACATCATATCTCCAAGA---ACCGTGAGACTG-----ACG
AATACGACATTATCGCCTCACGCATGTATTTGGTGGCTCGGACCACAGAG
AAGAAGCGCGAGGAGGTGGTTGAGNTTNTGGAGAAGCTTCGCCCATTGATGC
TGATCAACAGCATCAAGTTCATTGCCTTCAATCCCACGTTTGTGTTTCATG
GACCGCTACAGCTCCTCCGTCTCTCGCCATCCTTACCTCAGGCTTCAG
CGTGCTACCATCCTTATCCTCACTTTCTTCTGGTTCATCAACCCCTTGG
GGAACCTCTGGCTCATCCTCACGGTTACGTCCGTGGAGCTGGGCGTCTTG
GGTTNNNNGGCTTTCACCAGTTTGAGTGGCAGCCAGCTCTCAAGAATGTGTCT
GCATCTTGCAATGTTGGCATTATTAATGGGCTCTCTGGGTGGACTTCCTC
GGTGGATGACTCCCAGCTGACACCATCACTCGACGGTTTCGCTATGATG
TGGCACTAGTGTGAGCATTAAAGGATCTGGAGGAGGACATCATGGAAGGG
CTGAGAGGTAGCGGGATGGAAGACAGTGTTCGACGTCAGGCTTCAGTGT
TATGATCAAGGAATCTTGTGATGGCATGGGTGATGTCAGCGAAAAGCACG
GTGGAGGACCAGTTGTTCTGAGAAGGCTGTACGTTTCTCTATCACTATT
ATGCTGTCTCTGTCTGGCAGATGACGAGGAG-----
-----GAGGCGGTTACTATCTTACAGAGCCAAAGCCAAACT
CAGAAGTGTCTGTAAGCCCCTTTGCCTGATGTTTGTGGATGAATCAGAC
CATGAGACACTCACAGTCTCCTGGGGCCTGTAGTTGCAGAGCGTAATGC
AATGAAAGAGAGCAGGCTCATCCTTCCATTGGCGGCCTGCCTCGCTCCT

TCCGCTTCCACTTCAGAGGCACGGGATACGATGAGAAGATGGTGCGAGAG
ATGGAGGGCCTGGAGGCCTCAGGGTCCAGCTATGTCTGCACTCTGTGTGA
TTCCAGTCGGGCAGAAGCATCTGAAAACATGGTGTACTACTCCATCACCC
GCTGCCATGACGAGAACCTTGAACGTTACGAAATATGGAGAACCAACCCC
TTTTCTGAATCTGGAGAAGAGCTGCGAGATAGAGTCAAAGGGGTCTCTGC
CAAGCCCTTCATGGAGACCCAGCCACGCTGGATGCATTACATTGTGACA
TTGGCAATGCCACTGAGTCTACAAAATCTTCCAGGACGAAATTGGGGAG
GTGTACCAAAAGGT---CAAT---CCCACCCGGGAGGAACGGCGCAGCTG
GAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGTTGAAGCTTAGACCAG
TAATGAGGATGAATGGGAACATGCCCGCAGGCTAATGACCCAGGAGTCT
GTGGAAGTGGTGTGTGAGCTGGTACCCTCAGAGGAGAGGAGGGAGGCCCT
GAGGGAGCTTATGAGGCTATACCTCCAGATGAAGCCTGTGTGGCGTGCCA
CCTGCCAGCCAAGGAGTGCCCTGACCAGCTGTGCCGCTATAGCTTTAAC
TCCCAGAGCTTTGCCGACCTCCTCTCCTCTACCTTCAAATATAGGTACAA
TGGAAAAGATAACCAATTACCTGCACAAGACCCTGGCCCATGTCCCTGAAA
TCATAGAGAGAGATGGATCCATCGGAGCCTGGGCCAGTGAGGGGAACGAG
TCGGCAAACAAANN
NNNNNNNNNNNNNNNNNNNNCCACAAAACAGACAAAGTTCAAAGGCATCAAGACGTAC
ATTTTCATACCGGGTCACGCCGAGCCACACAGGGCATCCCGTCTACAGGCG
CTACAAACACTTTGACTGGCTGTACAACCGCCTGCTGCACAAGTTCACTG
TGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTGAG
GAAGACTTTTATTGAGAAGCGGAAGAGACGACTGATACTGTGGATGAACCA
CATGACCAGTCACCCGTCTCTCCAGTATGAAGGCTTTGAGCACTTTC
TGATGTGCGCTGACGACAAGCAATGGAAGCTGGGCAAGAGACGAGCTGAG
AAGGAAGAGATGGTGGCGCCCATTTTCATGCTGACCCTCCAGATCCCTAA
CGAGCACCAGGACCTTCAGGATGTAGAGGAGAGAGTCGACACCTTCAAGG
CCTTTGCTAAGAAAATGGACGACAGTGTTCATGCAGCTCACACATGTTGCC
TCGGAGCTGGTGCCTAAGCACCTAGGTGGATTTCAGGAAGGAGTTCAGCG
GCTGGGAAATGCCTTCCAGTCTATTAGTCAGGCATTCATGCTGGACCCTC
CCCATAGCTCAGACACCCTCAACAACGCCATCTCCCATNNNNNNNNNNNNNTTCCCTCAAGCTG
ACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGGAAACCTCCTGAT
CTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCACCCCTACTATT
TCCTGCTGGACCTGTGCGCCTCCGATATCCTCCGCTCTGCCATCTGCTTC
CCCTTGTCTTCACCTCGGTCAAGAATGGATCTGCCTGGACCTATGGCAC
GCTGACCTGCAAAGTGATCGCCTTCTGGGTGTGCTCTCCTGTTCCACA
CGGCGTTCATGCTATTCTGCGTGAGCGTCACCCGCTACCTGGCCATCGCA
CATCACGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTGGCTGT
CATCTGCATGGTGTGGACGTTGTGAGTATGGCGTTCCCGCCGGTGC
TAGACGTGGGGACGTACTCTTTTATCCGGGAGGAGGACCAGTGCACATTC
CAGCACCGCTCCTTCAGGGCGAATGATTGCTGGGCTTCATGCTCCTGCT
GGCGCTCATTCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTCT
TCGTCCACGACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTC
AGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAGGCGGCGGC
CAACTGGCTGGCCGATTTGGTAGAGGCCCCACCCGCCTACTTTGCTGG
GCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTACTGGTATTG
GATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGAC
GTTTTTCTTCCCTGGCACTGTGGGGGCCCTATCTGGTAGCCTGCTACTGGC
GGGTGTTTGCAAGGGGCCCTGTAGTCCCTGGGGCTACCTGACGGCAGCC
GTGTGGATGAGCTTTGCCAAGCTGGGGTCAATCCTTTCATCTGCNNNNNNNNNNNNNGCCAA
ATCTCGCTTTCACCCGTGGCGTGGGGACTGGTCCCTGGCACGGAGC---GCA
GCGTCCCACTCGGCAACAGCTTGCTATCCCGCAGCAAACCGAGGAGCCC
ACTGTTGCCACCCCGCAGCGATGGTTTGTACCC---CTGCCAACAA
CCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT-----GATT

-----GGACGAGTACATAGTGGTGTTCAGT
CGCTCCTCTACGAGGCTGATTCTGAACGAGCCAGAGCTAATCATGGTGT
GGCGCAGGAGTTTCAGATGAGGGTGGTCACGGTGTCTCTGGAAGAGCAAT
CCTTCCCCAGTATCATCCAGGCGATCAGCGGCGCTCCATGCTGGTCAGT
ATGCACGGAGCTCAGCTTGTACCTCCCTCTTCCCTCCCCAGAGGGGCTGC
CATTGTGGAGCTCTTCCCCTATGCTGTGAACCCAGAGCAGTATACTCCGT
ACAAAACCCTGGCCTCCCCTCCCAGGCATGGATCTTCAATACGTTTCCTGG
AGAAACACAATCGAAGAGAACTCGGTTAGCCACCCGATAGGTCTGGGA
CCAAGGAGGGATTGCTCACCTAGACAAGGAAGAGCAGGAGAGAATTCTCG
CCAGCAAGGAGGTCCCCAGGCACCTGTGCTGCCGCAACCCCGAGTGGCTC
TTCCGAATCTACCAGGACACTCTGGTGGACATCCCCTCATTCCCTCAAGAC
CCTCAA---GGAGGGCCTAAAG---ACCAAGCCCAGCTTGAAGAA---GT
CCAAGTCGGCCAGCACTGTTACCCGGGCCGGGTCAGGGAAGCCCAGTGC
CAGACCTCGGTCCAGGACACCAACGAGGCTAAACTCACTGTCTCCTGGCA
GATCCCCTGGAATCTCAAGTACCTGAAGGTACGAGAGGTTAAGTACGAGG
TCTGGATCCAGAAGAAAGATTCAAGCAAAGGGACACTGGAGGATCAAATC
ATTCAGGCAAACCCTGCACTGGAGGCTTTTGGTAATGCCAAAACAGTGAG
GAATGATAACTCATCCCGCTTTGGGAAATTCATCCGAATTCACTTTGGAA
CCAGTGGCAAATTGTCTCTGCCGACATTGAGACTTATCTCCTGGAGAAG
TCACGTGTTACCTTTCAGCTCAAGGCTGAGAGGAACTATCACATCTTCTT
CCAGATCCTGTCCAATCAAAGCCAGAGCTGTTGGACATGATGTTGGTCA
CCAACAACCCATATGACTACTCCTTCATCTCCAAGGAGAGGTAACAGTA
TCATCCATCAATGATGCAGAGGAGCTGATTGCCACTGACAGTGCCTTTGA
TGTCTCGGCTTCACCCAGGAGGAGAAGCTGGGAGTTTACAAGTTGACAG
GTGCGATCATGCACTATGGCAACATGAAGTTCAAGCAAAGCAGCGTGAA
GAGCAGGCTGAGTCTGATGGCACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCTGCCGACCTCATTAAAGGGCTTTGCCATCCCAGAG
TCAAAGTAGGAAATGAGTACGTACCAAAGGCCAAGGTGTAGATCAGGTT
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGTAAGCACTA
TAACACCAAGCTGGGATAACAAGCGCCATGTGGCCATGCACTCGGCCACGG
CGGGCGACCTCACCTGTAAAGTGTGTATGCAGAGCTACGAGAGCACGCCG
GTCTCCTGGAACACCTCAAGAGCCACTCTGGGAAATCTTCTGGTGGAGC
CAAGGAGAAAAAGCACCCATGTGATCACTGTGACCGTTCGGTTCTACACCC
GGAAGGACGTGAGGCGGCACATGGTAGTCCACACGGGCCGAAAGGACTTC
CTGTGTCAATACTGCGCCAGCGCTTTGGCCGGAAGGATCACCTGACGCG
ACACGTGAAGAAGAGCCACTCACAGGAGTTGCTGAAGATAAAGTCAGAGC
CTCCGGATATGCTGGGCCTCCTGGGCTCCGGCTCGCCGCTTGTGCAGTT
AAGGAGGAGCTTAGCCCCATGATGTGCAGCGTGGGTCCCAACAAAGACCC
CATGATGGGGAAACCCTTCCCCAGCGGGACCCCTTCCCCATGGGCATGT
ATAACCCGCACCAC-----CTCCAGGCCATATCCAGCCCTGGGGTGGGC
CACCCC-----CATCCCTCCCTGATGCCTAGTTCCCTGTCAGCGGCTAT
GGGCATGGGCTGTCAATGGAATATCTCATTACGCTTCCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGTGATGGGTCCAACATTGTGAATTTATTAGCT
AGTAATCTCTGAGCGTCTCATATGCTCTGACCCAGCAAAGTATTTTCAG

TAACTATAGTCCCGTCATTGGGTTTTACATCTACGAGCCCATTGAGTACT
GGAACTCAACAGTGCAGGAGCACCTGAGGACACTGAGCGATGGTTTCAAC
AAGATCTCTTGGATGGACCACTTCTTCCACTACCTGCAGGTGGTGAATGT
GAGCGCGTCAACCAAGAGTGACTTTATCGGCATCCTCAAAGGCTCCTTCT
TGAGGAACCCGGAGTACCAGCACTTCATGGAGGACATCATCTTCTCCAAG
A---ACCGGGAGAGCG-----ATGAGTACGACATCATCGCCTCACGCAT
GTACCTGGTGGCGCGCACCACGGAGAAGAGGGCGGAGGAGGTGGTTGAAC
TTCTGGAGAAGTTGCGACCGCTGATGCTCATCAACAGCATCAAGTTCATT
GCTTTCAACCCGACCTTTGTCTTCATGGACCGCTACAGCTCCTCCGTCAT
CTCACCCATCCTCACCTCGGGCTTCAGCGTCCTCACCATCCTCATCCTCA
CTTTCTTCTGGTCATAAACCCGTTGGGGAACCTTTTGGCTCATCCTGACG
GTCACATCCGTGGAGCTGGGAGTTTTGGGTTTAATG-----

-----GCGAGAAGCACGGAGGAGGGCCGGCGATTCC
CGAGAAGGCGGTCCGCTTCTCCTTCGCCATTATGTCAGTCTCTGTCCGGG
TCGAAGGAACGGAA-----GAGGCG
GTCACCGTCTTCAGGGAGCCGAAGCCCAACTCTGAATTGTCCTGTAAACC
CCTCTGTTTTGATGTTTGTGGATGAGTCTGACCATGAGACCCTGACGGCCA
TTCTGGGGCCTTTGGTGGCCGAGCGGAATGCGATGAAGCAGAGCTGCCTG
ATCCTGTCAATTGGGCGGCCTCCCGCGCTCTTCTCCTTTGAGTTCCGAGG
CACGGGCTACGACGAGAAGATGGTGCAGAGATTGGAGGGTATGGAGGCCT
CTGGTTCCACCTACGTCTGCACCCGTGTGCGACTCCACCCGAGCGGAGGCC
TCTCGAAACATGGTGTCTCCACTCCATCACCCGGAACCACGGCGAGAACCT
GGAGCGGTACGAGATGTGGAGGAGCAACCCTTCTCGGAGTCGGCCGAGG
AGCTGCGGGAGCGGGTCAAGGGCATCTCTGCCAAACCCTTCTGGAGACC
CAGCCCACCTTTGGATGCATTGCACTGCGACATTGGCAACGCCACTGAGTT
TTACAAGATCTTCCAGGATGAAATCGGGGAGGTGTTCCGGGGGAC---CA
AC---CCCAGCAGAGAAGAGCGGAGGAGCTGGAGGACGGC-----

-----G-----

-----CC
TCTTGCCACGTTCTCCTCAAACCTGACCTCTCTGGGCTTCATAATTGGAGTCG
GCGTGGTAGGAAACCTGCTGATCTCTATCCTGCTGGTCAAAGACAAAAGC
CTGCACCGCGCACCTACTACTTCTGCTGGACCTGTGCGCCTCCGACAT
CCTGCGCTCCGCCATCTGCTACCCCTTCGTCTTCACCTCTGTCAAGAATG
GATCCGCCTGGACCTACGGCACGCTCACCTGCAAAGTGATTGCCTTCCTT
GGCGTGCTCTCCTGTTTCCACACGGCATTATGCTGTTCTGCGTCAGCGT
CACCCGCTACCTGGCCATCGCCACCACCGTTTCTACACCAAGAGGCTGA
CTTTCTGGACCTGCCTGGCCGTCATCTGCATGGTGTGGACGTTATCCGTG
GCCATGGCCTTCCCCCAGTTCTCGATGTAGGGACTTATTCCTTTATCCG
GGAGGAGGACCAGTGTACATTCCAGCACCGCTCCTTCAGGGCTAACGACT
CCCTGGGCTTTATGCTCTTGCTGGCACTTATCCTGCTGGCTACGCAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGCAGGAAGATGAAGCC
TGTCAGTTTGTGCCAGCTGTCAGCCAGAACTGGACCTTCCATGGGCCTG
GTGCCAGCGGGCAGGCAGCGGCAACTGGCTGGCCGGATTTCGGGAGAGGC
CCCACCCCGCTACCTTGCTGGGCATCCGTCAGAACAGCAACGCGGCGGG
CCGCAGGCGTCTGCTGGTGTGGATGAGTTTTAAAAACAGAGAAGAGGATAA
GTAGGATGTTCTACATCATGACGTTTTTTTTTTCTGGTGTGTGGGGGCC
TATCTAGTGGCCTGCTACTGGCGGGTGTTCGCCAGGGGCCCGTGGTGCC
CGGGGGCTACCTGACTGCAGCTGTGTGGATGAGCTTCGCCAGGCGGGGG
TCAACCCCTTCATCTGCATCTTCTCCAACAGGGAG-----

-----CAGAGAGAGAGGTAGCTTTGGGG
ATAAATCCATTCGCAGACGGGATGGGCGCCTTTAAGATCAACCACACTTC
TCACGACATCGGCTCCGG--GCAGACGGCGTTTTCTTCCCAGGCG--C
CCGGGTACGCTGCCGCGGCCGCCCTGGGGCACCACCACCA-----CCAC
CCGACCCATGTAGCTCG--TACTCCACGGCGGCTTCAACTCCACTCG
GGACTTCTGTTTCAAGAACCGGGGCTTCGGAGACGCCACCGG-----
----CGCGCAGCACAGCTTGTTCGCCTC-----GGGAGGTTT---T
-----GCGGGGCCACATGGACACTCGGACGCCACGGGACACCTGCTCTT
CCCGGGGCTCCACGAG---CAAGCCGCGGGCCACGCGTCGTCCAATGTGG
TGAACAGCCAGATGCGCTTGGGTTTTTCAGGGGACGTGTACGGGAGGGCC
GAACAGTACGGCCACGTTACGAGCCCCGAGGTCAGCAGAGCACTATGCCTC
GACCCAGTTGCACGGCTACGGCCCCATGAACATGAACATGGCCGCG---C
ACCACGGAGCGGGGGCCTTCTTCCGATACATGCGCCAGCCGATCAAGCAA
GAGCTCATCTGCAAGTGGATCGAACCGGAGCAGCTGACCAACCCCAAAA
GTCGTGCAACAAAACTTTCAGCACCATGCACGAGCTGGTCACCCACCTGA
CGGTGGAGCATGTGGGGGGGCGGAGCAGTGAACCACATTTGCTTCTGG
GAGGACTGCTCCCGGGAAGGGAAACCGTTCAAAGCCAAATACAAACTTGT
GAAYCACATCAAG-----

>Ipnops sp

AGCCTTCTCATTTCGAGCTGAACTAAGCCAACCGGGGCCCTTTTAGGTGA
CGACCAAATCTATAATGTCATTGTCACCGCACACGCTTTCGTAATAATCT
TCTTCATAGTCATGCCTATTATGATCGGCGGGTTCGGAAACTGGCTGGTC
CCTCTAATGATCGGAGCCCCTGATATAGCATTCCCCGAATGAATAATAT
GAGCTTCTGACTTCTTCCCCCTTCTTTCCTCCTCTACTAGCCTCCTCCG
GAGTAGAGGCTGGGGCCGGAACCGGCTGAACAGTCTACCCACCCCTGGCT
AGCAACCTCGCACATGCCGGAGCCTCAGTAGACCTAACCATTTTCTCATT
ACACTTAGCTGGTGTCTCCTCAATTCTAGGTGCTATTAACCTTTATCACAA
CAATTATTAATATGAAACCCCCAGCCGTTTCTCAATACCAAACCCCTCTA
TTTGTATGGTCTGTCTGGTTACAGCAGTTTCTCCTCCTCTTTCCCTACC
TGTCTTGCAGCGGGAATTACCATGCTCCTCACAGATCGAAACTTGAACA
CTACCTTCTTTGACCCTGCAGGGGGAGGAGATCCCATCCTTTATCAACAC
TTATTCTGGTTCTTTGGGCACCCAGAAGTATACATTCTCATCCTTCCCGG
TTTTGGTATAATCTCACACATTGTTGCCTACTACTCCGGCAAAAAAGAAC
CCTTCGGCTACATGGGTATGGTCTGGGCCATGATGGCCATCGGCCTACTT
GGATTTATTGTGTGGGCTCACACATGTTTACAGTAGGAATGGACGTAGA
CACTCGTGCCTATTCCCTTGAGAGGAACCTGCACCCATCCAACCTGCCTTGG
CATGCTGCTACTGTCAGATGCTCACAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGTCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTCCAGCTACCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAGGCAGCCCTTAACCTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTGTCAGAGCTGCTGAGA
ACCGTGCCTGGCCTTGTTACCTGCCATCTTCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCCAAGTAAAGAGCAAGGAGTTAGTGGATG
AGGCTATCCGCTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTCAAC
AGTCCCTGTGCCCGGCCAGAAAGACCAGCCATGCCCTTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCAGATATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTCTATGTACAGGCGGGA--GAGGCTC-
AGAGAACGGCGTGTCTAAAGACGTGTGGGTCTATGACACGGTCCATGAGG
AGTGGTCTAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTCAAACACTGCCTCTATGTGGTTGGAGGACACACAGCAGCCAC
TGGCTGCCTCCCAGCTTCTCCGTCTGGATGAGTACATTGTAGTGTTCAGT
CGTCTACAACAAGGCTGATTCTAAACGAAGCAGAGCTAATCCTGGCACT
GGCCAGGAGTTTCAGATGAGGGTGGTTACAGTGTCTCTGGAGGAACAGT
CTTTCCCAGCATCATCCAGGTGATCAGCGCGGCCCTCCATGTTGGTTAGT
ATGCACGGAGCTCAGCTCGTCACCTCACTCTTCCCTCCCTAGAGGAGCGGC
TGTAGTGGAGCTCTTCCCCTATGCTGTGAACCCAGAACAGTACACCCCAT
ATAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCCCTGG
AGGAACACTATTGAGGAGAACACTGTTRTCCACCCAGACAGACCTTGGGA
CCAAGGAGGCATTGCCCATTTGGAGAAAGACGAGCAGGAGAGAATCCTAG
CCAGCAAGGATGTCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---GGAGGGCCTGAAG---ACGAGGCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTCATCCGGGCCGGGTCCGAGAACCCAGTGC
CAGACATCAGTCCAAGCCACCAACGAGGCTAAGCTCACGGTATCCTGGCA
GATCCCCTTGGAACTTAAGTACCTAACGGTGCAGAGGTGAAGTATGATG
TATGGATCCGGAAGGATTCAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCACTGGAGGCTTTTGGTAATGCCAAAACAGCGAG
GAACGATAATTCTCCCCTTTTGGAAAATTCATCCGAATTCACTTTGGAA
CCAGTGGTAAACTTCTCCTGCGGACGTTGAGACCTACCTGCTGGAGAAG

TCACGGATCACCTTTCAGCTTAAGTCAGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CAAACAACCCTTATGACTACTCCTACATCTCCCAAGGAGAAGTAACCGTA
CCATCCATCAATGATTCAGAGGAGTTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCAAGAGGAGAAGATGGGAGTCTACAAGTTGACAG
GGGCCATTATGCACTATGGCAACATGAAGTTCAAGCAAAGCAGCGTGAG
GAACAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCAGCAGACCTCATCAAAGGTCCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCTTTCAAGTGTGAAGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTCACCTGCAAGGTCTGCATGCAGAGTTACGAGAGCACACCG
GTGCTCCTGGAACACCTCAAGAGCCACTCTGGGAAGTCCTCGGGTGGCGC
TAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGTCGCTTCTACACAC
GGAAGGATGTCAGGCGGCACATGGTTGTCCACACAGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGATCATCTGACACG
ACACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATTAAGACGGAGC
CTCCAGATATGTTGGGTCTCCTGGGCTCTGGATCGCCGCCTTGCTCTGTC
AAGGAGGAGCTTAGCCCCATGATGTGCAACATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCATTCCCCAGCGGGACCCCCCTTCCCATGGGCATGT
ACAACCCCCACCAC-----CTCCGGGCCATTTCTAATCCAGGCGTGGGC
CACCCC-----CACCCCTCCCTGATGCCCGGTTCCCTGTCTGCAGCTAT
GGGCATGAGCTGTCACATGGAATATCTCATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGCGACGGGTGCAACATCGTGAATTTGCTGGCC
ACTAACTCTCCAAGCGTCTCATAACGCTATGACACAGCAGAAGTACTTCAG
TAACTACAGCCAGTGATCGGGTTTTACATCTATGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC
AAGATATCCTGGATGGACAATTTCTTCCACTACCTGCGAGTGGTGAACGT
GAGTGCCTCGACCAAGGCCGACTTCATCACCGTCCCTCAAGGGCTCCTTCC
TGCGGAGCCCGGCTTACCAGCACTTCACAGAGGACATCATCTTCTCCAAG
A---GCCGGGAGAACA-----ATGAGTACGAGATCATTGCCTCGCGCAT
GTACCTGGTGGCGCGCACCCACGGAGAATAGGCGCGACGAGGTGGTGGAGC
TGCTGGAGAAGCTCCGGCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACGTTTCGTTTCATGGACCGCTACAGCTCCTCGGTCAT
TTCGCCCATCCTCACCTCGGGCTTCAGCGTGTCTACCATCCTCATCCTCA
CCTTCTTCTGGTTCATCAACCCGCTGGGGAATTTGTGGCTCATACTGACG
GTCACGTCCTGGAGCTGGGCGTGTGGGTCTGATGGGCTACCACACATT
CGAGTGGCAGCCAGCCCTCAAGAATGTGTCCCATCCTGCCATGTGGGTA
TCATCAATGGGCTCTCTGGGTGGGCTTCCTCTGTGGATGATGCCCTGCT
GAGACCATCACTCGTTCGTTTTCGTTATGACGTGGCCCTGGTGTGAGCCCT
GAAGGACCTAGAGGAGGACATAATGGAAGGACTGAGGGAGCGTGGGCTGG
AAGACAGTGCCTTGACCTCAGGCTTCAGTGTTATGATCAAGGAATCCTGT
GATGGCATGGGAGATGTCAGCGAGAAGCATGGTGGAGGACCAGCGATGCC
TGAGAAGGCTGTGCGTTTCTCTATCACCATCATGTCCGTCTCTGTCCAGG
CCGATGGAGAGGAG-----GAGGCG
GTTGTCATCTTCAGGGAGCCAAAGCCCAACTCTGAACTGTCCTGTAAGCC
CCTGTGCCTGATGTTGTGGATGAGTCTGACCATGAGACAGTACCAGCTG
TCCTGGGGCCTTTGGTAGCAGAGAGGAATGCGATGAAGCAGAGCCGACTC
ATCCTTTCAGTGGGTGGCCTCCCCCGCTCTTTCCGCTTCCACTTCAGAGG
CACAGGCTATGATGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGGCCT
CAGGCTCCAGCTATATCTGCACTCTTTGTGACTCCACTCGGGCAGAAGCC
TCTCACAACATGGTGTCTCACTCTGTACCCCGCAGCCATGATGAGAACCT
GGAGCGCTATGAGATATGGAGGACCAACCCCTTCTCAGAGTCTGTCATGG

TCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGAGATCATC
CCCAAGGCGGACATTCAGCCCTCGGAAGGAGTTCAGCGCCTGTGCCAT
CGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-AGAGAATGGCG
TGTCAAAGATGTATGGGTCTATGACACCATCCATGAGGAGTGGTCCAAA
GCGGCGCCCATGCTCATCGCCAGGTTTGGTCATGGCTCTGCTAGCCTGAA
ACACTGCCNNNGGATGA
ATACATTTGTTGCTTTCAGTCGTTCAACAACAAGGCT
GATACTGAACGAAGCCGAGCTAATCATGGCGCTGGCCCAGGAGTTCCAGA
TGAGAGTGGTACAGTTTCCCTAGAGGAACAGTCTTTCACCAGCATTTGTC
GAGGTGATCAGCGGTGCTTCCATGTTAGTCAGCATGCATGGAGCTCAGCT
TATCACCTCACTCTTCCCTCCCTAGAGGAGCTATTGTGGTGGAGCTGTTCC
CCTTTGCTGTGAACTCAGAGCAGTACACCCCATATAAAACCCTTGCCTCC
CTTCCAGGCATGGACCTTCATTATGTTTCCCTGGAGGAACAGTCAGGAGGA
GAACACTGTCACCATCCAGACAGACCCTGGGAACAAGGAGGCATCGCTC
ACTTGGAGAAGGAGGAGCAGGAGCGAATACTGACCAGCAAAGACGTCCCC
AGGCACCTGTGCTGCCGCAACCCGGAGTGGCTCTTCCGAATCTACCAGGA
CACTTTGGTTGACATTCCTTCTTCTTGGAAAGTCTCAA--GGAGGGAA
TGAAG--AACAAAGCCAACTTGAAGAA--GTCCAAAACAGCCAGTACA
GTCCACCCAGGCCGGGTGAGAGAAGCCAGTGTGAGACATCAGTACAAAC
CACCAATGAGGCTAAACTTACAGTCTCCTGGCAGATCCCGTGGAATCTGA
AATACCTGAAAGTAAGAGAGGTGAAGTACGAGGTA-----AAAAGA
GACGCCAGCAAAGGAACCTGAGGATCAAATCATCCAGGCGAACC CGC
GCTGGAGGCCTTCGAAATGCCAAAACGCTGAGAAAACGACAACCTCGTCCC
GTTTTGAAAATTCATCCGAATTCACTTCGAAACAGCGGCAAGCTGTCCG
TCTGCTGACGTGGAGACGTACCTGTTGGAGAAGTCTCGGGTCACCTATCA
GCTCAAGGCTGAGAGGAACCTACCACATCTTCTACCAGATCCTGTCCAATC
AGAAGCCAGAGCTGCTGGACATGCTGTTGATCACCAACAACCCGTACGAC
TACTCCTACATCTCCCAAGGAGAGGTAACAGTCGCCCTCCATCAACGACTC
GGAGGAGCTGATGGCCACCAGACAGCGCCTTCGATGTGCTCGGCTTCACTC
CGGAGGAGAAGATGGGCGTCTATAAACTGACCGGCGCCATCATGCACTAC
GGCAACATGAAGTTCAAGCAGAAGCAGCGTGAGGAGCAGGCGGAGCCTGA
CGGGACGGAGGCTGTTGATAAATCAGCTTACCTGATGGGGCTGAACTCTG
CTGACCTCATCAAAGGGCTGTGCCATCCCAGAGTCAAGGTAGGAAACGAG
TACGTCACCAAAGGCCAGAGTGTGGACCAAGTCTACTACCCCAACAAGGA
GGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGAT
ATAAGCGCCATGTGGCCATGCACTCTGCCACGGCGGGGATCTCACCTGT
AAAGTGTGCATGCAGAGCTACGAGAGCACCCCTGTTCTCCTGGAGCACCT
CAAGAGCCACTCGGGGAAGTCTCCTCCGGCGGAGCCAAGGAGAAAAAGCACC
CGTGCAGCCACTGCGACC GCCCTTCTACACGCGGAAGGATGTGAGACGG
CACATGGTGGTCCACACAGGCCGAAAGACTTCCCTGTGCCAGTACTGTGC
CCAGCGCTTTGGCAGGAAGGATCACCTGACCCGACACGTGAAGAAGAGCC
ACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCTGACATGTTAAGT
CTTTTAGCTTCAGGGTACCACCGTGCTCTGTGAAGGAGGAGCTTAGCCC
CATGATGTGCGGCATGGGTCCCAACAAGACCCCATGATGGGCAAACCAT
TCCCTAGTGGCGCCCCCTTCCCGATGGGCATGTACAACCCCCACCAC---
---CTTCAGGCCATGTCTAATTCTGGGGTGGGTGATGCA-----CACCC
GTCCCTGATGCCAGCCCCCTGTCTGCAGCTATGGGCATGGGCTGT CACA
TGGAAATATCTAATCTATGCCTCTTCTCATTCATGGGATGTTTACAAATT
AGTGATGGATCGAACATTTGTGAACCTGCTGGCGAGTAACTCTCCGAGTGT
TTCGTACGCTCTGACCCAGCAGAAA TACTTACGCAACTACAGTCCCCTGA
TCGGGTTTTACATTTACGAGCCATCGAGTACTGGAACCTCCACGGTGCAG
GAGCACCTGAGA ACTCTGAGTACGGCTTCGAGAAGATCTCCTGGATGGA
CAACTTCTTCCACTACCTGCGGGTGGTGAACGTGAGTGCCTCGACCAAGA

GCGACTTCATCACCATCCTCATGGGCTCCTTCTGCGCAGCCCGGAGTAC
CAGCACTTCACTGAGGACATCATATTTTCCAAGA---ACCGTGAGACGG-
-----ACGAATACGACATTATCGCCTCGCGCATGTATTTGATGGCACC
GACCCGAGAACAAGCGCGAGGAGGTGGTGGAGCTTCTGGAGAAGCTCCGC
CCCTTGATGCTGATTAACAGCATCAAGTTCATCGCCTTCAATCCACGTT
TGTGTTTCATGGACCGCTACAGCTCATCCGTCATCTCACCATCCTGACCT
CAGGCTTCAGCGTGCTCACCATCCTCATCCTCACTTCTTCTGCTGATC
AACCCCTGGGGAActTCTGGCTCATCCTCACGGTTACATCCGTGGAGCT
GGGCGTCTTGGNNNNNNNN-----

-----TCATACACCATCGAGATGGGTCCCCTGGGGCC
CCAATGGAAGGAGAGTCCACAGCCGTTCTCCTGCTCCGTTGAAGACCCCA
CAAAACAGACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTATCGGGTC
ACGCCGAGCCACACGGGGCATCCCGTCTACAGGCGCTACAAACACTTTGA
CTGGCTGTACAACCGCCTGCTGCACAAGTTCACTGTGATCTCCGTGCCTC
ACCTGCCCCGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTTATCGAG
AAGCGGAAGAGACGACTGATACTGTGGATGAACCACATGACCAGTCACCC
GGTCTCTCCCAGTACGAAGGCTTCGAGCACTTTCTGATGTGTGCTGACG
ACAAGCAGTGGAAGCTGGGCAAGAGGGCGAGCTGAGAAGGACGAGATGGTG
GGCGCCATTTTCATGCTGACCCTCCAGATCCCCAACGAGCACCAGGACCT
TCAGGACGTAGAGGAGAGAGTGGACACCTTCAAGGCCTTCGCTAAGAAAA
TGGACGACAGCGTTATGCAGCTCACACATGTTGCCCGGAGCTGGTGCCT
AAGCACCTGGGTGGATTCAGGAAGGAGTCCAGCGGCTGGGAAATGCCTT
CCAGTCTATTAGCCAGGCGTTTTCATGCTGGACCCTCCCCATAGCTCAGACA
CCGTC AANNNNNNNNNNNNNNNN-----

ATGCTTTCGTAATAATCTTCTTTATAGTAATACCAATTATAATTGGAGGT
TTCGGGAAGTACTAGTCCCCTAATAATTGGAGCCCCAGACATAGCATT
TCCCCGAATAAATAACATAAGTTTCTGACTACTTCCCCCTCTTCTCTAC
TCCTTCTTGCCTCTTCCGGGTGTAGAAGCCGGTGTGCTGGCACTGGATGAACA
GTTTACCCCCCATTAGCCGGAACCTAGCCCATGCAGGAGCATCCGTCTGA
CCTCACAATCTTCTCCCTTCACTTGGCCGGCGTTTCTCAATCCTAGGAG
CTATTAATTTTATTACTACAATTATTAATATAAAAACCCCTGCAGTATCT
CAATACCAAAGTCCGCTATTTGTATGATCCGTTCTTATTACAGCCGTCCT
CCTTCTCTTATCCCTCCCAGTTCTTGGCCGGGAATTACTATGCTACTCA
CAGATCGAAATTTAAATACTTCTTCTTTGACCCAGCAGGAGGCGCGAC
CCCATTCTATATCAACACCTCTTCTGATTCTTCCGGCCACCCAGAAGTTTA
TATTCTAATCCTCCCGGATTCCGGTATAATCTCCCACATCGTAGCATACT
ATGCTGGGAAAAAAGAACCATTTGGGTACATAGGCATGGTTTGGAGCCATG
ATAGCCATCGGCCTACTAGGCTTCATTTGTATGAGCCACCACATATTTAC
AGTTGGAATAGATGTTGATACACGAGCATANNNNNNNNNNNNNNNNNNNNNNN
NGCTATTGCTGTCTGACGCCC
ACCAGTGTACCAAGCTGTCTAGAGCTCTCCTGGGGCATGTGCCTCAGCAAC
TTCCCTGCTATTTGCAAGACAGAGGACTTCCCTCCAAGTGCACAAAGATAT
GGTAGTGCAGCTTTTGTACATGAGGAGCTAGAGACGGAAGATGAGAGAC
TGGTTTATGAAGCTGCTCTCAACTGGATCAACTATGACTTAGAAAAGGAGG
CACTGCCACCTTCCAGAGCTCCTGAGAACAGTCCGCTTGGCCTGCTGCC
TGCCATTTTTCTGATGAGAAATGTGTCAACAGAGGAGCTGATCAACGCC
AGGCCAAGAGCAAGGAGTTGGTGGACGAGGCAATCCGCTGTAAACTGAAG
ATCCTGCAGAATGATGGTGTGTAAACAGCCATGTGCTCGACCAAGAAA
AACTAGCCATGCCCTCTTCTTCTGGGAGGGCAGACTTTCATGTGTGACA
AGTTGTACCTGGTGGACCAGAAAGCCAAAGAGATCATTCCAAGGCAGAC
ATCCCCAGCCCAAGAAAGGAGTTTCAAGTGCCTGCGCCATTGGCTGTAAGGT
GTATATAACAGGAGGAA--GAGGCTC-TGAGAATGGTGTGTCCAAGATG
TGTGGTCTATGACACAGTTTCAAGGAAATGGTCCAAGGCAGCGCCTATG
CTCATCGCCAGATTTGGCCATGGCTCTGCAGAGCTCAAACACTGCCTCTA
TGTGGTTGGAGGTCACACCGCAGCGACTGGCTGCCCTCCCGNNNNNNNNNN
NGGATGAATAC
ATTGTTGTCTTTAGTCGTTCAACAACAAGGCTGATACTCAATGAAGCAGA
GCTAATCATGGTACTGGCCAGGAGTTCCAGAAGAGGGTGGTCACAGTAT
CTCTGGAGGAGCAGTCTTCCCCAGTATCGTCCAGGTGATCAGCGGGCA
TCTATGTTAGTCAGTATGCATGGAGCTCAGCTTATCACCTCACTCTTCT
CCCCAGAGGAGCTGTGTGGTTGAGCTGTACCCATTTGCTGTGAACCCAG
AACAGTACACCCCTTATAAAAACCTTGCATCCCTTCCAGGCATGGACCTT
CACTATATTTTCAAGGAGAACTAAGGAGGAGAACACTGTACCCACCC
AGACAGGCCCTGGGAGCAAGGAGGCATCAGCCACTTGGAAAAAAGAAGAGC
AAGAGCGTATACTGGCCAGCAAAGATGTCCCCAGGCACCTTTGCTGCCGC
AACCCGGAGTGGCTTTTCCGGATTTACCAGGACACTTTGGTGGACATACC
TTCATTCTTGGAAAGTCCCTCAA---AGAGGGCATGAAG---ACCAAGCCCA
TCTTAAAGAA---GTCCAAGCCGGCCAACGCGGTCCACCCAGGCCGGGTC
AGAGATCCTCAGTGTGACACCTCAGTACAAAACAACAGTGAGGCTAAACT
CACGGTCTCCTGGCAGATCCCGTGGAAATCTGAAATACCTGAAGGTAAGAG
AGGTCAAATACGAAGTGNNNNNNNNNAAAAAGGACACCAGTAAGGGGACACT
GAGGAT
CAAATCATCCAGGCAAATCCTGCACTGGAGGCCTTTGGCAACGCCAAAAC
AGTAAAGAAATGACAACCTCATCTCGTTTTGGAAAATTCATCCGAATTCATT
TCGGAAACAGTGGCAAGTTATCATCTGCCGACATTTAGACTTACCTACTG
GAGAAGTACGCGTCACCTTTCAGCTTAAGGCTGAGAGGAACTACCACAT
CTTCTACCAGATTCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGC
TGATCACCAACAACCCGTATGACTATTCCTACATCTCCAAGGAGAGGTA
ACAGTTGCCTCCATCAACGACTCAGAGGAACTGATGGCCACTGACAGTGC

CTTTGATGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGTGTCTATAAAC
TGATCGGTGCCATCATGCACCATGGAAACATGAAGTTTAAACAAAAGCAG
CGTGAAGAGCAGGCTGAGCCCGACGGGACAGAGGCTGCTGATAAATCCGC
TTATCTTATGGGGCTGAACTCTGCTGACCTTATAAAAAGGGCTGTGCCATC
CCAGGGTGAAGGTAGGAAATGAATATGTCATAAAGGCCAGAGTGTGGAC
CAAGTCTACTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGG
GATATAAGCGCCATG
TGGCCATGCACTCTGCCACTGCAGGGGATCTCACTTGTAAAGTGTGCATG
CAGAGCTATGAGAGCACGCCTGTGCTCCTGGAGCACCTCAAGAGCCACTC
TGGGAAATCCTCAGGTGGTGCCAAGGAGAAAAACACCCATGCGACCACT
GTGACCGCCGCTTCTACACAAGGAAGGATGTGAGGCGGCACATGGTGGTC
CACACAGGTAGAAAGGACTTTCTGTGTCAGTACTGTGCCAACGCTTCGG
CAGGAAGGACCACCTGACACGTCATGTAAAGAAGAGCCACTCACAGGAGC
TGCTGAAGATCAAGACAGAACCCCTGATATGTTAGGTTTGTAGCTTCT
GGGTCAACACCTTGTCTGTGAAGGAGGAGCTTAGTCCCATGATGTGTGG
CATGGGTCCCAATAAAGACCCTATAATGGGAAAACCTTTCCCCAGTGGAG
CCCCCTTTCCTATGAGCATGTACAACCCCCACCAT-----CTCCAGGCC
ATGTCTAATTCTGGCGTGGGTTCATCCA-----CACCTTCCCTAATGCC
CAGTTCCTCTATCTGCAGCTATGGGCATGGGCTGCCANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGAACCTGCTGGCT
AGTAACTCTCCAAGTGTTCGTATGCTCTGACCCAACAGAAATACTTCAG
TAACTACAGTCTGTGATTGGGTTTACATTTATGAGCCTATTGAATACT
GGAACTCCACAGTGCAAGAACACCTAAAGACTCTGAGTCACGGATTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACTTGCGGGTGGTGAATGT
GAGTGCATCAACCAAAAAGCGACTTCATTAGCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCCCGAGGACATCATATTCTCCAAG
A---ATCGCGAGACTG-----ACGAGTATGACATTATTGCCTCACGCAT
GTATTTGGTGGCACGCACCACGGAGAAGAAGCGTGAGGAGGTGGTGGAGC
TTTTAGAAAAGCTTCGCCCTTGTATGTTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCACGTTTGTGTTTCATGGACCGCTACAGTTCCTCTGTCTAT
CTCACCCATTCTAACCTCAGGCTTCAGTGTGCTCACCATTCTCATCCTCA
CTTTCTTCTGGTTCATCAACCCATTGGGAAACTTCTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNGGCTTCCACCAGT
TTGAATGGCAGCCAGCTCTCCAGAATGTGTCTACATCTTGCAATGTTGGC
ATTATTAATGGGCTCTCTGGGTGGACATCTTCAGTGGATGACTCCCAGC
TGACACAATCACGAGGCGCTTTCGCTACGATGTGGCGCTGGTGTGAGCAT
TAAAAGATCTGGAGGAGGACATTATGGACGGGCTGAGAGAGCGTGGGATG
GAAGATAGCACTTGCACCACAGACTTCAGAGTTATGATCAAGGAAGCCTG
TGACGGCATGGGTGATGTCAGTGAGAAGCATGGAGGAGGTCTGTCAGTTC
CTGAGAAGGCTGTTTCGTTTCTCTTCACTATTATGTCGTGTCTGTCAAG
GCAGAGGAGGAGAAT-----GCAGA
AGTTAGCATCTTACGGAGCCAAAGCCAAATTCAGAAGTGTCTGTAAGC
CCCTTGTGCTGATGTTGTGGATGAATCCGACCATGAGACACTCACAGCT
GTCTTGGGGCCGATAGTTGCAGAGCGTAATGCAATGAAACAGAGTAGGCT
CATCCTATCCATAGGTGGCTTACCCCGATCCTTCCGCTTTCACTTTAGAG
GCACAGGATATGATGAGAAGATGGTGCCTGAGCTGGAGGGCCTGGAGGCC
TCAGGATCCACATATGTTTGCACCCCTGTGTGACTCCAGTCGAGCAGAGGC
CTCTCAAATATGCTACTGCACTCCATCACC CGCAGTCATGAAGAGAACC
TAGAACGTTATGAAAATTTGGAGAACGAACCCCTTTTCAGAATCTACAGAT
GAGCTGCGAGACAGAGTCAAAGGGTCTCAGCTAAACCTTTTATGGAGAC
CCAACCCACACTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGT
TCTACAAAATGTTCCAGGATGAGATTGGGGAAGTGTATCAAAGGT---C
AAC---CCCAGCCGTGAGGAACGGCGCAGTTGGAGGGCAGCCTTAGATAA

-----GGACGAGTACATCGTGGTGTTCAGC
CGCTCCACCACGAGGCTCATCCTGAACGAGGCCGAGCTGATCATGGCACT
GGTGCAGGAGTTCCAGATGAAGGTGGTCACCGTGTCTCTGGAGGAGCAGT
CCTTCCCCAGCATCGTCCAGGCGGTGAGCGGCGCTCCATGCTGGTCAGC
ATGCACGGGGCTCAGCTGATCACGTCGCTTTTCTGCCCAGAGGCGCCGC
CGTGGTGGAGCTGTTCCCCTTTGCGGTGAACCCGGAGCAGTACACCCCGT
ATAAGACTCTGGCCTCGCTGCCCGCATGGACGTCCACTACGTCTCCTGG
AGGAACACCATGGAGGAGAACACCGTCACCCACCCGGACCGGCGTGGGA
GCAAGGCGGCATCGCTCACTTGGAAAAGGAGGAGCAGGAGCGGATCCTGG
CGAGCAAGGACGTCCCCAGACACCTGTGCTGCCGCAACCCGGAGTGGCTC
TACAGGATCTACCAGGATACGACGGTGGACGTCCCCTTTTCTGGAAGT
CCTCCG---AGAAGGCATGAAG---ACCAAGCCCAACCTGAAGAA---GG
CCAGAGCCCGCAGCATCGTCCACCCGGGCGGGTCCGAGAGCCCCAGTGT
CAGACCTCGGTGCAGACCAGCAGCGAGGCCAAGCTGACGGTGTCTGGCA
GATCCCCTGGAACCTCAAGTACCTGAAGGTCCGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGACACCAGCAAAGGGACCTTGGAGGATCAAATA
ATCCAGGCAAACCCGGCGCTTGAGGCCTTTGGCAAACGCAAGACGCTGAG
GAATGACAACCTCCTCCAGTTTTGGAAAATTCATCCGGATTCACTTCGGCA
CCAGCGGCAAGCTGTCTTCAGCCGACATCGAGACGTACCTGTTGGAGAAG
TCCCGAGTCACCTTTCAGTTGAAGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTCCTGATCA
CAAACAACCCCTTATGACTACTCCTACATCTCACAGGGAGAAGTGACAGTC
GCCTCAATCAATGATGCGGAGGAGCTCATGGCGACTGACAGTGCCTTCGA
TGTGCTCGGCTTTACATCGGATGAGAAAATGGGTGTCTACAAGCTGACCG
GTGCCATCATGCACCACGGCAACATGAAGTTCAAACAGAAGCAACGCGAG
GAGCAGGCGGAGCCCGATGGGACCGAGGCTGCTGACAAGTCTGCCTACCT
GATGGGGCTGAACTCAGCTGACCTCATTAAGGGTCTGTGCCACCCAGGG
TCAAAGTAGGAAACGAGTACGTGACAAAAGGACAAAAGTGTGGACCAGGTG
TACTATCCAAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCCGCCACCG
CGGGGATCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACGCCT
GTCCTTTTGGAGCATCTCAAAGCCACTCGGGAAAATCCTCCAGTGGCAC
CAAGGAGAAGAAACACCCATGTGACCACTGCGACCGCGCTTCTACACGC
GGAAGGACGTGCGGCGGCACATGGTTGTCCACACTGGCAGAAAAGACTTC
CTGTGTCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACATTTGACGCG
CCACGTGAAAAAGAGCCACTCACAGGAGCTTCTGAAGATCAAGACAGAGC
CCCCTGACATGCTCGGGCTTTTAGCCACGGGCTCGCCACCGTGTCCGTC
AAGGAGGAGCTCAGCCCCATCATGTGTGGCATGGGGCCCAACAAAGACTC
GGTGATGGGCAAACCATTTCCCGGCGGGGCCCCGTCCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAATTCCGGGGTGGGT
CACCT-----CACCTTCCCTGATGCCCGGCTCCTTGTCTGCAGCTAT
GGGCATGGGATGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAGATCAGC
GACGGGTCAATA
TCGTGAACCTGCTGGCGAGCAACTCCCCGAGCGTTTCGTACGCGCTCACG
CAGCAGAAGTACTTCAGTAACTACAGCCCGGTGATCGGGTTCTACATTTA
CGAGCCATCGAGTACTGGAACCTCACGGTGCAGGAGCACCTGAAGACCC
TGAGTCACGGCTTCAACAAGATCTCTGGATGGACAACCTTTTCCACTAC
CTGCGGGTGGTGAACGTGAGCGGTCGACGAAGAGCGACTTCATCAGCAT
CCTCAAGGGCTCCTTCCCTGCGGAGCCCGGAGTACCAGCACTTCACCGAGG
ACATCATATTCTCCAAGA---ACCGCGAGACCG-----ACGAGTACGAC
ATCATCGCGTGCAGGATGTACCTGGTGCAGCGGACCACGGAGAAGAAGCG

CGAGGAGGTGGTGGAGCTCCTGGAGAAGCTCCGCCCCCTGATGCTGATCA
ACAGCATCAAGTTCATTGCCTTCAACCCACCTTCGTGTTTCATGGATCGC
TACAGTCTCCTCCGTCATCTCGCCATCCTGACCTCAGGCTTACAGCGTGCT
CACCATCCTCATCCTCACTTTCTTCTGGTTCATCAACCCCTTGGGAACT
TCTGNNNGGTTTTACCAGTTTGA
ATGGCAGCCAGCTCTCAAGAATGTGTCG
ACATCTTGCAACGTTGGCATTATTAATGGGCTCGCCGGATCAGCTGCCTC
GGTGGATGACGCCCCGGCTGACACCATCACTCGGCGTTTTCGCTATGATG
TGGCACTGGTGTGAGCACTAAAGGATCTGGAGGAGGACATCATGGAGGGG
CTGAGAGAGAATGGGATGGAAGACAGCGCTTGCACCTCAGGCTTTAGTGT
TATGATCAAGGAGTGTGTGATGGCATGGGTGATGTCAGCGAGAAGCACG
GTGGAGGACCAGCTCTTCCCAGAAAGGCTGTACGTTTCTCTTTCACTGTT
ATGTCTGTCTCTGTCTGGCAGGCGATAGGGAG-----
-----GAGGAGGTTACCATTTTCACTGAGCCAAAGCCAAACT
CAGAACTGTCTGTAAAGCCCCTCTGCCTGATGTTTGTGGATGAGTCAGAC
CATGAGACACTCACAGCTGTCTGGAGCCTATAGTTGCAGAGCGAAAGGC
CATGAAAGAGAGCAGGCTCATCCTGTCCATGGGCAACTTGCTCCGCTCTT
TTTCGCTTCCACTTACAGGGCACGGGATACGACGAGAAGATGGTGCCTGAG
ATGGAGGGACTGGAAGCCTCGGGGTCACATACGCTTGCCTCTGTGTGA
CACCAGTCGTGCCGACGCTTTCAGAGAACATGGTCTTGCCTCCATCACC
GCAATCATGTGGAGAACCCTAGACCGTTACGAAATATGGAGGACCAACCCT
TTTTTCGGAGTCAGTGGAGGAGCTGCGGGAGAGAGTCAAAGGCGTCTCTGC
CAAGCCCTTTTTGGAGACTCAGCCACACTCGATGCATTGCACTGTGACA
TTGGCAACGCCACTGAGTTCTACAAAATCTTCCAGGACGAGATTGGGGAA
GTTTACAAAAGGT---CAAC---CCCAGCCGGGAGGAACGGCGCAGCTG
GCGGGCAGCCCTAGATAAACAGCTGAGGAAGAGGATGAAGCTTAAACCAG
TAATGAGGATGAATGGGAACATGCCCGCAGGCTAATGACCCAAGAGGCT
GTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGGAGGGAGGCCCT
GAGGGAGCTTATGAGGCTCTATATTCAGATGAAGCCCGTGTGGCGTGCCA
CCTGCCAGCCAAGGAGTGCCCTGACCAGCTGTGCCGCTACAGTTTTAAC
TCACAGAGCTTCGCCGACCTCCTCTCCTCTACCTTCAAATATAGGTACAA
TGAAAAGATAACCAATTATCTGCACAAGACCCTTGCTCACGTGCCCGAGA
TCATTGAGCGAGATGGATCTATCGGAGCCTGGGCCAGCGAGGGGAGCGAG
TCGGCTAACAAATCGTACAACATCGAGATGGGGCCCTGGGCCCCCGGTG
GAACGACAACCCACAGCCCTTCTCCTGCTCCATCGAAGACCCCAAGC
AGACCAAGTTCAAAGGCATCAAGACCTACATTTTATACCGGGTACGCGG
AGCCACACGGGACACCCCGTGTACAGGCGATACAAACACTTTCGACTGGCT
CTACAACCGCCTGTTGCACAAGTTCATGTTGATCTCCGTGCCTCACCTGC
CCGAGAAGCAGGCCACGGGACGCTTCGAGGAGGACTTCATCGAGAAGCGC
AAGAGGCGGCTGATCCTGTGGATGAACCACATGACCAGCCACCCGGTCTCT
CTCCAGTACGAGGGCTTCGAGCACTTCCTCATGTGCGCCGACGACAAGC
AGTGGAAGCTGGGCAAGAGGCGGGCGGAGAAGGACGAGATGGTGGGCGCC
CACTTCATGCTGACCCTGCAGATCCCCTGAGCACCAGGACCTGCAGGA
CGTCGAGGAGCGGGTGGACAACCTTCAAGGCCTTCGCCAAGAAGATGGACG
ACAGCGTGTGAGCTCACGCACGTCGCCTCGGAGCTGGTGCAGCAAGCAC
TTGGGTGGATTTCAGGAAGGAGTTCAGAGGCTGGGGAACGCGTTCAGTC
CATCAGCCAGGCGTTCATGCTGGACCCGCCCCACAGGTCGGACACCCTCA
ACAACGCCATNNNNNNNNNNNNNNNNNNNNCGTTCTCAAACCTGACCTCTCTCGGTTTCATCATTTGGCGT
CRGTGTGGTTGGAAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGA
GCCTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCCGAT
ATCCTGCGATCTGCCATTTGCTTCCCCTTTGTCTTCACGTCCGGTCAAAA
TGGGTCTGCGTGGACCTACGGCACGTTGACCTGCAAGGTGATCGCCTTCC
TCGGGGTGTCTCTGTTTCCACACGGCGTTTATGCTCTTCTGTGTCAGC

GTGACCCGTTACCTGGCCATCGCACATCACCGTTTCTACACCAAGCGGCT
GACTTTCTGGACGTGCTTGGCTGTCATCTGCATGGTGTGGACGCTATCCG
TGGCTATGGCGTTCCCGCCGGTGTGGACGTAGGGACGTACTCGTTCATC
CGGGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCCAACGA
TTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTCGCCACACAGC
TGGTTTACCTCAAGTTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAG
CCCGTCCAGTTCGTGCCTGCCGTGAGCCAGAACTGGACCTTCCACGGGCC
GGGCGCCAGCGGGCAGGCGGGCCAACTGGCTGGCTGGATTTCGGTCGAG
GCCCCACCCCGCTACTTTGCTGGGTATCCGTGAGAACAGCAACGCAGCG
GGCCGAGGCGTCTACTGGTATTAGATGAATTCAAACAGAGAAGCGGAT
TAGTAGGATGTTTACATCATGACGTTTTTCTTCTGGCACTCTGGGGGC
CCTACCTGGTCGCCTGCTACTGGCGGGTGTGTTGCGAGGGGCCCTGTAGTT
CCTGGGGGCTACCTGACAGCAGCCGTGTGGATGAGCTTCGCTCAGGCTGG
GGTCAATCCTTTCATCTGCATTTTCTCCAACAGGGAGGCCAAATCTCGCT
TTCACCCTGGCGTGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCA
CTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTGC
CACCCCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGG
ACTTTGCTGCCTCGGCATACGACGCCGCG-----GATTTCCGCCGGT
AACCGGGCCACCTTGCTGTCCTACGCAGCGGCCGGAGTGAAGGCTC----
--TTCCCCTGCCGACTGCAGGCTGCTCCAATCGGCCCTTGGCTATTACG
CAGACCCGTCTG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGT
GGCGTAAATAGTAAATCCAGCTCGGTCTTTTCTGCTGGCCCCGGAACCTC
CATCGGCGGCCGAGCGGGG---CC---AACTACCTGT-----CCG
AGGA---GGGC---GACTC---CATCACGACGGAGAGGTGCCCC---AT-
--CGGCGGCTCGGAGGAG---ACCAAACCCAAAGACATGAC---GTCCGA
---GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAGTCAATCGATT
CCAGCGACTCTGGCATCTTTG---AGCAGGCCAAACGGAGGAGAATCTCC
CCCTCAGCCACGCCG-----GTTTCAGGGACAGTTTCCCCGTTAAA
ATCGGAGNNNNNNNNNNCAGGCGAAGTCAAGAGAGAGAAGTGGCGTTGGGGATAAATCC
GTTTCGAGATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCACGATA
TTGGCTCCGG---ACAGACGGCGTTTCTCCTCCAGGCG---CCCGCTAC
---GCGGCAGCCGCACTGGGA---CACCACCA-----CCACCCGACCCA
CGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTC
TCTTCAGAAATCGGGGTTTCGGGGATGCCACCGG-----GGCG
CAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----GC
AGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCGGGGC
TCCACGAG---CAAGCGGCAGCCACGCGTCTTCGAACGTGGTCAACAGC
CAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCCGACCAGTA
CGGCCACGTTACGAGCCCAGGT---CCGACCACTATGCTTCGACCCAGC
TGCACGGCTACGGCCCATGAACATGAATATGGCCGCA---CACCACGGA
GCAGGGGCCTTCTTTCGATACATGAGGCAGCCCATCAAACAAGAGCTCAT
CTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCA
ACAAAACCTTTCAGCACGATGCACGAGCTGGTGACCCATCTGACGGTGGAG
CATGTGGGGGGACCCGAGCAGACCAACCACATTTGCTTCTGGGAGGAATG
CGCCAGAGAAGGGAAACCGTTCAAAGCCAAATACAACTTGTAATCATA
TCAGAGTTCACACCGGAGAAAAGCCCTTCCCGTGTCCGTTCCCCGGCTGT
GGCAA

>Lachnolaimus maximus

AGCCTTCTCATTTCGAGCAGAACTAAGCCAACCAGGCGCCCTTCTAGGGGA
CGACCAGATTTATAACGTCAATTGTTACGGCGCATGCATTTGTAATAATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGGTTTGGAACTGACTTATC
CCACTAATAATTGGAGCCCCTGACATGGCTTTCCCCGAATAAACAACAT
AAGCTTTTACTTCTCCACCTTCATTTCTTCTCTTGGCATCCTCAG

AGAGAGAAGTGGCGTTGGGGATAAATCCGTTTGCAGATGGGATGGGCGCC
TTCAAATAAACACAGCTCCCACGATATCGGCTCCGG---ACAAACGGC
GTTTTCTCCAGGCG---CCCGCTAC---GCAGCAGCCGCCCTGGGA-
--CACCACCA-----TCACCCGACCCACGTTGGCTCT---TACTCCACG
GCGGCGTTCAACTCCACCAGGGACTTCTCTTCAGAAATCGGGGTTTCGG
GGATGCAGCCGG-----GGCGCAGCACAGTTTGTTCGCTTC--
-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGAT
GCAGCGGGACACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCTGCGAG
CCACGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGG
GGGACATGTACGGAAGGGCCGACCAGTACGGCCACGTTACGAGCCCGCGG
T---CCGACCACTACGCCTCGACCCAGCTGCACGGCTACGGCCCCATGAA
CATGAATATGGCCGCA--CACCACGGAGCAGGGGCCTTCTTTTCGGTACA
TGAGGCAGCCCATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAG
CAGCTGACGAACCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGATGCA
CGAGCTCGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGA
CGAACCACATCTGCTTCTGGGAGGACTGCGCCCGAGAGGGGAAGCCGTTT
AAAGCCAAATACAAACTTGTGAATCATATCAGAGTACACACCCGGAGAGAA
GCCCTTCCCGTGCCCGTTCCCGGCTGTGGCAA

>*Lactophrys triqueter*

AGCCTACTCATCCGAGCAGAAGTGGGCAACAGGCGCTCTCCTTGGGGA
TGATCAGATTTACAATGTTATTGTCACGGCACATGCATTCGTGATAATTT
TCTTTATAGTTATACCCATCATAATCGGAGGTTTTGGAAACTGACTAGTC
CCATTAATAATTGGGGCCCCGACATAGCATTTCGCCGAATAAATAACAT
AAGCTTTTACTTCTTCCCCCTTCTTTCTTCTCCTAGCTTCATCAG
GAGTTGAAGCAGGGGCAGGAAGTGGTGGACAGTTTACCCGCCCTTAGCA
GGAAACCTAGCACACGCGGGAGCATCCGTAGATTTAACTATTTTTTCACT
TCATCTAGCGGGAGTCTCCTCAATTCAGGGGCTATTAATTTTATTACCA
CCATTATTAACATAAAACCCCTGCTATCTCTCAATATCAAACCCCTTA
TTTGTGGGCTGTCTTAATTACCGCGTTCTTCTCCTCTTATCTCTACC
AGTTCTTGCTGCCGGCATCACAATGCTCCTAACAGACCGAAATCTCAACA
CCACCTTCTTTGACCCAGCAGGAGGCGGAGACCCAATCCTCTACCAACAC
CTATTCTGATTCTTCGGTCA-----

-----TTTCTAGAGAGAAACCTTACCCATCTAACTGCCTTGG
CATGCTATTACTGTCTGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGTAACTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGACATGGTGGTTTACGCTTTTGTACACGAGGA
GCTAGAGACTGAAGATGAAAGACTGGTTTATGAAGCAGCGCTCAATTGGA
TCAACTATGACCTGGACAAGAGGCATGGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGCCTAGCCCTTCTGCCTGCCATCTTTCTCATGGAGAATGTTTC
TACAGAAGAGTTGATCAACGCCCAAGCGAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGCGTTGTCAAC
AGCCCATGTGCTCGACCAAGAAAAACAGCCATGCCCTCTTTCTTCTGGG
TGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTCCTAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATTGGCTGTAAGGTGTATATCACTGGTGGGA--GAGGCTC-
AGAGAACGGTGTGTCCAAAGATGTGTGGGTCTACGACACTGTCCACGAGG
AATGGTCAAAGGCCGACCCATGCTCATTTGCTAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACTGCAGCAAC
TGGTTGCCTCCCGGCTCTCCGCTGGATGATTATATTGTTGTATTTAGT
CGTTCAACAACAAGGCTCATACTGAATGAAGCAGAGCTAATTATGGCTCT

GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTATCTCTGGAGGAGCAGT
CCTTTCCCAGTATCGTCCAGCTGATCAGCAGTGCTACCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCACTTTCCCTCCCCAGAGGAGCTGT
TGTGGTTGAGCTGTTCCCTTTTGTGTGAACCCAGAACAATATAACCCAT
ATAAAAACCTTACCTCCCTTCCAGGCATGGACCTTCACTATATCTCCTGG
AGGAACGCTAAGGAGGAAAACACCATCACCCACCCAGACAGACCTGGGA
TCAGGGGGGCATTGTTACCTAGAGAAAAGAGGAGCAAGTGCAAATACTGG
CGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGAATCCANAGTGGCTTT
TCCTGATCTACCACGACACTTTGGTGGACATCCCTTCTTTCTGGAAGTC
CTCAA---AGAGGGCTTGAAG---ACAAGGCCAGTCTGAAGAA---GTC
AAAGCCAGCCAGCACACTTTCATCCAGGCCGAGTCAGAGAACCTCAGTGTC
AGACCTCGGTACAAAACCACCAATGAGGCTAAACTCACAGTATCCTGGCAG
ATTCCATGGAATCTGAAATACCTAATGGTCCGAGAGGTGAAATACGAGGT
GTGGATCCAGAGAAAAGACACCAGCAAGGGGACACTGGAGGATCAAATCA
TCCAGGCAAACCCGGCGCTGGAGGCCTTTGGCAACGCCAAAACACTGAGA
AATGACAACCTCGTCTCGTTTTTGGAAAATTTATCCGAATTCACTTTGGTAC
GAGTGGCAAGCTGTCATCTGCTGACATTGAGACATACCTACTGGAGAAGT
CACGGGTACCTTCCAGCTCAAGGCTGAGAGAAAATTACCACATCTTCTAC
CAGATCCTGTCCAATCAAAGCCAGAGCTGCTTGACATGCTGCTGATCAC
CAACAACCCATACGACTACTCCTACATCTCCAAGGAGAGGTATCAGTCG
CCTCCATCAACGACTCAGAAGAGTTGATGGCCACCGACAGTGCCCTTCGAT
GTGCTTGGCTTCACTCCAGATGAGAAGATGGGTGTCTACAAACTGACGGG
AGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAACAGCGTGAGG
AGCAGGCTGAGCCCGATGGGACAGAGGCTGCTGATAAATCGGCTTACCTA
ATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTGTGCCACCCAGAGT
CAAGGTAGGAAATGAATATGTGACCAAAGGCCAAAGTGTGGACCAAGTCT
ATTACCCCAACAAGGAAGCCTTCAAGTGTGAAGAATGTGGGAAGCACTAC
AATACCAAGCTCGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGC
AGGTGATCTCACCTGTAAAGTATGCATGCAGACCTATGAGAGCACACCTG
TGCTTCTGGAGCACCTCAAGAGCCATTCTGGGAAGTCCTCTGGGGGCACC
AAGGAGAAGAAACACCTTGTGACCCTGTGACCGTCGTTTTCTACACAG
AAAGGATGTGAGACGGCACATGGTGGTCCACACAGGACGAAAGGACTTTC
TATGCCAGTACTGCGCCAGCGCTTGGTAGGAAAGACCATCTGACACGC
CATGTAAAGAAGAGCCACTCGCAGGAGCTACTGAAAATCAAGACAGAGCC
GCCTGATATGTTGGGCCTTTTAGCTTCTGGGTACCACCTTGCTCYGTGA
AGGAGGAGCTCAGCCCAATGATGTGTGGCATGGGTCCCAACAAAGATCCC
ATGATGGGCAAACCGTTCCCAGCGGAGCCCCTTTCCAATGGGCATGTA
CAACCCCAACAC-----CTCCAGGCCATGTCTACTTCTGGGGTGGGTC
ACCCA-----CACCCGTCCCTAATGCCNCTTCTTGTCTGCAGCTATGA
GCATGGGCTGTATATGGAANNNNNNNNNNNNGCATCTTCTCATTCATGGGATGTTTACAA
ATCAGTGATGGATCAAATATTGTGAACTTGTGGCCAGTAACTCTCCAAG
TGTTTCATATGCTTTGACCCAGCAAAAATACTTCAGTAACTACAGTCCTG
TGATTGGGTTTTATATTTATGAGCCATTGAGTACTGGAACCTCGACAGTG
CAGGAGCACCTGAAGACTCTTAGTCATGGCTTCAATAAGATCTCCTGGAT
GGACAACTTTTTCCACTACTTGAGGGTGGTGAATGTGAGTGCGTCAACCA
AGAGTGACTTCATCACCATCCTCAAGGGCTCCTTCTTGCGCAGCCCTGAG
TACCAGCACTTCACTGAGGACATCATATTCTCTAAGA---ACCGTGAGAC
TG-----ACGAGTATGACATTATGCTTCAAGGATGTAAGTGGTGGCAC
GGACAACAGAGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTGGAAAAGCTT
CGTCCACTGATGCTGATCAACAGCATCAAGTTCATGCTTCAATCCAAC
ATTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCACTCGCCTATCCTGA
CCTCAGGATTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCTTGGTA
ATCAACCCCTTGGGTAACCTTCTGGCTCATCCTCACTGTAACGTCCGTAGA

GCTTGGGGTATTGGGTCTGATGGGCTTTCACCAGTTTGAATGGCAGCCAG
CTCTCAAGAATGTGTCTACATCTTGCAATGTAGGAATTATTAATGGGCTC
TCTGGATGGGTTTTCTTCAGTGGATGACTCCCCAGCTGACACCATCACTCG
GCGGTTTCGCTATGATGTAGCACTGGTGTGAGCGTTAAAGGATCTGGAAG
AGGACATCCTGGAAGGGCTGAGAGAAAATGGAATGGAGGATAGAGCTTGC
ACCTCAGGCTTCAGTGTTCATGATCAAAGAATCCTGTGATGGCATGGGCGA
TATCAGCGAGAAGCACGGTGGAGGACCAGTTGTTCCGAGAAGGCTGTGC
GTTTTTCTTTCACTATTATGTCTGTCTGTCTGCTGGCAGACGGTGACGAA
-----GATGAAGTGAGAATCTACAC
AGAGCCAAAGCCAAACTCAGAGCTGTCGTGTAAGCCCCTTTCCTGATGT
TTGTGGATGAATCAGACCATGAGACACTCACAGCCATTCTGTGGCCAATA
ATCGCAGAGCGTAAACGCAATGAAAAGAGAGCAGACTCATTCTATCCATCGG
TGGACTATCTCACTCCTTCCGGTTTCACTTCAGAGGCACAGGATATGATG
AGAAGATGGTGCGTGGAGTGGAGGGCCCTCGAGGCCCTGGATCCACTTAC
ATCTGCACTCTTTGTGACTCTAGTCGCGCAGATGCCTCTCAAAAACATGGT
GCTACACTCCATCACTCGCAGTCAAGAGGAATCTAGAACGTTATGAAA
TATGGAGAACTAACCCCTTTTCTGAGTCTGTGCGACGAGCTCCGAGACAGG
GTCAAAGGGGTCTCTGCCAAGCCCTTTCATGGAAAACCCATCCACATGGGA
CGCACTACACTGTGACATAGGCAATGCCACTGAGTTTTACAAAATCTTCC
AGGATGAGATTGGGGAGGTGTACCTGAAGGT---CAAC---CCCAGCCRG
GAGGAGCGGCAGCTGGAGAGCAGCCCTTGATAAACAGCTGAGAAAGAA
GATGAAGCTCAAACCGTAATGAGGATGAATGGGAACATATGCCCGCCGGC
TAATGACCCTGGAGGCTGTGGAGGTGGTGTGTGAGTTGGTGCCCTCAGAG
GAGAGAAGGGAGGCCCCGAGGGAACCTATGAGGCTCTACCTCCAGATGAA
GCCTGTGTGGCGCACACCCTGCCCTGCCAAGGAGTGCCCTGACCAGCTGT
GCCGCTACAGCTTTAACTCTCAGCGCTTTGCGAGAGCTCCTCTCCTCTACC
TTCAAGTACAGGTACAATGGAAGATAACCAATTACCTGCACAAGACCCT
GGCCCATGTTTCCGAAATCATTGAGAGAGATGGATCCATAGGAGCCTGGG
CCAGCGAGGGGAAATGAGTCGGCAAATAAANNNNNNNNNNNNNNNNNNNNNNNTGGAT
GGAAAGCCCACAGCCT
TTCTCCTGCTCAATTGAAGATCCTACAAAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATTTTCGTACCGGGTCACGCCGAGCCACACAGGACATCCTG
TCTACAGGGCGTACAAGCACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCAGTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTCGAGGAAGACTTCATTGAGAAGCGCAAGAGGGCGACTGATACTGT
GGATGAACCACATGACCAGTCACCCAGTCCCTCTCCCAGTATGAAGGCTTT
GAGCACTTTCGTGATGTGCGCTGATGACAAGCAATGGAATTGGGCAAGAG
GCGCGCAGAGAAGGATGAGATGGTGGGGGCGCATTTTCATGCTGACCCTCC
AGATTCAGGAGTGAGCACCAGGACCTCCAGGATGTAGAGGAGCGGATCGAC
TCCTTCAAGTCCCTTGCTAAGAAAATGGATGACAGTGTGATGCAGCTCAC
ACATGTTGCCTCAGAGCTGGTGCCTAAGCATCTGGGTGGGTTCAGGAAGG
AGTTCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCCCTTCATG
CTAGACCCTCCCTACAGCTCAGAGACCCTAGACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNAT
TGACCTCTCTGGGTTCATCATCGGAGTCGGCGTGGTTGGGAACTGCTG
ATCTCCATCTTGCTGGTCAAAGACAAGAGTCTGCACCGAGCGCCCTACTA
TTTTCTGCTGGACCTGTGCGCCTCTGACATCCTTCGATCCGCCATCTGCT
TCCCCTTCGTCTTACCCTCGGTCAAGAATGGATCTGCCTGGACGTACGGC
ACGCTGACCTGCAAAGTGATTGCCTTCCTGGGTGTGCTCTCCTGTTCCA
CACAGCGTTTTATGCTGTTCTGTGTCAGTGTACGCGCTATCTGGCCATCG
CTCATCACCGTTTTCTACACTAAGAGGCTGACCTTCTGGACCTGCCTGGCT
GTCATCTGCATGGTGTGGACGTTATCAGTGGCGATGGCGTTCCCGCCTGT
GCTAGACGTAGGGACGTACTTTTTATCCGGGAGGAGGATCAGTGCACGT
TCCAGCACCGCTCCTTCAGGGCGAATGATTGCTGGGCTTCATGCTCCTG

TTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTT
TTTTGTCCATGACCGTCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCTG
TTAGCCAGAACTGGACCTTCCACGGGCCAGGTGCCAGCGGGCAGGCGGCC
GCCAACTGGCTGGCCGATTTCGGTCGAGGCCCCACTCCGCCTACTTTGCT
GGGCATCAGACAGAACAGCAATGCAGCGGGCCGAGGCGTCTACTGGTAT
TGGATGAATTCAAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACATTTTTCTTCTGGCACTGTGGGGGCCCTATCTGGTCGCCTGCTACTG
GCGAGTGTTCWAGGGGCCCTGTGGTCCCTGGGGGCTACCTGACAGCAG
CTGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTCATCTGCATNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNT

GGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCT
TGCTATCCCCGAGCAAACCGAGGAGACCACTGTTGCCACCCCCCGCAG
CGTTGGTTTGTACCC---CTGCCAACACCGACTGGACTTTGTGCCTC
GGCATAACGACGCCGT-----GATTTCCGCCGGTAACGCGGCCACCT
TGCTGTCTACGCTGCGGCCGGAGTGAAGGCTC-----TTCCCTGCCG
ACTGCAGGCTGCTCCAACCGGCCTCTTGGCTACTACGCAGACCCGTCAG-
--GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGGTGTGAATAGCA
AATCCAGCTCGGTCTTTTCTGCTGGCCTTCTAACTCTATCGGAGGCAGA
GC-----CGAGGA---AGGG--
-GACTC---CATCCCGACAGAGAGGTCATCG---AT---TGGCGGCTCCG
AGGAG---ACCAAACCTAAAGACATAAC---GTCAGA---GTCGAGCTGG
ATAGAG---ACGCCGTCTCCATTAAGTCCATAGATTTCGAGCGATTCTGG
AATCTTTG---AACAGGCCAAACGGAGAAGGATCTCACCTTCTGCCACGC
CA-----GTTTCAGAGACAGTGTCCCGCTGAAGTCTGAGCATCAC
TCAACAGGCCAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTT
CGCAGATGGGATGGGCGCCTTCAAATAAACCACAGCTCCACGATATTG
GCTCCGG---ACAAACGGCGTTTTCTCGCAGGCG---CCTGGGTAC---
GCAGCAGCAGCCCTGGGA---CACCACCA-----CCATCCGACCCACGT
TGGCTCT---TACTCTACGGCGGCTTTCAACTCCACCAGGGACTTTCTCT
TCAGAAATCGGGGATTCGGGGACGCCACCGG-----GGCTCAG
CACAGTTTGTTCGCCCTC-----CGGGAGTTT---C-----GCAGG
GCCACATGGACACTCAGATGCAGCGGGCACCTGCTCTTCCCGGGGCTCC
ACGAG---CAAGCGGCGAGCCACGCGTCTACCAATGTGGTTAACAGCCAG
ATGCGGCTGGGCTTCTCGGGGACATGTACGGACGGCCGACCAGTACGG
CCACGTTACAAGTCCGCGTT---CCGACCCCTACGCCTCGACCCAGCTGC
ACGGCTACGGCCCCATGAACATGAATATGGCCGCG---CACCACGGAGCA
GGGGCTTCTTTTGATACATGAGGCAGCCGATCAAGCAAGAGCTCATCTG
CAAGTGGATCGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCATGCAACA
AACTTTCAGCACGATGCACGAGCTCGTGACCCATCTGACGGTGGAGCAT
GTGGGGGGCCAGAGCAGACCAACCAGTCTGCTTCTGGGAGGAATGTT
CAGAGAAGGAAAGCCGTTCAAAGCCAAATACAACTTGTGAATCATATCA
GAGTACACACCGGAGAAAACCCCTTCCCGTGTCCGNNNNNNNNNNNNNNNNNN

>Lampris guttatus

AGTCTTCTAATCCGAGCTGAGCTCAGCCAACCAGGAGCCCTCCTGGGAGA
CGACCAAATCTATAACGTAATCGTCACCGCCCATGCCTTCGTAATAATTT
TCTTTATAGTCATGCCTATCATAATTGGAGGCTTTGGGAACCTGGCTGATT
CCCTTAATAATTGGCGCCCTGATATGGCTTTTCCCCGAATGAACAACAT
AAGCTTCTGGCTTCTTCCCCCTCTTTCCTACTCCTCCTAGCCTCCTCCG
GAGTGGAGGCCGGGGTAGGAACAGGCTGAACCGTATACCCCTCTAGCA
GGGAACCTAGCCACGCAGGAGCCTCGGTTGACCTAGCCATTTTCTCCCT
CCACCTAGCAGGGGTTTCTCTATTTCTAGGAGCAATTAACCTTTATTACGA
CAATTATTAATATGAAACCCCGGCCATCTCTCAATACCAGACCCCTCTC
TTCGTATGGGCCACCCGTGATTACGGCTGTTCTCCTTCTCCTCCTCCCTCC

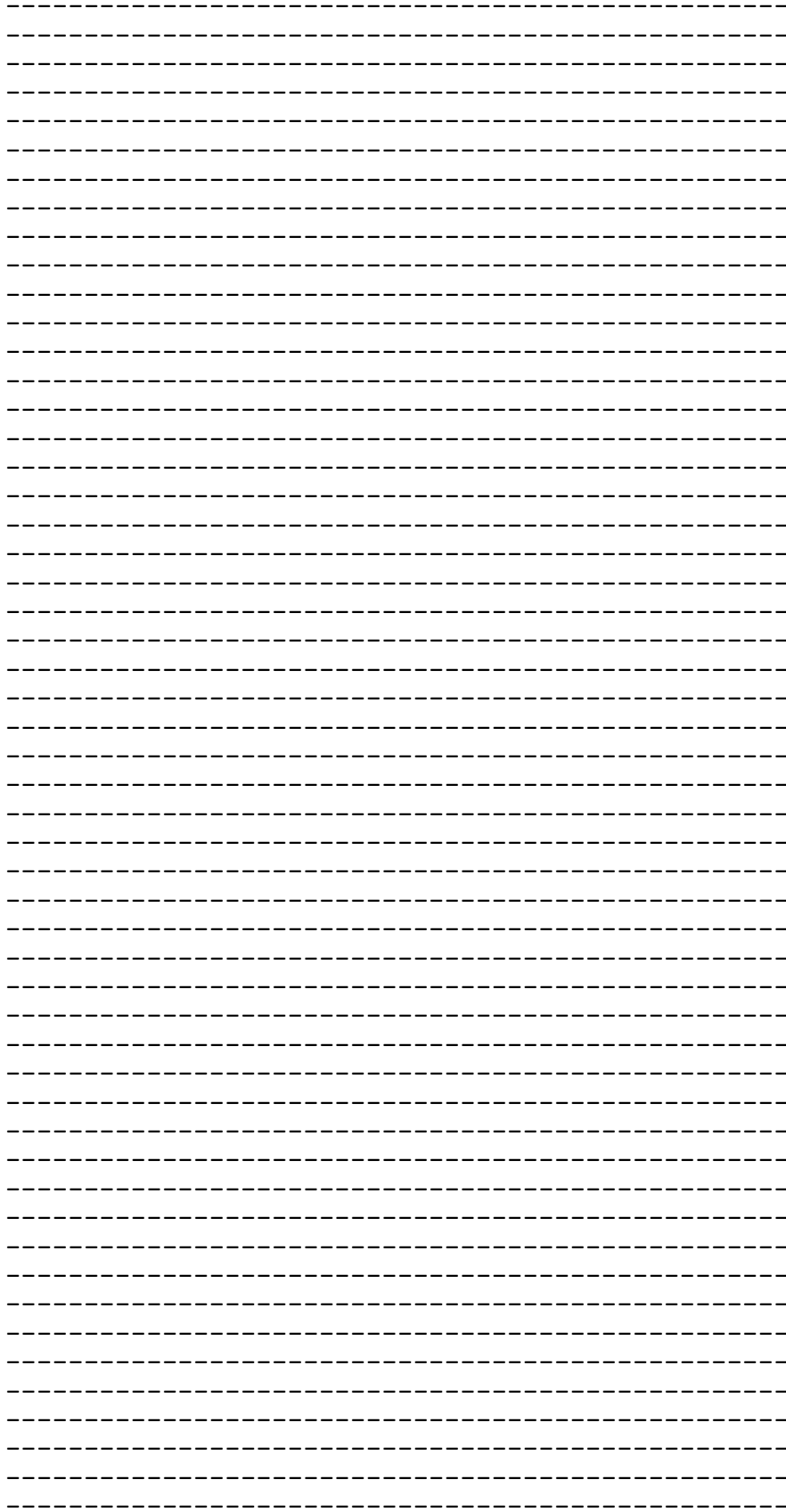
TGTCTTAGCCGCCGGAATTACGATACTCCTAACAGATCGAAACCTTAATA
CTACATTTCTTTGACCCCTCTGGAGGAGGAGACCCCATTTCTATATCAACAT
TTGTTC-----

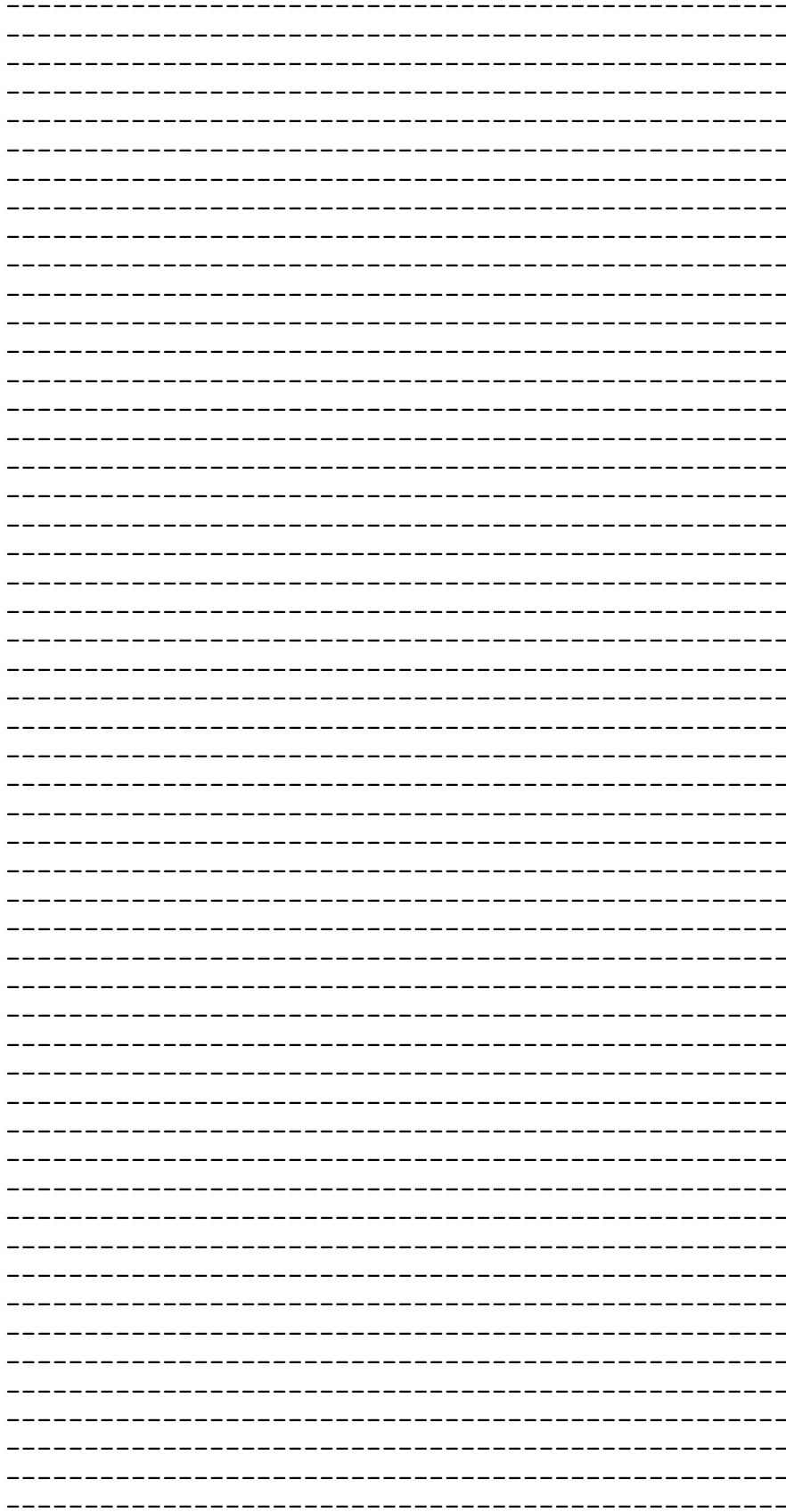
-----GGATGAATACATTGTTGTATTTCAGC
CGTTCAACAACCTAGACTGATTCTGAATGAACCTGAGCTGATCATGGCACT
GGCCCAGGAGTTTCAGATGAGAGTGATTACAGTGTCCCTGGAGGAACAAT
CTTTCCCAAGTATTGTTTCAGGTTATCAGCGGGGCTCCATGTTGGTGAGT
ATGCATGGAGCACAGCTTGTACCTCACTCTTCCCTCCTCGGGGAGCTGC
CGTGGTGGAGCTGTTCCCCTACACTGTGAACCCAGAACAGTACACGCCTT
ATAAAACCCTCGCCTCCTTGCCAGGCATGGACCTTCAGTATGTTTCTTGG
AGGAACACAAAGGAAGAGAACAACACTGTCACTCACCCAGACAGACCCTGGGA
CCAAGGGGGAATTGCCCACTTGAAAAGGATGAGCGAGAGCGTATACTGG
CCAGCAAGGAGGTCCCAGACATCTATGCTGCCGCAACCCGGAATGGCTC
TTCCGAATCTACCAGGATACATTAGTGGATATCCCGTCATTTCTGGAGGT
CCTTAA---AGAGGGCATAAAG---GTCAGACCCAGCTTGAAGAA---GT
CCAAACCTACCAGTGCAGTTACCCGGGCGGGTCAGAGAACCCAGTGC
CAGACTTCAGTCCAAGCCACCAATGAGGCAAAACTTACCGTCTCTTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTATGAGG
TTTGGATCCAG-----

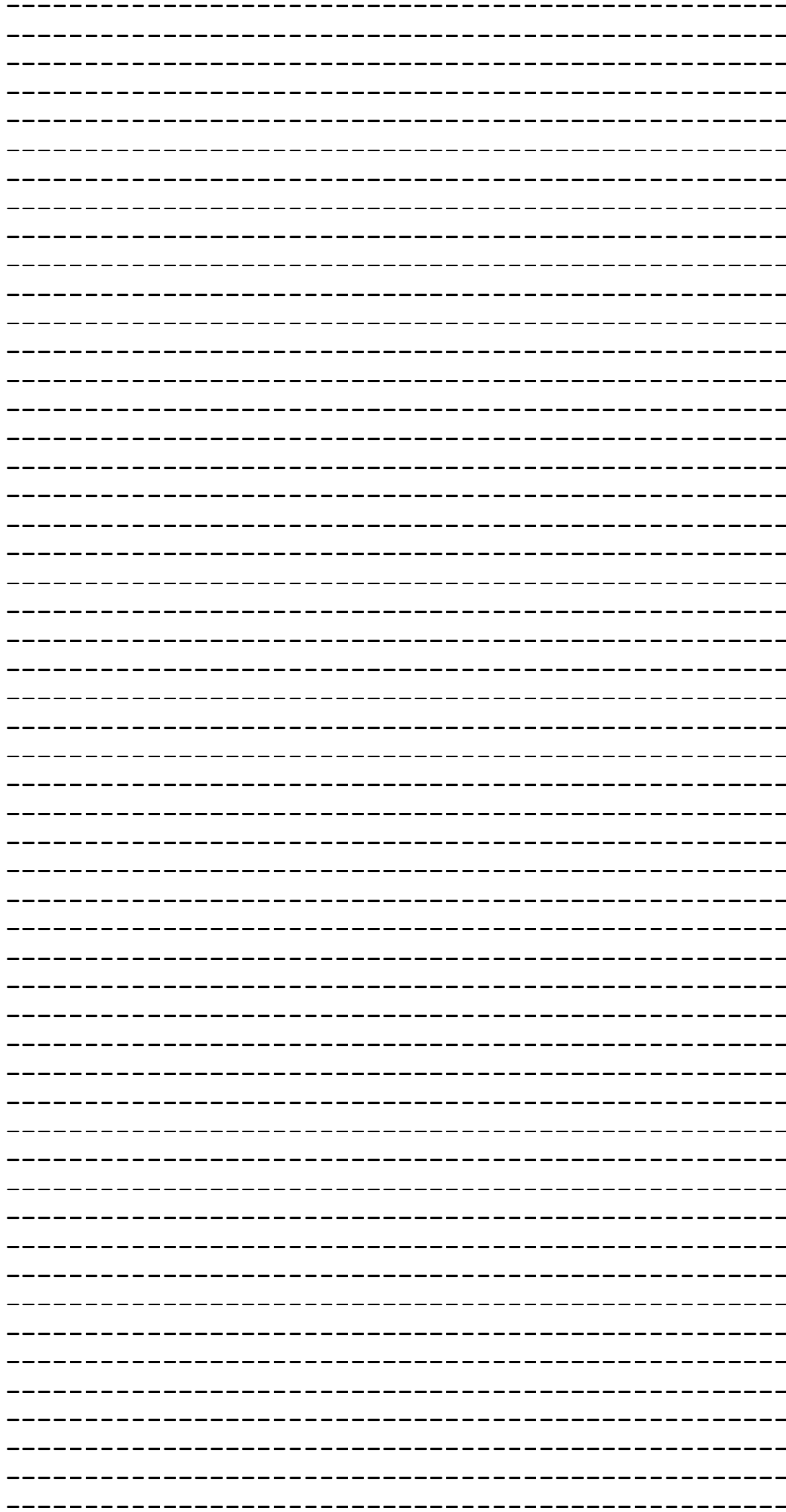
-----CCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGACCTCACCTGCAAAGTGTGTATGCAGAGCTATGAGAGCACGCCA

GTGCTCCTGGAACACCTCAAGAGCCACTCGGGCAAGTCCTCGGGTGGTAC
CAAGGAGAAGAAGCACCCATGTGATCACTGCGACCGCCGCTTCTACTC
GGAAGGATGTGAGGCGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACGCG
CCACGTAAAGAAGAGTCACTCACAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCGGACATGTTAGGTCTCCTAGGCTCCGGCTCGCCTCCTTGCTCTGTC
AAGGAGGAGCTTAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGATCC
CATGATGGGAAAACCTTCCCCAGTGGTACCCCTTCCCCATGGGCATGT
ATAACCACCACCAC-----CTCCAGGCCATGTCCAATTCGGGGGTGGGC
CATCCC-----CACCCCTCCCTGATGCCCAACACCCTGTCTGCAGCAAT
GGGCATGGGCTGTACATGGAATATCTTATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAAAATTAGTGATGGATCAAACATCGTGAATTTGCTGGCA
AGTAACTCCCCAAGTGTTCGTATGCACCTACTCAGCAGAAGTACTTCAG
TAACTACAGTCCTGTGATTGGGTTCTACATTTACGAACCCATAGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACACTGAGCCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGAGGGTGGTAAATGT
GAGTGCATCGACCAAAAACCGACTTCATCAACATCCTCAAGAGCTCCTTCC
TCCGCAGCCCCGAGTACCAGCACTTCACTGAGGACATAATCTTCTCCAAG
A---ACAGGGAGAGTG-----ATGAATATGACATCATCGCCTCACGCAT
GTACCTTGTGGCGCGGACCACAGAGAAGAAGCGTGAGGAGGTAGTGGAGC
TTCTGGAAAAGCTGCGTCCACTGATGCTGATTAACAGCATCAAGTTCATT
GCCTTCAACCCACCTTTTGTGTTTCATGGACCGGTACAGCTCCTCGGTTAT
TTCACCCATCCTAACCTCAGGCTTCAGTGTGCTTACCATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAATCCTCTAGGAAACTTCTGGCTCATCCTCACA
GTCACCTTCTGTGGAGCTGGGCGTGTGGGTTTGATGGGCTATCACCCATT
TGAGTGGCAGCCTGCCCTCAAGAATGTGTCTGCATCGTGCCAAGTGGGCA
TAATCAACGGGCTATCTGGGTGGGTTGCTTCTGTTGATGACTCTCCGGCT
GATACAATCACTCGCCGGTTTCGTTATGACGTGGCCCTGGTATCGGCCCT
CAAAGATCTGGAAGAGGACATTATTGAGGGACTGAGCAAGTGTGGGCTTG
AAGACAGTGCCTTGCACCTCAGGCTTCAGTGTATGATCAAGGAGTCTTGC
GATGGCATGGGTGATGTCAGCGAGAAGCACGGTGGAGGCCCTCCTGTCCC
AGAAAAAGCTGTGCGCTTTTCTTTTACCATTATGTCCATCTCTATATTGG
CTGATGGAGAGCAG-----GAAGAG
GTAACTATCTTCAGGGAGCCAAAGCCAAATTCTGAACTGTCCTGTAAACC
TCTTTGCCTGATGTTTGTAGACGAGTCTGACCACGAAACCCCTCACGGCTG
TCCTAGGGCCTGTGATTGCGGAACGAAACGCCATGAAGCAGAGCCAACTC
ATCCTATCTATGGGCGGGCTACCTCATTCTTTCCGCTTCCACTTTAGAGG
CACAGGCTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CAGGTTCACCTTATATCTGCACCCCTGTGCGATTCCACTAGGGCGGAGGCC
TCTCACAAACATGGTACTCCATTCTATCACACGCAGCCACAGTGAGAACCT
GGAGCGCTATGAGATATGGAGGACAAATCCCTTCTCTGAGTCTGCTGAGG
AGCTGCGAGACCGGGTCAAAGGAGTCTCTGCCAAGCCCTTTATGGAAACC
CAGCCTACTCTAGATGCATTACACTGTGACATCAGCAATGCCACAGAGTT
CTACAAAATCTTCCAGGATGAGATTGGAGAAGTGTTCCAAAGGCC---CA
AC---CCTACCCGGGAGGAAAGGCGAGGATGGAGGGCAGCCTTGGATAAG
CAGCTTAGGAGGAAGATGAAGCTTAAGCCTGTGATGAGGATGAATGGAAA
CTATGCCAGAAGGCTGATGACCAAGGAGGCTGTGGACGTGGTATGTGATT
TAGTGGCCACAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGGAGCTA
TACCTGCAGATGAAAACCTGTATGGCGTGCTACCTGCCCCACCAATGAATG
CCCTGACCAGCTATGCCAGTACAGCTTCAACTCTCAGCGCTTTGCTGATC
TCCTTTCCACTGCCTTTAAATATAGATATAATGGAAAAGATTACCAATTAC
CTGCACAAGACACTGGCCCATGTCCCAGAAATTATAGAGAGAGATGGCTC
CATCGGAGCCTGGGCCAGTGAAGGGAATGAGTCAAGCAACAAATCGTACA

CTTGCACTATGTCTCCTGGAGGAATACCATGGAGGAGAACACAGTCACCC
ACCCAGACAGACCCTGGGAACAAGGAGGCATAGTTCATTTGGAGAAGGAG
GAACAGGAGCGAATACTGGCCAGCACAGATGTCCCAGGCACCTGTGCTG
CCGCAATCCAGAGTGGCTCTTCAGGATCTACCAGGACACTTTGGTAGACA
TCCCTTCATTCTGGAAGTCATCAA---AGAGGGCTTGAAG---ACCAAG
CCTAGTTTGAAGAA---GGCCAAGGCGGCCAGCACAGTTCACCCAGGCCG
GGTCAGAGAAGCCAGTGTGACACCTCAGTGCAAACCAGCAGTGAGGCTA
AACTCACAGTTTCTGAGCAGATCCCATGGAATCTGAAGTATCTGAAGGTG
AGAGAAGTGAAGTACGAGGTG-----AAGAAAGACACCAGCAAGGG
GACATTGGAAGATCAAATCATCCAGGCGAACCAGCCCTGGAGGCCCTCG
GTAATGCCAAAACAGCGAGAAATGACAACCTCATCCCGTTTTGGAAAATTC
ATCCGAATTCACCTTTGGAAACAGCGGCAAGTTATCATCCGCTGACATTGA
GACATATTTGCTGGAGAAGTCCCGTGTACCTTTTCAGCTCAAGGCTGAGA
GGAACTACCACATCTTCTACCAGATCTTGTCCAATCAGAAGCCAGAGCTG
TTGGACATGCTGCTGATCACAACAACCCGTATGACTACTCCTACATCTC
TCAAGGGGAGGTAACAGTTGCATCAATCAATGACGCAGAAGAGCTGATGG
CCACTGACAGTGCCTTTGACGTGCTCGGCTTCACTCAAGAGGAAAAGATG
GGTGTTTATAAGCTGATTGGTGCCATCATGCACTATGGCAACATGAAGTT
TAAGCAGAAGCAACGTGAGGAGCAGGCTGAACCTGACACGACAGAGGCTG
CTGATAAATCAGCTTACCTGATGGCCCTGAACTCTGCAGACCTCATTA
GGGTTGTGCCACCCCAGAGTTAAGGTAGGGAATGAGTATGTTACCAAAGG
CCAAAGTGTGGACCAAGTCTACTATCCCAACAAGGAGGCTTTCAAGTGTG
AGGAGTGTGGCAAGCAGTACAACACCAAGCTGGGATATAAGCGACATGTG
GCCATGCACTCTGCCACAGCGGGGGATCTCACCTGCAAAGTGTGCATGCA
GAGCTACGAGAGCACGCCGTGCTCCTGGAACACCTCAAGAGCCACTCTG
GGAAGTCCCTCAGGTGGCACCAAGGAGAAAAAGCACCCGTGTGACCCTGT
GACCGTCTGTTTCTACACGCGGAAGGATGTGAGACGGCACATGGTGGTCCA
CACGGGCAGAAAGGACTTTCTGTGCCAGTACTGTGCCAGCGCTTTGGCA
GGAAGGACCACCTGACGCGTACGTAAGAAGAGCCACTCTCAGGAGCTG
CTGAAGATCAAGACGGAGCCCCCGGATATGTTAGGTCTGTTAGCTTCAGG
GTCACCACCTTGCTCTGTGAAGGAGGAGCTTAGCCCCATGATGTGCGGCA
TGGGTCCAAATAAAGACCCCATGATGGGAAAACCCCTCCCAAGTGGGGCC
CCTTTCCGATGAGCATGTACAACCCCCACCAT-----CTCCAGGCCAT
GTCCAATTCTGGGGTGGGCCACCCC-----CACCCCTCCTTGATGCCTA
GTCCCTGTCTGCAGCTATGGGTATGGGCTGTCAATGGAATATCTCATC
TATGCCTCTTTCTCATTCATGGGATGTTTACAAATCAGTGATGGATCAA
CATTGTGAACCTGCTGGCCAGTAACTCTCCGAGTGTCTCCTACGCTCTGA
CCCAGCAGAAATACTTCAGCAACTACAGCCCCGTGATTGGGTTTTACATT
TACGAGCCCATTGAGTACTGGAATTCACGGTGCAGGAGCATCTGAAGAC
TCTGGGTACGGATTCAACAAAATCTCCTGGATGGACAACCTTTTCCACT
ACCTGCGTGTGGTGAATGTGAGCGGTCACCAAGGGCGATTTTATCTCC
ATCCTCAAGGGTTCTTCTTGGCAGCCCGGAGTACCAGCACTTCACTGA
GGACATCATCTTCTCTAAGA---ACCGTGAGACTG-----ATGAGTATG
ACATTATTGCCTCACGAATGTATTTGGTGGCAAGGACCACCGAGAAGAAG
CGCGAGGAGGTGGTGGAGCTTTTGGAGAAGCTACGTCCGTTGATGCTGAT
CAACAGCATCAAATTCATTGCCTTCAACCCCACTTTTGTGTTTCATGGACC
GCTACAGCTCCTCTGTAATCTCGCCATCCTGACCTCAGGCTTTAGCGTT
CTCACTATCCTCATCCTCACTTTCTCCTGGTCATCAATCCCTTAGTGTA
CTTCTGGCTCATCCTGACAGTTACATCCTGGGAGCTGGNNNNNNNNNNNNNNNNNNNN-----







>Lates niloticus

AGCCTACTCATCCGAGCTGAACTTAGCCAACCTGGCGCACTCCTAGGAGA
CGACCAGATCTATAACGTAATCGTTACCGCCCACGCTTTCGTAATAATTT
TCTTTATAGTAATACCAATTATGATCGGAGGCTTTGGAAACTGACTTATC
CCACTAATAATTGGGGCCCCAGACATAGCATTCCCTCGAATAAAATAACAT
GAGTTTCTGACTCCTTCCACCATCTTTCCTGCTCCTCCTAGCTTCTTCTG
GAGTAGAAGCCGGAGCTGGAACCGGTTGAACTGTGTATCCACCCCTCGCT
GGGAACCTTGCCCATGCTGGAGCATCCGTCGACCTGACCATCTTCTCACT
TCACTTAGCAGGAATTTTCCTCAATTCTCGGGGCCATCAACTTTATTACTA
CCATCTTCAATATGAAGCCGGCTGCCGTATCTATGTACCAAATTCCTCTA
TTCGTCTGAGCAGTGTTAATCACAGCTGTCCTACTCCTTCTTTCCCTCCC
AGTCTTAGCTGCGGGTATCACAATACTTCTCACAGACCGAAATCTAAATA
CAGCATTTCTTTGACCCCGCCGGAGGAGAGACCCCATTTCTCTATCAACAC
CTA

-----GGACGATTACATTGTTGTGTTTCAGT
CGTTCAACAACGAGGCTTATACTTAATGAAGCAGAGCTAATCATGGCATT
GGCCAGGAGTTCCACATGAGAGTGGTCACAGTATCCCTGGAGGAACAGT
CTTTTCCCAGTATCATCCAGGTGATCAGCGGTGCTTCCATATTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGT
TGTGGTGGAACTGTTTCCCTTTGCTGTGAATCCGGAGCAGTACACTCCTT
ATAAAAACCCTTGCCCTCCCTCCCAGGCATGGACCTTCACTATATCTCCTGG
AGAAATACTAAGGAGGAAAACACCATCACCACCCAGACAGACCCCTGGGA
ACAAGGAGGTATTGCTCACTTGGAGAAGGAGGAGCGAGAGAGAATACTGG
CCAGTAAGGAGGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTATCAGGACACCTTAGTTGACATCCCCTCCTTCCCTAGAAAT

CCTCAA---AGAGGGCATGAAG---ACCAAGCCCAGCTTGAAGAA---GT
CAAAGCCTGCCAGCACAGTTCACCCAGGCCGAGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCACTAATGAGGCAAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACTTGAAGGTAAGAGAAGTCAAATACGAAG
TGTGGATCCAGAAAAAGATGCCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCTGCACTGGAGGCCCTTCGGCAACGCCAAAACGTTGAG
AAACGACAATTCGTCACGTTTTGGAAAATTTATTCGCATTCACTTTGGTA
CGAGTGGCAAACCTGTCATCTGCTGACATCGAGACGTACCTGCTGGAGAAG
TCACGCGTCACTTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTT
GCTTCCATCAATGACTCGGAGGAGCTGATGGCCACTGACAGCGCCTTCGA
TGTGCTTGGCTTCACTCCAGAAGAGAAGATGGCGGTCTATAAACTGACCG
GTGCCATCATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCTGAACCTGACGGGACGGAGGCTGCTGATAAATCAGCTTACCT
AATGGGGCTGAACTCCGCTGACCTCATCAAAGGCCTTTGCCACCCCAGAG
TCAAAGTGGGAAATGAATACGTCACCAAAGGCCAAAGTGTGGACCAAGTC
TACTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGTAAGCACTACAACACCAAGCTGGGATACA
AGCGTCATGTGGCCA
TGC ACTCTGCCACAGCAGGGGATCTCACCTGTAAAAGTGTGCATGCAGAGC
TACGAGAGTACACCTGTTCTTCTGGAGCACCTCAAAGCCACTCTGGGAA
GTCTTCCGGTGGTGCCAAGGAGAAGAAACACCCGTGTGACC ACTGTGACC
GTCGTTTCTACACACGGAAGGATGTCAGACGGCACATGGTGGTCCACACA
GGCCGAAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAA
GGACCACCTGACACGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGA
AGATCAAGACGGAGCCTCCGGATATGTTAGGCCCTTTAGCTTCTGGGTCA
CCACCTTGCTCTGTGAAGGAAGAGCTTAGCCCCATGATGTGCGGCATGGG
TCCCAACAAGACCCCATGATGGGCAAACGTTCCCCAGTGGGGCCCCTT
TTCCAATGGGCATGTACAACCCCCACCAT-----CTTCAGGCAATGTCT
AATACTGGGGTGGGTACCCA-----CACCCATCCCTAATGCCAGTTC
CTTATCTGCAGCTATGGGCATGGGCTGCCANN
NN
NN
ACTCTCCAAGTGTTCATATGCTCTGACCCAGCAGAAATATTTTCAGTAA
TACAGTCTGTGATCGGGTTTTACATTTATGAGCCATTGAATACTGGAA
CTCTACAGTTCAGGAGCACCTGAAGACCCTGAGTCATGGCTTCAACAAGA
TCTCCTGGATGGACAACCTTCTTCCACTATCTGCGAGTGGTGAATGTGAGT
GCATCAACCAAGAGTGACTTCATCACCATCCTTAAAGGCTCCTTCTGCG
CAGCCAGAGTACCAGCACTTCACTGAGGACATCATTTTCTCCAAGA---
ACAGTGATACTG-----ACGAGTATGATATTATCGCCTCACGGATGTAC
TTGGTGGCCCCGACGACGGAGAAGAAGCGAGAGGAGGTGGTGGAGCTTCT
GGAAAAGCTTCGTCCATTGATGCTAATCAACAGCATTAAGTTCATTGCCT
TCAATCCCACATTTGTGTTTATGGACCGCTACAGCTCCTCTGTCTCTCG
CCCATCCTGACCTCAGGCTTCAGTGTACTCACTATCCTCATCCTCACTTT
CTTCTGGTCATCAACCCATTGGAAAACCTCTGNN
NNNNNNNNNNNNNGGTTTTTACCAGTTTGA
GTGGCAGCCAGCTCTCAAGAATGTTTCCACGTCTTGCAACGTTGGCATT
TTAATGGGCTCTCTGGATGGGCTGCCTCGCTGGATGACTCCCCAGCCGAC
ACCATCACTCGGCGGTTTTGCTATGATGTGGCACTGGTGTGAGCATTA
AGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAG
ACAGTGTGACCTCAGGCTTTAGTGTGATGATCAAGGAATGTTGTGAC
GGCATGGGTGATGTGAGTAAAAGCACGGTGGAGGACCAGCCGTTCTG
GAAGGCTGTACGCTTCTCTTTCACCGTTATGTCTGTCTGTCTGTCTAGCAG
ACGATGACAGG-----CAGGAGGTT

TTCTCCAAGTCCCAAAGATATGGTGGTTCAGCTTTTGTACATGAGGA
GTTAGAGACAGAAGATGAGAGACTGGTTTACGAAGCTGCTCTCAACTGGA
TCAACTACGACCTGGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGA
ACAGTGCCTTTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAATGTGTC
CACAGAAGAGCTCATCAACACCCAGGCCAAGAGCAAGGAGCTGGTAGATG
AAGCCATCCGCTGCAAGCTGAAGATCCTGCAGAATGACGGCGTGGTCAAC
AGCCCGTGTGCCAGACCGAGAAAACTAGCCATGCCCTCTTTCTTCTGGG
AGGTCAGACTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATTCCCAAGGCTGATATTCCCAGCCCTAGGAAGGAGTTCAGC
GCCTGCGCAATTGGTTGCAAGGTATACATTACTGGTGGGA--GAGGGTC-
TGAGAATGGCGTGTCCAAAGATGTGTGGGTCTATGACACCGTCCATGAAG
AATGGTCAAAGGCGGCACCCATGCTCATTGCTCGGTTTGGCCATGGATCC
GCAGAGCTGAAACACTGCCTGTACGTCGTGAGAGGTCACACAGCTGCAAC
CGGTTGCCTTCCGGCATCTCCATCCGGAAGAGTACATTGTTGTGTTTCACT
CGCTCAACAACGAGACTGATATTGAATGAAGCAGAGCTAATCATGGCACT
GGCCAGGAATTCCAGATGAGAGTGGTACAGTATCCCTGGAGGACCAGT
CTTTCCCCAGTATTGTCCAGGTGATCAGTGGTGTACTATGCTGGTCACT
ATGCACGGAGCTCAACTTATCACCTCGCTCTTCCCTTCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGT
ACAAAACCTTGCCTCCCTACCAGGTATGGACCTTCATTATGTCTCCTGG
AGGAATACCAAGGAGGAGAACAATAATACCATCCAGACAGACCCCTGGGA
GCAAGGGGCATTGTGCACCTGGAGAAGGAGGAGCAGGAGAGAATCGTGA
GGAGCAAAGACGTCCCCAGGCATCTGTGCTGCCGCAACCCAGAGTGGCTC
TTTCGGATCTATCAGGACACTTTGGTGGACATCCCTTCCCTTCCCTGGAGGT
CCTGAA---GGAGGGCATGAAA---ACAAAGCCCATCTTAAAGAA---AT
CAAAGCCAGTACCACAGTCCACCCAGGCCGGGTAGAGAACCCAGTGT
CAGACCTCTGTACAAGCTGCTAATGAGGCCAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAGTACCTGAAGGTGAGGAGGTGAAGTATGAGG
TGTGGATCCAGAAAAAGACACCAGCAAAGGGACCTTGGAGGACCAGATC
ATCCAGGCCAATCCTGCTCTGGAGGCCTTTGGCAACGCCAAGACACTGAG
AAATGACAACCTCATCACGTTTTGGAAAATTCATCCGATTCACTTTGGTA
CCAGTGGCAAACCTTTCATCTGCTGACATTGAGACGTACCTGCTGGAGAAG
TCACGAGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCCAAGGAGAAGTAACGGTC
GCCTCCATTAACGACTCGGAGGAGCTGATGGCCACAGACAGTGCCTTCGA
TGTGCTCGGCTTCACTGCAGAGGAGAAGATGGGCGTCTACAAGCTGACGG
GTGCCATCATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCAGACGGCACTGAGGCTGCTGATAAATCCGCGTACCT
AATGGGGCTGAACTCTGCCGACCTCATCAAAGGGCTGTGCCACCCCGAG
TCAAGGTAGGAAATGAATACGTACCAAAGGTGAGAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGTCATGTGGCCATGCACTCTGCCACGG
CCGGCGACCTCACCTGCAAGGTGTGCATGCAGACCTACGAGAGCACGCCC
GTGCTCCTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTCCTCGGGCGGCAC
CAAGGAGAAGAAACACCCGTGCGACCACTGCGACCGTTCGCTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCGCAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGAAAGGACCATCTGACGCG
GCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCCGACATGCTGGGCCTGCTGGCGTCCGGGTCCGCGCCGTGCTCCGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGACTGCCAACAAGACCC
CATGATGGGCAAACCTTCCCTGGGGGGGCCCCGTTTCAGATGGGCATGT
ACAATCCCCACCAC-----CTCCAGGCCATGTGCAATTCCGGGGTGGGT

CACCCG-----CACCCGTCCTGATGCCCGGCCCCCTGTCTGCAGCCAT
GGGCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATGGGATGTTTACAAATTAGT
GATGGAT
CAAACATTGTGAACCTGCTGGCTAGTAACTCTCCGAGTGTTTCATATGCT
CTGACCCAGCAAAAATACTTTAGTAACTACAGTCTGTGATTGGCTTTTA
TATTTATGAGCCCATTGAGTACTGGAACCTCCACAGTGCAGGAGCACCTGA
AGACCTTGAGTACGGCTTCAACAAGATCTCCTGGATGGACAACCTTTTC
CATTACCTGCGGGTGGTGAATGTGAGTGCATCAACCAAAGCGACTTCAT
CACCATCCTCAAGGGCTCGTTCTGCGCAGCCCAGAGTACCAGCACTTCA
CTGAGGACATCATATTTTCTAAGA---ACCGCGAGACAG-----ACGAG
TACGAAATCATCGCCTCTCGGATGTACCTGGTGGCACGGACGACAGAGAA
GAAGCGTGAAGAGGTGGTGGAGCTCCTGGAGAAGCTTCGCCCCGTTGATGC
TGATCAACAGCATCAAATTCATTGCCTTTAATCCCACCTTTGTGTTTATG
GATCGCTACAGCTCATCCGTCTCGCCCATCCTGACCTCAGGATTCAG
TGTGCTCACAATCCTCATCCTCACTTTCTTCTGTCATCAACCCCTTGG
CAAACCTCTGGNN
NNNNNNNNNNCAGCCAGCTCTCAAGAATGTATCTACATCTTGCAATGTT
GGCATTATTAACGGGCTCTCTGGATGGACCTCCTCAGTGGATGATGCCCC
AGCTGACACCATAACGCGACGTTTTTCGCTACGATGTGGCTCTTGTGTCAG
CACTAAAGGACCTGGAGGAGGACATCATGGAAGGGCTGAGGGAGAATGAG
ATGGAGGACAGTGCTTGCACCTCAGGCTTCACTGTCATGATCAAGGAGTC
CTGCGATGGCATGGGTGACGTGAGTGAAGCACGGAGGAGGACCAGCTG
TCCCAGAGAAGGCTGTGCGTTTTCTCTTTCACTATCATGTCTATTTAGTG
ACGACTGAGG---AGGAG-----AA
AGAAGTCAGCATCTTACAGAGATGAAGCCAAACTCAGAGCTGTCCTGTA
AGCCCCCTCAGCCTCACATTTGTGGATGAGTCAGACCATGAGACACTGACA
GCCATACTGTGGCCTATTGTTGCAGAGCGTAATGCAATGAAAGAGAGCAG
GCTCATCCTGTCCATTGGTGGACTGCCTCGCTCCTTCCGCTTTCATTTCA
GAGGCACGGGATATGATGAGAAGATGGTACGTGAGATGGAGGGCCTCGAA
GCCTCAGGGTCCACTTACGTCTGCACCTTTTGTGACTCAGGTCGAGCGGA
GGCCTCTGAAAACATGGTGTTCACACCATAACTCGGAATCACGAAGAGA
ACCTAGAGCGATATGAGATATGGAGAAGCAACCCCTTTTCTGAGTCAGCA
GATGAGCTTCGAGACAGAGTCAAAGGGGTCTCCGCCAAACCCCTCATGGA
GACCCATCCCACGATGGATGCATTACACTGCGACATAGGCAATGCCACAG
AGTTCTACAAAATCTTTCAGGATGAGATCGGGGAGGTGTTTGAAGGCC-
--CAAC---CCCAGCCGAGAGGAGCGCCGACGCTGGAGGGCAGCCCTGGA
TAAACAGCTGAGGATGAAGCTGAAGCTCAAACCGGTGATGAGGATGAATG
GGAACATATGCACGCCGCTAATGACGACAGAGGCTGTGGAAGCAGTGTGT
GAGCTGGTGCCTCAGAGGCAAGGAGGGAGGCCCTGAGGGAGCTGATGGA
GCTCTACCTCCAGATGAAGCCCGTGTGGCGTTCCAGCTGCCAGCCAGGG
AGTGCCCCGACCAGCTGTGCCGTTACAGCTTCAACTCCCAGCGCTTTGCT
GACCTCCTGTCTTCCACCTTCAAATATAGGTACAAAGGAAAGATACCCAA
TTACCTGCACAAGACCCCTGGCCATGTGCCTGAAATCATAGAGAGAGATG
GACCCATAGGAGCTTGGGCCAGTGANNNNNNNNNNNNNNNNNNNNNNNTCGTACACCATCGAGATGGGTCC
CT
TGGGTCCCAGGTGGAAAGATAGCCCTCAGCCTTTCTCCTGCTCCATTGAA
GACCCAACGAAACAGACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTA
CCGGGTGACGCCGAGCCACACGGGGCACCCAGTCTACAGACGCTACAAAC
ACTTTGACTGGCTGTACAACCGCTGCTGCACAAGTTCACTGTGATCTCC
GTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTCGAGGAAGACTT
CATCGAGAAGCGCAAGAGGCGACTGATACTGTGGATGAACCACATGACCA
GCCACCCGGTCTCTCCAGTATGAAGGCTTCGAGCACTTTCTGATGTGC
GCTGATGACAAGCAGTGGAAACTGGGCAAGAGACGGGCGGAGAAGGACGA

AACCCTGCCCTGGAGGCTTTTGGCAATGCCAAAACATTGCGAAATGACAA
TTCTTCGCGGTTTTGGAAAATTCATCCGCATTCATTTTGGAAACAAGTGGCA
AATTGTCTTCTGCTGACATAGAGACTTATCTGCTGGAAAAATCACGTGTC
ACCTTTCAACTTAAAGCGGAAAGGAAGTATCACATTTTTTTTTCAGATATT
GTCCAATCAAAGCCAGAGTTGCTGGACATGCTGTTAGTTACCAACAATC
CATATGATTATTCTTACATCTCCCAAGGAGAGGTAACAGTTCTATCCATC
AATGATTCTGAAGAACTTATGGCCACTGATAGKGCATTTGATGTGCTTGG
ATTTTCTTCAGAGGAAAAGAGTGGGGTCTATAAAATGACAGGTGCCATCA
TGCACATGGCAACATGAGGTTCAAGCAAAGCAGCGTGAGGAGCAAGCA
GAACCTGATGGCACAGAAGCTGCTGACAAGGCTGCCTACCTAATGGGACT
GAACTCAGCAGATCTCTTGAAAGGACTTTGTCAACCAAGAGTCAAGGTTG
GAAATGAGTATGTAACCAAGGGCAAAGTGTAGATCAAGTATACTAC---

-----TACCTGATCTACGCCTCCTTCTCCTTCATGGGCTGCC
TGCAGATCAGCGACGGCTCCAACATCGTCAACCTGCTGGCCAGTAATTTCG
CCGAGCGTGTCTACGCGCTCGCACAGCAGAAGTACTTCAGCAACTACAG
CCCCGTGATCGGCTTTTACATCTACGAGCCATCGAGTACTGGAACCTCCA
CCGTGCAGGAGCACCTCAGGACGCTGGGTGAGGCTTCAACAAAATCTCC
TGGATGGACAACCTTCTTCCACTACCTGCGGGCGGTGAACGCCAGCGCCTC
CACCAAGGCCGACTTCATCGCCACGCTCAAGGTCCTTCTCCTGCGTAGCC
CGGAGTACCAGCACTTCACGGAGGACATCATCTTCTCCATGA---ACGGC
G-----AGGAGTACGACATCATCGCGTCCAGGATGTACCTGGT
GGCGAGGACCACCGAGAAGACGCGGGAGGAGGTGGTGGAGCTCCTGGAGA
GGCTGAGGCCCTGTCTCATCAACAGCATCAAGTTCATCGTCTTCAAC
CCCACCTTCGTCTTCATGGACCGATAACAGCTCGTCCGTGGTGTGCGCCAT
CCTGACGTGCGCCTTCAGCGTGCTCACCATCCTCATCCTCACCTTCTTCC
TGGTCATCAACCCGCTGGGGAACCTCTGGCTGATACTGACCATCACCTCC
GTGGAGCTCGGCGTCTGGGCCTGATG-----

-----GC
CGTGCGCTTCTCCTTCACACTCATGTCTATCTCCGTCCGGGCCGAAGGTC
AGGAG-----CAGCCAGTCACGGTC
TTCAGGGAGGCCAAGCCCAACTCAGAACTCTCCTGCAAGCCTATGTGCCT
GATGTTTCGTGGACGAGTCCGACCACGAGACGCTCACCGCCATCCTGGGGC
CCGTGGTTGCCGAGCGGGACGCCATGAAGGAGAGCAGACTCATCCTCTCG
CTGGGTGGCCTCCAGCGCTCTTCCGCTTCTGTTCCGGGGCACGGGCTA
TGATGAGAAGATGGTGCAGGGAGATGGAGGGGCTGGAGGCCTCGGGCTCCT

NNNNNNNNNNNNNNNNNNNNNNNNNGGTGGCGTTGGGGA
TCAACCCGTTTCGCGGACGGCATGGGCGCCTTCAAAATAAACACGGCTCC
CACGACATCGGCTCCGG---GCAGACGGCGTCTCTCGCAGGCG---CC
CGGCTAC---GCGGCGGCCGCCCTGGGG---CACCACCA-----CCACC
CGACCCACGTCAGCTCG---TACTCCACGGCAGCCTTCAACTCCACCAGG
GACTTTCTGTTTCAGAAACAGGGGCTTCGGAGACGCCACCAG-----
---CGCCCAGCACAGTTTGTTCGCCTCCGC-----GGGAAGTTT---C-
-----GCGGGGCCACATGGACACTCGGATGCCGCGGGGCACCTGCTCTTC
CCCCGGCTGCACGAA---CAAGCCGRAGCCACGCGTCTCGAACGTCGT
CAACAGCCAGATGCGACTGGGCTTTTCGGGGGACATGTACGGACGGGCGG
ACCAGTACGGCCACGTCACGAGCCCGCGGT---CCGACCACTACGCGTCG
ACCCAGTTGCACGGCTACGGCCCTATGAACATGAATATGGCCGCG---CA
CCACGGAGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATCAAGCAAG
AGCTCATCTGCAAGTGGATCGAGCCGGAGCAACTGTCGAACCCCAAGAAG
GCGTGCAACAAACTTTCAGCACGATGCACGAGCTCGTCACCCATCTGAC
GGTGGAGCATGTGGGGGGGCGGAGCAGGCCAACCACATATGCGTCTGGG
AGGACTGCGCTCGCGAGGGGAAGCCGTTCAAAGCCAAATACAAACTTGTG
AATCATATCAGAGTACACACTGGAGGAAAACCCCTTCCGTGTCCCTTTNNNNNNNN--

>Lepomis macrochirus

AGCCTACTCATTTCGAGCAGAGCTCAGCCAACCAGGCGCTCTCCTGGGCGA
CGACCAAATTTATAACGTAATTGTGACAGCACATGCATTTCGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGTGGCTTTGGCAACTGACTTGTC
CCATTAATAATTGGAGCCCCGATATAGCATTCCCCGAATAAATAACAT
AAGCTTTTGACTTCTCCCCCCTCTTTCCTTCTTCTCTCGCCTCCTCCG
GGGTGAAGCCGGGGCTGGCACAGGATGAACCGTTACCCCCCTCTCGCT
GGTAACCTAGCCCATGCAGGAGCATCAGTCGACCTTACTATCTTCTCCCT
GCATCTCGCAGGGGTCTCTTCAATCCTGGGAGCTATTAATTTTATTACCA
CAATTATTAACATGAAGCCCCCTGCTATTTCCAGTACCAGACCCCTTTA
TTTGTCTGATCAGTCCTAATTACTGCCGTCTTACTCCTGCTTTCCCTTCC
AGTCCTTGCTGCAGGCATCACAATACTACTTACAGACCGTAATCTAAACA
CCACTTCTTTGACCCAGCGGGGGCGGGGACCCAATCCTCTATCAGCAC
CTG-----

-----CATCACTCAA
CAGGTGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTCGCA
GATGGGATGGGCGCCTTCAAATAAACACAGCTCCACGATATTGGCTC
CGG---ACAAACGGCGTTTTCTCCAGGGC---CCCGGCTAC---GCGG
CAGCCGCTCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGG
TCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCCG
AAATCGGGGCTTTGGGGACGCCACCG---GGCGCAACACA
GTTTGTTCGCCTC-----CGGAAGTTT---C-----GCAGGGCCA
CATGGACATTTCGGATGCAGCGGGGCACCTGCTCTTCCCAGGGCTCCACGA
G---CAAGCTGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGC
GGCTGGGCTTCTCGGGGGACATGTACGGACGCGCCGACCAGTATGGCCAC
GTTACAAGCCCGCGGT---CCGACCACTACGCTTCGACCCAGCTGCACGG
CTATGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGG
CCTTCTTTTCGATACATGAGGCAGCCCATCAAACAAGAGCTCATCTGCAAG
TGGGTTCGAGCCGGAGCAGTTGACGAATCCCAAAAAGGCGTGCAACAAAAC
TTTTAGCACGATGCACGAGCTTGTGACCCATCTGACGGTGGAGCATGTGG
GGGGACCGGAGCAGACCAACCACATCTGCTTCTGGGAGGAATGCGCCAGA
GAAGGAAAGCCATTCAAAGCCAAATACAACTTGTAATCATATCAGAGT
ACACACCGGAGAAAAGCCCTTTCCGTGTCCGTTCCCCGGCTGTGGCAA
>Lestidiops jayakari
AGTCTTCTTATCCGAGCGGAAGTCAACCCGGGGCCCTTGGGTGA
CGACCAGATTTACAACGTAATCGTCACAGCTCATGCCTTCGTAATAATTT

TCTTCATGGTCATGCCCATCATAATCGGCGGCTTCGGGAACTGGCTTATC
CCACTGATAGTCGGAGCCCCTGATATGGCTTTCCCTCGAATAAAACAACAT
AAGCTTCTGACTGCTCCCTCCGTCTTCCTGCTCCTTCTGTCATCCTCCG
CCGTAGAGGCGGGCGCAGGGACCGGGTGAACGGTTTATCCCCCCTTGCC
AGCAATCTGGCGCACGCGGGTGCCTCTGTGACCTGACCATCTTCTCCCT
TCACCTGGCCGGCATTTTCGTCCATCCTCGGAGCCATCAACTTCATCACGA
CCATCATTAACATAAAAACCCCTGCCATCACCCAGTATCAAACGCCCTC
TTTGTGTTGAGCCGTTCTTATTACTGCTGTGCTTCTCCTTCTCTCCCTGCC
TGCTTTAGCAGCAGGCATTACAATGCTTCTTACAGACCGAAACCTAAACA
CGACCTTCTTTGACCCCGCTGGGGGCGGCGACCCCATCCTATATCAGCAC
CTCTTCTGGTTCTTCGGCCACCCGGAAGTCTACATTTCTCATCTTACCCGG
CTTCGGAATAATCTCCCACATCGTTGCCTACTATTCAGGGAAAAAAGAAC
CTTTCGGGTATATAGGCATAGTCTGAGCAATAATAGCAATCGGCCTCCTC
GGGTTTATTGTCTGAGCCACCTCATGTTACGGTCGGGATAGACGTGGA
CCCACGAGCATATTCCTCGAGAGGAACCTGCACCCATCCAAGTGCCTTGG
CATGCTGCTACTGTCAGATGCCACCAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGTCTCAGCAACTTCCCTGCCATCTGCAAGACGGAAGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCATGAAGA
GCTGGAGACGGAAGATGAAAGACTGGTTTATGAGGCTGCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTGCCCGAGCTGTTGAGA
ACCGTACGCCTGGCCTTGCTTCCCGCCATCTTCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAGGCAAAGAGCAAGGAGTTGGTGGACG
AGGCCATCCGTTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGTTAAC
AGTCCCTGTGCCCGGCCAGAAAGACCAGCCACGCCCTTTTCTACTGGG
AGGGCAGACTTTCATGTGTGACAAGCTGTATTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTGTACGTACAGGCGGGA--GAGGCTC-
GGAGAACGGTGTATCTAAAGATGTGTGGGTCTATGACACCGTCCACGAGG
AGTGGTGAAGGACAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTCAAACACTGCCTCTACGTGGTTGGAGGACACACAGCAGCCAC
TGGCTGCCTCCAGCCTCTCCGTCTGGATGAGTACATCGTAGTGTTCAGT
CGTTCCACAACGAGGCTGATTCTGAACGAAGCGGAGCTGATCCTGGCGCT
GGCCCAAGAGTTTCAGATGAGGGTGGTCACTGTGTCCCTGGAGGAACAGT
CTTTCACAGCATCGTACAGGTCATCAGTCGGGCCCTCCATGTTGGTTAGT
ATGCACGGAGCTCAGCTCGTCACCTCCCTCTTCTGCTAGAGGAGCCGC
CGTGGTAGAGCTTTTCCCCTACGCTGTGAACCCGGAACAGTACACCCCAT
ACAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCCCTGG
AGGAACACTATTGAGGAGAACACCGTCAACCATTCAGACAGACCTTGGGA
CCAAGGAGGCATACCCATTTGGAGAAGGAAGAGCAGGAGAGAATCCTAG
CCGGCAAGGATGTCCCAGGCACCTATGCTGCCGCAACCCGGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTAGACATCCCGTCCCTCCTGGAAGT
CCTCAA---GGAAGGCCTGAAG---ATGAGGCCAGGCTTGAAGAA---GT
CCAGGCCGGCCAGCACGGTTCACCCGGGCGGGTCCGAGAACCCAGTGC
CAGACTTCGGTTCAGGCCACCAACGAGGCTAAACTCACAGTGTCTGGCA
GATCCCGTGAACCTCAAGTACCTGAAGGTGCGAGAGGTGAAGTACGAGG
TATGGATCCAGAAAAGGACACAAGCAAGGGAACCCCTGGAGGATCAAATC
ATTCAGGCAAACCTGCACTGGAGGCTTTTGGTAATGCCAAAACAATCAG
GAATGATAATTCTCCCGTTTTGGAAAATTCATCCGAATCCACTTTGGAA
ACAGTGGTAAACTGTCTCTGCGGACATTGAGACCTACCTGCTGGAGAAG
TCACGGTGCACCTTTCAGCTTAAGGCAGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCGAGCAAAGCCAGAGCTTCTGGACATGCTGTTGATCA
CCAACAACCCCTATGACTACAGCTACATCTCCCAAGGAGAAGTAACTGTA
GCATCCATCAATGATTCCGAAGAGCTGATGGCCACTGACAGTGCCTTTGA

TGTGCTTGGCTTCACGCAAGAGGAGAAGATGGGAGTCTATAAGTTGATAG
GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCAAAGCAGCGAGAG
GAACAGGCTGAGCCTGACGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCAGCAGACCTAATCAAGGGACTCTGCCATCCCAGAG
TCAAGGTTGGGAATGAGTATGTCACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGC GGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGTCATGTGGCCATGCACTCGGCCACGG
CGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCGTCGGGTGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCCGCTTCTACACGC
GCAAGGACGTGCGGCGGCACATGGTCGTCCACACGGGCCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGACCACCTGACGCG
GCACGTGAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGACATGCTGGGCCTCCTGGGCACCGGCTCGCCGCCTTGCTCCGTC
AAGGAGGAGCTGAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCCAGCGGGACGCCCTTCCCCATGGGCATGT
ACAACCCCCACCAC-----CTGCAGGCCATGTCTAACCCCGGGGTGGGC
CACCCG-----CACCCCTCCCTCATGCCCGGCTCCCTGTTCGGCGGCGAT
GGGCATGGGCTGCCACATGGAGTATCTCATCTATGCTTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGACGGGTGCAACGTAGTGAATTTGCTGGCG
AGTAACTCTCCGAGCGTCTCGTACGCTCTGACGCAGCAGAAGTACTTCAG
TAACTATAGCCCCGTGATYGGGTTTTACATCTACGAGCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAT
AAGATCTCTTGGGTGGACAATTTTCATCCACTACCTGCGGGCGGTGAACCT
GAGCGCGTCGACCAAGGCCGACTTYGTTGCCGTCTCAAGGGCTCCTTCC
TGCGGAGCCCGGTGTACCAGCACTTACAGAGGACATCATCTTCTCCAAG
A---GCCACGAGAACA-----ACGAGTACGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCCACGGAGAAGAGGGCGGAGGATGTGGTGGAGC
TGCTGGAGAAGCTCCGGCCGCTGATGTTGATCAACAGCATCAAGTTCATT
GCCTTCAACCCACGTTTCGTCTTCATGGACCGCTACAGCTCCTCGGTCAT
CTCGCCCATCCTCACCTCGGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CCTTCTCCTGGTCATCAACCCGCTGGGGAACCTGTGGCTCATCCTGACG
GTCACGTCCGTTGGAGCTGGGCGTGCTGGGCCTGATGGGCTACCACACATT
CGAGTGGCAGCCGGCCCTGAAGAACGTGTCCCCATCCTGCCACGTGGGGA
TCATCAACGGGCTTTCGGGTGGGCCACCTCGGTGGACGACGTCCCTGCT
GACACCATCACCCGCCGTTTTCGCTACGATGTGGCGCTCGTATCGGCCCT
GAAGGACCTAGAGGAGGACATCGTGGAAGGACTGAGGGAGTGTGGGCTGG
AAGACAGCACTTGTACCTCAGGCTTCAGCGTTATGATCAAGGAATCCTGC
GATGGCATGGGAGACGTCAGCGAGAAGCACGGCGGGGGGCCACCGGTGCC
CGAGAAGGCCGTGCGTTTTCTCCTTACCCTCATGTCCGTCTCCGTCCAGG
CTGACGGAGAAGAG-----GAGGAG
GCTGTGCTCTTCAGGGAGCCAAAGCCCAACTCCGAGCTGTCTGTAAAGCC
CCTGTGCCTGATGTTGTGGACGAGTCTGACCACGAGACGCTCACCGCCG
TCCTGGGGCCTTTGATCGCGGAGAGGAACGCGATGAAGGAAAGCCGMCTC
ATCCTCGCGATGGGAGGCCTCCCGCGCTCCTTCCGTTTCCACTTCAGAGG
CACGGGCTACGATGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGGCCT
CGGGCTCCACCTATACTGCACTCTTTGTGACTCCACTCGGGCAGAAGCC
GCTCACAACATGGTGCTCCACTCCGTCACCCGCAGCCACGAGGAGAACCT
GGAGCGCTACGAGATATGGAGGACCAACCCCTTCTCGGAGTCCGCCGTGG
AGCTGCGAGATCGGGTCAAAGGGGTCTCCGCCAAACCGTTCATCGAGACC
CATCCGACTATGGACGCGTTGCATTTGTGACATAGGTAATGCCACTGAATT
CTACAAGATCTTCCAGGATGAGATCGGGGAGGTGTTCCAGAAGGC---CA
AC---CCAAGCCGGGAGGAGCGGCGCAGCTGGCGGGCAGCCCTCGATAAA

>*Lestrolepis japonica*
AGCCTGCTAATCCGAGCAGAATAAGCCAACCGGGGGCCCTATTGGGCGA
CGACCAGATTTATAATGTCATCGTTACAGCCCACGCTTTCGTGATAATCT
TCTTCATAGTCATGCCCGTTATAATTGGGGGCTTCGAAACTGACTAATC
CCACTAATAATCGGAGCCCCTGATATGGCTTTCGCCGAATAAATAACAT
GAGCTTCTGACTTCTTCCCCCTCTTTTCTCCTACTTCTTGCCCTCCTCTG
CCGTCGAAGCTGGGGCCGGCACCGGATGAACAGTTTACCCCCCTCTTGCG
AGCAACTTGGCTCATGCAGGTGCTTCTGTGGACCTGACTATTTTTTCCCT
TCACTTAGCCGGGATTTTCATCGATCCTAGGAGCCATTAATTTTATTACCA
CAATCATTAACATAAAAACCTCCAGCTATCACGCAATATCAAACCCCTCTA
TTCGTGTGAGCCGTTTTAATCACCGCTGTCTCCTCCTCCTCCTCCTCCTCC
TGTTCTAGCCGCAGGGATCACAATACTACTCACAGACCGGAACTTAAACA
CAACTTTCTTCGACCCGGCAGGAGCGGCGACCCAATTCTGTACCAACAC
CTGTTTTGATTCTTTGGCCACCCAGAGGTATATATTTTGTGATCTTACCCG
ATTTGGGATAATCTCTCACATTGTGGCATACTACTCAGGAAAAAAGAAC
CTTTTGGGTATATGGGTATAGTATGGGCAATAATAGCAATTGGCCTCCTG
GGGTCATCGTATGAGCCCACCACATATTTACAGTGGGGATAGACGTAGA
CACACGAGCATATTCCTCGAGAGGAACCTGCACCCATCCAAGTGCCTTGG
CATGCTGCTACTGTCAGATGCCACCAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAAGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTCCAGCTTCTGTCCCATGAAGA
GCTGGAGACTGAAGATGAGAGACTGGTTTATGAGGCTGCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTGCCAGAGCTGTTGAGA
ACCGTACGCCTGGCCTTGCTTCCCGCCATTTTCTCATGGAGAACGTCTC
CACGGAGGAGCTGATCAATGCCAGGCAAAGAGCAAGGAGTTGGTGGATG
AGGCCATCCGTTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTCAAC
AGTCCCCTGTGCCCCGCCAGAAAGACCAGCCACGCCCTTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTGTACGTACAGGGCGGGA--GAGGCTC-
AGAGAACGGTGTATCTAAAGATGTGTGGGTCTATGACACCGTCCACGAGG

AGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCCGAGCTCAAACACTGCCTCTATGTGGTTGGAGGGCACACAGCAGCCAC
TGGCTGCCTCCCAGCCTCTCCGTCT-----

-----AAAAGGGATACAAGCAAGGGAACCTTGGAGGATCAAATC
ATTGAGGCAAACCTGCACTAGAGGCTTTTGGGAATGCCAAAACATTGAG
GAACGATAATTCCTCCCCTTTTGGAAAATTCATCCGAATCCACTTTGGAA
CCAGTGGTAAACTGTCTCCTGCAGACATTGAGACCTACCTGCTGGAGAAG
TCACGGTGCACCTTTCAGCTTAAGGCAGAGAGGAACCTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGTTGATCA
CCAACAACCCCTATGACTACAGCTACATCTCCCAAGGAGAAGTGACCGTA
GCATCCATCAATGATTCCGAAGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACGCAAGAGGAGAAGATGGGAGTCTACAAGTTGATAG
GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCAAAGCAGCGAGAG
GAACAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCAGCAGACCTAATCAAGGGACTCTGCCATCCTAGAG
TCAAGTTGGGAATGAATATGTCACCAAAGGCCAGGTTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCCTCAAGTGCGAAGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACAG
CGGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACCCCG
GTGCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGGGCGC
CAAGGAGAAGAAGCACCCTGCGACCCTGCGACCCTGCGGCCGCTTCTACACGC
GGAAGGACGTCCGGCGGCACATGGTCGTCCACACGGGCGGGAAGGACTTC
CTGTGCCAGTACTGTGCCCAGCGCTTCGGCAGGAAGGATCACCTGACGCG
GCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATTAAGACGGAGC
CTCCGGATATGCTGGGTCTCCTGGGCTCCGGGTCCGCGCCTTGCTCCGTC
AAGGAGGAGCTGAGCCCCATGATGTGCAGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCCTTTCCCAGCGGGACCCCTTCCCATGGGCATGT
ACAACCCCCACCAC-----CTCCAGGCCATGTCTAATCCCGGGGTGGGA
CACCC-----CATCCCTCCCTTATGCCCCGGTCCCTGTTCAGCAGCTAT
GGGCATGGGCTGTCATATGGAA-----

CGGTAGAAGCCGGAGCAGGGACAGGATGAACAGTTTACCCTCCTCTAGCA
AGCAACCTTGCCCATGCAGGAGCTTCCGTAGACCTAACTATTTTCTCCCT
TCACCTCGCTGGGATTTCTCAATCTTGGGGCAATCAACTTCATCACAA
CCATTATCAACATGAAACCCCCAGCTATCTCCCAGTACCAAACACCCCTT
TTTATCTGGGCTGTCTTATTACAGCTGTGCTCCTTCTCCTCTCCCTTCC
CGTCTTAGCCGCAGGAATTACAATACTACTTACAGACCGAAACCTAAATA
CCACCTTCTTTGACCCCGCTGGAGGGGGAGACCCCATTTCTTATCAACAT
CTCTTCTGATTCTTTCGGCCACCCCGAAGTCTACATTTTGATTCTTCCAGG
CTTTCGGCATGATCTCCACGTCGTCGCCTACTACGCGGGCAAAAAAGAAC
CCTTCGGCTACATGGGCATGGTCTGAGCAATGATGGCTATTGGACTTCTA
GGCTTCATCGTTTTGAGCCACCACATGTTTACAGTCGGAATGGACGTTGA
CACTCGTGCCTATTCTATGAGAGAAATCTGCACCCGTCTAACTGCTTGGG
CATGCTGCTGCTGTCMGACGCCACACCTGCACCAAGCTCTMCGAGCTYT
CCTGGGGCATGTGWCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTTGCAGCTGCCCAAGGACATGGTGGTGCAGCTGCTGTCCACGAGGA
GCTGGAGACGGAGGACRARAGGCTGGTGTACGAGGCGGCTCTCAGCTGGG
TCAACTACGACCTGGAGAGGAGGCACTGCCAGCTGCCCGAGATGCTGAGG
ACAGTCCGCCTAGCCCTGCTGCCCGCCATCTTCCCTCATGGAGAACGTATC
GACGGAAGAGCTGATCAACGCCAGGTCAAGAGCAAGGAGCTGGTGGACG
AGGCTATCCGCTGCAAGCTGAGAATCCTGCAGAACGAAGGCGTGGTCAAC
AGCCTGTGCGCCCGGCCAGGAAGACCAGCCACGCCCTGTTTCTGCTCGG
TGCCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCAGACATCCAAGCCCCAGAAAGGAGTTCAGY
GCCTGTGCCATCGGCTGCAAGGTCTACGTACCCGGGGGAA--GAGGCTC-
GGAGAACGGGTGTCCAAGACGTGTGGGTYTAMGACACCATCCAGGAGG
AGTGGTCCAAGGCGGCGCCCATGCTCATCGCCAGGTTTCGGCCACGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTSGTGGGGGGGCACACAGCTGCCAC
GGGC-----GGAAGAGTACATAGTGGTGTTCAGC
CGTTCCATTAACAGGCTGATTCTTAACGAGGCAGAGCTCATTCTGGCCCT
AGCACAGGAGTTCAGATGAAGGTTGTGACTGTGTCTCTGGAGGAGCAAT
CCTTTGCTGCTATAGTGAAGGTGGTCAGTGAGGCCACCATGTTAGTCAGT
ATGCACGGAGCCCAACTGGTGTCTCTCTTTTCTGCAAGAGGGGCGC
AGTGGTTGAGCTTTTCCCCTATGCAGTGAACCCAGAGCAGTACGCTCCCT
ACAAAACCTTAGCCTCACTCCCTGGCATGGACTTGCAATGTGGCCTGG
AGGAACACGATAGAGGAGAATCGCTGGCCTACCCCGAGAGGCCCTGGGA
GCAGGGGGGCATACCCACTTGGAGAAGGACGAGCAAGATCGCATCCTGG
CCAGCAAAGAGGTACCGAGGCACCTGTGCTGTGCAACCCAGAGTGGCTC
TACCGTATCTACCAGGACACCATAGTGGACATCCCGTCTTTACTGGACAC
CCTCAG---AGAGACCTGAAA---ACCAGGCCAACCTGAAGAA---GG
CCAAGCCTGCCAGCACGGTTCACCCGGGCCGGGTGAGAGAGCCCCAGTGC
CAGACCTCAGTCCAGGCCACCAACGAGGCCAAGCTCACAGTGTCTTGGCA
GATCCCCTGGAACCTGAAGTACCTGAAGGTCCGGGAGGGAAATA-----
-----AAGAGGGATGCAAGCAAGGGAACCCTAGAGGATCAAATC
ATCCAGGCTAACCTGCACTCGAGGCTTTTGGTAACGCCAAAACATTTGAG
AAATGATAATTCATCCCGTTTTGGCAAATTCATCCGTATTCATTTCCGAC
AAAGTGGCAAATTTGCTCTGTCAGATATAGAGACGTATCTGCTTGAGAAG
TCACGTTGTACCTTTCAGCTGAAATCAGAGAGGAACTACCATATCTTCTT
TCAGATCTTGTCCAATGAAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAATCCATATGACTACGCCTACATCTCCCAAGGAGAGGTGACAGTA
GCATCCATCAACGATTTCTGAGGAGCTGATAGCCACTGACAGTGTCTTTGA
TGTGCTGGGCTTTACTGCAGAGGAGAAAATGTCCGGTCTACAACTGACAG
GTGCCATAATGCACTATGGCAACATGAGGTTCAAGAACAAGCAGCGGGAG
GAGCAGGCAGAGCCTGACGGTACAGAGGCTGCTGACAAGTCAGCTTATCT

GATGGGACTGAACTCTGCAGATCTCATTAAAGGACTCTGCCATCCAAGAG
TCAAGGTTGGCAATGAGTATGTCACCAAAGGTCAGAGTGTGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTA
CAATACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCAGCCACGG
CGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCC
GTGCTCTTGGAGCACCTCAAGAGCCACACGGGGAAGTCGTGAGGAGGCGC
CAAGGAGAAGAAGCATCCATGCGACCCTGCGATCGCCGCTTCTACACAC
GGAAGGACGTCCGGCGGCACATGGTGGTGCACACGGGCGGAAGGACTTC
CTGTGCCAGTACTGCGCGCAGCGCTTCGGCCGCAAGGACCACCTGACGCG
CCATGTGAAGAAGAGCCACTCACAGGAGCTGCTAAAGATCAAGACGGAGC
CTCCAGACATGCTGGGCCTGCTGGGCTCTGGCTCGCCGCCCTGCTCCATC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAGGACCC
CATGATGGGCAAACCCCTTCCCCAGCGGGACCCCTTCCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAGTCCAGGGGTGGGG
CACCCC-----CACCCCTCCCTGATGCCAGCTCTTTGTGTCAGCGGCCAT
GGGCATGGGCTGCCACATGGAGTACCTGATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGATGGGTCAAACATCGTGAACCTGATGGCG
AGTAACTCTCCGAGCGTGTCTTTTCGCGCTCACCCAGCAGAAGTACTTCAG
TAACTACAGCCCCGTTATTGGGTTCTACATTTACGAACCCATCGAGTACT
GGAACGCCACGGTGCAGGAGCACCTGAAGACGCTCAGTCACGGCTTCAAC
AAGATCTCCTGGATCGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGT
GAGCGCTCGACCAAGAGCGACTTCATCAGCATCCTGAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCAACGAGGACATCATCTTCTCCAAG
A---ATCGCGAGAGCG-----ACGAGTACGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCACCGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TGCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTCGTCTTCATGGACCCTACAGCTCCTCGGTCAT
CTCGCCCATCCTTACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CGTTCTTTCTCGTCATCAACCCGCTGGGGAACCTTCTGGCTCATCCTGACG
GTCACGTCCGTGGAGCTGGGCGTGCTGGGTCTGATGGGCTACCACCCCTT
CGAGTGGCAGCCGGCCCTCAAGAATGTGACCACGTCATGCCATGTGGGCA
TCATGAATGGGCTCGCAGGATGGACAGCCTCAGTGGATGATGCCCTGCR
GATAACATAACCCGGCGGTACCGCTATGACGTGGCCCTGGTGTGCGCCCT
GAAGGATCTGGAAGAGGACATCATGGATGGGCTACGGGAGCGAGGGCTGG
ACGACAGCGCCTGCACCTCTGGCTCAATGTGATGATCAAGGAGTCTGC
GATGGCATGGGGGACGTCAGTGAGAAACATGGTGGTGGGCGCCGGTCCC
CGAGAAGGCTGTGCGCTTCTCCATTACCGTCATGTCTGTCTCTGTCCAGG
CTGAAGGAGAGGAG-----GAGGCG
GTCACCATCTTCCGGGAGCCCAAGCCAACTCTGAACTGTCCTGTAAACC
ACTGTGCTTGATGCTTGTGATGAATCGGACCACGAGACACTCACGGCAG
TCCTAGGGCCCTTGGTGGCCGAGCGGAATGCTATGAAGCACAGCCGGCTC
ATTCTGTCCCTGGGTGGGCTCCCTCGCTCCATCCGCTTCCACTTCAGAGG
AACGGGTTACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCT
CTGGCTCCACCTATATCTGCACCTTGTGTGACTCCACCAGGGCAGAGGCC
TCCCACAACATGGTGTCTCACTCCATCACCCGCAGCCACGATGAAAACCT
GGAGCGCTACGAGTGTGGAGGACCAACCCCTTCTCGGAGTCCGCAGAGG
AGCTGCGGGACCGGGTCAAAGGTGTCCTTGCCAAGCCCTTATGGAGACC
CAGCCCACACTGGATGCCCTGCACTGCGACATCGGCAATGCCACTGAGTT
CTACAAGATCTTCCAGGACGAGATCGGGGAGGTGTACCGCAGCCC---CA
AC---CCCAGGCGAGAAGAGAGACGGAGCTGGAGGGCCACTCTGGACAAG
CAGCTGAGGAAGAAGATGAAGTTGAGGCGGTGATGCGAATGAACGGGAA
CTATGCGCGTGGCTGATGACCCGGCAGGCGGTAGAGGTGGTGTGTGAGC
TGGTGCCGTCAGAAGAGAGGCGAGAGGCCCTGAGGGAGCTGATGGGGCTC

TACCTTCAAATGAAGCCAGTGTGGCGCTCTTCTGCCAGCCACTGAGTG
CCCAGACCAGATGTGTCGCTATAGCTTCAACTCCCAGCGCTTCGCAGAGC
TCCTCTCCAGCACCTTCAAGTACAGGTA-----

-----TCCTACA
CCATCGAGATGGGCACCAAAGGGCCGCAGTGGAAAAGAGAGTCCCCAGCCG
TTCTCCTGCTCCATCGAGGACCCACCAAGCAGACCAAGTTTAAAGGCAT
CAAGACGTACATTTTCGTACCGGGTCACCCCGAGCCACATGGGGCGGCCTG
TGTACCGGCGCTACAAGCACTTTGACTGGCTGTACAATCGCCTGCTGCAC
AAGTTCACCGTCATCTCCGTGCCTCACCTGCCGGAGAAGCAGGCCACAGG
GCGCTTCGAGGATGACTTCGTGCGAGAAGCGCAAGAGGCGGCTGGTTCTCT
GGATCAACCACATGACCAGCCACCCGGTCCTGTCTCAGTACGAAGGCTTC
GAGCACTTCCTCATGTGCGCCGACGACAAGCAGTGGAAGCTGGGGAAGCG
GCGGGCGGAGAAGGACGAGATGGTGGGCGCCACTTCATGCTGACGTTCC
AGATTTCCACGGAGCACCAGGACCTGCAGGACGTGGAGGAACGCGTGGAC
AACTTCAAGTCCTTCGCCAAGAAGATGGACGACAGCGTGTTCAGCTGAC
GCACGTGGCGTCGGAAC TGGTGC GGAAGCACGTCCGGAGGGTT CAGGAAGG
AGTTTCAGCGGCTGGGGAACGCCTTCCAGTCCGGTCAGCCAGGCCCTTCATG
CTGGATCCTCCGCACAGCTCGGACGCCCTCAACAACGCCATCTCTCAT--

-----GCCAAATCTCGCTTT
CACCTTGGCGTAGGGACTGGTCCTGGCACAGACC--GCAGCGTCCCCT
TAGTAACAGCTTGCTGTCCCCGCAACAAACCGAAGAGCACACAGTTG--
CTTCCCCGCAGCGATGGTTTGTACCC--CTGCCAACAACCGACTGGAC
TTCGCCGCCTCGGCATACGACGCCGCCGCGGCTGCTGATTTCCGCCGTAA
CGCGGCCACCTTGCTGTCTTACGCAGCTGCTGGAGTAAAGGCC--
TTCCCTGCCACTGCTGGCTGCTCCAACAGACCGTTGGGTTATTATACC
GACCCATCCG--GCTGG--GGCACGCGCACACCACCTCAGTACTGC--
-----AGTAAATCCAGCTCGGTGCTTTCATGCTGGCCCACAAATGCGC
TTGGAAGCCGAACAGGCA--CGTCCAATTACCTGC-----CGGAA
GA--CGGG--GACCC--CATCCCCACGGAGAGGTCTCCG--AT--
CGGCGTGCCAGAGGAG--ACCAAACCAAAGACTT-----GTCCGA--
-GTCCAGCTGGATAGAG--ACGTCGTCTTCAATAAAGTCGATAGATTCA
AGTGATTCTGGGATCTTTG--AGCAGGCCAAACGGAGAAGAATTTACC
GTCTGCCACACCG-----GTNTCAGAGACAGTTTCCCCGCTGAAATC

-----NNNNNNNNNNNCTTTCACCCCTGGCGT

GGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCCTCGGCCACAGCT
TGCTGTCCCCCGCAGCAAACCGACGAGCCAGTGTGCCACCCCCCGCAG
MGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTC
GGCATACGACGCCGT-----GATTTGCGCGGTAACGCGGCCACCT
TGCTGTCTACGCAGCGGCCGAGTGAAGGCTC-----TTCCCTGCCG
ACTGCAGGCTGCTCCAACCGGGCGCTTGGCTATTACGCAGACCCGTCAG-
--GCTGG---GGAGGACGCACACCGCCGAGTACTGCGGCGTAAACAACA
AATCCAGCTCGGTCTTTTCTGCTGGCCCGCTAACTCTATCGGGGGCCGA
GCAGGTA---CC---AACTACCTGY-----CCGAGGA---AGGA--
-GACTC---CATCACGACAGAGAGGTGCGCG---AT---CGGCGGCTCGG
ACGAG---ACCAAACCCAAAGACATGAC---ATCAGA---GTCGAGCTGG
ATAGAG---ACGCCGTCTCCATTAAGTCCATTGATTTCGAGCGATTCTGG
TATCTTTG---AACAGGCCAAACGGAGAAGAATCTCACCTTCTGCCACGC
CG-----GTTTCAGAGACAGTGTCCCCTTAAAGTCNNNNCATCACTCAA
CAGGCCAAGTCACAGAGAGAGAAGTAGCGTTGGGGATAAATCCGTTTCGCG
GATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCACGATATCGGCTC
CGG---ACAACGGCGTTTTCTCCAGGGC---CCCGGTAC---GCGG
CAGCCGCCCTAGGA---CACCATCA-----CCACCCGAGCCACGTTGGC
TCT---TACTCCACGGCGGCTTTCAACTCCACGAGGGACTTTCTCTTCAG
AAATCGGGGCTTCGGGGACGCCACCGG-----GGCGCAGCACA
GTTTGTTCGCCTC-----CGGAAGTTT---C-----GCTGGGCCA
CATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCGGGGCTCCACGA
G---CAAGCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGC
GGCTGGGCTTCTCGGGGACATGTACGGACGGGCGACCAGTACGGCCAC
GTTACGAGCCCGCGGT---CCGACCACTACGCTTCGACCCAGCTGCACGG
CTATGGCCCCATGAACATGAATATGGCCGCA---CATCACGGAGCAGGGG
CCTTCTTTTCGATACATGAGGCGCCGATCAAGCAAGAGCTCATCTGCAAG
TGGATCGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAAC
TTTTAGCACGATGCACGAGCTTGTGACCCATCTGACGGTGGAGCATGTGG
GGGACC GGAGCAGACCAACCACATCTGCTTCTGGGAGGAATGCGCCAGA
GAGGGAAAGCCATTCAAAGCCAAATACAACTTGTAATCATATTAGAGT
ACACACCGGAGAAAAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

>*Lophius americanus*

AGCTTGCTCATTTCGGGCTGAACTGAGCCAACCCGGCGCCCTCTTAGGGGA
TGACCAAATCTACAACGTTATTGTTACCGCTCACGCCTTTGTAATAATTT
TCTTTATGGTTATAACCAATTATGATTGGAGGGTTTGGCAACTGACTTATC
CCCTTAATGATTGGGGCCCCGGACATAGCCTTCCCCGAATAAAACAACAT
AAGCTTCTGGTACTTCCCCCTTCTTCCCTCCTGCTACTTGCATCTTCCG
GGGTGAAGCCGGAGCAGGCACTGGATGAACCGTCTACCCCCGTTGGCA
GGGAACCTTGCACATGCAGGAGCCTCTGTTGACCTAACTATTTTTTCCCT
CCACCTAGCAGGAATTTCTTCAATCCTAGGAGCAATCAACTTCATCACAA
CAATTATTAACATAAAACCCCCACAATCTCCCAGTACCAGACACCTTTA

TTCGTTTGAGCTGTTTTAATCACAGCAGTTCTTTTACTCCTATCCCTACC
CGTGCTTGCCCGCAGGCATTACCATGCTCTTAACAGACCGAAACTTAAACA
CCACCTTCTTCGACCCACAGGAGGAGGGGACCCCTATCCTATAACCAACAC
TTGTTC-----

-----TTCCTTGAGACAAACCTCCACCCGACAAATTGCCCTGG
CATGCTATTGTTGCTGATGCCACCAGTGCACCAAGTTGTCAGAGCTCT
CATGGGGTATGTGCCCTCAGCAACTTTCCCACTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCGAAAGATATGGTGGTGCAGCTTTTGTACATGAAGA
ACTAGAGACCGAAGATGAGAGACTTGTATGATGCTGCCCTGAATTGGA
TCAACTATGATCTGGAAAAGCGGCATAGCCACCTTCCAGAGCTCCTGAAA
ACAGTCCGTCTGGCTCTGCTACCCGCCATCTTTCTTATGGAGAACGTCTC
TACAGAAGAGCTGATAAACGCCAGGCTAAGAGCAAAGAGTTAGTGGATG
AAGCTATTTCGCTGCAAGCTGAAGATCCTGCAGAATGATGGTGTGTTAAC
AGCCTGTGTGCTCGACCCAGAAAAACAANCCATGCGCTTTTTCTTCTGGGT
GGACAGACTTTTATGTGTGACAAGTTGTATCTGGTGGACCAAAAAGCCAA
AGAGATCATCCCCAAAGCTGACATTTCCAGCCCAAGGAAGGAGTTCAGTG
CCTGTGCCATCGGCTGTAAAGTGTACATCACTGGTGGGA--GAGGCTC-T
GAGAATGGCGTGTCCAAAGATGTATGGGTCTACGACACGGTCCATGAGGA
ATGGTCAAAGGCGGCACCCATGTTAATCGCAAGGTTTGGCCATGGCTCTG
CCGAGCTCAAGCACTGCCTTTATGTGGTAGGGGGTCACTGCAGCAACG
GGCTGCCTCNNNNNNNNNNNNNNNAGATGAATGCATAGTTGTGTTTCAGTCGCTCAACAACAAGAT
TGATACTGAATGAAGCTGAACATAATCATGGCGCTTGCCAGGAGTTCGAG
ATGAGAGTGGTTCACAGTGTCCCTGGAGGAGCAGTCTTCTCCAGTATCAT
CCAGGTCATCAGCAGGGCCTCCATGTTGGTTAGTATGCATGGAGCTCAAC
TCATAACCTCGCTCTTCCCTCCCTAGAGGAGCAGTTGTGGTTCGAGCTGTT
CCCTTTGCTGTGAACCCAGAGCAGTACACCCCGTATAAAACCCCTGCCTC
CTTACCGGTATGGACCTTATTATATCTCCTGGAAGAACACGAAGGAGG
AAAACACCATAACCCATCCAGACCGATCGTGGGAACAAGGTGGTATCGAT
CATTTGGAGAAGGAGGAACAAGAGCGAATAAAGATGAGCAGAGATGTCC
CAGACATCTGTGCTGCCGCAACCCAGAGTGGCTTTTTCGGATCTACCAGG
ACACTTTGGTGGACATCCCTTCCCTGGAAGTCCCTCAA---AGAGGGC
ATGAAG---ACAAAGCCCAACTCGAAGAA---GTCAAAGCCGGCCAGTAC
ACTCCACCCGGGCAGAGTCAGACAACCCAGTGTGACACCTCAGTACAAA
CCAGTAATGAGGCTAACTCACGGTGTCTGAGCAGATCCCGTGGAACTG
AAATACCTGAAAGTCAGAGAAGTGAAGTACGAGGTGTGGATCCAGAAGAA
AGACGCCAGTAAGGGAACCCCTGGAGGATCAAATCATCCAAGCTAACCCTG
CGCTGGAAGCCTTCGGTAATGCCAAAACACTAAGAAACGACAACTCCTCC
CGTTTTGGGAAGTTCATCCGAATACACTTTGGTCCAAGCGGCAAGCTGTC
ATCTGCTGACATCGAGACATACCTGCTGGAGAAGTCCCAGTCACTTTC
AGCTCAAGGCTGAGAGAAATTACCACATCTTCTACCAGATCCTGTCCAAT
CAGAAGCCAGAGCTGCTGGACATGCTCCTGATCACCACCAACCCATACGA
CTACTCCTACATCTCTCAAGGAGAGGTAACCGTTTCTCAATCAACGACT
CTGAGGAGCTGATATCCACGGACAGCGCCTTCGACGTGCTTGGCTTCACA
GCAGATGAGAAGATGGGTGTCTACAACTAACGGGGGCCATCATGCACTA
TGAAATATGAAGTCAAGCAGAAGCAACGCGAGGAGCAGGCTGAGCCCG
ACGGCACGGAGGCCGCTGACAAAACAGCTTACCTAATGGGGCTGAACTCT
GCTGACCTGATCAAGGGGCTGTGCCATCCAGAGTCAAGGTGGGAAATGA
GTACGTAACCAAAGGCCAAAGTGTGACCAAGTGTACTACCCCAACAAGG
AGGCCTTCAAATGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGA
TACAAGCGGCATGTTGCCATGCATTCGCCACGGCGGGGGATCTCACCTG

TAAAGTGTGCATGCAGACCTACGAGAGCACGCCGGTGTGCTGGAGCACC
TCAAGAGCCACTCTGGGAAGTCCTCAGGTGGCACCAAGGAGAAGAAACAC
CAGTGTGACCACTGTGATCGGCGTTTCTACACAAGGAAGGATGTGAGGCG
CCACATGGTGGTGCACACCCGGCAGAAAGGACTTCTCTGCCAGTACTGTG
CCCAACGCTTCGGCAGGAAGGACCATCTGACGCGGCACGTGAAAAAGAGC
CACTCACAGGAGCTGCTGAAGATCAAGACGGAGCCTCCTGACATGTTGGG
TCTTTTAGCTTCTGGGTACCCGCCGTGCTCGGTGAAGGAGGAGCTCAGCC
CCATGATGTGTGGCATGGGTCCCAACAAAGATCCCATGATGAGTAAACCA
TTTCCCAGCGGGGCCCCCTTCCCGATGGGAATGTATAACCATCACCAT--
----CTCCAGGCCATGTGCAATTCTGGGGTGGGCCACCCC-----CACC
CATCCCTCATGCCAGTTCCTTGTCTGCAGCTATGGGCATGGGCTGTCAC
ATGGAATACCTCATSTACGCCTCCTTCTCATTTCATGGGATGTTTGCAGAT
CAGTGTGGATCCAACATTGTGAACCTGCTGGCCAGTAACTCTCCAGCG
TCTCATATGCTCTGACTCAGCAGAAGTACTTTAGTAATTACAGTCCGTGTG
ATCGGGTTCACATTTACGAGCCCATTGAGTACTGGAACTCCACGGTGA
GGAACACCTGAAGACTCTGAGTCATGGCTTCAACAAGATATCCTGGATGG
ACAACTTTTTCCACTACCTGCGGGTGTAAATGTGAGCGCATCCACCAAG
AGCGACTTCATCTCCATCCTCAAGGGTTCCTTCCCTGCGTAGCCCCGAGTA
CCAACACTTCACCGACGACATCATCTTCTCAAAGA---ACCGGGATACTG
-----ATGAGTACGACATTATTGCCTCAAGGATGTACCTGGTGGCACGG
ACTACAGAGAAGAAGCGTGAGGAGGTGGTGGAGCTGCTGGAGAAGCTCCG
TCCACTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCCACAT
TTGTGTTTCATGGACCGTACAGCTCCTCCGTCATCTCACCCATCCTGACC
TCAGGATTCAGCGTACTCACAATCCTCATCCTCACCTTCTTCCCTAGTCAT
CAACCCTTTGGGTAACCTTCTGGCTCATCCTCACTGTGACGTCCGTGGAGC
TGGCGCTCTTGGGTTGATGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNGATTAACGGGCTTTCTGGAAGGGTTCCCTC
TCTGGATGACTCTCCAGCTAACACCATCACCCGGCGGTTTCGCTATGATG
CACCCTGGTATCAGCATTAAAAGATCTGGAGGAGGACATCATGGAAGGA
CTGAGAGAGAATGGAATTGAATACAGCACTTGCAACTCAGGCTTCAGAGT
CATGATCAAAGAATCTTGGCATGGCATGGGCGACATCAGCGAGAAGCATG
GTGGAGGACCAGCTGTCCCTGATAAAGCTGTGCGTTTCTCTTTCACTGTG
ATGTCTGTCTCTCCTCCGACAGGGAATGAGGAA-----
-----GAGGAGTAGCAATCTTACAGAGGCAAAGCCAACT
CAGAACTGTCCCTGTAAGCCCCCTTGCCTAATGTTTGTGGATGAGTCAGAC
CATGAGACACTAACAGCCATCTTGCACCCTATAATTGCAGAGCGTAAGGC
GATGAAAGAGTCCAGACTCATCTTGAAGCATGGGTGGACTACTTCGCTCTT
TCCAATTTCACTTCATAGGTACGGGGTATGATGAGAAGATGGTACGAGAG
GTTGAGGGCCTAGAGGCGTCTGGGTCCACCTACGTTTGCACCTCTCTGTGA
CTCCAGCCGTGCAGAGGCCCTGTAAGAACATGGTGTACATTCCATCACCC
GCAGTCATGAAGAGAACTTAGAACGTTATGAAATGTGGAGAACCAACCCC
TTCTCTGAGTCTGTTGATGAGCTGCGAGACAGAGTCAAAGGGGTCTCTGC
CAAGCCCTTCATGGAAACCCATCCACCCTCGATGCATTACATTGTGACA
TARGAAATGCCACCGAGTTCACAAAATATTCAGGATGAGATTGRGGAG
GTATAACAAAAGGG---AAAT---CCAAGCCGTGAGGAGCGGCGCAGCTG
GAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGATGAAACTCAAACCGG
TAATGAGGATGAATGGGAACCTTGGCCGCAAGCTAATGACCAAGGAGGCT
GTGGAGGTGGTGTGCGAGCTGGTGCCCTTAGAGGAGAGGAGGGAGGCCCT
GAGGGAGCTTATGAGCCTTACCTCCAGATGAAGCATGTGTGGCGTGCCA
CCTTCCCAGTCAAGGAGTGCCCTGACCAGCTGTGCGCTACAGCTTTAAC
TCCCATCGCTTTGCTGAACTCCTCTCCTCGACCTTCAAATATAGATACAA
TGGAAGANN
NN

GGCCCCGTGTGGAAG

GAGAGCCCGCAGCCTTTCTCCTGCTCCATTGAAGACCCACAAAAACAGAC
TAAGTTCAAGGGCATCAAGACCTACATTTTCGTACCGGGTCACGCCGAGCC
ACACCGGCCATCCCGTCTACAGACGCTACAAACACTTTGACTGGCTGTAC
AACCGCCTACTGCACAAGTTCACCGTGATCTCGGTGCCTCACCTGCCGGA
GAAGCAGGCCACGGGGCGTTTTGAGGAGGACTTCATTGAAAAGCGCAAGA
GGCGACTGATACTGTGGATGAACCACATGACCAGTCACCCGGTCCTCTCC
CAGTACGAAGGTTTGGAGCACTTTCTCATGTGCGGCGACGACAAGCAGTG
GAAGCTGGGCAAGAGACGAGCGGAGAAGGATGAGATGGTGGGCGCCATT
TCATGCTGACCCTCCAGATCCCTAGCGAGCACCAGGACCTTCAGGATGTC
GAGGAGCGGATCGACTCCTTCAAGTCCTTTGCTAAAAAATGGATGACAG
CGTGATGCAGCTCACGCACGTTGCTTCGGAGCTGGTGCAGAAACACCTGG
GCGGGTTCAGGAAGGAGTTCAGAGGCTGGGGAACGCCTTCCAGTCTATC
AGCCAGGCGTTCATGCTGGACCCTCCCCACAGTTCGGASACCTTCAACAA
CGCCATCTCCCACNNNNNNNNNNNNNNCTCAAACGACCTCTCTGGGTTTCATCATTGGAGTCG
GCGTGGTTCGGAAACCTCCTGATCTCCATCCTGCTGGTTAAAGACAAAAGC
CTGCACCGAGCACCTACTATTTCTGCTGGACCTGTGCGCCTCCGACAT
CCTGCGCTCCGCCATCTGCTTCCCCCTTCGTCTTACCTCGGTCAAGAATG
GATCCGCTTGGACGTACGGCACGCTGACCTGTAAGGTGATCGCCTTCCTG
GGTGTGCTCTCCTGTTTCCACACGGCGTTTATGCTATTCTGCGTCAGCGT
CACGCGCTACCTGGCCATCGCACATCACCGCTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGCCAGCTGTATCTGCATGGTGTGGACGTTGTCGGTG
GCTATGGCGTTCCCGCCAGTGCTAGACGTAGGGACGTACTCTTTCATACG
GGAGGAGGACCAGTGCACCTTCCAGCACCGCTCTTTCAGGGCCAACGATT
CGCTAGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACGCAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGCAGGAAGATGAAGCC
TGTCCAGTTTGTGCTGCGTCAGCCAGAAGTGGACCTTCCACGGACCGG
GGGCCAGCGGCCAGCGGGCGCCAACCTGGCTGGCCGTTTTTCGGTCGAGGC
CCCACCCCGCTACCTTGCTAGGAATCCGTGAGAACAGCAACGCAGCGGG
CCGCAGGCGTCTACTGGTGTGGATGAGTTCAAACAGAGAAGAGGATTA
GTAGGATGTTTACATCATGACGTTTTTCTTCTGCCCCTCTGGGGGCC
TATCTGGTGCCTGCTACTGGCGGGTGTGTTGCCAGGGGCCCTGTGGTCCC
GGGAGGCTACCTGACGCGCCCGTGTGGATGAGCTTCGCCCAGGCTGGGG
TCAATCCGTTTCATCTGCATCTTCTTAACNNNNNNNGCCAAATCTCGCTTTCACCCCT
GGCATGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCCTCTGCAA
CAGCTTGCTATCCCCGCAGCAAAGCGAGGAGCCACTGTTGCCACCCCCC
CGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCA
GCCTCAACCTACGACGCCGCC-----GATTCGCCCGGTAACGCCGC
CACCTTGCTGTCTTACGCTGCGGCAGGAGTGAAGGCTC-----TCCCGC
TGCCGACCGCAGGCTGCTCCAACCGGCTCTCGGTTATTACGCAGACCCG
TCGG---GATGG---GGAGGACGCACGCCGCCGAGTACTGCGGCATGAA
CAGCAAATCCAGCTCGGTGTTTTCTGCTGGCCCCCTAACTCTATCGGAA
GCCGAGCTGCAA---GC---AACTACCTGG-----CCGAGGA---G
GGA---GAGTC---CATCCCCGCAGAGAGGTCACCG---AT---CGGCGG
CTCAGAGGAG---ACCAAACCCAAAGACTTAAC---GTCAGA---GTCGA
GCTGGATAGAG---ACGCCCTCCTCCATCAAATCCATCGATTCCAGCGAT
TCTGGGATCTTTG---AACAGGCCAAAAGGAGAAGGATCTCACCTTCCGC
CACGCCG-----GTGTCAGAGACAGTGTCCCCGTTAAAATCGGAGC
ATCACTCAACAGGCGAAGTACAGAGCGAGAAGTGGCGCTGGGGATAAAT
CCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCACGA
TATTGGCTCCGG---ACAGACGGCGTTTTCTCCACAGGCT---CCCGGCT
AC---GCAGCAGCCGCTTGGGG---CACCATCA-----CCACCCGACC
CACGTTGGCTCT---TACTCCACCGCTGCTTTCAACTCCACCAGGACTT

TCTCTTCAGAAATCGAGGATTCGGGGATGCCGGCGG-----CG
CGCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----
GCAGGGCCACATGGACTCAGATGCAGCGGGGCACCTGCTCTTCCCGGG
GCTCCACGAG---CAAGCGGCGACCCACGCGTCTTCCAATGTGGTCAACA
GCCAGATGCGGCTGGGTTTCTCGGGGACATGTACGGACGGGCTGACCAG
TATGGCCACGTTACGAGCCCTCGCT---CCGACCCTATGCCTCGACCCA
GCTGCATGGCTACGGCCCTATGAACATGAATATGGCCGCA---CACCACG
GTGCAGGGGCTTCTTCCGATACATGAGGCAGCCCATCAAACAAGAGCTC
ATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCGAACCCCAAAAAGTCGTG
CAACAAAACCTTTTAGCACTATGCACGAGCTGGTGACCCATCTGACGGTGG
AGCATGTTGGGGGACCGGAGCAGACCAACCACATCTGCTTCTGGGAGGAT
TGCGCCAGAGAGGGGAAGCCATTCCAAGCCAAGTACAACTTGTAATCA
TATCAGAGTTCACACCGGAGAGAAGCCCTTCCGTGTCNNNNNNNNNNNNNNNNNNNN

>Lota lota

AGCCTGCTCATTTCGAGCAGAGCTAAGTCAACCCGGCGCACTCCTTGGTGA
CGATCAGATTTATAATGTAATCGTCACAGCACACGCTTTCGTAATAATTT
TCTTTATAGTAATACTACTAATAATTGGAGGCTTCGGAACTGACTAGTC
CCCCAATGATCGGCGCCCCGATATAGCCTTTCCTCGTATGAACAACAT
GAGCTTCTGACTTCTTCCCTCCATCATTCCTTGCTCCTCCTAGCATCCTCTG
GGGTAGAAGCCGGAGCCGGAACAGGTTGAACTGTATACCCTCCTCTAGCA
GGCAATCTTGCTCATGCTGGGGCTTCTGTTGACCTTACTATTTTCTCCCT
GCATTTAGCAGGGTCTCATCAATTCCTGGAGCAATTAATTTTATTACCA
CCATCATCAACATGAAACCCCGCAATCTCACAATATCAAACACCGCTA
TTTGTCTGAGCAGTCCTAATTACAGCCGTCTACTACTCCTGTCTCTCCC
CGTTTTAGCCGCTGGTATTACGATACTGCTGACTGATCGAAATCTTAATA
CTTCTTCTTTGACCCCGCTGGAGGAGGGGACCCAATTCTGTATCAGCAC
TTA-----

-----TTCTGGAGAGGAACCTCCACCCGACCAACTGCCTGGG
CATGCTGCTGCTGTCCGACGCCACCAGTGCCTCAAGCTCTCGGAGCTGT
CCTGGAGCATGTGCTGAGCAACTTCCCTGCCATATGCAAGACGGAGGAT
TTTCTCCAACCTGCCCAAAGACATGGTTGTGCAGCTCTTGTCCCACGAGGA
GCTGGAGACGGAGGACGAGAAGCTTGTCTACGAGGCCGCGCTGAACTGGG
TCACCTATGACCTGCGAGGGAGGCACCCCACTTGCCGGAGCTGCTGAAA
ACGGTGCCTCTGGCCCTTCTGCCCGCCGTCTTCCCTCATGGAAAATGTCTC
CACCGAAGAGCTGATCAACAGCCAGGCCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCTGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGCCCGTGTGCCCGTCCAGGAAGACCAGCCACGCRCTCTTCCCTGCTGGG
CGGCCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCCGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGCAGGGTGTACATCACGGGCGGGC--GGGGCTC-
GGAGAACGGCGTGTCCAAGGACGTGTGGGTGTACGACACGGTGCAGGAGG
AGTGGTCCAAGGCGGCGCCCATGCTCATCGCCCGCTTCGGCCACGGCTCC
GCGGAGCTGAAGCACTGCCTGTACGTGGTGGGCGGGCACACGGCCGCCAC
GGGCTGCCTCCCGGCGTNCCTCCGGAGGATTACATTGTGGTCTTCTCTC
GTTCCACAACGAGGTTGATCCTAAATGAAGCAGAGCTGATCATGGCACTG
GCCAGGAGTTTACAGATGAGAGTCTTTACGGTGTCCCTGGAGGAGCAGTC
TTTCGCCAGCATAGTGCAGGTGATCAGCGGAGCCTCCATGCTGTTTCAGTA
TGCATGGCGCTCAGCTCGTCACGTCATTGTTTCTGCCAGAGGGGCAGCT
GTGGTGGAGCTGTTCCCTATGCGGTTAACCAGAGCAGTACACCCCGTA
TAAAACCTAGCTCCCTGCCGGGCATGGACCTCCAGTATGTCTCCTGGA

-----TCT
CCTGGAGCATGTGCCCTGAGCAACTTCCCTGCCATTTGCAAGACAGAGGAC
TTCTCCAAGTCCCAAAGACATGGTCGTGCAGCTTTTGTCCCCTAGGA
GCTGGAGACGGAAGACGAGAACTGGTTTACGAGGCCGTGCTGAACTGGG
TCACCTACGACCTGCCGGGGAGGCACGCCCACTTGCCAGAGCTCCTGAAA
ACGGTGCGCCTGGCTCTCCTGCCCGCCATTTTCTCATGGAGAACGTCTC
CATGGAGGAGCTGATCAATGCGCAGACCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCTGCTGCAAGCTGAAGATCCTGCATAACGACGGCGTGGTGCAC
AGCCCTTTGGCCCGTCCCAGGAAGACCAGCCACGCGCTCTTCTGCTTGG
CGGGCAGACCTTCATGTGCGACTATTTTTTTCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCCGACATCCCCAGCCCCGCAAGGAGTTCAGC
GCCTGCGCCATCGGCTGCAAGGTGTACATCACCGGGCGGCCGGGGGCTCG
GGAGAACGGCGTGTCCAAGGACGTGTGGGTGTACGACACCGTGAAGAGG
AGTGGTTCAGGGCGGCGCCCATGCTCATCGCCCGCTTCGGCCACGGCTCC
AC-----

-----GGAGGATTACATTGTGGTCTTCTCT
CGCTCCACAACGAGGTTGATCCTAAATGAAGCGGAGCTGATCATGGCGCT
GGCCAGGAGTTTCAGATGCGAGTCTTGACGGTGTCCCTGGAGGAGCAGT
CTTTTGCCAGCATCGTGCAGGTGATCAGCGGAGCAACCATGCTGTTTCACT
ATGCACGGCGCTCAGCTCGTACGGCGTTGTTTCTGCCAGAGGTGCAGC
CGTGGTGGAGCTGTTCCCTATGCCGTGAACCCGGAGCAGTACACCCCGT
ATAAAACCCTCGCTCCCTGCCGGGAATGGACCTCCAGTACATCTCCTGG
AGGAACACAATGGAGGAGAACACCGTCACTCACCCGGACCGACCCCTGGGA
CCAAGGGGTGTGCTGCACTTGGAGAAGGAGGAACAAGAGCGCATACTAG
CCAGCAAGGACGTCCCAGGCACCTATGCTGCCGTAAACCCAGAGTGGCTT
TTCAGAATCTACCAGGACACTTTGGTGGACATCCCTTCACTCCTCGAGGT
GCTCAA---GGAGGGCCTCAA---ACCAGGCCCAACTTGAAAA---GA
GCAAGGCRGCCAGCACAGTTACCCGGGGAGGGTCCGAGAACCCCAAGTGC
CAGACCTCGGTCCAAGCCACCAATGAGGCCAAACTCACAGTGTCTGGCA
GATCCCGTGGAACTGAAGTTTCTGAAGGTGAGAGAGGTGAAGTACGA--
-----AAGAAGGATGCCAGCAAAGGAACCCCTGGAGGATCAAATC
ATCCAGGCCAACCCCTGCCCTGGAGGCCTTCGGTAATGCCAAAACCCCTGAG
AAATGACAACCTCCTCCCGTTTTGGAAAGTTCATCCGGATTCACTTTGGGA
ACAGTGGCAAGCTTAGCTCAGCGGACATTGAGACCTACCTGCTAGAGAAG
TCCAGAGTCACTTTCCAGCTCAAGTCAGAGAGGAACATCACATATTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATAA
CCAACAACCCATACGATTACTCCTACATCTCTCAAGGAGAAGTAACTGTG
GCCTCCATCAATGACTCTGAGGAGCTCATGGCCACTGACAGTGCATTTGA
CGTCTTGGCTTACCCCTGGAAGAGAAGATGGGAGTGTACAAGCTCACGG
GTGCCATCATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCAGAGTCAGACGGGACTGAAGCTGCTGATAAATCAGCGTACCT
CATGGGTTTGAACCTGTCAGACCTCATCAAAGGCCCTTGCCACCCAGGG
TGAAGGTAGGAAATGAATATGTCACCAAAGGTCAAGGGGTGGACCAAGTC
TACTAC-----

AGCACTTCCTCATGTGCGCCGACGACAAGCAGTGGAAGCTGGGCAAGCGG
CGGGCGGAGAAGGACGAGATGGTGGGCGCCCACTTCATGCTCACCTTCCA
GATCCCCAACGAGCACCAGGACCTGCAGGATGTGGAGGAGCGCGTGGACT
CCTTCAAGGCCTTCACCAAGAAGATGGACGACAGCGTCATGCAGCTGACG
CACGGCGCCTCGGAGATGGTGCGCCGGCACCTGGGAGAGTTCCGCAAGGA
GTTCCACCGGCTGGGCGGTGCCTTCCAGTCGCTGTCGCAGGCCTTCATGC
TGGAGCCGCCGACAGCTCGGAGCCACTCAACAACGCCATCTCGCAT---

-----GCCAAATCTCGCTTTC
ACCCCTGGCATGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCACTC
GGCAACAGCTTGCTATCCCCGCAGCAAAGCGAGGAGCCCACTGTTGCCAC
CCCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGACT
TTGCAGCCTCGGCTTACGACGCCGCC-----GATTTCCGCCGTAAC
GCCGCCACCTTGCTGCTTTACGCGCGGCAGGAGTGAAGGCTC-----T
CCCCCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTCGGCTATTACGCAG
ACCCGTCGG---GCTGG---GGAGGACGCACGCCCGCCGAGTATTGCGGG
GTGAACAGCAAATCCAGCTCGGTGTTTTCTGCTGGCCCCCTAACTCTAT
CGGAAGCCGGGCTGCCA---CC---AACTACCTGG-----CCGAGG
A---GGGA---GACTC---GATCCCCGCAGAGAGGTCACCG---AT---C
GGCGGCTCCGAGGAG---ACCAAACCCAAAGACTTAAC---GTCAGA---
GTCGGGCTGGATAGAG---ACGCCGTCCTCCATCAAATCTATTGATTCCA
GCGATTCTGGGATCTTTG---AACAGGCCAAAAGGAGACGGATCTCACCT
TCTGCCACACCA-----GTGTCAGAGACAGTGTCTCCGTTAAAATC
TGAG---TCACCCAACAGGGGAGGTCACGGACAGAGAAGTCGCGTTGGGGA
TCAACCCGCTCGCGGACGGGATGGGCGCCTTCAAAATCAACCACAGCTCC
CACGACATCGGCTCCGG---TCAAACGGCGTTTTCTCCAGGGC---CC
CGGCTACGCGGCGGCGGCCGCCCTCGGA---CACCACCACATCCCCACC
CCACGCACGTGAGCTCT---TACTCCACCGCCGCTTCAACTCCACACGG
GACTTTCTTTTCAGAARTCGGGGTTTCGGAGACGCCACCG-----
---CGCGCAGCACAGCTTGTTCGCCTCCGC---CGCGGGAAGTTT---C-
-----GCGGGGCCACACGGACACTCCGAGGCCACGGGGCACCTGCTCTTC
CCGGGGCTCCACGAG---CAGGCGGCCAGCCACGCGTCCTCCAATGTGGT
CAACGGCCAGATGCGACTGGGCTTTTCCGGAGACATGTACGGAAGGGCCG
ACCAGTACGGGCACGTAACGAGCCCGAGGT---CCGACCACTACGCGTCG
ACCCAGTTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCGGCTCA

CCACGGGGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATCAAACAGG
AGCTGATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCCAATCCCAAAAAG
TCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTGGTGACCCACCTGAC
GGTGGAGCACGTGGGGGGGCCCCGAGCAGTCGAACCACATCTGCTTCTGGG
AAGAGTGTTCACGGGAAGGGAAGCCGTTCAAGGCTAAATACAAAACCTGTG
AACCACATCAGGGTTCACACCGGA-AGAAACCGTCCCATGTCC-----

>Luvarus imperialis

AGTCTGCTCATCCGGGCAGAGCTCAGCCAACCAGGCGCCCTCCTCGGGGA
CGACCAAATTTACAATGTTATCGTTACGGCGCACGCATTCGTTATGATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGGTTTCGGAAACTGACTGATC
CCCCTCATGATCGGAGCCCCGACATAGCATTCCCCCGAATAAAACAACAT
GAGCTTTTGACTCCTCCCTCCCTCTTTCCTTCTCCTTCTTGCCCTCCTCTG
GAGTAGAAGCTGGTGCCGGCACCAGGATGAACTGTCTACCCCCATTAGCT
GGAAACCTCGCACATGCGGGAGCATCCGTAGACCTGACCATTTTCTCCCT
GCACCTAGCAGGTATTTCCCTCAATCCTGGGGGCCATTAACCTCATTACAA
CTATCATCAACATGAAACCTCCCGCTATTTCCCAATACCAAACCCCTCTT
TTCGTATGGGCTGTTCTAATTAAGTGTCTGCTCCTCCTCCTCACTTCC
AGTCCCTGCTGCTGGAATCACAATGCTCTTAACAGATCGAAACCTCAACA
CCACCTTCTTCGACCCCGCGGGCGGAGGGGACCCCATTTCTTTACCAACAC
CTGTTCTGATTCTTCGGCCA-----

-----NNNCTAGAGAGAAACCTTCACCCATCTAACTGCCTTGGCAT
GCTGTTGCTGTCTGATGCCACCAGTGTATCAAGCTGTCAGAGCTCTCCT
GGGGCATGTGCCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGACTTC
CTCCAGCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGAGCT
AGAAACAGAAGAYGAGAGACTGGTTTATGAAGCTGCCCTCAATTGGATCA
ACTATGACCTGGAAAAGAGACACTGCCACCTACCAGAGCTCCTGAGAACA
GTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTCTAC
AGAAGAGCTGATCAACGCCACAGGCCAAGAGCAAGGAGCTGGTGGATGAAG
CTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGCGTTGTTAACAGC
CCATGTGCTCGACCAAGAAAACCAGCCATGCTCTCTTTCTTCTGGGAGG
GCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCAAAG
AGATCATCCCCAAGGCTGACATTCCCAGCCCCAGGAAGGAGTTCAGCGCC
TGTGCCATTGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGCTC-AGA
GAATGGCGTGTCCAAAGATGTATGGGTCTACGACACCGTCCACGAGGAAT
GGTCGAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTGCG
GAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACAGCTGCAACTGG
TTGCCTCCCGGCCCTCTCCGTCTGGATGAATACATTGTTGTGTTTAGTCGT
TCAACAACGAGGCTGATACTGAATGAAGCAGAGTTAATCATGGTGTGCGC
CCAGGAGTTCAGATGAGAGTGGTCACAGTATCCCTGGAGGAACAGTCTT
TCCCCAGTATCGTCCAGGTGATCAGCGGTGCTACCATGTTAGTCAGTATG
CATGGAGCTCAGCTTATTACCTCACTCTTCCCTCCCCAGAGGAGCTGTTGT
GGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACTCCATATA
AAACCTTGCCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGGAGG
AACACCAAGGAGGAGAACACCATCACCCACCCAGACAGACACTGGGAACA
GGGGGGCATCGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCAA
GCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAATGGCTTTTT
CGGATCTACCAGGACACTTTGGTGGACATCCCTCCTTTCTGGAAGTCCT
CAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GTCAA
AGTTGGCCAGCACTGTCCACCCAGGCCGTGTCAGAGAACCCAGTGTGTCAG

TACAGAAGAGCTGATCAACGCCCAAGCCAAGAGCAAGGAACTGGTGGATG
AAGCTATCCGGTGTAAAGCTGAAGATCCTGCAGAACGATGGCGTTGTTAAC
AGCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTCTGGG
AGGACAGACTTTCATGTGTGACAAGTTGTATTTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAAGAGTTCAGC
GCCTGCGCCATCGGCTGTAAAGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAAATGGTGTGTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTGAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACCGCAGCGAC
TGGCTGCCTCCCGCCTCTCCGTCTGGATGAATACATTGTTGTGTTTAGT
CGTTCATCAACGAGGCTGATACTGAATGAAGCAGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTATCCCTAGAGGAAACAGT
CCTTCCCCAGTATCGTTCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTTTTGTGTTAAACCCAGAGCAGTACACCCCAT
ATAAAAACCTTGCCTCGCTTCCAGGCATGGACCTTCACTATGTCTCCTGG
AGGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCCTGGGA
ACAAGGGGGCATTTGTTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGG
CAAGCAAAGATGTCCCCAGGCACCTTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCCTTCCCTGGAAGT
GCTCAA---AGAGGGCATGAAG---ACAAAGCCCAGCCTGAAGAA---GT
CAAAGCCGGCCAGCACAGTCCACCCGGGTCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATACCTAAAGGTGAGAGAGGTGAAGTACGAAG
TGTGGATCCAGAAAAAGACACCAGCAAAGGGACACTGGAGGATCAAATC
ATCCAGGCAAACCCCTGCCCTGGAGGCCTTCGGTAACGCCAAAACGCTGAG
AAACGACAACCTCGTCTCGTTTTGGTAAATTCATCCGAATTCACTTCGGTA
CGAGCGGTAAGCTGTCTCTGCTGACATTGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATATTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACCTGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCAAGGAGAGGTAACAGTC
GCCTCCATTAATGACTCGGAGGAGCTGATGGCCACCGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCCAGAAGAGAAGATGGGTGTCTATAAACTGACTG
GCGCCATCATGCACATATGGCAACATGAAGTTCAAACAGAAGCAGCGGGAG
GAGCAGGCTGAGCCGGATGGGACGGAGGCTGCTGATAAATCAGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAAGTAGGAAATGAATACGTACCAAAGGACAAAATGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTTCGAGAGCACACCC
GTACTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCGC
CAAGGAGAAAAAACACCCGTGCGACCACTGTGACCGTTGTTTCTACACAC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACACG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCGGGGTCACCGCCTTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGTGGAATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCATTTCCCAGTGGTGGCCCTTTTCCGATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCGATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCCTTGTCTGCAGCTAT
GGGCATGAGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTTA
TGGGATGTTTACAAAATCAGTGATGGATCAAATATCGTGAACCTGCTGGCT
AGTAACTCTCCGAGTGTTCGTATGCTCTGACCCAGCAGAAATACTTCAG

TAACTACAGCCCCGTGATTGGGTTTTACATTTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTACGTCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCGTGAGACTG-----ATGAGTACGACATTATCGCCTCACGGAT
GTACTTGGTGGCACGGACGACAGAGAAGAAGCGGAAGAGGTGGTGGAGC
TTCTGGAAAAGCTTCGTCCGTTGATGCTAATCAACAGCATCAAGTTCATT
GCCTTCAATCCTACATTTGTGTTTATGGACCGCTACAGTTCCTCTGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCTGGTTCATCAACCCCTTGGGAACTTCTGGCTCATCCTCACR
GTAACGTCCGTGGAGCTGGGCGTCTTGGGTTTTGATGNNNNNNNNNNNNNNNNNNNNGCAGCCCGCTCTCA
AGAATGTGTCTACATCTTACAATGTTGGCATTATTAATGGGCTCTCTGGA
TGGGCTTCTCGGTGGATGACGCTCCAGCTGACACCATCACTCGGCGGTT
TCGCTATGATGTGGCACTGGTGTGAGCATTAAAGGATCTGGAGGAGGACA
TCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGACAGTGCTTGCACCTCA
GGCTTCAGTGTGATGATCAAGGAATCTTGTGATGGCATGGGCGATGTCAG
CGAGAAGCATGGTGGAGGACCAGTTGTTCCCGAGAAGGCTGTACGTTTCT
CTTTCACTGTTATGTCTGTCTCTGTCCTGGCAGACGATGAGGAG-----
-----GAAGAGGTTACCATCTTCACTGAGCC
AAAGCCAAACTCAGAACTGTCTGTAAAGCCCTTTCCTGACATTTGTGG
ATGAGTCAGACCATGAGACACTCACAGCTGTCTGAGCCCTATAGTTACA
GAGCGTAATGCAATGAAAGACAGCAGGCTCATCCTATCCATGGGTGGACT
ACCTCGTTTCCCTCCGCTTCCACTTCAGAGGCACAGGATACGATGAGAAGA
TGGTGCCTGAGATGGAGGGCCTCGAGGCCTCAGGCTCCACCTATATCTGC
ACTCTTTGCGACTCCAGTCGGGCAGAGGCCTCTCAAACATGGTGTCTACA
CTCTGTACCCCGCAGTCATGAAGAGAACCTTGAACGTTACGAGATATGGA
GAACCAACCCCTTTTCTGAGTCTGTAGATGAGCTGCGAGACAGAGTCAA
GGTGTCTCTGCCAAGCCCTTCATGGAGACCAGCCACACTGGATGCATT
ACACTGTGACATTGGAAATGCCACTGAGTTCTACAAAATCTTCCAGGACG
AGATCGGGGAGGTGTACAAAAGGT---CAAC---CCCAGCCGGGAGGAA
CGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGATGAA
GCTTAAACCGGTGATGAGGATGAATGGGAACATGCCCCAGGCTAATGA
CCCAGGAGGCTGTGGAGGTGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGG
AGGGAGGCGCTGAGGGAGCTTATAAGGCTCTACCTCCAGATGAAGCCTGT
GTGGCGGCCACCTGCCAGCGAAGGAGTGCCCCGACCAGCTGTGCCGCT
ACAGCTTTAACTCCCAGAGCTTTGCCGACCTCCTCTCCTCTACCTTCAA
TATAGGTACAATGGAAAGATAACCAATTACCTGCACAAGACCCTGGCCCA
TGTGCCGTAAATCATAGAGAGAGATGGATCCATAGGAGCCTGGNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNTCGTACA
CCATCGATATGGGTCCTTTGGGGCCCCGGTGGAAAGGAGAGCCCACAGCCT
TTCTCCTGCTCCATTGAAGACCCCACAAAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATTTTCGTACCGGGTACGCCGAGCCACACAGCTCATCCTG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGAAAGAGACGACTGATACTGT
GGATGAACCACATGACCAGTCAACCAGTCTCTCCAATATGAAGGCTTT
GAGCACTTCTGATGTGTGCTGATGACAAGCAGTGGAAACTGGGCAAGAG
ACGGGCAGAGAAGGACGAGATGGTGGGTGCCCATTTTCATGCTGACCCTCC
AGATCCCTAACGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGATGAC
ACCTTCAAGGCATTTGCTAAGAAAAATGGATGATAGCGTGATGCAGCTCAC
ACATGTTGCCTCAGAGCTGGTGCCTAAGCACCTGGGTGGGTTTCAAGGAGG
AGTTCAGCGGCTGGGAAATGCCTTCCAGTGCATCAGCCAGGCGTTCATG

CTGGACCCTCCCCACAGCTCAGAGACCTTCAACAACGCCGTCTCCCATNNNNNNNNNNNNNTT
CCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGGAA
ACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCG
CCCTACTACTTCCCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCTGC
CATCTGCTTCCCCTTTGTCTTACCTCGGTCAAGAATGGATCTGCCCTGGA
CCTATGGCACGCTGACCTGCAAAGTGATTGCCTTCTGGGTGTGCTGTCC
TGTTTCCACACGGCGTTTATGCTGTTCTGTGTGTCAGTGTACACGCTACCT
GGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCT
GTCTAGCTGTGATCTGCATGGTGTGGACATTGTGTCAGTGGCTATGGCGTTC
CCGCCGGTGTAGACGTAGGGACGTACTCTTTTATCCGGGAGGAGGACCA
GTGCACATTCCAGCACCGTTCCTTACAGGGCGAATGATTCGCTGGGCTTCA
TGCTCCTGCTGGCACTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAG
CTCATCTTCTTCGTCACGACCGTCGAAAGATGAAGCCTGTCCAGTTTGT
GCCTGCTGTGACCCAGAACTGGACCTTCCACGGGCCCGGCGCCAGCGGGC
AGGCGGCGGCCAACTGGTTGGCCGGATTTGGTTCGAGGCCCCACCCCGCCT
ACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGACGGCGTCT
ACTGGTATTGGATGAATTCAAACAGAGAAGAGGATTAGTAGGATGTTCT
ACATCATGACGTTTTTCTTCCCTGGCGCTGTGGGGGCCCTATCTGGTCCCC
TGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTGGTCCCTGGGGGCTACCT
GACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTCA
TCTNNNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCCTGGCATGGGGACTGGTCCTGGCACGGA
GC---GCAGCGTCCCACCTCGGCAACAGCTTGCTATCCCCGAGCAAACCG
AGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTCAACC---CT
GCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT-----
----GATTTGCGCCGTAACGCGGCCACCTTGCTGTCTTACGCAGCGGCCG
GAGTGAAGCTC-----TTCCCTGCCGACTGCAGGCTGCTCCAACCGG
CCTCTTGGCTATTACGCAGACCCGTCAG---GCTGG---GGAGGACGCAC
GCCGCCGAGTACTGTGGCGTAAATAGCAAATCCAGCTCGGTCTTTTCCT
GCTGGCCCGCTAACTCTATCGGTGGAAGAGCGGGCA---CC---AACTAC
CTGG-----CTGAGGA---GGGA---GACTC---CATCCCGACAGA
GAGGTCACCG---AT---CGGCGGCTCGGATGAG---ACCAAACCCAAAG
ACATGAC---ATCAGA---GTCGAGCTGGATAGAG---ACGCCGTCCTCC
ATTAAGTCCATTGATTCAAGCGATTCTGGTATCTTTG---AACAGGCCAA
AAGGAGAAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGAGA
CAGTGTCCCCTTTAAATCTGAGCATCACTCAACAGGCGAAGTACAGAG
AGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGGATGGGCGCCTT
CAAAATAAACACAGCTCCCACGATATTGGCTCCGG---ACAAACGGCGT
TTTCTCCAGGCG---CCGGCTAC---GCAGCAGCAGCCCTGGGA---
CACCATCA-----CCACCAACCCATGTTGGCTCT---TACTCCACGGC
GGCTTTCAACTCCACAGGGACTTCTCTTTCAGAAATCGGGGTTTGGGG
ACGCCACCGG-----GGCGCAGCACAGTTTGTTCGCCTC----
-----CGGAAGTTT---C-----GCAGGGCCACATGGACTCAGATGC
AGCGGGGCACCTGCTCTTCCAGGGCTCCACGAG---CAAGCGGCGAGCC
ATGCGTCTTCCAACGTGGTCAACAGTCAAGTGCAGTGCAGGCTGGGCTTCTCGGG
GACATGTACGGACGGGCCGACAGTACGGCCACGTTACAAGCCCAGCGT-
--CCGACCACTATGCTTCGACCCAGCTGCACGGCTATGGCCCCATGAACA
TGAATATGGCCGCA---CACCATGGTGCAGGGGCCCTTTTCGATACATG
AGGACAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTTCGAGCCGGAGCA
GCTGACGAATCCCAAAAAGGCGTGCAACAAAACCTTTTAGCACGATGCACG
AGCTTGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGACC
WACCACATCTGCTTCTGGGAGGAATGCGCCAGAGAAGGAAAGCCATTCAA
AGCCAAATACAAACTTGTAATCATATCAGAGTACACACCGGAGAAAAGC
CCTTTCGCTGTCTNNNNNNNNNNNNNNNNNNNN

>Macropinna microstoma

AGCCTGCTAATCCGGGCTGAATTAAGCCAACCCGGGGCCCTCCTAGGGGA
CGACCAAATCTACAATGTTATCGTGACAGCACATGCTTTCGTTATAATCT
TCTTTATAGTAATACCTGTCATAATTGGCGGCTTTGGGAACTGGTTAATC
CCCTTGATAATCGGAGCCCCGGATATAGCATTCCCCCGCATAAAATAACAT
AAGCTTCTGACTTCTCCCCCCTCCTTCCTTCTTCTCCTGGCCTCTTCCG
GGGTTGAAGCCGGAGCTGGCACAGGCTGAACAGTATACCCCCCTTAGCA
GGAAACCTTGCCCATGCAGGAGCCTCCGTAGACCTAACTATTTTTTCCCT
CCACCTCGCCGGTATTTCCCTCAATTCCTGGCTCAATTAACCTTCAATACAA
CTATCATCAATATAAAACCCCGGCCATCTCCCAATACCAAACCCCTCTT
TTCGCTGAGCCCTACTTATTACTACAGTCCTTCTGCTCCTCTCACTCCC
TGTCTTAGCTGCAGGAATCACTATACTGCTTACGGACCGAAATTTAAATA
CTACTTCTTTGACCCCGCAGGAGGGGGTGACCCAATCCTCTACCAACAT
CTANNN
NN
NN
NN-----

-----GGAGGAGTACATAGTGGTGTTTCCAGCCGTTCAATT
AGCAGGCTGATTCTTAACGAAGCAGAGCTGATTCTGGCCCTAGCACAGGA
GTTCCAGATGAAGGTGTAAGTGTGTCTCTGGAGGAGCAGTCTTTGCCA
GTATAGTGAAGATGGTCAGTGAGGCCTCCATGTTAGTCAGTATGCACGGA
GCCCAACTGGTGTCTCTCTCTTCCCTGCCAGGGGGCGCAGTGGTCGA
GCTCTTCCCCTATGCAGTGAACCCAGAGCAGTACGCTCCCTACAAAACCT
TGGCCTCACTCCCTGGCATGGACCTGCAGTATGTGGCCTGGAGGAACATG
ATAGAGGAGAACTCAGTGGCCTACCTGAGAGGCCTTGGGAGCAGGGAGG
CATCGCCATTTGGAGAAGGACGAGCAAGAGCGCATCTCGGCCAGCAAAG
AGGTACCAAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTACCGTATC
TACCAAGACACCATAGTGGACATCCCGTCTTTACTGGAGACACTCAG---
AGAGACCCTGAAA---ACCCGGCCAAACCTGAAGAA---GGCCAAGCCTG
CCAGCACGGTCCACCCGGGCGGAGTGAGGGAGCCCCAGTGCCAGACCTCG
GTCCAGGCCACCAACGAGGCCAAGCTCACCGTGTCTGGCAGATCCCCTG
GAACCTGAAGTACCTGAAGGTGAGGGAGGTTAAATACGAAGTGTGGATAC
AGAAGAGGGGATCCAAGCAAGGTACCCTAGAGGATCAAATCATCCAGGCT
AACCTGCACTGGAGGCTTTTCGGTAAAGCAAAACATTTGAGAAATGATAA
TTCATCACGTTTTTGGCAAATTCATCCGTATTTCATTTTCGGACAAAGTGGCA
AATTGTCCTCTGCTGACATAGAGACTTATCTGCTTGAGAAGTCACGTTGC
ACCTTTCAGCTGAAAATCGGAGAGGAACTACCATATCTTCTTCCAGATCTT
GTCCAATCAAAGCCAGAAGTGTGGACATGCTGTTGATCACCAACAATC

CTTCCAGGATGAGATCGGGGAGGTGTACCGCAGCCC---CAAC---CCCA
GACGGGAGGAGCGGCGGAGCTGGAGAGCCGCTCTGGACAAGCAGCTGAGG
AAGAAGATGAAGTTGAGGCCGGTGATGCGTATGAACGGGAACTACGCGCG
GCGGCTGATGACCCGGGAGGCAATAGAGGTGGTGTGTGAGCTGGTGCCGT
CAGAGGAGAGGCGAGAGGCCCTGAGGGAGCTGATGGGGCTCTACCTCCAG
ATGAAGCCAGTGTGGCGTTCCTCCTGCCAGTCAAGGAGTGCCAGACCA
GCTGTGTCGCTACAGCTTCAACTCCCAGCGCTTTGCAGAGCTCCTCTCCA
CCACCTTCAAGTACAGGTATTGT-----

-----TCGTACACCATCGAGA
TGGGCTCCAAAGGTCTCAATGGAAAGAGAGTCCCAGCCTTTCTCTTGC
TCCATCGAAGACCCCACCAAGCAGACAAAGTTTAAAGGCATCAAGACCTA
CATATCGTACCGGGTAACCCCCAGCCACATGGGGCGGCCTGTGTACCGGC
GCTACAAGCACTTTGACTGGCTGTACAATCGCCTGCTGCATAAGTTTACG
GTCATATCTGTGCCCCACCTGCCCGAGAAACAGGCCACGGGGCGCTTCGA
GGAGGATTTTCATTGAGAAGCGTAAAAGGCGACTGGTCCTCTGGATAAACC
ACATGACCAGCCACCCAGTCTGTCTCAGTACGAAGGCTTCGAGCACTTC
CTGATGTGTGCCGATGACAAGCAGTGGAAGCTGGGTAAGCGGCGGGCAGA
GAAGGACGAGATGGTGGGCGCCCATTTTCATGCTCACCTTCCAGATCCCCG
CGGAGCACCAGACCTTTCAGGATGTGGAGGAGCGCGTGGACAACTTCAAG
TCCTTCGCCAAGAAAATGGATGACAGTGTATGCAGCTGACGCACGTGGC
GTCGGAACCTGGTGCAGGATCTCGGAGGATTCCGGAAGGAGTTTCAGC
GGCTGGGGAACGCATTCAGTCCGTCAGTCAGGCATTCATGCTGGACCCT
CCTCACAGCTCAGACGCCCTCAACAATGCCANNNNNNNN-----

-----GCCAAATCTCGCTTTCACCCTGGCGTAGGGAC
TGGTCTTGGCACAGACC---GCAGCGTCCCCTTAGTAACAGCTTGCTAT
CCCCGCAACAAACCGAAGAGCACACAGTTG---CTTCCCCGCAGCGATGG
TTTGTACCC---CTGCCAATAACCGACTGGACTTTGCCGCTCGGCATA
CGATGCCGCCGCGGCTGCTGATTTTGGCCGTAACGCGGCCACCTTGCTGT
CCTACGCAGCGGCTGGAGTAAAAGCAC-----TTCCCCTGCCCACTGCT
GGGTGTTCAAACAGACCTTTGGGTTATTATGCCGATCCATCCG---GCTG
G---GGCACC CGCACACCACCTCAGTACTGT-----AGTAAATCCA
GCTCAGTGCTCTCGTGCTGGCCACAAATGCTGTTGGAAGCCTTACAGGC
A---CGTCCAATTACCTGG-----CGGAGGA---TGGG---GACAC

---CATCCCTACGGAGAGGTCTCCA---AT---CGGAGTGCCAGAGGAG--
--ACAAAACCAAAAGACTT-----GTCCGA---ATCCAGCTGGATAGAG
---ACGCCGTCTTCAATAAAGTCGATCGATTCAAGTGATTCTGGAATCTT
TG---AGCAGGCCAAACGGAGAAGAATTTACCCGTCTGCCACACCG----
-----GTTACGGAGACAGTNNNNNNNNNNNNNNNNNNNNNN-----ACAGGCGAAGTCACAGACAGAG
AAGTGGCTTTGGGGATAAATCCGTTCGCAGACGGGATGGGCGCTTTTAAA
ATCAACCACAGCTCTCATGATCTTGGCTCCGG---GCAAACGGCGTTTTTC
CTCCAAGCG---CCCGGCTAC---GCAGCCGCTGCCTTGGGA---CATC
ATCA-----CCATCCGACCCATGTCAGCTCC---TACTCCACCGCCGCT
TTCAATTCACCCCGGACTTTCTTTTTCGAAATCGGGGCTTCGGAGACGC
GACCAG-----CGCCAACACAGTCTGTTCGCCTCCGC---AG
CGGGAAGTTT---T-----GCAGGGCCACATGGACACTCAGATGCCGCG
GGACACCTGCTCTTCCAGGACTTCACGAG---CAAGCCGCGAGCCATGC
GTCTCCAATGTTGTAAACAGTCAGATGCGATTGGGTTTTTTCGGGGGACA
TGTACGGGCGGGCTGACCAATATGGCCATGTTACGAGCCCACGGT---CC
GACCACTACGCTTCGACCCAGTTGCATGGCTATGGCCCCATGAACATGAA
TATGGCCGCA---CACCACGGAGCAGGGGCTTCTTCCGTTACATGAGGC
AGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGTTG
TCGAACCCGAAAAAGTCGTGCAACAAAACTTTTCAGCACGATGCACGAGCT
CGTGACCCACCTGACAGTGAACATGTGGGGGGACCAGAGCAGTCAAACC
ATATTTGCTTTTGGGAAGAGTGTTCGCCGAGAAGGAAAACCATTCAAAGCT
AAATACAAACTTGTAAATCATATCAGAGTACACACCGGAGAAAACCGTT
CCCATGTCCATTCCCGGCTGTGGCAA

>Macroramphosus scolopax

AGCTTACTTATCCGAGCAGAACTAAGCCAACCCGGCGCCCTTCTTGGGGA
TGACCAAATTTATAACGTAATTGTTACGGCCACGCCTTTGTAATGATTT
TCTTTATAGTAATACCAATCATGATCGGGGCTTTGGCAACTGACTTATT
CCCCAATGATCGGAGCACCCGACATGGCATTCCCTCGAATGAATAACAT
GAGCTTTTGACTACTCCCTCCCTCATTCCTTCTGCTCCTAGCCTCTTCTG
GAGTTGAAGCCGGTGCGGGCACCGGCTGAACAGTCTACCCCCACTATCA
GGAAACCTCGCTCACGCTGGGGCCTCCGTTGACTTAACCATTTTCTCCCT
CCACTTAGCCGGTATTTTCATCTATTTCTAGGGGCCATTAATTTTCATCACA
CTATTATTAACATGAAACCTCCCGCAATCTCGCAATACCAAACACCGCTC
TTTGTATGAGCAGTACTAATTACAGCTGTTCTTCTCCTCCTCCTCCTCCC
CGTCTGGCCCGCGCATCACAATGCTTCTCACGGACCGAAATTTAAATA
CCACCTTCTTCGACCCCGCAGGTGGAGGTGACCCCATCCTCTACCAACAC
CTA-----

-----NNNNNNNGAGAAACCTTACCCGTCTAACTGCCTCGGCATGCTGC
TGCTCTCCGACGCCACCAGTGCACCAAGCTGTTCGGAGCTCTCCTGGGGC
ATGTGTCTCAGCAACTTCCCCGCTATTTGCAAGACAGAGGACTTCTCCA
ACTCCCCAAAGATATGGTGGTTCAGCTTTTGTCCCACGAGGAGCTGGAGA
CAGAAGATGAGCGGCTTGTATGAGGCTGCCCTGAACTGGATCAACTAT
GACCTGGACAGGAGGCACTGCCACCTCCCTGAGCTCCTCAGAACCGTCCG
GCTGGCGCTGCTGCCCGCCATCTTTCTAATGGAGAATGTCTCGACGGAAG
AGCTGATCAACGCCCAGGCCAAGAGCAAGGAGCTGGTGGACGAGGCCATC
CGCTGCAAGCTGAGGATCCTGCAGAAATGACGGCGTTGTGAACAGCCAGTG
TGCTCGACCCAGAAAGACCAGCCACGCCCTTTTCTTCTGGGGGGGAGAGA
CGTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGAGATC
ATCCCGAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCGCCTGTGC
CATCGGCTGTAAGGTGTACATCACAGGCGGAC--GAGGCTC-GGAGAACG

CGGTTGAGGCTGGAGCGGGGACCGGATGAACTGTCTACCCTCCCCTAGCA
GGCAACTTAGCTCACGCAGGGGCATCCGTGGATTTAACTATCTTTTCTCT
TCACTTAGCCGGAATTTTCATCAATTTTAGGGGCAATTAATTTTATTA
CTATTATTAATATAAAAACCCCGCTATTACGCAGTACCAAACACCTTTA
TTTGTCTGAGCCGTTTTAATCACAGCGGTACTTCTTTTACTATCACTTCC
TGTACTAGCAGCCGGAATTAATACTTCTCACAGATCGAAACCTTAATA
CTTCTTTCTTTGATCCTGCCGGTGGAGGTGACCCCATTTCTTTATCAACAT
CTA-----

-----AGAGGATTACATTGTGGTCTTCTCT
CGTTCCACAACAAGGTTGATCCTAAACGAAGCAGAGCTGATCATGGCGCT
TGCCAGGAGTTTCAGATGAGAGTCTTGACAGTATCCCTGGAGGAACAGT
CTTTTGCCAGCATCGTGCAGGTGATCAGCGGAGCCTCCATGCTGTTTCA
ATGCACGGCGCGCAGCTCATCACATCGCTGTTTCCCTGCCCCGAGGTGCAGC
CGTGGTGGAGCTGTTCCCTTACGCCGTGAACCCAGAGCAGTACACCCCGT
ACAAAACCCTGGCCTCCCTGCCGGCATGGACCTCCAGTACGTCCTCGG
AGGAACACGATGGAGGAGAACACCGTCACTCACCCGACCCGGCCCTGGGA
CCAAGGGGGCGTGGTGCATTTGGAGAAGGAGGAACAAGAGCGCATACTAG
CCAGCAAGGACGTCCCAGGCACCTGTGCTGCCGTAACCCAGAGTGGCTT
TTCAGAATCTACCAGGACACTTTAGTGGACATCCCTTCACTCCTCGAGGC
GCTCAA---GGATGGCCTCAGA---ACCAAGCCCAACTTGAAAAA---GA
GCAAGGCGGCCAGTACAGTTACCCGGGCCGAGTCCGAGAACCCAGTGC
AAGACCTCAGTCCAAGCTACCAACGAGGCCAAACTCACAGTGTCTTGGCA
GATCCCGTGGAACTGAAGTTCCCTGAAGGTGAGAGAGGTGAAGTACGAGNNN-
-----AAGAAGGATGCCAGCAAAGGAACCCTGGAGGATCAAATCATC
CAGGCTAACCCCTGCCCTGGAGGCTTTGGTAATGCCAAAACCCCTGAGAAA
TGACAACCTCCTCACGTTTTGGAAAAGTTTATCCGGATTTACTTTGGGAACA
GTGGCAAGCTGAGCTCTGCAGACATTTGAGACCTACCTCCTAGAAAAGTCC
AGGGTCACCTTCCAGCTCAAGTCAGAGAGGAACTATCACATATTTTCCA
GATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATTACCA
ACAACCCGTACGATTACTCCTACATCTCCAAGGAGAGGTAACCGTCGCC
TCCATCAACGACTCTGAGGAGCTCATGGACACTGACAGTGCCTTTGACGT
CCTTGGCTTACCCCTGGAAGAGAAGATGGGGGTGTACAAGCTGACTGGTG
CCATCATGCACTACGGCAACATGAGGTTCAAACAGAAGCAGCGTGAGGAG
CAGGCAGAGTCCGACGGGACTGAAGCAGCTGATAAATCAGCGTACCTCAT

GGGCTTGA ACTCTGCAGACCTCATCAAATGCCTCTGCCACCCCAGGGTGA
AGGTAGGGAATGAATATGTCACCAAAGGTCAAGGGGTGGACCAAGTCTAC
TAC-----

-----TACCTCATCTACGCTTCCTTCTCCTTCATGG
GATGTTTACAGATCAGCGACGGCTCCAACGTGGTCAACCTGCTGGCCAGT
AACTCTCCCAGTGTGTCCTACGCTCTGACACAGCAGAAGTACTTCAGTAA
CTACAGTCCCGTCATTGGCTTCTATATCTACGAGCCCATCGAGTACTGGA
ACTCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAACAAG
ATCTCCTGGATGGACAACCTTCTACCAGTACCTGCGCGTGGCCAACGTCAG
CGCGGCCACCAAGAACGAGTTCATCCACATCCTGAAGGGCTCCTTCCTGC
GCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTTTCCAAGA--
-ACCGCGAGAGCA-----ACGAGTATGACATCATCGCCTCGCGCATGTA
CCTGGTGGCCCGCACCACGGAGAAGAAGCGCGAGGAGGTGGTGGAGCTGC
TGGAGAAGCTGCGGCCGCTGATGCTCATCAACAGCATCAAGTTCATCGCC
TTCAACCCACCTTCGTGTTTTCATGGACCGCTACAGCTCCTCCGTCATCTC
GCCCATCCTCACCTCCGGCTTACGCGTGCTACCCATCCTCATCCTCACCT
TCTTCTGGTTCATCAACCCCCTGGGGAACCTGTGGTTGATCCTGACCGTG
ACCTCGGTGGAGCTGGGCGTCTGGGCCTGATG-----

ACAACGAGGCTGATACTGAATGAAGCGGAGCTAATCATGGCGCTGGCCC
AGGAGTTCCAGATGAGAGTGGTCACGGTATCCCTGGAGGAACAGTCTTTC
CCCAGTATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGTATGCA
TGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGCTGTGG
TGGAGCTGTTCCCTTTGCCGTGAATCCAGAGCAGTACACCCCGTATAAA
ACCTTGCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGGAGGAA
CACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGAACAAG
GGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCGAGC
AAAGATGTCCCCAGGCACCTGTGTGCCGCAACCCAGAGTGGCTCTTCCG
GATCTACCAGGACACTTTGGTGGACATCCCTTCCCTTCCCTGGAAGTCCTCA
A---AGAGGGCATGAAG---ACAAAAGCCCAGCTTGAAGAA---GTCAAAG
CCGGCCAGCACAGTCCATCCGGGCCGGGTGAGAGAACCCCAATGTCAGAC
CTCAGTACAAACCCTAATGAGGCTAAACTCACAGTCTCCTGGCAGATCC
CGTGAATCTGAAATACCTGAAGGTGAGAGAGGTCAAATATGAGGTG---
-----AAAAAAGACACCAGCAAGGGGACACTGGAGGATCAAATCATCCA
GGCGAACCTGCGCTGGAGGCCTTCGGCAACGCCAAAACATTGAGAAAACG
ACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACCTTCGGTACGAGC
GGCAAGCTGTGCTGCTGCTGACATCGAGACGTACCTGCTGGAGAAGTCACG
TGCTCCTTTTCAGCTCAAGGCTGAGAGGAACTACCATATCTTCTACCAGA
TCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACCAAC
AACCCATACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTCGCCTC
CATCAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGATGTGC
TCGGCTTCACTCCAGACGAGAAGATGGGCGTCTATAAACTGACCGGCGCC
ATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCA
GGCGGAGCCGGACGGGACGGAGGCTGCTGACAAATCAGCTTACCTAATGG
GGCTGAACTCTGCTGACCTCATTAAGGGCTGTGCCATCCAGAGTCAAG
GTAGGAAATGAATACGTCACCAAAGGCCAAAGTGTGGATCAAGTCTACTA
CNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGGGATACAAGCGC
CATGTGGCCATGCA
CTCTGCCACGGCAGGGGATCTCACCTGCAAAGTGTGCATGCAGACCTACG
AGAGCACGCCCGTGTCTTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCT
TCGGGTGGCACCAAGGAGAAAAAACCCCATGCGACCACTGTGACCGCCG
TTTTACTACGCGGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCC
GAAAGGACTTCCCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGAT
CATCTGACACGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGAT
CAAGACGGAGCCTCCTGATATGTTAGGTCTTTTAGCGTCGGGGTCACCAC
CCTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATTGGTCCC
AATAAGACCCCATGATGGGCAAACCGTTCCCCAGTGCGGCCCCCTTTCCC
GATGGGCATGTACAACCCCCACCAT-----CTCCAGGCCATGTCTAATT
CTGGGGTGGGTACCCA-----CACCCGTCCCTGATGCCCAGTTCCTTG
TCTGCAGCTATGGGCATGGGCTGTACATGNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNGTGAACCTGCTGGCTAGTAA
CTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTCAGTAACT
ACAGTCCCCTGATTGGGTTTTACATTTACGAGCCCATCGAGTACTGGAAC
TCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGAT
CTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTG
CGTCAACCAAGGGCGACTTCATCACCATCCTGAAGGGCTCCTTCCCTGCGC
AGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA---A
CCGCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGATGTACT
TGGTGGCACGGACGACAGAGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTG
GAGAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTT
CAACCTACGTTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTTCATCTCGC
CCATCCTGACCTCAGGCTTACAGGCTACTACAATCCTCATCTCACTTTC

TTCTTGGTCATCAACCCCTTGGGAACTTCTGNNN
NNNTCTTGCAATGT
TGGCATT
ATTAATGGGCTCTCTGGATGTGCTTCCTCGGTGGATGACGCCCCAGCTGA
CACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCATTA
AGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAA
GACAGTGCTTGACCTCAGGCTTCTAGTGTATGATCAAGGAGTCTTGTA
TGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCATTGTTTCCTG
AGAAGGCTGTACGTTTTCTTTTCACTGTTATGTCTGTCTCTGTCTGGCA
GACGAGGAGGAG-----GAAGAGGT
TACCATCTTCACCGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAAGCCCC
TTTTGCTGACGTTTTGTGGACGAGTCAAGACACTCACAGCCGTC
CTGGGGCCTATAGTTGCAGAACGCAAGGGATGAAAGAGAGCAGGCTCAT
CCTATCCATGGGTGGACTACCACGCTCCTTCGGCTTTCACTTCAGAGGCA
CGGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCTCA
GGGTCTCTCTATGTCTGCACTCTTTGTGACTCCAGTCCGGCAGACGCCTC
TCAAAGCATGGTGCTACTCCTGCAGTCCCGCAGTCATGATGAGAACCTAG
AACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAG
CTGCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCA
TGCCACGCTGGATGCATTACTGTCAGATTGGCAATGCCGCGGAGTTCT
ACAAAATCTTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CAAC
---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACA
GCTGAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAAGT
ATGCCCAGCAAGCTAATGACCAGGAGGCTGTGGAGGTGGTGTGTGAGCTG
GTGCCCTCAGAAGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTCTA
CCTCCAGATGAAGCCTGTGTGGCGCCACCTGCCAGCCAAGGAGTGCC
CCGACCAGCTGTGCCGCTACAGCTTAACTCCAGCGCTTTGCCGACCTC
CTCTCTCTACCTTCAAATATAGGTACAACGGAAAGATAACCAATTACCT
GCACAAGACCCTGGCCCATNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNTCGTACACCATCGACATGGGCCCCCTTGGGTC
CCCGGTGGAAGGAGAGCCACAGCCTTTCTCCTGCTCCATTGAAGACCC
ACAAAACAGACAAAGTTCAAGGGCATCAAGACGTACATTTCTGTACCGGGT
CACGCCGAGCCACACAGGGCGTCCCGTCTACCGGCGCTACAAACTTTG
ACTGGCTGTACAACCGCTTACTGCACAAGTTCACGTGTGATCTCCGTGCCT
CACCTGCCTGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTCATCGA
GAAGCGCAAGAGGCGACTGATACTGTGGATGAACCACATGACCAGTCACC
CGGTCTCTCCCAGTATGAAGGCTTTGAGCACTTCTGATGTGCGCTGAT
GACAAGCAGTGGAAACTGGGCAAGAGACGGGCGGAGAAGGACGAGATGGT
GGGCGCCATTTTATGTGACCTCCAGATCCCCAACGAGCACACAGGACC
TTCAGGATGTAGAGGAGCGGGTCCGACTCCTTCAAGTCTTTGCTAAGAAA
ATGGATGACAGCGTGATGCAGCTCACACACGTGCGCTCGGAGCTGGTGCG
TAAGCACCTGGGTGGTTCAGGAAGGAGTTCAGCGGCTGGGAAATGCCT
TCCAGTCTATCAGCCAGGCCCTCATGCTGGACCCTCCCCACAGCTCAGAA
ACCTTCAACAACGCCATCTCCCAT-----

-----GGCT
ATCATCCCTTCRAATGGCAGCCGGCCCTCCGGAACGTTTCCCCGGCCTGC
CAGGTGGGCATCATCGACGGCCTGTCAGGATGGACGGCTTCGGTGGACGA
CTCCCCAGCGGACACCATCTCGCGGAGGTTCCGCTACGACGTGGCTCTGG
TGTCTGCTCTGAAGGACCTAGAGGAGGACATCGTGGAGGGCTTGAGGGAG
CACGGCCTGGAAGACAGTTCTGCACCTCTGGCTTCACCGTGACCATCAA
GGAGTCTGTGACGGCATGGGGGACGTCAGCGAGAAGCACGGCGGGGGGC
CGGCCGTTCCCGAAAAGGCCGTCGCTTCCTTCCTTCACCGTCATGTCCGTC
TCCGTCCTGGCCGAGGGGGAGGAG-----
----GAAGCGGTACCGTCTTCAGAGAGCCCAAGCCCAATTCCGAGATGT
CCTGCAAACCTCTCTGTCTGATGTTGTGGACGAGTCGGACCACGAGACC
CTGACGGCCATCTTGGGGCCTGTGGTGGCTGAGAGGAAGGCCATGAAGAA
CAGCCGCCTCATCCTGCCATGGGGCGGCCTCCCTCGTCTCTCCGCTTCC
ACTTCAGGGGCACAGGCTATGACGAAAAGATGGTGCGCGAGATGGAGGGC
CTGGAGGCTTACAGGCTCCACCTACGTCTGCACCCCTCTGCGACGCCACCAG
AGCTGAGGCCTCCCGAAACATGGTGCTGCACTCAGTCACCCGCAGCCACG
ACGAGAACCCTGGACCGTTACGAGTTGTGGAGGACCAACCCGTACGGCGAA
TCGGCGGACGAGCTGCGAGACCGGGTGAAAGGGGTCTCCGCCAAGCCCTT
CATGGAGACCCAGCCACAATGGACGCGCTGCACTGTGACATCGGCAACG
CCACCGAGTTCTACAAGATCTTCCAGGACGAGATCGGGGAGGTGCATTGC
AGGCC---CAAC---CCGAGCAGGGAGGAGCGTCGGAGCTGGAGGGCGGC
TCTGGACAAGCAGCTCAGGAAGAAGATGAAGCTGAAGCCCCTGATGAGGA
TGAACGGCAACTTCGCCCGGGCGACTGATGACGGCGGAGGCGGTGGAGGCA
GTGTGCGAGCTGGTGCCGTGCGACGCGGAGCGAAGCCCTCAGGGAGCT
GATGAACCTCTACATCCAGATGAAGCCCCTGTCGGCGGCCACGTGCCCGG
CCAAAGAGTGCCCCGACCAGCTGTGTCGCTACAGCTTCAACTCCCAGCGC
TTCGCTGATCTCCTCTCTTCCACCTTCAAGTACAGGTACGACGGGAAGAT
CACTAACTACCTCCTCAAGACTCTGGCGCACGTTTCTGAAATCATAGAGA
GGGACGGCTCCATCGGGGCCTGGGCCAGTGAGGGGAACGAGTCGGGAAAC

AAA-----

-----GGCGAAGTCACAGAAAGAGAAGT
GGCTTTGGGGATAAAATCCGTTTCGCAGACGGGATGGGTGCTTTCAAAATCA
ACCACAGTTCGCATGATCTTGGCTCCGG---GCAAACGTCATTTTCCTCC
CAAGCG---CCCGGCTAC---GCAGCCGCTGCCCTGGGA---CATCACCA
-----CCACCCGACTCATGTCAGCTCT---TACTCTACGGCGGCTTTCA

ATTCCACCCGGGATTTTCTCTTCAGAAATCGAGGCTTCGGAGACGCTACC
AG-----CGCTCAGCATAGTCTCTTCGCCCTCCGC---AGCGGG
AAGTTT---T-----GCAGCCCCACATGGACACTCAGATGCAGCGGGAC
ACCTGCTCTTCCCAGGACTTACGAA---CAAGCCGCGAGCCATGCTTCC
TCAAATGTTGTTAATAGTCAGATGCGATTGGGCTTTTCGGGGGACATGTA
CGGCAGAGCCGACCAGTATGGCCACGTTACCAGCCGCGGT---CCGACC
ACTATGCTTCGACCCAGTTCATGGCTATGGCCCTATGAACATGAATATG
GCCGCG---CATCATGGAGCAGGGGCCCTTCTTCGTTACATGAGACAGCC
GATAAAACAAGAGCTGATCTGCAAGTGGATCGAACCGGAGCAACTAACGA
ACCCGAAAAAGTTCGTGCAACAAAACTTTGTAGCACAATGCACGAGCTCGTC
ACCCATCTGACGGTGGAGCATGTGGGAGGACCGGAGCAGTCGAACCACAT
TTGCTTCTGGGAAGAGTGTGCCCGAGAAGGAAAACCATTCAAAGCCAAAT
ACAAAACTTGTGAACCACATCAGAGTGCACACCGGAGAG-----

>Margrethia obtusirostra

AGCCTGCTTATCCGAGCAGAGTTAAACCAACCCGGTGCCCTTCTAGGCGA
CGACCAAATTTACAACGTTATTGTTACGGCACATGCCTTTCGTAATAATTT
TCTTTATAGTGATAACCAATTATGATTGGTGGCTTCGGAAATTGACTAATT
CCCCTTATGATCGGAGCCCTGACATAGCCTTCCCTCGAATAAAACAACAT
AAGTTTCTGACTTCTCCCTCCCTCTTCTTCTACTATTAGCCTCTGCAG
GAGTTGAAGCCGGTGCCGGAACAGGATGAACAGTCTACCCGCCCCTTGCC
GGTAATTTAGCCCACGCAGGGGCATCTGTTGATCTTACCATCTTCTCCCT
TCACCTTGCAGGTGTCTCTTCAATCCTCGGAGCAATTAACCTTTATCACA
CAATTATTAACATGAAGCCCCCAGCCATCTCCCAATACCAACACCTCTC
TTCGTGTTGAGCTGTTCTCATTACTGTGTCTCCTTCTCTTGTCCCTCCC
AGTACTGGCTGCCGGGATCACTATACTCCTCACAGATCGAAACCTAAACA
CAACTTTCTTTCGACCCCTGCAGGAGGAGGAGACCCCATCCTCTACCAGCAC
CTCTTCTGGTTCTTCGACACCCCGAAGTATACATTTTGTATTCTTCCAGG
CTTTGGCATGATCTCCACATTGTTGCCTACTACGCAGGGAAAAAGAAC
CCTTCGGGTACATGGGCATGGTCTGAGCCATGATGGCCATCGGACTCCTG
GGCTTTATTGTCTGAGCCACCACATGTTACAGTCCGTATAGATGTAGA
CACCCGAGCCTNTTCTGAGAGGAACCTGCACCCACCAACTGCCTGGGC
ATGCTGCTGCTGTCCGACGCCACCAGTGCACCAAGCTGTCCGAGCTGTC
CTGGGGCATGTGCCTCAGCAACTTCCACCACATCTGCAAGACGGAGGACT
TCCTCCAGCTCCCCAAGGACATGGTGGTGCAGCTGCTGTCCCACGAGGAG
CTGGAGACGGAGACGAGAGGCTGGTCTACGAGGCCGCCCTCAACTGGGT
CAACTACGACCTGGAGAGGCGCCACTCCACCTGGCCGAGCTGCTGCGGA
CAGTGCCTTGGCGCTTCTGCCC GCCATCTTCTCATGGAGAATGTGTCC
ACGGAGGAGCTGATCAACGCCAGGTCAAGAGCAAGGAGCTGGTGGACGA
GGCCATCCGTGCAAGCTGAAGATNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NCCCCGCAAGACCAGCCACGCCCTCT
TCCTGCTGGGCGGGCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGAC
CAGAAGGCCAAGGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAA
GGAGTTCAGCGCCTGCGCCATCGGCTGCAAGGTCTACGTACCCGGGGGA
--GGGGTC--GGAGAACGGCGTGTCCAAGGACGTGTGGGTGTACGACACT
GTCCAGGAGGAGTGGTCGAAGGCGGCGCCATGCTCATCGCCGGTTTCGG
CCATGGCTCAGCCGAGCTGAAACACTGCCTCTACGTGGTGGGAGGGCACA
CCGAGCCACGGGCTGCCTGCCGGCCTCCCCCTCG-----

-----AAGAGGGATCCCAGCAAGGGAACCTTGGA
GGATCAAATCATCCAGGCTAACCCCTGCCCTGGAGGCTTTCGGTAATGCTA
AAACACTGAGAAATGACAACCTCATCACGCTTTGGCAAATTCATCCGGATT
CACTTTGGAACCAGTGGCAAGTTGTCCTCTGCGGACATAGAGACTTACCT
TCTGGAAAAGTACAGTGTACCTTTCAGCTCAAGGCAGAGAGGAAC TATC
ATATCTTCTTCCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATG
CTTTTAATCACCAACAATCCATWTGACTACTCCTACATCTCCAAGGAGA
GGTAACAGTAGCATCCATCAATGATTCTGAGGAGTTGATGGCCACTGACA
GCGCATTCGATGTGCTTGGCTTTACACCAGAGGAGAAAATGGGAGTCTAC
AAGTTGACAGGTGCAATCATGCATTACGGCAACATGAAGTTCAAAGCAAAA
GCAGCGAGAGGAGCAGGCAGAGCCTGACGGCACTGAGGCTGCTGACAAGT
CAGCCTTCCTAATGGGGCTGAACTCTGCAGATCTAGTGAAAGGACTCTGC
CATCCCAGGGTTAAGGTCGGCAATGAGTATGTCACTAAAGGGCAGGGTGT
AGACCAAGTCTATTAC-----

-----TATCTGATCTACGCCTCC
TTCTCCTTCATGGGATGTTTACAAATCAGTGACGGTTCCAACGTGGTCAA
CCTGTTGGCCAGCAACTCGCCGAGCGTGTCTACGCGCTGACCCAGCAGA
AGTACTTCAGCAACTACAGCCCCGTCATCGGGTTCTACATCTACGAGCCC
ATCGAGTACTGGAACCTCACGGTGCAGGAGCACCTGAGGACGCTGGGCCA
TGGCTTCAACAAGATCTCCTGGATGGACAAC TACTTCCACTACCTGAAGG
TGGTGAACGTGACCGCTCCACCAAGAGCCACTTCATCGCCATCCTCAAG
GGCTCCTTCTGAGGAGCCCGGAGTACCAGCACTTCACAGAGGACATCAT
CTTCTCGAAGA---ACGGCG-----ACGAGTACGACATCATCG
CGTCCCGGATGTACCTGGTGGCGCGCACCACGGAGAAGACGCGGGAGGAG
GTGGTGGAGCTGCTGGAGAGGCTGCGGCCGCTCTCCCTCATCAACAGCAT
CAAGTTCATCGTCTTCAACCCACCTTCGTCTTCATGGACCGCTACAGCT
CGTCCGTGGTCTCGCCCATCCTCACCTCGGGCTTCAGTGTCTCACCATC
CTCATCCTCACCTTCTCCTGGTCATCAACCCGCTGGGGAACTTCTGGTT
GATCCTGACGGTGACCTCGGTGGAGCTGGGCGTGTGGGCCTCATG-----

-----GCCAA
ATCTCGTTTTACCCCTGGCGTAGGGACTGGTCCTGGCACGGACC---GCA
GCGTCCCACCTTAGTAACAGCTTGCTATCCCCGCAACAAACCGAAGAGCCC
ACGGTTG---CTTCCCCACAGCGATGGTTTGTACCC---CTGCCAACAA
CCGACTGGACTTTGCCGCCTCGGCATACGATGCTGCCGCTGCTGCAGATT
TTGCCGGCAACGCAGCCACCTTGCTGTCCTACGCAGCGGCTGGAGTGAAG
GCCC-----TTCCCCTGTCCACGGCAGGTTGCTCAAACAGACCTCTCGG
TTATTATGCCGACCCATCAG---GTTGG---GGCGCCCGCACGCCACCAC
AATACTGT-----AGCAAGTCCAGCTCAGTTCTCTCTTGCTGGCCC
ACAAATACTGTTGGAGGCAGAACAGGCA-----CCAATTACCTGG----
-----CTGAGGA---TGGG---GA-----CACAGAGAGGTCTC
CA---AT---AGGCGCGTCCGACGAA---ACAAAACCAAAGACTT----
--GTCCGA---GTCCAGCTGGATAGAG---ACGCCGTCTTCAATAAAGTC
AATTGATTCAAGTGATTCTGGAATCTTTG---AGCAAGCGAAACGGAGAA
GAATTTCTCCTTCTGTACACCA-----GTTTCGGAGGCCGTGTCC
CCGTTGAAATCAGAG-----

>Megalops atlanticus

AGCTTACTAATCCGGGCTGAGCTAAGCCAACCCGGGGCACTACTTGGTGA
TGACCAAATTTATAATGTCATCGTCACGGCACACGCCTTCGTAATAATCT
TCTTTATAGTAATGCCTATTTTAATTGGTGGGTTTGGAAACTGACTAGTC
CCTCTTATGATCGGGGCCCCAGACATAGCATTCCCCCGTATAAAACAATAT
AAGCTTCTGGCTTCTCCCGCCGTCATTCCTTCTTCTGTTAGCTTCCTCGG
GAGTCGAAGCGGGGCGAGTACTGGATGAACAGTCTACCCTCCTCTTGCT
GGTAACCTAGCCCACGCAGGTGCATCTGTAGACCTTACCATCTTTTCTCT
CCACCTGGCAGGTGTCCTCAATCCTAGGCGCTATCAACTTTATTACTA
CAATTATCAACATAAAACCGCCCGCCATGTCACAAATACCAAACACCACTA
TTCGTTTGATCTGTCTTAGTTACCGCAGTACTTCTCCTGCTATCTCTGCC
GGTATTAGCTGCAGGTATTACTATACTCCTCACAGATCGCAATCTAAACA
CAACCTTCTTTGACCCTGCAGGAGGAGGAGACCCAATCCTATAACCAACAC
CTATTTTGATTCTTTGGACACCCAGAAGTTTATATCCTCATCCTGCCAGG

GCCAATACTGCGCCAGCGCTTCGGCCGCAAGGACCACCTGACCCGGCAC
GTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCGCC
GGACATGCTGGGCTGCTGGGGTCC-GCTCTCCGCCCTGCCCCGTC AAGG
AGGAGCTCAGCCCGATGATGTG---CATGGGTCCCTCCAAGGACTCCCTA
ATGGGGAAGCCTTTCCCGGCG-----CTTTCCCATGGGCATGTACAA
CCCCAC-----TTGCAGGCCATGTCCA ACTCCGGGGTGCC-----
-----CACC ACTCCCTGGTGTCTGGGTCACTGTCCGCGGC-ATGGGA
ATGGGCTGCCMCA-----TACCTGATTTACGCGTCATTTTCGTT CATGGG
ATGTTTACAAATCAGCGACGGATCGAACATAGTCAACCTTTTAGCCAGCA
ACTCTCCAGCGTCTCCTATGCTCTCACCCAGCAAAAATACTTCAGCAAC
TACAGTCCTGTGATTGGGTTCTACATCTACGAGCCATAGAGTACTGGAA
TTCCACTGTTT CAGGAACACCTGAAGACACTGGGCCACGGATTCAATAAGA
TTTTCTGGATCGACA ACTACTTTT CAGTATCTGAGGGTGGTGAATGTCAGC
GCATCGACCAAAAGCGAATTCATATCTATCCTCCAGACTTCGTTCTTGAG
GAGCCAGAGTACCAGCACTTCAAGGACGACATAATTTTTTACAAAA---
TGAGGG-----ACGAAAACGGAGATCATCGCGTCCAGGATGTAC
CTGGTGGCCAGAACCACAGAAAAACGCGTGAGGAGGTGGTGGAGTTACT
GGAGAGACTGAGACCTCTGTCTCTTATCAACAGCATAAAGTTCA TTGTCT
TCAACCCACCTTTGTGTTT CATGGATCGATACAGCTCCTCCGTCATTTCC
CCCATCCTGACCTCTGGATT CAGCGTCTGATCGTTCTGATCCTGACGTT
TTTTCTGGTCATCAACCCCTGGGAACTTCTGGTTGATTCTGACAGTCA
CCTCAGTGGAGCTGGGCGTTCTTGGCCTCATGGGGTTCCACCCCTTCGAG
TGGCAGCCGGCACTCAAGAATGTGTCCAGTGCCACTGAGGTGGGCATCAT
TGATGGGTTGTCTGGGTTGGATGGCCACTGTGGATGACTCACCTGCAGACA
CCATTGCCCGGAGGTTCCGCTACGATGTGGCTCTGGTAGCTGCATTGAAG
GATCTTGAGGAAGACATAATGGAAGCCTGAGAGAGAATGGCTTGGAGGA
CTGTGCCCTGCACAGGCGGGTTCTCTGTGGTGATCAAGGAGTCTTGTGATG
GGATGGGGGATGTCAGTGA AAAGCACGGGGTGGGCCAACGGTCCCGAA
AAAGCAGTGCGGTTCTCCTTTACGGTAATGTCAGTCTCCGTCCAGCTGGA
AGGCAGGGGT-----GAGCAGATCA
CAGTGTTCGGGAGCCAAAGCCTAACTCCGAGCTGAGCTGTAAGCCACTG
TGCTGATGTTTGTGATGAGTCCGACCATGAAACACTGACCGCCGTGCT
GGGGCTGTGGTGGCGGAGAGGAATGCTATGAAGGAGAGCCGGCTCATCC
TGTCCATTGGAGGGCTCCTGCGCTCCTTCCGCTTCCACTTCCGAGGCACG
GGCTATGATGAGAAGATGGTGAGGGAGATGGAGGGCCTGGAAGCTTCAGG
ATCCACCTACATCTGTACCCTGTGTGACTCTACAAGGGCTGAGGCCTCCC
AGAACATGGTGTGCTGCACTCCATCACCAGGAGCCATGACGAGAACCTGGAG
CGCTATGAGATCTGGAGAACA AATCCCTACTCGGAGTCTGCTGAGGAGCT
GCGTGACCGGGTCAAAGGTGTCTCAGCCAAGCCCTTCATGGAGACCCAGC
CTACCATGGATGCGCTTCACTGTGACATTGGCAATGCCACTGAGTTCTAC
AAGATCTTCCAGGATGAGATTGGTGAGGT-----CCAC--
-CCCAGCCGCGAGGAGACGATGCTGGAGGTCTGCCCTTGACAAGCAGC
TCAGAAAGAAGCTGAAGTTGAAGCCAGTGATGCGAATGAACGGGA ACTAC
GCCC GGCGCCTGATGACCCGAGAGGCAGTGGATGCAGTATGTGAGCTGGT
GCCCTCCGATGAGCGTAGGCAAGCCTTGAAGGAGCTGATGGAGCTCTACC
TGCAGATGAAGCCGCTGGCGCTCTACATGTCTGTGCAGGAATGTCCA
GACCAGCTCTGCCGCTATAGCTTCAACTCCCAGCGCTTTGCCGAGCTCCT
CTCCTCCACCTTCAAGCACCGCTATGATGGCAAGATCACC AACTACCTCC
ACAAGACCCTAGCCCACGTGCCTGAGATCATCGAGAGGGATGGCTCTATT
GGGGCATGGGCCAGTGAAGGGAACGAGTCTGGGAACAAGTCTATGCTAT
TGAGATGGGCCACTGGGGCCTCAGTGGAAAGGAGAGCCCCAGCCTTTCT
CTTGCTCCATCGAGGACCCACSAAGCAGACAAAAGTTCAAGGGCATAAAG
ACCTACATCTCATAACCGAGTGACACCTAGCCACACTGGCCGGCCAGTGTA

G---CAAGCGGCCACTCACGCGTCTTCCAATGTAGTAAACAGTCAGATGC
GTCTGGGCTTTTCGGGGGACATGTACGGCAGAGCCGATCAGTACGGCCAT
GTAACCAGCCCCAGGT---CTGATCATTACGCCTCGACCCAGCTGCACGG
CTATGGCCCCATGAACATGAACATGGCTGCG---CACCATGGGGCAGGGG
CCTTCTTTTCGGTACATGAGGCAACCGATAAAGCAGGAACCTTATCTGCAA
TGGATCGAGCCGGAGCAATTGACGAACCCCAAAAAGTCCTGCAACAAAAC
TTTCAGTACCATGCACGAGCTGGTTACGCACCTCACAGTGGAGCACGTTG
GTGGACCAGAACAATCGAATCATATCTGCTTTTGGGAAGAGTGTCCCCGG
GAAGGAAAACCGTTTAAAGCAAAGTACAACTTGTAAATCACATCAGAGT
ACACACCGGCGAGAAACCCTTCCCTG-----

>Meiacanthus grammistes

-----TTCTTGAAAGAAACCTTACCCGTCCTCAACTGTCTCGG
TATGCTGCTTCTGTCTGATGCCCATCAGTGTACCAAGCTGTCTGAGCTCT
CCTGGGGAATGTGCCCTCAGCAACTTCCCTGCGATCTGCAAGACAGARGAC
TTCCCTCAACTGCCCAAAGATATGGTGGTGCAGCTCTTGTACATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCYGCCCTTAACTGGA
TCAACTACGACCTGGATAGGAGACACTGTCATCTTCCAGAGCTCTTGGA
ACGGTGCGACTCGCCCTGCTGCCTGCCATCTTTTAAATGGAAAATGTCTC
AACAGAGGAGCTCATCAATGCCCAAGCAAGAGCAAAGAGCTGGTGGATG
AGGCCATCCGCTGTAAGCTGAAGATCCTGCAAAACGATGGAGTTGTAAAC
AGCCCTTGTGCCCGTCCAAGAAAACAGCCACGCCCTGTTTCTTCTTG
CGGGCAGACTTTCATGTGCGACAAGTTGTACTTGGTTGACCAGAAGGCCA
AAGAGATCATCCCGAAAGCTGACATCCCCAGCCCAAGGAAGGAATTCAGT
GCTTGTGCTATTGGCTGTAAGGTGTACATCACAGGTGGAC--GAGGCTC-
GGAGAATGGCGTGTCCAAGATGTATGGGTCTATGACACGGTCCATGAGG
AATGGTCAAAAGCCGCGCCCATGCTCATCGCCCGGTTCCGGCCATGGATCT
GCAGAGCTTAAGCACTGTCTCTACGTTGTAGGAGGTCACACTGCTGCGAC
TGGTTGCCTCCCGGCTTCTCCGTCAGGACGAGTACGTCGTGGTGTTCAGC
CGCTCCGCCACGAGACTGATTCTAAACGAGGCCGAACGATCATGGCGCT
GGTCCAGGAGTTCCAGATGAAGGTGGTCACGGTGTCTGTTAGAAGAACAGT
CTTTCCCCAGCATCGTCCAGGTGATCAGCGGCGCTCCGCGCTAGTCAGC
ATGCACGGCGCCAGCTCATCACCTCGCTCTTCCCTCCCCAGGGGAGCTGC
TGTGGTGGAGCTCTTCCCCTTCGCGGTGAACCCGAACAATACACCCCGT
ACAAAACCCTGGCCTCCTTGCCAGGCATGGACCTCCACTACGTCCTCGG
AGGAACACCATGGAGGAGAACACCGTCAACCCAGACAGGTCCCTGGGA
ACAAGGAGGCATCGCACACTTGGAGAGAGCGGAGCAGGAGCGCATCCTGG
CGAGCAAGGACGTCCCCAGACACCTCTGCTGCCGAAACCCGGAGTGGCTC

TTCAGGATCTACCAGGACACCGCCGTAGACATCGCGTCCTTCTGGAAGC
CGTGCG---GGAGGGCATGAAG---TCCAAACCCGGCTCCAAGAA---AT
CCAAGGCGTCCGGCGTCGTCCACCCCGGCCGTGTCAGGGAGCCCCAGTGT
CAGACCTCGGTCCAGACCAGCAACGAGGCCAAGCTCACCGTCTCCTGGCA
GATCCCGTGAATCTCAAGTATCTGAAAGTGCGAGAGGTGAAGTACGAGG
TGTGGATCNNAAGAAAGACACCAGCAAAGGTACCC TGGAGGACCAGATCATC
CAGGCCAATCCAGCTTTGGAAGCCTTTGGTAATGCCAAAACAGTGAGGAA
CGACAAC TATCCCGTTTTGGAAAATTCATCCGGATTCACTTTGGCACAA
GTGGAAAGCTGTTCGTCCGCCGACATTGAAACATACCTGCTGGAAAAGTCA
CGGGTGACGTTTTAGCTGAAGGCTGAGAGAGACTACCACATCTTTTATCA
AATTCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTCCTGATCACCA
ACAACCCCTACGACTACTCCTACATCTCTCAGGGTGAGGTGACGGTCACC
TCCATCAACGATTCCGAGGAGCTGATGGCAACCGACAGCGCCTTTGACGT
GCTGGGCTTACACCAGACGAGAAGATGGGCGTGTACAAGCTGACCGGCG
CCATCATGCATTACGGCAACATGAAGTTCAAACAGAAGCAACGCGAGGAG
CAAGCTGAGCCCGATGGCACTGAAGCAGCCGACAAGTCRGCCTATCTGAT
GGGGCTGAACTCGGCCGACCTCATCAAGGGATTGTGCCATCCAAGGGTCA
AGGTTGAAAATGAGTACGTCACCAAAGGTCAAAGTGTGGACCAAGTCTAC
NNNCCTAACAAGGAAGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACAC
CAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGGCGGGGG
ATCTGACCTGTAAAGTGTGTATGCAGAGCTACGAGAGCACGCCCGTTCTC
CTGGAGCACCTCAAGAGCCACTCGGGAAAGTCTTCGGGTGGTGCCAAGGA
GAAGAAGCACCCGTGCGACCCTGCGACCCTCGTTTCTACACGCGGAAAG
ACGTGAGGCGGCACATGGTGGTCCACACCGGTGCAAAGGACTTCTGTGC
CAGTACTGCGCACAGCGCTTCGGCAGGAAAGACCATCTGACGCGCCACGT
GAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCGG
ATATGCTAGGTCTTTTGGCCACGGGGTCGCCGCCATGCTCGGTGAAGGAA
GAGCTCANCCCCATGATGTGCGGCATGGGGCCCAACAAGATCCCATGATG
GGCAAACCATTTCCAGTGGAGCCCCCTTTCCGATGGGCATGTACAACCC
CCATCAC-----CTTCAGGCCATGTCAAATTCTGGGGTGGGCCACCCG-
-----CACCCGCCCTGATGCCAGGCCCTTTGTCTGCAGCTATGGGCATG
GGATGCCACATGGAGTATCTCATCTACGCGTCTTTCTCCTTCATGGGATG
TTTACAAATTAGTGATGGATCGAACATCGTGAAC TTGCTGGCTAGTAACT
CTCCAGTGTTCCTATGCTCTGACCCAGCAGAAATACTTCAGTAACTAC
AGTCCCCTGATTGGGTTTTATATTTACGAGCCAATCGAGTATTGGAACTC
CACCGTGCAGGAGCACCTGAAAAC TCTGAGTCACGGCTTCAACAAAATCT
CCTGGATGGACAATTTTTTCCACTACCTGCGGGTGGTGAACGTGAGCGCC
TCAACGAAGAACGACTTCATCACCATCCTGAAGGGTTCGTTCTCCTCCGGAG
CCCGGAGTACCAGCACTTACCCGAGGACATCATATTTCTCAAAGA---ACC
CAGAGACCG-----ATGAGTACGACATCATCGCGTTCGAGGATGTA CTG
GTCGCGCGGACCATGGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTTTGGGA
AAAGCTCCGCCCTTTGATGCTCATCAACAGCATCAAATTCATTGCC TTCA
ATCCACGTTTTGTGTTTATGGACCGCTACAGCTCCTCCGTCATCTCACCT
ATCCTGACCTCAGGCTTCAGCGTACTCACCATCCTCATCCTCACTTTCTT
CCTTGTCATCAACCCACTGGGGAAC TCTGGCTCATCCTTACAGTTACGT
CCGTGGAGTTGGGCGTCTTGNNNNNNNNGGTTTTACCAGTTTGAGTGGCAGCCAGC
CCTCAAGAATGTGTGACAACCTTGCTGTGTTGGCATTATTAATGGGCTCG
CTGGATCCGCGTTCTCGGTGGATGATGCCCGGCCGACACCATCACTCGC
CGCTTTCGCTATGATGTGGCACTAGTGTGTCAGCATTAAGGATCTAGAGGA
GGACATCATGGAGGGATTGAGAGAGAATGGGATGGAAGACAGTGCTTGCA
CCTCAGGCTTTAGTGTTGTGATCAAGGAGTGCTGTGATGGCATGGGTGAT
GTCAATGAGAAGCATGGTGGTGGACCAATTGTTGTCYGAGAAGGCTGTGCG
TTTCTCTTTCACTGTGATGTCTGTCTCAGTCCTGCCAGATGATGAGGAG-

-----GGAGAGGTTTCCATTTTCACT
GAGCCAAAGCCCAACTCAGAACTATCCTGTAAGCCCCTCTGTCTTATGTT
TGTGGATGAGTCAGACCATGAGACACTCACAGCTGTCCTGGGGCCATAG
TCGCAGAGCGCAATGCAATGAAAGAAAGCAGACTCATCCTGTCCATGGGA
GGCTTGCTCCGTTTCAATTCGCTTCCACTTTAGGGGCACCGGGTATGATGA
GAAGATGGTGCCTGAGATGGAAGGACTGGAAGCCTCCGGGTCTTCATATG
TCTGTACTACTGTGTGACGCCAGTCGTGCAGAGGCCCTCACAACATGGTG
CTGCACTCAATCACACGTAATCATGAAGAGAACTTAGAACGTTATGAAAT
ATGGAGAACCAATCCCTTCTCTGAGTCTGTAGATGAGCTACGAGAAAGAG
TAAAAGGAGTGTCTGCCAAACCCTTTATGGAGACTCACCCCATGCTCGAC
GCACTGCACTGCGACATTGGCAATGCCACTGAATTCTACAAAATCTTCCA
GGACGAGATTGGAGAAGTTTACAAAAGGT---CAGT---CCCAGCCGGG
AGGAACGCCGCAGCTGGCGGGCAGCCCTCGATAAACAGCTGAGGAAGAGG
ATGAAGCTTAAACCGGTAATGAGGATGAATGGGAACTATGCCCGCAGGCT
AATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGCTTGTGCCCTCAGAGG
AGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTGTATATACAGATGAAG
CCTGTGTGGCGTGCCACCTGCCAGCAAAGGAGTGCCCTGACCAGCTGTG
CCGCTACAGCTTCAACTCCCAGCGCTTTGCTGACCTCCTCTCCTCTACCT
TTAAATATAGGTACAATGGAAAGATAACCAATTATCTGCACAAGACCCTT
GCTCATGTTCTGAGATCATTGAGAGAGATGGATCTATTGGAGCCTGGGC
CAGCGAGGGAAACGAGTCAGCTAACAAATCGTACACCATTGAGATGGGGC
TTCTGGGACCCCGGTGAAAGACAACCCACAGCCTTTCTCCTGCTCCATT
GAAGACCCACCAAACAGACCAAGTTTAAAGGTATCAAACCTACATATC
GTACCGGGTCACCCCGAGCCACACGGCGCACCCCGTCTACAGACGCTACA
AACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGTTCACTGTGATC
TCCGTGCCCCACCTGCCCGAGAAGCAGGCCACGGGCGGATTTCGAGGAGGA
CTTCATTGAGAAGCGCAAGAGGGCAGCTGATCCTGTGGATGAACCACATGA
CCAGTCAACCGGTCCTTTCCAGTACGAGGGCTTCGAGCACTTCTCATG
TGCGCCGATGATAAACAGTGGAAACTGGGCAAGAGGCGGGCGGAGAAGGA
CGAGATGGTGGGTGCCCACTTCATGCTGACCCTCAAATCCCCAACGAGC
ACCAGGACCTTCAAGACGTCGAGGAGAGGGTGGACAACCTTCAAGCCTTC
GCTAAGAAAATGGACGACAGCGTGTGTCAGCTCACTCACGTTGCCTCGGA
GTTGGTGCAGCAAGCACTTGGGTGGATTTCAGGAAAGAGTTTCAACGGCTGG
GTAATGCTTTCCAGTCCATCAGCCAGGCGTTCATGCTGGACCCCTCCCAT
AGGTCAGACACCCTCAACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNN
NNNNNNNTGGCGTCCGGTGTGGTT
GGAAACCTCCTGATCTCCATCCTGCTGGTAAAAGACAAGAGCCTGCACCG
AGCACCTACTATTTCTGCTAGACCTGTGCGCCTCTGACATCCTGCGCT
CGGCCATTTGCTTCCCCTTTGTCTTACGTCGGTCAAGAATGGATCTGCC
TGGACCTACGGCACGTTGACCTGCAAAGTGATTGCCCTCCTCGGGGTGCT
CTCCTGTTTCCACACGGCGTTCATGCTTTTCTGTGTCAGCGTGACCCGGT
ACCTGGCCATCGCTCACCACCGATTCTACACAAAAGGCTAACTTTCTGG
ACGTGCTTGGCCGTATCTGCATGGTGTGGACTTATCCGTGGCTATGGC
GTTCCCACCGGTGCTAGACGTGGGGACGTA CTCTTTTATCCGCGAGGAGG
ACCAGTGCACGTTTCCAGCACCGTTCCTTTCAGGGCGAATGATTCTGTTGGGC
TTCATGCTCCTGCTGGCACTCATTCTCCTCGCCACACAGCTGGTTTACCT
CAAGCTCATCTTCTTCGTCCACGACCGCCGAAAAATGAAGCCCGTCCAGT
TTGTGCCTGCCGTGAGCCAGAACTGGACCTTCCATGGGCCGGGGCCAGC
GGGCAGGCGGGGCTAATTGGCTGGCCGGATTTGGTCGAGGCCCCACCC
GCCTACTTTGCTGGGAATCCGGCAAACAGCAACGCGTCGGGCCGCAGGC
GCCTACTGGTATTAGATGAATTCAAAACGGAGAAGAGGATTAGTAGGATG
TTCTACATCATGACGTTTTTCTTCTTGGCACTGTGGGGGCCCTACCTGGT
TGCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCGTAGTTCTTGGGGGCT

ACCTGACAGCAGCCGTGTGGATGAGCTTTGCTCAGGCTGGGGTCAATCCT
TTCATCTGCATTTTCNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGG
TCCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCC
CGCAGCAAAGCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGT
GTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGA
CGCCGCT-----GATTTTGCCGGTAAACGGGCCACCTTGCTGTCCT
ACGCAGCGGCCGGAGTGAAAGCTC-----TTCCCTGTGCTGACTGCAGGC
TGCTCCAATCGGCCCTTGCTACTACACAGACCCGTCTG---GCTGG--
-GGGGACGCACGCCGCGCAGTACTGCGGCGTAAACGCCAAATCCGGCT
CGGTGTTTTCTGCTGGCCCACTAACTCCATCGGTAGCAGGGCCGGGG--
-CC---AACTACCTGT-----CCGAGGA---GGGA---GACTC---
CATCACCACGGAGAGGTCGCC---AT---CGGCGCTCGGAGGAG---G
CCAAACCCAAAGACATGAC---GTCCGA---GTCGAACTGGATAGAA---
ACGCCGTCCTCCATCAAGTCCATCGATTCCAGCGACTCTGGCATCTTCG-
--AGCAGGCCAAGAGAAGGAGAATCTCACCTTCCAGCCACGCCG-----
--GTCTCAGAGACAGTGTCCCCCTCAAANNNNNNNNNNNNCTCAACAGGCCGAAGTACAGAG
AGAGAAGTGGCGTTGGGGATAAATCCGTTCGCGGATGGGATGGGCGCCTT
CAAAATCAACCACAGCTCCACGACATTGGCTCCGG--ACAGACGGCGT
TCTCCTCCAGGGC---CCCGGCTAC---GCGGCGGCCGCGCTGGGA---
CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGC
GGCTTTCAACTCCACCAGGACTTTCTCTTTCAGAAAATCGGGGTTCGGGG
ATGCCGCCGG-----GGCGCAGCACAGTTTGTTCGCCCTC----
-----CGGGAGTTT---T-----GCAGGGCCACATGGACACTCGGATGC
GGCGGGGCACCTGCTATTCGCCGGGCTGCACGAG---CAGGCGGCGAGCC
ACGCGTCTTCGAACGTCGTCAACAGCCAGATGCGGCTGGGTTTCTCGGG
GACATGTACGGACGGGCCGACCAGTACGGCCACGTCACGAGTCCGAGGT-
--CCGATCACTACGCTCGACCCAGCTGCACGGCTACGGCCCATGAATA
TGAACATGGCCGCG---CACCACGGAGCAGGGGCTTCTTCCGTTACATG
AGGCAGCCCATCAAGCAAGAACTCATCTGCAAGTGGATCGAACCAGGCA
GCTGACGAACCCCAAAAAGTCGTGTAACAAAACCTTTAGCACCATGCACG
AGCTGGTGACCCACCTGACGGTGGAGCATGTGGGGGACCCGAGCAGACC
AACCACATTTGCTTCTGGGAGGAATGCTCCAGAGAAGGAAAGCCATTCAA
AGCCAAATACAAACTGTAAATCATATCAGAGTTCACACCCGGAGAAAAGC
CCTTTCCGTGTCCGTCCCCGGCTGTGGCAA

>Melamphaes polylepis

-----TTTCTAGAGAGGAACCTCTACCCATCCAACTGCCTTGG
CATGCTGTTGCTGTCCGATGCTCACCAGTGTACCAAGCTGTCAGAGCTCT

CCTGGGGCATGTGCCTCAGCAACTTTCCTGCTATTTGCAAGAAGGAAGAC
TTCCTCCAAGTCCCAAAGACATGGTGGTGCAGCTCCTGTCCCACGAGGA
GCTGGAGACAGAAGACGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGG
TCAACTACGACCTGGAAAGGAGGCAC TGCCAAGTCCAGAGCTGCTGAGA
ACGGTCCGGCTGGCCCTGCTGCCCGCCATATTCCTCATGGAGAACGTCTC
CACAGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTCGATG
AAGCCATCCGCTGCAAGCTGAAGATCCTTGCAAGACGACGGTGTGGTGAAC
AGCCCCGTGTGCTCGACCGAGAAAAACCAGCCACGCCCTCTTTCTGCTGGG
TGGGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCAGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGTGGGA--GGGGCTC-
AGAGAAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACTGTCCACGAGG
AATGGTCCAAGGCAGCACCCATGCTCATCGCCAGGTTCCGGTCATGGCTCT
GCCGAGCTGAAACACTGCCTCTATGTGGTCCGAGGTCACACAGCTGCCAC
TGGCTGCCTCCCAGCCTCCCCCTCCGGAAGAATACATCATCATGTTTCAGT
CGTTCAGTGACGAGGCTGATCCTGAATGAAGCAGAGCTAATCATGGCGCT
GGCACAGGAGTTTCAGATGAGAGTGGTTACGGTGTCCCTAGAGGAACAAA
CTGTTGCCAGCATTGTCCAGTTGATCAGCGGGGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTAGTCACCTCACTCTTCCCTCCCAGAGGAGCTGC
TGTGGTGGAGTTGTTCCCCTATGCTGTGAATCCAGAACAGTACACCCCAT
ACAAAACGCTTGCCCTCCCTACCAGGCATGGACCTTCAATACGTGGCCTGG
AGGAACACTATGGAGGAGAACACCATCACCCACCCAGGCCGACCCCTGGGA
ACAAGCGGCATCGCTCATTTGGAAAAGGACGAGCAAGAGCGAATACTGG
CCAGCAGGGATGTTCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGAATCTACCAAGACACTTTGGTGGACATCCCTTCATTGCTGGACGT
CCTCAA---AGAGGGCCTGAGG---GCCAGGCCAGCTTAAAGAA---GG
CCAAGCCGGCCAGCACCGTTACCCGGGCCGGGTCAGAGAACCCCAAGTGC
CAAACCTCAGTCCAAGCCACCAACGAGGCAAAACTCACAGTTTCTGGCA
GATCCCCTGGAACCTGAAGTACCTAAAGGTGAGAGAAGTGAAGTATGAGG
TGTGGATCCAGAAGAGGGATAACCAGCAAGGGAACACTGGAAGATCAAATC
ATCCAGGCAAACCCCTGCCCTGGAGTCCTTTGGTAACGCCAAAACACTGAG
GAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGAATTCACTTTGGAA
CCAGTGGCAAGCTGTCTGTGCTGACGTTGAGACTTACCTACTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACATCACATCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTTCTGGACATGCTGCTGATTA
CCAACAACCCATACGACTACTCTTTCATCTCCCAAGGAGAGGTAACAGTA
CACTCCATCAACGATTCAGAGGAACTGATAGCCACTGATAGCGCCTTTGA
TGTGCTTGGCTTCAGTTCAGATGAGAAGATGGGAATCTACAAGCTGGTCCG
GTGCCATTATGCACTATGGCAACATGAAGTTC AAGCAGAAGCAGCGTGAG
GAGCAAGCTGAGCCTGACGGAACAGAGGCTGCTGACAAGGCAGCTTACCT
GATGGGGCTGAACTCTGCAGATCTCATCAAAGGACTGTGCCATCCCAGAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAGGGTGTAGAACAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGCAGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACGG
CGGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACGCCC
GTGTTGCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCCTCAGGGGGCGC
CAAGGAGAAGAAGCACCCGTGTGACCACTGTGACCCCGCTTCTACACCC
GCAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTTGGCAGGAAGGACCACCTGACGCG
GCACGTCAAGAAGAGTCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGATATGTTAGGGCTTTTAGGTTCCGGTTCCCCGCCTTGCTCTGTC
AAGGAGGAGCTCAGCCCTATGATGTGCAGCATGGGTCCCAACAAAGACCC
TATGATGGGCAAGCCCTTCCCAGCGGTACCCCTTCCCGATGGGCATGT

ACAACCCCTCACCAC-----CTCCAGGCCATGTCCAATCCTGGGGTGGGT
CACCCG-----CACCCCTCCCTGATGCCCGGTCCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAGTATCTCATCTACGCCTCRTTTTTATTCA
TGGGATGTTTTACAAATCAGCGATGGGTCAAACATTGTGAACTTGCTGGCT
AGTAACTCTCCAAGCGTTTTCGTTTGCTCTGACCCAGCAGAAATACTTCAG
TAACTACAGCCCCGTGATTGGGTTTTACATTTACGAGCCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCATCTGAAGACACTGAGTCATGGTTTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGT
GAGTGCCTCGACCAAGAGCGACTTTATCACCATCCTCAAGGGTTCCCTCC
TGCGCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTCTCCAAG
A---ACCGCGAGAGYG-----ACGAGTATGACATTATTGCCTCGCGCAT
GTACCTGGTGGCGCGGACCACGGAGAAAAGGCGGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTTTTTATGGACCGCTACAGCTCCTCTGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CATTCTTCTGGTCACTAACCCTTGGGAACTTCTGGCTCATCTTGACG
GTTACTTCTGTGGAACCTGGGCGTCTTGGGTTAATGNNNNNNNNNNNNNNNNAGTGGCAGCCGGC
CTCAAAAATGTGTCTGCATCGTGCCATGTTCGGCATTATTAACGGGCTCTC
TGGATGGGCTGCCTCAGTGGACGACTCCCAGCTGACACCATCACTCGGC
GATTCCGCTATGATGCGGCCCTGGTGTCGGCCTTAAAGGATCTGGAGGAG
GATATCATGGAGGGACTGCGAGAGTGTGGGCTGGAAGACAGTGCTTGCAC
CACGGGCTTCACTGTTTTGATCAAGGAATCGTGTGACGGCATGGGAGATG
TCAGTAAAAGCACGGTGGCGGGCCTATGGTCCCCGAGAAGGCTGTACGT
TTCTCTTTTACTGTCATGTCTGTCTCTGTCTTGGCAGAAGGAGAGGAG--
-----GAGGAGTTACCATCTTCAGGG
AGCAAAAGCCGAACCTCAGAACCTGTCCCTGTAAGCCCCATGTCTGATGTTT
GTGGATGAGGCAGACCACGAGACACTCACTGCCGTCCTGGGGCCCGTCGT
TGCAGAGCGAAACGCTATGAAGCAGAGTCGACTCATCCTATCTGTGGGTG
GCCTGCCTCGCTCATTTTCGCTTCGAGTTCAGAGGCACGGGATACGATGAG
AAGATGGTGCCTGATTTGGAGGGCCTGGAGGCCTCAAGCTCCACCTACAT
CTGCACCTCTGTGTGACTCCACACGGGCAGAGGCCTCCCACAACATGGTGC
TGCACCTCCATCACCCGAGTCATGACGTAAACCTGGAGCGTTATGAAATA
TGGAGACCAATCCGTTTTTCGAGTCCGCCGACGAGCTGCGAGACCAGGGT
CAAAGGTGTCTCCGCCAAGCCCTTCATGGAGACCCTCCCACCTCTGGATG
CATTGCACTGTGACATNGGTAATGCTACAGAGTCTACAAAATCGTCCAGG
ATGAAAACGGGGAGTGCTACCAAAAGGC---CAAC---CCCAGCCGGGAG
CAGCGGGCAGCTGGAGGGCAGCTCTAGACAAGCAACTGAGGAAGAAGAT
GAAGCTTAAACCGGTGATGAGGATGATTGGGAACATATGCCCGGAAGCTAA
TGACGAAGGAGGCCGTGGAGGTGGTGTGTGAGCTGGTGCCTCAAAGAAG
AGGAAGCAGGCCCTGAGGGAGCTTATGGGGTCTCTCTGCAAATGAGGCC
TGGTGTGGCTGCCACCTGCCAGCAAAGGATGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NNNNNNNNNNNNNNNNNTCGTACACCATTGAG
ATGAGCCCCAAGGGGCCCCAGTGGAAAGGAGAGTCCGCAGCCCTTCTCCTG
CTCTGTTGAAGACCCACAAAGCAGACCAAGTTCAAGGGCATCAAGACCT
ACATCTCGTACCGGGTCACGCCGAGCCACACGGGACGTCCCGTCTACAGG
CGCTACAAACACTTTGATTGGCTGTACAGCCGCCTGCTGCACAAGTTCAC
TGTGATCTCCGTGCCACCTGCCGGAGAAGCAGGCCACGGGCCGCTTCG
AGGACGACTTCATCGAGAAGCGCAAGAGAAGGCTGATCCTGTGGATGAAC
CACATGACCAGCCATCCGGTCTCTCCAGTACGAGGGCTTCGAGCACTT
CCTGATGTGTGCCGACGAGAAGCAGTGGAAAGCTGGGTAAGAGGCGGGCGG
AGAAGGACGAGATGGTGGGCGCCCACTTCATGCTGACCTTCCAGATCCCT

TCGCCCTGCTGCCGGCCATCTTTCTGATGGAGAACGTCTCAACAGAAGAG
CTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTTGACGAAGCTATCCG
CTGTAAGCTGAAAAATCCTGCAGAATGACGGCGTTGTTAACAGCCCGTGTG
CTCGGCCAAGAAAAACCAGCCATGCTCTCTTTCTGCTGGGTGGGCAGACT
TTCATGTGTGACAAGTTGTACCTGGTGGATCAAAAAGGCCAAAGAGATCAT
CCCCAAGGCTGACATCCCCAGCCCCAGGAAAGAGTTCAGCGCCTGTGCCA
TCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAACGGT
GTGTCTAAAGATGTATGGGTCTACGACACCGTCCACGAGGAATGGTCCAA
AGCAGTCCCATGCTCATCGCCAGGTTTGGCCATGGCTCTGCAGAGCTGA
AACACTGCCTCTACGNNNGGATG
ATTACATCGTCGTGTTTCAGTCGTTCAACAA
CGAGGCTGATACTTAACGAAGCGGAGCTGATAATGGTGTGCTGGCCAGGAG
TTCCAGATGAGGGTGGTACAGTATCCCTGGAGGAACAGTCTTTCCCCAG
TATCATCCAGGTGATCAGCGGGCTTCCATGTTAGTCAGCATGCATGGAG
CTCAGTCTATCACCTCACTCTTCCCTCCCAGAGGAGCTGTTGTGGTGGAG
CTGTTCCCCTTTGCTGTGAACCCTGAGCAGTACACCCCATATAAAACACT
GACCTCTCTCCCGGCATGGACCTTCACTATATCTCCTGGAGGAACACTA
AGGAGGAAAACACTATCACCCACCCAGACAGAGCCTGGGAACAAGGAGGC
ATTGCTCACTTGGAGAAGGAAGAGCGGGAGCGAATACTGGCCAGTAAGGA
CGTACCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCAGGATCT
ACCAGGACACTTTGGTGGACATTCCCTTCCTTCCCTGGAAGTCCTCAA--G
GAGGGTATGAAG---ACCAAGCCCAGCTTTAAGAA---GTCAAAGCCAGC
GAGCATAGTCCACCCAGGCCGAGTCAGAGAACCTCAGTGTGACACCTCAG
TACAAACCTCTAATGAGGCTAAGCTCACAGTTTCCCTGGCAGATCCCCTGG
AATCTGAAATACCTGAAAGTAAGAGAGGTCAAATACGAAGTGNNNNNNNNNAAAAAAGA
CACCAGCAAGGGGACACTAGAGGATCAAATCATCCAGGCGAACCCCTGCGC
TGGAGGCATTTGGCAACGCCAAAACACTAAGAAACGACAACCTCATCTCGT
TTTGGAAAATTCAATTGCAATTCACTTTGGTACAAGTGGCAAACCTGTCATC
TGCTGACATAGAGACATACCTGCTGGAGAAGTCACGTGTACCTTTCAGC
TCAAGGCTGAGAGAACTACCACATCTTCTACCAAATCCTGTCCAATCAG
AAGCCAGAGCTGCTGGACATGCTGCTGATCACCAACAACCCATACGACTA
CTCCTACATCTCCAAGGAGAGGTAACAGTCGCCTCAATCAACGACTCAG
AGGAGCTGATGGCCACTGACAGTGCCTTTGATGTGCTCGGGTTCACTCCA
GAGGAGAAGATGGGTGTCTACAAACTGACCGGTCCATCATGCACTATGG
CAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGCTGAACCTGATG
GGACGGAGGCTGCTGATAAATCAGCTTATCTGATGGGACTAAACTCTGCT
GACCTCATCAAAGGCCTGTGCCACCCAGAGTCAAGGTAGGAAATGAGTA
TGTCACCAAAGGCCAAAGTGTGATCAAGTCTACTACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NGGAAGCACTACAA
CACCAAGCTGGGATACAAGCGCCATGTGGCGATGCACTCGGCCACGGCGG
GCGATCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCCGTT
CTCCTGGAGCACCTCAAGAGCCACTCCGGGAAGTCGTCCGGCGGGCGCCAA
GGAGAAGAAACACCCGTGCGACCCTGCGACCAGCGTTTCTACACGCGGA
AGGACGTGAGACGGCACATGGTGGTCCACACGGGCCGGAAGGACTTCCTG
TGCCAGTACTGCGCCAACGCTTTGGCAGGAAGGACCACCTGACGCGCCA
CGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTC
CGGACATGTTGGGTCTTTTGGCTTCGGGGTCGCCGCCTTGTTCTGTGAAG
GAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCCCAT
GATGGGCAAACCGTTCCCCAGCGGGGCCCTTTTCCCATGGGCATGTACA
ACCCCCACCAT-----CTCCAGGCCATGTCCAACACCGGGGTGGGTAC
CCC-----CACCCGTCCTGATGCCCGGGTCCCTGTCTGCAGCTATGGG
CATGGGCAGTCANNNNNNN-----

NNNTCTTGCAGTGTTGGCATAATTA
AT

GGGCTCTCTGGATGGGCTTCCTCAGTGGATGACGCCCTGCTGACACAAT
CACTCGCCGGTTTTCGCTATGATGTGGCGCTGGTGTTCGGCATTAAAGGATC
TGGAGGAGGACATCATGGAGGGCTGAGAGAGACCGGAATGGAAGACAGC
GCTTGCACCACAGGCTTTAGCGTCATGATCAAGGAATGCTGCGATGGCAT
GGGTGACGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCTGAGAAGG
CTGTACGCTTCTTTTACAATTATGTCTATTTCTATCCTGGCAGAGGGT
GAGGAG-----AAGGAGGTTGCCAT
CTTCACAGAGCCAAAGCCTAACTCAGAACTGTCTGTAAGCCCTTTGCC
TGATGTTTGTGATGAGTTCAGACCATGAGACGCTCACAGCCGTCCTGGGG
CCCATAGCTGCAGAGCGTGGAGCCATGAAAGAGAGCAGGCTCATCCTGTC
CGTGGGCGGCTGCCCTCGATCCTTCCGCTTTTATTTCAGAGGTACAGGAT
ACGATGAGAAGATGGTGGAGAGATGGAAGGCCTGGAGTTCCTCAGGGTCC
ACATATGTCTGCACTCTGTGTGACTCCAGTTCGGGCAGAGGCCTCTCAAAA
CATGGTGCTTCACTCCATCACCCGCAGTCATGAAGAGAACCTCGAACGTT
ACGAAATATGGAGAACCAACCCCTTCTGTGAGTCTGTAGACGAGCTGCGA
GATAGAGTCAAAGGGTCTCTGCTAAGCCCTTCTTGAAACCCAGCCCAT
GTTAGATGCATTACACTGTGACATGGCAATGCCACTGAGTTCTATAAAA
TCTTCCAGGACGAGATTGGGGAGGTGTACCAAAAAGGC---CAAC---CCC
AGCCGCGAGGAACGGCGAGCTGGAGGGCAGTCCCTAGATAAACAGCTGAG
GAAGAAGATGAAGCTTAAACCAGTGTGAGGATGAATGGAAACTATGCC
GCAAGCTAATGACCTGGAAGCTGTGGAGGTGGTGTGCGAGCTGGTGGCC
TCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTCTACCTCCA
GATGAGGCCCGTGTGGCGGCCACCTGCCAGCCAAGGAATGCCCCGACC
AGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACCTCCTCTCC
TCTACCTTCAAATACAGGTACAATGGAAAGATAACCAATTACCTTCACAA
GACCTGGCACATGTACCTGAACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN

NN
NNNNNNNNNNNNNNNGCATAACCATCGAGATGGGGACCGTG
GGGCCCCGGTGAAGGAGAACCACAGCCCTTCTCCTGCTCCATTGAAGA
CCCCACAAAACAGACAAAGTTCAAGGGCATTCAAGACCTACATTTCATACC
GGGTACGCGAGCCACACGGGGCGTCCCGTCTACAGGCGTTACAAACAC
TTTACTGGTGTACAACCGCTTGTGCACAAGTCACTGTGATCTCCGT
GCCTCACCTGCCTGAGAAGCAGGCGAGGGGCGATTTGAGGAAGACTTCA
TCGAGAAGCGAAAGAGACGGCTGATACTGTGGATGAACCACATGACCAGT
CACCAGTCTCTCCAGTACGAAGGCTTTGAACACTTTCTGATGTGCGC
TGACGACAAGCAGTGGAACTGGGAAAGAGGGCGGGGCGGAGAAGGATGAGA
TGGTGGGGCGCCATTTATGCTGACCCTCCAGATCCCCAACGAGCACCAG
GACCTTCAGGACGTGGAGGAGCGGGTGGACTCCTTCAAATCCTTCGCWAA
AAAAATGGATGACAGCGTGTATGCAGCTCACGCATGTCGCTCAGAGCTGG

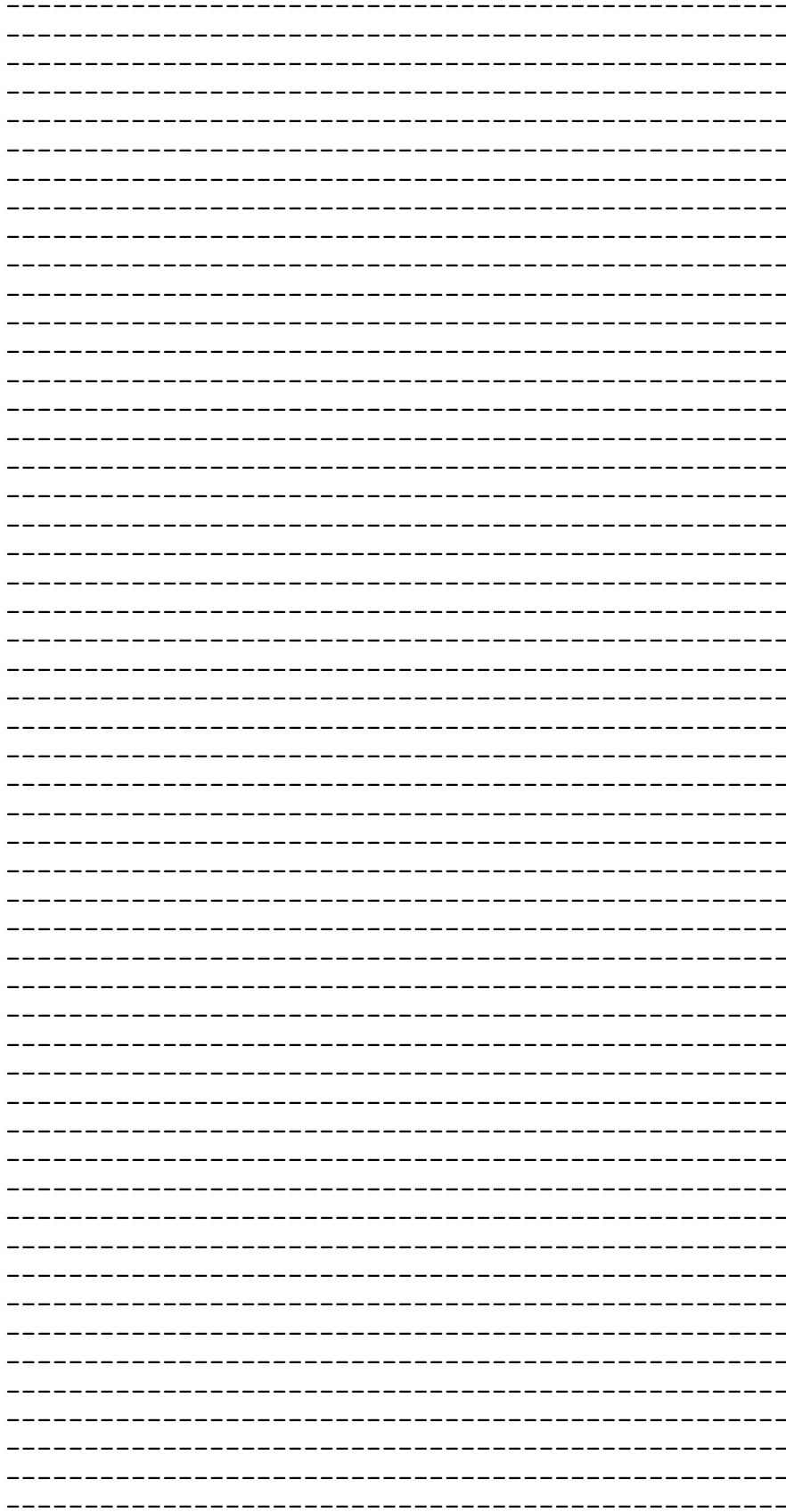
NN

>Menticirrhus littoralis

-----TTCTAGAGCGAAACCTTCACCCCTTCTAACTGCCTTGG
CATGTTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTTT
CCTGGGGCATGTGCCCTCAGCAACTTCCCCGCTATTTGCAAGACAGAGGAC
TTCTTCCAAGTCCCCAAAGATATGGTGGTGCAGCTTTTGTTCGCATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTGTATGAAGCTGCCCTCAACTGGA
TCAACTATGACTTGAAAAGAGACACTGTCACCTGCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCTTGCTGCCTGCCATCTTTCTCATGGAGAACGTATC
TACGGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGACG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGTGTGTAAC
AGCCCGTGTGCTCGACCAAGAAAACCAGCCACGCGCTCTTTCTTCTGGG
AGGGCAGACTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAAGTGTACATCACTGGTGGAA--GAGGCTC-
AGAGAACGGTGTGTCCAAGACGTGTGGGTCTATGACACTGTCCACGAGG
AATGGTGAAGGCGGCACCCATGCTCATCGCCAGGTTCCGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACCCGAGCAAC
TGGCTGCCTCCCCGGCCTCCCCGCTCTGGATGAATACATTGTTGTGTTAGT
CGTTCAACAACAAGGTTGGTACTGAATGAAGCAGAGTTAATCATGGCACT
GGCCAGGAGTTCCAGATGAGAGTGGTGCAGTATCACTGGAGGAACAGT
CTTTCCCAGTATTGTCAGGTGATCAGCAGTGCTACCATGTTAGTCAGT
ATGCATGGAGCTCAGTTGATCACCTCACTGTTCCCTCCCAGAGGAGCTGT
CGTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAACAGTACACCCCAT
ATAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTCCATTATATCTCCTGG
AGGAACACGAAAGAGGAGAACACCATCACCCACCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATATTGT
CGAGCAAAGATGTCCAAGGCACCTGTGCTGCCGCAACCCTGAGTGGCTC
TTTCGGATCTACCAGGACACCTTGGTGGACATCCCTTCTTTTCTGGAAGT
CCTGAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTTAAGAA---GT
CAAAGCCGGCCAGTACAGTCCATCCAGGCCGGGTGAGAGAACCCCATTTGT
CAGACCTCAGTACAAACACTAATGAAGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGGTTAAAATACGAGG
TGTGGATCCAGAAGAAAGACACCAGCAAGGGAACACTGGAGGATCAAATC
ATCCAGGCCAACCCGGCGCTGGAGGCGTTTGGCAACGCCAAAACACTGAG
AAATGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTCGGTA
CGAGTGAAAGCTGTCATCTGCTGACATTGAGACGTACCTGCTGGAGAAG

TCACGTGTCACCTTTCAGCTCAAAGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTGACGGTC
GCCTCCATCAACGACTCAGAGGAGCTGATGGCCACCGATAGCGCCTTCGA
TGTGCTTGGCTTCACTCCAGATGAGAAGCTGGGCGTCTATAAATGACGG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCAGACAGCACGGAGGCTGCAGATAAATCTGCTTATCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TAAAGGTAGGAAATGAATATGTGACCAAAGGCCAAAGTGTGGACCAGGTC
TACTATCCCAACAAGGAGGCCTTCAAGTGTGAAGAGTGTGGGAAGCATTA
CAACACCAAGCTGGGATATAAGCGCCATGTAGCCATGCACTCTGCAACGG
CAGGGGATCTCACCTGCAAAGTGTGCATGCAGACCTACGAGAGCACACCT
GTGCTCTTGGAGCACCTCAAGAGCCACTCTGGGAAGTCTTCAGGTGGCAC
CAAGGAGAAAAAACACCCATGTGACCACTGTGACCGTCGCTTCTACACAC
GAAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCGGAAAAAGACTTC
CTGTGCCAGTACTGTGCCAACGCTTCGGCAGGAAGGACCATCTGACACG
CCATGTGAAGAAGAGCCACTCACAGGAGCTGCTAAAGATCAAGACAGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCCGGGTCACCACCCTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGTATGGGTCCCAACAAAGACCC
CATGATGGGAAAAACCATTTCCAGTGGGGCCCTTTTCCAATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCCAATTCTGGGGTGAGT
CACCCA-----CACCTTCCCTGATGCCAGTTCCTTATCTGCAGCTAT
GGGCATAGGCTGTCACATGGAATATCTCATCTACGCATCTTTTTTCATTCA
TGGGATGTTTACAAATTAGTGATGGATCAAATATTGTGAATCTGCTGGCT
AGTAACTCTCCGAGTGTTCCTATGCTCTGACCCAGCAAAAATACTTCAG
TAACTACAGTCCCGTGATTGGGTTTTACATTTATGAGCCTATTGAGTACT
GGAACTCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACTTACGGGTAGTGAATGT
GAGTGCCTCAACCAAGGGTGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCGTGAGACTG-----ATGAGTATGACATTATCGCCTCACGGAT
GTACTTGGTGGCACGGACGACAGAGAAAAAGCGAGAAGAGGTGGTGGAGC
TTCTTGAAAAGCTTCGTCCATTGATGCTAATCAACAGCATCAAATTCATT
GCCTTCAATCCTACGTTTGTGTTTATGGACCGCTACAGCTCTTCTGTCAT
CTCGCCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTCA
CTTCTTCTTGGTCATCAACCCCTTGGGTAACCTTCTGGCTCATTCTCACT
GTAACGTCCTGGAGCTGGGCGTCTTGGGTTTGTGAGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGGCTCGCTGGATGGGTTTCCTCAGTGGATGATTCCCAGCT
GACACCATCACTCGGCGGTTTCGCTATGATGTGGCACTTGTGTGGCATT
AAAGGACCTGGAGGAGGACATCATGGAGGGGCTGAAAGAGAGTGGGATGG
AAGACAGTGTGACCTCAGGCTTCAGTGTGATGATCAAAGAATCTTGT
GATGGCATGGGCGATGTCAGTGAGAAGCATGGTGGAGGACCAGTTGTTCC
CGAGAAGGCTGTACGTTTCTCTTTCACTATTATGTCTGTCTCTGTCTAG
CAGACGAGAAGGAG-----GAAGAG
GTTACCATCTTACGGAGCCAAAGCCAAACTCAGAATCTCCTGTAAGCC
CCTTTGCCTGACATTTGTAGATGAGTCAGACCATGAGACACTCACAGCCA
TCCTGTGGCCTATTGTTGCAGAGCGTAACGCAATGAAAGAAAGTAGGCTT
ATCCTACCCATAGGTGGACTACCTCGCTCCTTCCGCTTTCACTTCAGAGG
CACGGGTTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAAGCCT
CAGGGTCCACCTACATCTGCACTCTTGTGACTCCAGTCGGGCAGAGGCC
TCTCAAACATGGTGTACACTCTGTACCCCGCAGTCATGAAGAGAATTT
AGACCGTTACGAAATATGGCGAACCAACCCCTTTTCTGAGTCTGTAGAGG

AGCTGCGAGAAAGAGTCAAAGGGGTTTCTGCCAAGCCTTTCATGGAAACA
CACCCACACTGGATGCATTACACTGTGACATAGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATCGGGGAGGTGTATGAAAAGGT---CA
AC---CCCAGTCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGAAACAAGATGAAGCTTAAACCGTAATGAGGATGAATGGGAA
CTATGCCCCGAAGCTAATGACCATGGAGGCTGTGGAGGTAGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTC
TACTTGCAGATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTACAGTTTTAACTCCCAGCGCTTTGCCGACC
TCCTCTCCTCTGCCTTTAAATATAGGTACAATGGAAAGATAACCAATTAC
CTGCACAAGACCCTGGCCCATGTGCCAGAAATCATAGAGAGAGATGGATC
TATAGGAGCCTGGGCCAGCGAGGGGAATGAGTCTGCAAACAAATCATACA
CCATCGAGATGGGTCCCATGGGGCCCAGGTGGAAGGAGAGCCACAACCT
TTCTCCTGCTCCATCGAAGACCCAACCAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATATCGTACC CGCTCACACCGAGCCACACAGAGCATCCTG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACAGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGCAAAAAGACGACTTATACTGT
GGATGAACCACATGACCAGTCACCTGTCTCTCCAGTATGAAGGCTTC
GAGCACTTTCTGATGTGTGCTGATGACAAACAGTGGAACCTGGGCAAGAG
ACGGGCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCCTGC
AGATCCCTAATGAACACCAGGACCTTCAGGATGTAGAGGAGCGGATCGAC
TCCTTCAAGTCCTTTGCTAAGAAGATGGATGACAGCGTGATGCAGCTCAC
ACATGTTGCCTCAGAGCTGGTGCCTAAGCACCTGGGTGGTTTTCAGGAAGG
AGTTCCAGCGACTGGGGAATGCCTTCCAGTCTGTAAGCCAGGCATTATG
CTGGACCCACCCACAGCTCAGAGACCTTCAACAACGCCATCTCCCAT--
-----ACGTTCTTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCG
GTGTGGTTGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCCGATAT
CCTGCGCTCAGCCATCTGCTTCCCTTTGTCTTACCTCCGTCAAGAATG
GATCTGCCTGGACCTATGGCAGCTGACCTGCAAAGTGATCGCCTTTCTC
GGTGTGCTCTCCTGTTTCCACACAGCGTTTATGCTGTTCTGTGTCAGTGT
CACACGCTACCTGGCCATCGCGCATCATCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTAGCTGTCTGCATGGTGTGGACGTTGTGTCAGTG
GCTATGGCATTCCCGCCGGTGTGATGTAGGGACGTACTCTTTTATCCG
GGAGGAGGACCAGTGACATTCCAGCACCGTTCCCTCAGGGCGAATGATT
CGCTGGGCTTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTTGTCCACGACCGTCGAAAGATGAAGCC
TGTCCAGTTCGTGCCTGCTGTGAGCCAGAACTGGACCTTTCACGGGCCAG
GCGCCAGCGGGCAGGCGGCGGCAACTGGCTGGCTGGATTTGGTCGAGGC
CCCACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCAGG
CCGCAGGCGTCTACTGGTGTGGATGAATTCAAAAACAGAGAAGAGGATTA
GTAGGATGTTCTACATCATGACGTTTTTCTTCTTGGCACTGTGGGGCCA
TATCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCGTGGTCCC
CGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGG
TCAATCCTTTCATCTGCATC-----GCCAAATCTCGCTTT
CACCTGGCATGGGGACTGGTCCCTGGCACGGAGC---GCAGCGTCCCACT
CGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCCACTGTTGCCA
CCCCCCGCGAGCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGCT-----GATTTCCGGGTAA
CGCGGCCACCTTGCTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCCAACCGGCTCTTGGCTATTACGCA
GACCCGTCAG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGG



GTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACAGG
TGCCATTATGCACTATGGCAACATGAAGTTC AAGCAGAAGCAGCGTGAGG
AGCAGGCAGAGCCTGATGGCACTGAGGCAGCTGACAAGTCAGCTACCTG
ATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCCAGGGT
CAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTCT
ATTACCCCAACAAGGAGGCCTTCAAGTGCAGAGGAGTGC GAAAGCACTAC
AACACCAAGCTGGGCTACAAGCGGCACGTGGCCATGCACTCGGCCACGGC
GGGCGACCTCACCTGCAAGGTGTGCCGTGCAGAGCTACGAGAGCACGCCGG
CGCTGCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCGTGGGGCGGCGCC
AAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCGCTTCTACACGCG
CAAGGACGTGCGCCGCCACATGGTGGTGCACACGGGCCGCAAGGACTTCC
TGTGCCAGTACTGCGCGCAGCGCTTCGGCCGCAAGGACCACCTGACGCGC
CACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAACC
TCCGGACATGCTGGGCCTGCTGGGGCTCGGGCTCGCCGCCCTGCGCCATCA
AGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGCCCCGCAAGGACCCC
ATGATGGCCAAGCCCTTCCCCAGCGGCACCCCTTCCCCATGGGCATGTA
CAACCCCCACCAC-----CTCCAGGCCATGTCCAACCCCGGAGTGGGCC
AC-----CACCCTCCCTGGTGCCC GGCTCCCTGTTCGGCCGCCATG
GGGATGGGCTGCCACATGGAG-----

-----TTCAGTGTGACGATCAAGGAGTCCTGCG
ACGGCATGGGGGACATCAGGGAGAAACAGGCGGTGGGCCGCCCGTCCCA
GAGAAGGCCGTGCGCTTCTCCATCACCGTCATGTCTGTCTCCGTCCAGGC
CGAAGGAGAGGAG-----GAGGCGG
TCACCATCTTCCGGGAGTCCAAGCCCAACTCTGAACTGACCTGTAAGCCA
CTGTGCTTGATGCTGGTGGACGAGTCGGACCACGAGACCCTCACGGCAGT
CCTGGGGCCTCTGGTGGCCGAGAGGAACGCCATGAAGCACAGCCGGCTCA
TCCTGTCCCTGGGCGGGCTCCCTCGTCCATCCGCTTCCACTTCCAGAGGA
ACGGGTTATGACGAGAAGATGGTGCGGGACATGGAGGGCCTGGAAGGCTC
CGGCTCCACCTATATCTGCACCTTGTGCGACTCCACCAGGGCAGAGGCCT
CCCACAACATGGTGTCCACTCCATCACCCGCAGCCACGACGAAAACCTG
GAGCGCTACGAGCTGTGGAGGACCAACCCCTTCTCGGAGTCCGCAGAGGA
GCTGCGAGACCGGGTCAAAGGTGTCTCGGCTAAGCCCTTCATGGAGACAC
AGCCCACTGGACGCCCTGCACTGCGACATTGGCAATGCTACGGAGTTC
TACAAGATCTTCCAGGATGAGATCGGGGAGGTGTACCGCAGCCC---CAA
C---CCCAGGCAGAGGAGCGACGGGGTGGAGGGCCGCTCTGGACAAGC

-----GAGAAGTGGCTTTGGGGA
TAAATCCGTTTCGCCGACGGGATGGGCGCTTTCAAAATCAACCACAGCTCC
CACGATATTGGCTCTGG---TCAAACGGCGTTTGCCTCGCAGGCG---CC
CGGCTAC---GCAGCCGCTGCCCTGGGA---CACCATCA-----CCACC
CAACCCATGTCAGCTCC---TACTCCACCGCGGGCGTTCAACTCCACCCGG
GACTTTCTCTTTTCGGAATCGGGGATTCGGAGACGCCACTAG-----
---CGCGCAGCACAGTCTCTTCGCCTCAGC---TGCGGGAAGTTT---C-
-----GCTGGGCCACATGGACACACCGATGCCACGGGACACCTGCTCTTC
TCGGGACTGCACGAG---CAAGCGGCGACCCACGCGTCTTCGAACGTGGT
GAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACATGTACGGCAGAGCCG
AGCAGTATGGTACGTAACGAGCCCCCGGT---CCGAGCACTACGCTTCG
ACTCAGTTGCACGGCTACGGCCCCATGAACATGAATATGGCTGCC---CA
CCACGGGGCAGGGGCCCTTCTTCCGTTACATGAGGCAGCCGATCAAACAAG
AGCTCATCTGCAAGTGGGTGCAACCAGAGCAGCTGTCGAATCCGAAAAAG
TCCTGCAACAAAACCTTTCAGCACGATGCATGAGCTCGTGACCCACCTCAC
AGTGGAACATGTTCGGGGGACCGGAACAGTCGAATCACATTTGCTTTTGGG
AAGAGTGTCCGCGAGAAGGGAAACCATTTAAAGCCA-----

>Mola mola

AGCCTACTCATTTCGAGCGGAACTAAGTCAACCTGGTGTCTTCTTTGGAGA
CGACCAAATTTACAATGTCATCGTCACAGCACATGCATTTGTAATAATTT
TCTTTATAGTAATACCAATTATGATTGGGGGCTTCGAAACTGACTGGTC
CCTCTTATGATCGGGGCCCGATATGGCCTTCCCCCGAATGAACAATAT
AAGCTTTTACTCTTGCCCCATCTTTTCTTCTACTTCTTGCCCTCCTCAG
GCGTCGAAGCAGGTGCCGGAACAGGATGAACTGTATACCCCCCTTTAGCC
GGAAACTTAGCCCATGCAGGCGCCTCTGTTGATTTAACAATCTTTTCCCT
TCACCTAGCCGGCATCTCCTCAATTCAGGGGCCATTAATTTTATCACAA
CGATCATTAACATGAAACCGCCTGCGATTTTACAATAACCAGACCCCCCTG
TTTGTATGGGCGGTCCTCATTACAGCAGTACTTCTTCTCCTCTCGCTTCC
AGTCTTGCAGCTGGGATTACGATGCTTCTTACAGATCGAAACCTTAACA
CCACTTTCTTCGACCCGGCAGGCGGAGGAGATCCAATTCATATCAACAT
CTCTTCT-----

-----TTTCTAGAGAGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGCTGCTATCCGACGCCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCTCAGCAACTTCCCCGCTATTTGTAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTCCCATGAGGA
GCTAGAGACTGAAGATGAGAGACTGGTGTATGAAGCTGCCCTCAATTGGA
TCAACTATGACCTAGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTTCTGCCCGCCATTTTCTCATGGAAAACGTCTC
TACAGAAGAGCTGATCAACGCCAGGCCAAGAGCAAAGAGCTGGTGGACG
AGGCTATCCGCTGCAAGCTGAAGATCCTGCAGAAATGATGGTGTGGTGAAC
AACCCATGTGCGCGTCCCAGAAAAACCAGCCATGCCCTCTTTCTTCTTGG
CGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCA
AAGAAATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATTGGCTGCAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGACGTGTGGGTCTACGACACCGTCCACGAGG

AATGGTCAAAGGCGGCCCATGCTTATCGCCCCGTTTGGCCATGGCTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTCGGAGGCCACACTGCAGCAAC
CGGTTGCCTCCCAGCCTCTCCTTCTGGACAACACTACATTGTTGTGTTTAGT
CGTTCCACCACAAGGCTGATACTGAATGAAGCAGAGCTAATTATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACAGTATCTCTGGAGGAACATT
CTTTCCCCAGTATTGTCCAAGTGATAAGCAGTGCTACTATGTTAATCAGT
ATGCATGGAGCTCAGCTTATTACCTCACTGTTCCCTCCCTCGAGGAGCTGT
TGTGGTTGAGCTATTCCCCTTTGCTGTGAACCCGGAGCAATATACTCCAT
ATAAAAACCTTGCCTTCCTTCCAGGCATGGACCTACACTATATCTCATGG
AGGAACAATAAAGAACAGAACACCATCACCCACCCACAGAGACCCTGGGA
ACAAGGGGGCATCATACTTAGAGAAGGAGGAACAAAAGCGAATACTTA
CTAGCAAAGATGTTCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTA
TTCCGGATCTACCAGGACACTTTGGTGGATATCCCCTCCTTCCCTGGACAT
CCTCAA---AGAAGGCTTAAAG---ACGAAGCCTAGTTTGAAGAA---GT
TAAAACCAGCAAGCGCACTCCACCCTGGCCGGGTCAGAGAACCCTCAGTGT
CAGACTTCAGTACAAACCAGTAATGAGGCTAGACTCACAGTCTCCTGGCA
GATTCCCTTGGAAATCTCAAGTACCTGAAGGTGAGAGAAGTAAAATATGAAG
TGTGGATCCAGAAGAAGGACACAAGCAAGGGGACGCTGGAGGATCAAATC
ATCCAGGCGAACCCCTGCCTGGAAGCCTTCGGTAATGCCAAAACATTGAG
AAATGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTTGGTA
CGAGTGGCAAGCTGTCTCGTCCGCTGACATCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAAAGAAAATTACCACATCTTCTA
CCAGATACTGTCCAATCACAAGCCAGAGCTACTGGACATGTTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAGGGAGAAGTTACGGTG
GCCTCCATCAATGACTCAGAGGAGCTGATGGCCACCGACAGCGCCTTTGA
CGTACTTGGCTTCACTTTCAGAGGAGAAGATGGGCGTATACAAGCTGACGG
GCGCTATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGAGAG
GAACAGGCTGAGCCGGATGGGACGGAGGCGGGGATAAATCAGCTTACCT
CATGGGGCTGAACTCTGCTGATCTCATCAAAGGGCTGTGCCACCCAGAG
TCAAGGTAGGAAACGAATATGTCACCAAAGGCCAAAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCTTTCAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCAACTG
CAGGCGATCTCACATGTAAAGTGTGCATGCAGACCTACGAGAGCACACCG
GTGCTCTTGGAGCACCTAAAGAGCCACTCTGGGAAGTCCTCAGGTGGCAC
CAAGGAGAAAAACACCCCTGTGACCATTGTGATCGTCTGCTTCTACACAC
GGAAGGACGTGAGACGGCACATGGTGGTCCACACAGGCCGAAAGGACTTC
CTGTGTCAGTACTGTGCCAACGCTTTGGCAGGAAGGACCATTTGACACG
CCATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAAATTAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCTGGGTACCACCCTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGTGGCATGGGTCCCAACAAGGACCC
CATGATGGGGAAACCTTTCCCAGTGGAGCCCCATTTCAATGGGCATGT
ATAACCCCAACCAT-----CTCCAGGCCATGTCTAATCCTGGGGTGAGT
CACCCA-----CACCTTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGAGTTGTCTCCTGGAANNNNNNNNNNNNNNNNNNNNNATTTTCATGGGGAGTTTACAGATCAGT
G
ATGGATCAAACATTGTGAACCTGTTGGCTAGTAACTCTCCAAGTGTTTCA
TATGCTTTGACCCAGCAAAAATACTTCAGTAACTACAGTCCCTGTGATCGG
GTTTTACATTTATGAGCCATTGAGTATTGGAACCTAACGGTGCAGGAGC
ACCTGAAGACTCTGAGTAATGGCTTCAATAAGATCTCCTGGATGGACAAC
TTTTTCCACTACCTGAGAGTAGTGAATGTGAGTGCATCAACCAAGAAGGA
CTTCATTAACATCCTTAAGGGCTCCTTCCCTGCGCAGCCCGGAGTACCAGC
ACTTCACTGAGGACATCATATTCTCTAAGA---ATCGTGAGACTG-----
-ATGAATACGACATTATTGCTTCAAGGATGTACTTGGTGGCACGTATAAC

AGAAAAGAAGCGTGAAGAGGTGGTGGAGCTTCTGGAAAAGCTTCGTCCAT
TAATGTTGATCAACAGCATCAAGTTCATTGCCTCAATCCTACATTTGTG
TTCATGGACCGCTACAGTTCGTCCGTCATCTCACCCATCCTGACCTCAGG
ATTCAGCGTACTCACAACTCTCATCCTCACTTTTTCTTGGTCATCAACC
CCTTNN
NN
NN
NN
NN
NN
NN
NN
NN
NN
GAGAAGCACGGCGGTGGACCGGTTGTTCTGAGAAGGCAGTA
CGTTTCTCTTTACCCTTATGTCCGTGTCTGTGCGGGCAGATGGCAAGGA
G-----GACGAAATTACCATCTACA
GGGAGCCAAAACCAAACCTCAGAGCTGTCCTGTAAGCCCCTTTGCCTGATG
TTTTGTGGATGAATCAGACCACGAGATGCTCACAGCCATCCTGTGGCCCAT
AATTGCAGAGCGTAATGCAATGAAAAGAGAGCAGACTCATCATATCCATTG
GTGGACTGCCTCGCTCCTTCCGCTTTCACTTCCGAGGCACAGGCTATGAT
GAGAAGATGGTGCCTGAGATGGAGGGCCTAGAGGCCTCTGGATCCACCTA
CATCTGCACACTTTGTGATTCCGGTCGTGCAGAGGCCTCTCAAAACATGG
TCCTACACGCCATCACACGCAGTACGAAGAGAACTTAGAGCGCTACGAA
ATATGGAGAACCAACCCTTTTTCTGAGTCTGTAGAGGTGCTTAGAGACAG
AGTCAAAGGGGTGTCTGCCAAGCCTTTCATGAAAACCACCCAACGCTGG
ATGCACTCCACTGCGACATAGGCAACGCCACTGAGTTTTACAAAATTTTC
CAGGACGAGATTGGGGAAGTCTACCAAAAGGT---CAAC---CCCAGCCG
GGAGGAGCGCGCAGCTGGAGAGCAGCCCTTGACAAAACAGCTGAGGAAAA
AGATGAAGCTCAGACCCGTGATGAGGATGNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NN
NN
NN
NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCTTACACCATCGAGATGGGT
TCCTTGGGGCCCAGATGGAAGGAGAGTCCCCAGCCTTTCTCGTGCTCCAT
CGAAGACCCCAAAAACAGACAAAAGTTTAAGGGCATCAAGACGTACATTT
CGTACCGGGTCACGCCGAGCCATAACGGGGCACCCCTGTCTACAGGCGTTAC
AAACACTTTGACTGGCTGTACAACCGCTTGCTGCACAAGTTCACTGTGAT
CTCCGTGCCCCACCTGCCTGAGAAGCAGGCCACAGGGCGATTTGAGGAGG
ACTTCATCGAAAAGCGCAAGAGGCGACTGATACTTTGGATGAACCACATG
ACCAGTACCCAGTCTCTCCCAGTATGAAGGCTTTGAGCACTTCTGAT
GTGTGCCGACGACAAGCAGTGGAAGCTGGGCAAGAGGGCGCGCAGAGAAAG
ATGAGATGGTGGGCGCGCATTTTCATGCTGACCCTTCAGATTCCCAACGAG
CACCAAGACCTTCCAGATGTAGAGGAGCGGATTGACTCCTTCAAGTCCTT
TGCCAAGAAAATGGACGACAGCGTGTATGAGCTCACGCATGTCACCTCAG
AGCTGGTGGCAAAGCACCTGGGTGGGTTGAGGAAGGAGTTCCAGCGGCTG
GGAAATGCCTTCCAGTCCATCAGCCAGGCATTTCATGCTGGACCTCCCCA
CAGCTCAGAGGCCTTAAACAACGCCATCTCCCATNNNNNNNNCGCCGTTCTCAAACCTG
ACCTCTCTGGGTTTTCATCATTGGAGTCCGGTGTGGTTGAAAACCTACTGAT
CTCCATCCTGCTGGTCAAAGACAAAAGCCTGCACCCAGCGCCCTACTATT
TCCTACTGGACCTGTGCGCCTCTGACATACTTCGGTCCGCCATCTGCTTC
CCCTTGTCTTTACCTCGGTCAAGAATGGATCTGCCTGGACGTATAGTAC
GCTGACCTGCAAAGTGATAGCCTTCCGGGTGTGCTCTCCTGTTTCCACA
CGGCGTTCATGCTGTTCTGCGTCAGTGTACGCGCTATCTGGCCATCGCA
CATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGT
CATCTGCATGGTGTGGACGTTATCAGTGGCCATGGCCTTCCCACCAGTGC
TCGACGTAGGGACGTACTTTTTATCCATCAGGAGGACCAATGCACGTTTC

CTATCATTAATATAAAAACCTCCCGCCATTTCCCAATACCAGACCCCTCTG
TTCGTATGGGCCGTTTAAATTACAGCAGTCCTTCTCCTCCTATCCCTCCC
CGTACTTGCAGCCGGCATCACCATGCTCCTAACAGATCGTAACCTAAACA
CAACCTTCTTTGATCCTGCAGGAGGAGACCCTATCCTGTATCAACAC
CTGTTT-----

-----TTTCTAGAGAGAAACCTTCATCCATCTAACTGCCCTGGG
CATGCTGTTGCTGTTTGTATGCACACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCGGCTATTTGCAAGACAGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTTCTATCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTYAACTGGG
TCAACTATGACTTGGAAGGAGGCACTGCCACCTGCCAGAGCTGCTGAGA
ACGGTTCGCCTGGCCCTGCTACCTGCCATCTTCTCATGGAGAATGTCTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCGGTGCAGCTGAAGATCTTGCAGAAATGACGGTGTGGTTAAC
AGCCCCTGTGCTCGGCCGAGAAAAACCAGCCATGCCCTTTTCTCTTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTATTTGGTGGATCAGAAGGCAA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCTAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAAGTCTACATCACAGGTGGCA--GAGGCTC-
AGAAAATGGTGTGTCTAAAGATGTGTGGGTCTATGACACTGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATCGCTAGATTTGGTCATGGCTCT
GCTGAGCTGAAACACTGCCTTTACNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNGGATGAATACATTTGTGGTGTTCAGCC

GTTCACAACAAGGCTGATTCTGAACGAAGCAGAGCTAATCATGACACTG
GCCCAGGAATTTAGATGAGAGTGGTTACAGTCTCCCTAGAGGAACAAC
TTTTCCCAGCATCGCCAGGTGATCAGTGGGGCCTCCATGTTAGTCAGTA
TGCATGGAGCTCAGCTTGTACCTCACTCTTCTCCCAGAGGAGCTGCT
GTGGTGGAGCTGTTCCCTATGCTGTCAACCCAGAACAGTACACCCATA
TAAAACCCTCGCTCCCTACCAGGCATGGATCTTCAATATGTTTCTGGA
GGAACACTATAGAGGAGAACACTGTCACCCACCCAGACAGACCGTGGGAA
CAAGGAGGCATCACCCATTTGGAAAAGGACGAACAAGAGCGAATACTGGC
CAGCAATGATGTCCCCAGACACCTGTGCTGCCGCAACCCAGAGTGGCTCT
TCCGAATCTACCAGGACACTTTGGTGGACATCCCTTCATTCCTGGAGGTC
CTCAA---AGAGGGCCTGAAG---ACCAGGCCAGCTTGAAGAA---GAC
CAAGCTGGCCAGCACGGTTCACCCAGGCCGGGTGAGAGAACCCCAGTGCC
ACACCTCAGTCCAAGCCACCAACGAGGCTAAACTCACGGTTTCTGGCAG
ATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTACGAGGT
GTGGATCCAGAAGAAGGATACCAGCAAGGGAACACTGGAGGATCAAATCA
TCCAGGCAAACCCTGCACTGGAGGCTTTTGGTAATGCCAAAACAGTGAGG
AATGACAATTCATCCCGTTTTGGAAAATTCATCCGAATTCACCTTGGAAAC
CAGTGGCAAACCTGTCTCTGCTGATATTGAAACTTACCTATTGGAGAAGT
CACGTGTCACCTTTCAGCTCAAGTCTGAGAGGAACTACCACATCTTCTTC
CAGATATTGTCCAATCAGAAGCCAGAGCTGTTGGACATGATGTTGATCAC
TAACAACCCATATGACTACTCCTACATCTCCAAGGAGAGGTAACAGTAG
CATCCATCAACGACTCAGAGGAGCTGATGGCCACTGACAGCGCTTTGAC
GTGCTTGGCTTCACTCAAGAGGAGAAGATGGGAGTATATAAGCTGATTGG
TGCCATTATGCACTATGGCAACATGAAGTTAAGCAGAAGCAGCGTGAGG
AGCAGGCTGAGCCTGACGGAACAGAGGCTGCTGATAAGTCAGCATACTT
ATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTATGCCATCCCAGAGT
CAAGGTAGGAAATGAATATGTACCCAAAGGCCAAGGTGTAGACCAAAGTCT
ACTACCAAACAAGGAGGCTTCAAGTGCAGGAGTGTGGCAAGCACTAC

AACACCAAGCTGGGATACAAACGCCATGTGGCCATGCACTCTGCCACAGC
AGGGGACCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCGG
TGCTCCTGGAGCACCTTAAGAGCCACTCGGGGAAGTCCTCAGGTGGCGCC
AAGGAGAAAAAACACCCATGCGACCACTGCGACCGCCGTTTTTACACACG
GAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCC
TGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTGACACGC
CATGTAAAGAAGAGCCACTCACAAGAGCTGCTGAAGATCAAAACGGAGCC
TCCAGATATGTTAGGTCTTTTAGGTTCTGGCTCACCGCCATGCTCTGTCA
AGGAGGAGCTTAGCCCTATGATGTGCAGCATGGGTCCCAACAAAGACCCC
ATGATGGGCAAACCCCTCCCCAGCGGGACCCCATCCCCATGGGTATGTA
CAACCCCCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGTC
ACCC-----CACCCCTCCCTGATGCCTAGCTCCCTGTCTGCAGCTATG
GGCATGGGCTGTACATGGAATATCTCATCTATGCCTCTTTCTCATTCAT
GGGTTGTTTACAAATCAGTGATGGCTCAAACATTGTGAACTTGCTGGCTA
GTAACTCTCCGAGCGTTTCATATGCTCTGACCCAGCAGAAATACTTCAGT
AACTACAGTCTGTGATTGGATTTTACATTTATGAGCCATTGAGTACTG
GAACTCCACAGTGCAGGAGCACCTGAAGACACTGAGTCATGGCTTCAACA
AGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTG
AGCGGTGCGACCAAGAATGACTTTATCAGCATCCTCAAGGGCTCTTTCCT
GCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATTTTCTCCAAGA
---ACCGTGAGAGTG-----ATGAGTATGACATTATTGCCTCGCGCATG
TACCTAGTGGCGCGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGCT
TCTGGAGAAACTGCGTCCACTGATGCTGATCAATAGCATCAAGTTCATCG
CCTTCAACCCACCTTTGTTTTTCATGGACCGCTACAGCTCTTCAGTCATC
TCGCCCATCCTGACCTCAGGCTTCCAGCGTCTCACCATCCTCATCCTAAC
TTTCTTCCCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACAG
TTACTTCTGTGGAGCTGGGTGTCTTGGGTTTAATGGGCTATCATCTATTT
GAATGGCAGCCGGCCCTCAAGAATGTGTCTGCATCCTGCCATGTGGGCAT
TATTAATGGGCTCTCTGGAGGGACTGCCTTGGTGGATGACTCCCCACCTG
ACACCATTACTCGACGTTTTCGCTACGATGTGGCCCTGGTATCAGCCTTA
AAGGATCTGGAGGAGCACATCATGGAGGGACTGAGAGAGTGTGGGCTGGA
AGACAATGCTTGCACCTCAGGCTTCACTGTTATGATCAAGGAATCTTGTG
ACGGCATGGGAGATGTCAGTGAGAAGCACGGGGAGGGCCAGTGGTCCCC
GAGAAGGCTGTACGCTTCTTACTGTTATGTCTGTCTCTGTCTCTGGC
AGATGGAGAGGAA-----GAGGCGG
TTACCATCTTTAGGGAGCCAAAGCCCAACTCAGAAGTGTCTGTAAAGCCC
CTAAGCCTGATGTTTGTGGATGAGTCAGACCATGAGACAGTCACTGCTGT
CCTGGGACCTTTAATGTCAGAGCGTAATGCAATGAAGCAGAGTCAACTCA
TCCTATCTATGGGTGGCCTCCCTCGCTCCTTTTCGCTTCCACTTCCAGAGCC
ACAGGATATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTC
AGGTTCACCTATATCTGCACTCTGTGTGATTCCAGTCCGAGCAGAAGCCT
CTCACAACATGGTTCTACATTCCATCACCCGCAACCACGATGAGAACCCTG
GAGCGTTATGAAATATGGAGGACCAATCCCTTTTCTGAGTCTGTGAGGA
GCTGCGAGACCGGGTCAAAGGGATCTCTGCCAAGCCCTTTATGGAGACCC
AGCCCACTATGGATGCATTACACTGTGACATTGGTAATGCCACAGAGTTC
TACAAAATCTTCCAGGATGAGATTGGGGAAGTGTATCAGAAGGC---CAA
C---CCCACCCGAGAGGAACGGCGGAGCTGGCGAGCAGCCCTAGACAANCA
NCTGAGGAAGAAGATGAAGCTTAANACAGTGATGAGGATGAATGGGAATTAT
GCCCCGAGGCTAATGACCAAGGAGGCTGTGGAAGTGGTGTGTGAGCTGGT
ACCTTCAGAAGAGAGGCGAGAGGTCTGAGGGAGCTTATGGGGCTCTACA
TCCAGATGAGCCTGGTGTGGCGCGCTACCTGCCAGCCAAGGAATGCCCT
GATGAGCTATGTCCCTACACGTTTTCACTCCCAGACATTTGCCGATCTCCT
CTCCANTACCTTCAATAATGGAACAAAGGGAAAGATCACCAATTTCTGCA

CAAGACATTCGCACATGTCCTTGAAACTATTGTAAGANNN
NNNNNNNNNNNNNNNNNNNTCGTACACCATTG
AGATGGCTCCTAAGGGGCCCCAATGGAAGGAGAGTCCTCAGCCTTTCTCC
TGCTCCATTGAAGACCCACAAAACAGACCAAGTTCAAAGGCATCAAGAC
CTACATTTTCGTACCGGGTCACGCCGAGCCACACAGGGCGTCCCGTCTACA
GACGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGTTC
ACTGTGATCTCGGTGCCCCACCTGCCGAGAAGCAGGCCACGGGGCGCTT
CGAGGAGGACTTCATTGAGAAGCGTAAAAGACGACTGATTCTGTGGATGA
ACCACATGACTAGTCACCCAGTCTCTCCCAGTATGAGGGGTTTGAGCAC
TTCTTTATGTGTGCTGATGACAAGCAATGGAAGCTGGGTAAAGAGGCGGGC
GGAGAAGGACGAGATGGTGGGCGCCACTTCATGCTGACCTTCCAGATTC
CTAACGAGCATCAGGATCTCCAGGATGTGGAGGAGCGGGTTGACTCCTTC
AAGTCCTTTGCTAAGAAAATGGATGACAGCGTCATGCAGCTCACACATGT
TGCTCGGAGCTGGTGCCTAAGCACCTGGGTGGATTCCAGGAAGGAGTTCC
AGCGGCTAGGAAATGCCCTTCCAGTCTATCAGCCAGGCATTCATGCTGGAA
CCTCCCCACAGCTCTGATGCCCTCAACAACGCCATCTCCACCCCTCTCGC
CACGTTCCCTCAAACGACTCTCTGGGTTTCATCATTTGGAGTCGGTGTGG
TCGGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCAC
CGCGCACCCCTACTACTTCCCTGCTAGACCTGTGCGCCTCTGACATCCCTGCG
CTCTGCCATCTGCTTCCCCTTCGTCTTACCTCTGTCAAGAATGGATCCG
CCTGGACCTATGGCAGCTCACCTGCAAAGTGATCGCCTTCCCTGGGTGTG
CTCTCCTGTTTTCCACACGGCGTTTCATGCTATTCTGTGTCAGTGTACTCG
CTACCTGGCTATTGCGCATCACCGCTTCTACACCAAGAGGCTGACCTTCT
GGACCTGTCTAGCTGTCTGTCATGCTGATGGTGTGGACGTTGTGAGTAGCCATG
GCTTTTCCCCCAGTGTGGACGTAGGGACGTACTCCTTCATCCGAGAGGA
GGACCAGTGACATTCAGCACCGTCTTTTCAGGGCCAATGACTCACTGG
GCTTCATGCTCCTGCTGGCACTCATCCTCCTGGCCACACAGCTGGTTTAC
CTCAAGCTCATCTTCTTTTGTCCACGACCGTCGGAAGATGAAGCCCGTGCA
GTTTCGTGCCCTGCCGTCAGCCAGAAGTGGACCTTCCATGGGGCCAGGCGCCA
GTGGGCAGGCGGCAGCTAACTGGCTTGCTGGATTTGGGAGAGGCCCCACC
CCGCTTACCTTGTGGGCATCCGGCAGAACAGCAACCGGGCGGGCCGCGAG
GCGTCTGCTGGTGTGGATGAGTTCAAACAGAGAAGAGGATTAGTAGGA
TGTTCTACATCATGACGTTTTTTCTCCTGGCGTTGTGGGGCCCTATCTG
GTAGCCTGCTACTGGCGGGTGTGGTGAAGGGGCCCGTAGTCCCCGGGGG
CTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATC
CCTTCATCTGCATNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGGTC
CTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGTATCCCCG
CAGCAAACCGAGGAGCCACTGTTGCCACCCCGCAGCGATGGTTTGT
CACCC---CTGCCAACAACCGACTGGACTTTGCTGCCCTCGGCATACGACG
CGGCC-----GATTTCCGCGGTAACGCGGCCACCTTGTGTCTTAC
GCAGCGGCCGGAGTGAAGGCTC-----TTCCTCTGCCGGCTGCAGGCTG
CTCCAACCGGCCTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---G
GCGGACGCACGCCCGCAGTACTGTAGCGTAAACAGCAAACCAAGCTCG
GTCCTTTCCTGCTGGCCCTCTAACTCTGTTCGGCGGCAGAGCAGGCG---C
C---AATACCTGG-----CCGAGGA---CGGA---GACGC---CA
TCCCACGAGGAGATCCCCG---AT---CGGTGGCTCCGAGGAG---ACG
AAACCAAGGACCT-----GTCGGA---GTCGAGCTGGATAGAG---AC
GCCGTCCCTCATTAAGTCAATTGATTCAAGCGATTCTGGTATCTTCG---
AACAGGCCAAAAGAAGAAGTCTCTCCCTCTGCCACGCC-----
GTTTCAGAACTGTGTCCCGTTAAAATCTNNNNNNNNNNNTCAACAGGCGAAGTCACAGA
GAGAGAAGTGGCGTTGGGGATAAAATCCGTTTCGCGGACGGGATGGGGCGCT
TCAAAAATCAACCACAGCTCCACGATATTGGCTCCGG---ACAGACGGCG
TTTTCTCCAGGCG---CCCGCTAC---GCAGCGGCCCGCCCTGGGA---

-CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGG
CGGCTTCAACTCCACCCGGGACTTCTCTTCAGAAATCGGGGTTTCGGA
GACGCCACCGG-----GGCGCAGCACAGTTTGTTCGCCTC---
-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATG
CCGCGGGACACCTGCTCTTCCCAGGACTCCACGAG---CAAGCAGCGAGC
CACGCGTCTTCTAACGTGGTCAACAGCCAGATGCGATTGGGCTTCTCGGG
GGACATGTATGGTCGGGCGGACCAGTATGGCCACGTTACAAGCCCAAGGT
---CCGACCACTATGCTTCGACCCAGTTGCACGGCTATGGCCCCATGAAC
ATGAATATGGCCGCA---CACCACGGAGCAGGGGCTTCTTTAGATACAT
GAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGC
AACTGACGAATCCCAAAAAGTTCGTGCAACAAAATTTTAGTACGATGCAT
GAGCTGGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGTC
CAACCACATCTGCTTCTGGGAAGACTGCGCCAGAGAAGGGAAACCATTCA
AAGCCAAATACAAACTTGTAATCATATCAGAGTACACCCGGAGAGAAA
CCCTTTCATGTCCGTTCCCAGGCTGTGGNNNN

>Monopterus albus

AGCCTATTAATTTCGAGCCGAACCTCTGCCAGCCCCGGCTCCCTCCTAGGGGA
TGACCAAATCTACAATGTTATTGTAACAGCGCATGCAATTTATTATAATCT
TCTTTATAGTAATACCTATCATAATCGGGGGCTTTGGAAACTGGTTAGTC
CCACTAATAATCGGGGCCCCAGACATAGCCTTTCCCCGAATAAAACAACAT
AAGCTTTTACTCCTCCCCCCTCTTTTCTATTACTCTTAGCCTCCGCCG
GCATTGAAGCCGGGGCGGGAACAGGTTGAACTGTCTACCCCCCTCTCGCT
GGAAACCTTGCTCACGCAGGCGCCTCTGTTGACCTTACAATCTTCTCCTT
ACACCTAGCAGGTGTTTCTTCAATTCTTGGGGCCATCAACTTTATCACA
CCATCATCAACATAAAACCTCCCGCAATTTCTCAGTATCAAACCCCCCTA
TTCGTATGATCTGTCATAATCACAGCCATTCTTCTCCTTCTATCGCTCCC
TGTGCTAGCAGCCGAATTACAATATTACTAACGGACCGAAACCTTAACA
CAACTTTCTTTGACCCTGCTGGAGGGGGGACCCCATCCTGTACCAACAC
CTATTCTGATTCTTCGCCACCCTGAAGTATATATCTTGATTCTTCCAGG
CTTTGGAATAATCTCTCATATCGTTACCTTTTATGCTGGTAAAAAGAAC
CTTTGCGCTATATAGGGATAGTGTGAGCAATAATAGCCATTGGCCTACTA
GGCTTATTGTTTGGAGCTCATCATATATTCACAGTCGGGATAGACGTTGA
CACACGAG----TTCTGGAGAGAAACCTTCACCCATCTAATTGTCTTGG
CATGTTGCTGCTGTCCGACGCCACCAGTGTACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCTCAGCAACTTCCCTGCTATTTGCAAGAMTGACGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTTGAGACAGAAGATGAGAAACTGGTTTATGAAGCTGCCCTTAACGGA
TCAACTATGACTTGGAAGGAGGCACTGCCACCTTCCAGAGCTCCTGCCA
ACAGTCCGCCTGGCTCTACTGCCTGCCATCTTTCTGATGGAGAATGTCTC
GACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGTGTGTTAAC
AGCCCATGTGCTCGACCAAGAAAAACCAGTCATGCCCTTTTCTTCTGCGG
AGGGCAAACCTTCATGTGTGACAAGTTGTACCTGGTRGAYCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGATATCCCAGCCCCAGGAAGGAATTTAGC
GCCTGCGCCATCGGGTGAAGGTGTACATCACTGGAGGGA--GAGGCTC-
AGAGAACGGTGTGTCCAAAGATGTGTGGGTCTATGACACCATCCATGAGG
AATGGTCCAAAGCGGCTCCCATGCTYATCGCCAGGTTTGGCCAYGGCTCT
ACAGAGCTGAAACACTGCCTCTATGTGGTAGGAGGTCACACTGCAGCAAC
TGGCTGCCTCCCGGCTTCTCCATCAGGATGATTATATTGTTGTGTTTACT
CGTTCAACAACAAGGCTGATAATTAATGAAGCAGAGCTAATCATGGCACT
GGCACAGGAGTTCCAGATGAAAGTAGTCACAGTATCCCTGGAGGAACAGT
CTTTCAATAGTATCGTCCAGGTGATCAGTGGTGTCTCCATGTTAGTAAGC
ATGCATGGAGCTCAACTAATCACCTCACTTTTTCTCCCCAGAGGAGCTAC

TGTGGTGGAGCTGTTCCCCTTTGCTGTAAACCCAGAACAGTACACCCCAT
ATAAAACCCTTGCATCTCTTCCAGGCATGGATCTTCACTATATCTCTTGG
AGGAACACTAAGGAAGAGAACACCATCACCCACCCAGACAGAACCTGGGA
ACAAGGAGGCATTGCTCACTTGGAGAAGGAAGAGCAAGAGCGAATACTGG
CCAGTAAGGATGTCCCAGGCACCTGTGCTGTGTAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACATTGGTGGACATTCTTCTTTCTTGGAAAT
TCTCAA---AGAGGGCATGAAG---ACCAAGCCCAGCTTTAAGAA---GT
CAAAGTTAGCCAGCACAGTCCACCCAGGCCGGGTAGAGAACCCAGTGT
CAGACCTCTGTACAACTACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTAAGAGAGGTGAAGTATGAAG
TGTGGATCCAGAAAAAGACAGCAGCAAGGGGACGCTGGAGGATCAGATC
ATCCAGGCAAACCTGCACTGGAGGCCTTTGGCAACGCTAAAAACAGTAAG
AAATGACAACCTCTCTCGTTTTGGAAAATTCATACGAATTCATTTTGGTA
CAAGTGGAAAACCTGGCATCTGCTGACATTGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGAAGCTACCATGTCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGTTGGACATGCTACTGGTCA
CCAACAACCCATACGACTACGCCTACATCTCCCAAGGAGAGGTAACAGTT
GCTTCTATCAATGACTCAGAGGAGCTGATGGCCACTGACAATGCCTTTGA
TGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGCATCTATAAATTGACTG
GTGCCATCATGCACTATGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCTGAACCTGACGGGACAGAGGCGGCTGATAAGACAGCTTTCTT
AATGGGGCTAAACTCTGCTGACCTCATCAAAGGCCGTGTCATCCCAGAG
TCAAAGGTAGGAAATGAGTACGTCACCAAGGGCCAAGGCGTGGACCAAGTC
TACTATCCCAACAAGGAGGCCTTCAAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTAGGATATAAGCGCCATGTGGCCATGCACTCTGCCACTG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGTACACCT
GTTCTCCTGGAGCATCTCAAGAGCCACTCCGGGAAGTCTTCAAAGTGGCAC
CAAGGAAAAGAAACATCCATGCGACCCTGTGACCGCGTTTCTACACGC
GGAAGGATGTGAGGCGGCACATGGTGGTACACACAGGTCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGTAGGAAGGACCACCTGACACG
CCACGTGAAGAAAAGCCACTCCCAGGAGCTGCTGAAGATCAAGACAGAGC
CTCCGGACATGTTAGGTCTTTTAGCTTCAGGGTCACCACCTTGTCTGTGTC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCATTTCCCAGTGGGGCGCCTTTTCCAATGGGCATGT
ACAACCCCACCAT-----CTTCAGGCCATGTCTAATAGTGGGGTGGGT
CACCCA-----CACCCATCCCTGATGCCCACTTCTTGTCTGCAGCTAT
GGGGATGGGCTGTACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGGTGTTTACAGATCAGT
GATGGATCA
AACATTTGTGAACCTACTGGCTAGTAACTCTCCAAGTGTTCATATGCACT
GACCCAACAGAAATATTTTCAAGTAACTACAGTCCCTGTGATTGGATTTTACA
TTTACGAGCCCATTGAGTACTGGAACTCGACGGTGCAGGAGCACCTGAAG
TCTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACCTTTTCCA
CTACCTGAAGGTAGTAAATGTGAGTGCATCAACCAAGAGCGATTTTATCA
ACATCCTCAAGGGCTCTTTCCTCCGCAGCCCAGAATACCAACACTTCACT
GAGGACATCATTTTCTCTAAGA---ACCGTGAGACTG-----ACGAGTA
TGATATTATTGCCTCACGGATGTACCTGGTGGCACGGACAACAGAGAAAA
AGCGCGAGGAGGTGGTGGAGCTTTTGGAAAAGCTTCGTCCGTTGATGCTG
ATCAACAGCATCAAGTTCATTGCCTTCAATCCAACATTTGTGTTTATGGA
CCGCTACAGCTCCTCTGTCAATTCACCCATCCTGACCTCAGGCTTCAGCG
TACTCACTATTCTCATCCTCACTTTCCTTCTGATCATCAACCCCTGGGA
AACTTCNNNGGCTTCCACCAGT
TTGAATGGCAGCCAGCTCTCAAGAAATGTGTC
TCCATCCTGCAATGTCAGCATTATTAATGGGCTCTCTGGATGGGCTTCCT

CAGTGGATGACTCTGCAGCTGATACCATCGGTGGCGTTTTTCGCTATGAT
GTGGCACTGGTGTGTCAGCATTAAAGGATCTGGAGGAGGACATCATGGAGGG
GCTGAGAGAGAGTGGGATGGAAGACAGTGCTTGCACCTCAGGCTTTAGTG
TCATGATCAAGGAATGTTGTGATGGCATGGGTGACGTCAGCGAGAAGCAC
GGCGGGGACCGATGGTTCCTGAGAAAGCTGTACGTTTCTCTTTCCTACTGT
TATGTCGTCTCTGTCCCTGGCGGATGATAGGGAG-----
-----AAGGAGGTTATCATTTTTCACTGAGCCAAAGCCAAAC
TCAGAACTATCCTGTAAGCCCCTATGCCTGATGTTTGCAGATGAGTCAGA
CCATGAGACACTCACAGCTGTCTGGGGCCTATAGTTGCAGAGCGTAATG
CAATGAAAGAGAGCCGACTCATTCTATCTATTGGCGGACTTGCCTCGCTC
CTCCGCTTCCACTTCAGAGGCACAGGATATGATGAGAAGATGGTGCAGAGA
GATTGGAGGGCTGGAGGCCTCTGGGTCCACATACGCTCTGCACTCTTTGTG
ACTCAAGTGAACAGAGGCCTCTCAAAACATGGTTCACACTGCATCACC
CGCAGTCATGAAGAGAACCCTAGAACGTTATGAAATATGGAGAACCAACCC
CTTCTCTGAATCTGTGGATGAGCTGCGAGACAGAGTCAAAGGGGTCTCGG
CAAAGCCCTTCATGGAGACCCAGCCCACGCTAGACGCATTGCACTGTGAC
ATTGGCAATGCCACTGAGTTCTATAAAATCTTCCAAGATGAGATTGGCGA
GGTGTATCAAAAGGT---CAAT---CCCAGCAGGGAGGAACGGCGCAGCT
GGAGGGCAGCCCTAGATAAAACAACCTGAGGAAGAAGATGAAGCTCAAGCCG
GTAATGAGGATGAATGGGAACTATGCCCGCAGGCTAATGACCCTAGAGGC
TGTGGAGGTGGTGTGTGAGCTGGTGCCTCAGAGGAGAGAAGGGAGGCC
TAAGGGAGCTTATGCGGCTTTACCTCCAAATGAAGCCTGTGTGGCGTGCC
ACCTGCCCGGCCAAGGAGTGCCCCGACCAGCTGTGTGCTACAGCTTTAA
CTCCCAGCGCTTTGCCGACATCCTCTCCTCTACTTTCAAATATAGATACA
ATGGAAAAATAACCAATTACCTGCACAAGACTCTGGCCCATGTGCCTGAA
ATAATAGAGAGAGATGGATCCATAGGAGCCTGGGCCAGTGAGGGTAATGA
GTCTGCAAACAAATCATAACCATCGAGATGGGTTCCTGAGGGCCTCAGT
GGAAGGAGAGCCCGCAGCCTTTCTCCTGCTCCATTGAAGACCCACAAAA
CAGACAAAGTTCAAGGGCATCAAGACATACATTTTCATACCGAGTCACACC
GAGCCACACAGGGCGTCCCGTTTACAGGCCTTACAAACACTTTGACTGGC
TGTACAACCGCTTACTGCACAAGTTCCTGCTGATCTCTGTGCCTCACCTG
CCTGAGAAGCAGGCGACGGGGCGATTTGAGGAAGATTTTCATCGAGAAGCG
TAAGAGGCGATTGATACTATGGATGAACCACATGACCAGCCATCCAGTCC
TCTCCCAGTATGAAGGCTTTGAGCACTTTCTGATGTGTGCTGATGACAAA
CAGTGGAAACTGGGCAAGAGAAGGGCAGAGAAGGACGAGATGGTGGGTGC
TCATTTTCATGCTGACCTCCAGTTCCTAAAGAGCACCAGGACCTTCAGG
ATGTAGAGGAGCGGGTCGACACCTTCAAGGCCTTTGCTAAGAAAATGGAT
GACAGTGTGATGCAGCTCATGCATGTTGCCTCTGAGCTGGTGCCTAAACA
CCTGGGTGGGTTTCAGGAAGGAGTTCAGCGGCTGGGAAATGCCTTCAGT
CTATCAGCCAGGCCTTCATGCTGGACCTCCCCACAGCTCAGAAGCCCTC
AACAGCGCCATCTCCATNNNNNNNCTACGTTCCCTCAAACCTGACCTCTCTGGGTTTC
ATCATTTGGAGTTGGTGTGGTAGGAAACCTCCTGATCTCCATCCTCCTGGT
CAAAGACAAGAGTCTGCACCGAGCACCTACTATTTCCCTGCTAGACCTGT
GTGCTTCAGATATCCTGCGATCTGCGATCTGCTTCCCCTTTGTCTTCACA
TCAGTCAAGAATGGATCTGCCTGGACCTATGGCACGCTGACCTGCAAAGT
GATAGCCTTCCCTGGGTGTGCTCTCCTGTTTCCATACAGCATTTCATGTTAT
TCTGTGTGTCAGTGTACCCGCTACCTGGCCATCGCACATCACCGTTTCTAC
ACCAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTCATCTGCATGGTATG
GACATTTGTGTCAGTGGCTATGGCATTTCACCAGTGTTAGACGTAGGGACAT
ACTCTTTTATCCGGGAGGAGGACCAGTGCACATTCAGCACCGTTCCCTTC
AGGGCAAATGATTCTCTGGGCTTCATGCTCCTGCTGGCGCTCATTTCTCTT
GGCTACACAGCTGGTTCCTCAAGCTCATCTTCTTTGTTTCATGACCGCC
GAAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTGTCAGCCAGAACTGGACC

TTCCACGGACCAGGTGCCAGTGGTCAGGCGGCAGCCAACCTGGCTGGCAGG
ATTTGGTCGAGGCCCCACCCCGCTACTTTGTTAGGCATTCGGCAAACA
GCAATGCAGCGGGTCGAGGCGTCTATTGGTATTGGATGAATTCAAACA
GAGAAGAGGATTAGTAGGATGTTCTACATCATGACATTTTTCTTCTGGC
GCTGTGGGGGCCCTATCTAGTCGCCTGTTACTGGCGGGTGTTCACGGG
GCCAGTAGTCCCTGGGGGTACCTAACAGCAGCTGTTTGGATGAGCTTT
GCCAGGCTGGGGTCAATCCTTTTATCTGCNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCC
TGGCGTGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCCTCGGCA
ACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCCTGTTGCCACCCCC
CCGCAGCGATGGTTTGTACCC---CTGCCAACACCGACTGGACTTTGC
TGCTCGGCATACGACGCCGCT-----GATTCGCCGGTAACGCAG
CCACCTTACTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCC
CTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGACCC
ATCRG---GCTGG---GGAGGACGCACGCCGCCAATACTGCGGCCTAA
ATAGCAAATCTAGCTCGGTCTTTTCTTGCTGGCCCCGCAACTCAATCGGC
AGCAGAGCGGCCA---CC---AACTACCTGG-----CCGAGGA---
GGGT---GACTC---CATCACGACMGAGAGGTCACCG---AT---CGGCG
TCTCGGAGGAG---ACCAAACCCAAAGACATGAC---ATCAGA---GTCG
AGCTGGATAGAA---ACGCCCTCCTCCATTAATCAATCGATTCAAGCGA
TTCCGGTATTTTTG---AACAGGCCAAAAGGAGAAGAATCTCACCTTCTG
CCACGCCG-----GTTTCAGAGACAGTGTCCCGTTAAAATCTGAG
CATCACTCAACAGGAGAAGTACAGAGAGAGAAGTGGCGCTGGAGATAAA
TCCGTTAGCGGATGGGATGGGCGCCTTTAAAATAAACACAGCTCCCATG
ATATTGGCTCCGG---GCAGACGGCGTTTTTCTCCAGGCG---CCGGGC
TAC---GCAGCAGCCGCCCTGGGA---CACCATCA-----CCACCCGAC
CCACGTTGGCTCT---TACTCCACGGCAGCTTTCAACTCCACCAGGGACT
TCCTCTTCAGAAATCGGGTTTCGGAGATGCCACCGG-----G
GCGCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----
-GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCAG
GGCTCCACGAG---CAAGCGGCGAGCCATGCGTCTTCCAACGTCGTCAAC
AGCCAGATGCGACTGGGCTTCTCTGGGGACATGTACGGACGGGCCGACCA
GTACGGCCACGTTACAAGCCACGGT---CCGACCCTATGCTTCGACCC
AGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA---CACCAC
GGAGCAGGGCCTTCTTTCGATACATGAGGCAGCCGATCAAACAAGAGCT
CATCTGCAAGTGGATCGAACCGGAGCAGCTGACAAATCCCAAAAAGTCGT
GCAACAAAACTTTTAGCACCATGCACGAGCTTGTGACCCATCTGACGGTG
GAGCATGTGGGGGGACCAGAGCAGACCAACCACATCTGCTTCTGGGAGGA
CTGCTCCAGAGAAGGGAAGCCATTCAAAGCCAAATACAAACTTGTGAATC
ATATCAGAGTACACACCGGCGAAAAGCCGTTTCCGTGTCCGTTCCCGGC
TGTGGCAA

>Morone chrysops

AGTCTTCTTATTTCGAGCAGAGCTAAGCCAACCGGGCGCCCTCCTTGGGGA
TGACCAAATCTACAACGTAATCGTTACCGCACATGCATTTGTAATGATCT
TTTTTATAGTAATAACCAATCATGATCGGAGGATTCGGAAACTGACTTATT
CCACTAATAATTGGAGCACCTGATATAGCATTCCCCGAATGAACAACAT
AAGTTTTTACTACTTCCCCCATCCTTCCTTCTCCTTCTGGCTTCTTCAG
GCGTCGAAGCCGGGGCTGGGACTGGCTGAACCGTCTATCCCCCCTTGCA
AGCAACCTTGACACGCAGGTGCATCTGTAGACTTAACAATTTTTTCTCT
CCACCTGGCTGGGATCTCCTCAATTCGGGGGCCATTAATTTTCATCACA
CTATTATTAACATGAAGCCTCCCGCTATTTCCCAGTACCAAACCCCTTA
TTTGTCTGAGCTGTTCTAATTACAGCCGTCCTTACTTCTCTCTCTGCC
AGTCTTCGAGCCGGAATTACAATACTACTTACAGACCGAAATCTAAACA
CCACCTTCTTTGACCCTGCCGGGGGAGGGGACCCCATCCTCTACCAACAC

CTC-----

-----TTCTTAGAGAGAAACCTTCACCCATCTAACTGTCCTGG
CATGCTGTTGCTGTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTTT
CCTGGGGCATGTGCCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTAGTGCAGCTCTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGA
TCAACTATGACCTAGAAAAGAGGCACGTGCACCTTCCAGAGCTCCTGAGA
ACAGTCCGTCTGGCCCTACTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGTTGATCAACGCCAGGCCAAGAGCAAGGAGCTAGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATACTACAGAATGATGGCGTTGTTAAC
AGCCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCCCTTTTTCTTCTGGG
TGGGCAGACTTTCATGTGTGACAAGTTGTACCTAGTGGATCAGAAAAGCCA
AAGAGATAATCCCCAAGGCAGACATTCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACCGGTGGAA--GAGGCTC-
AGAGAATGGTGTTCCTCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTGAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCACGGCTCT
GCGGAGCTGAAGCACTGCCTGTATGTAGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTCCCGCCTCTCCGTCCGGATGAATACATTGTCGTGTTTAGT
CGTTCAACAACAAGGCTGATACTGAATGAAGCAGAGCTGATCATGGCGCT
GGCCAGGAGTTCAGATGAGAGTGGTACAGTATCCTTGGAGGAGCAGT
CTTTCCCCAGTATCGTCCAGGTGATAAGCGGTGCCACCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGGGGAGCTGC
TGTGGTAGAACTATTCCCCTTTCAGTGAACCCAGAGCAGTACACCCCAT
ATAAAACCTTGCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGG
AGGAACACTAGGGAGGAGAACACCATCACCCATCCAGACAGACCCCTGGGA
ACAAGGGGGCATCGTTCACCTGGAGAAGGAGGAACAAGAGCGAATACTGG
CGAGCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCTTTTCTGGAGGT
CCTCAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---AT
CAAAGCCAGCCAGCACAGTCCACCCGGCCGGGTCAGAGAACCCCACTGT
CACACCTCAGTACAAACCACTAATGAGGCTAAACTCACGGTCTCCTGGCA
GATCCCCTGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGANNNNNNNNNNNAA
AAAAGACACCAGCAAGGGAACACTGGAGGATCAAATCATCCAGGCGAACC
CTGCGTTGGAGGCCTTCGGCAACGCCAAAACGTTGAGAAACGACAACCTCG
TCTCGTTTTGGAAAATTCATCCGGATTCACCTCCGGTACGAGTGGCAAGCT
GTCGTCTGCTGACATAGAGACGTACCTGCTGGAGAAGTCACGTGTCACCT
TTCAGCTCAAGGCTGAGAGGAACCTACCACATCTTCTACCAGATCCTGTCC
AATCAGAAGCCAGAGCTGCTGGACATGCTGCTTATCACCAACAACCCGTA
CGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTTGCCTCCATCAACG
ACTCAGAGGAGTTGATGGCCACTGACAGTGCCTTCGATGTGCTCGGCTTC
ACTCCAGATGAGAAGATGGGTGTCTATAAACTGACGGGCGCCATAATGCA
CTACGGCAATATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGCAGAGC
CCGATGGGACAGAGGCTGCGGATAAAAACAGCCTACCTAATGGGGCTGAAC
TCTGCTGACCTCATCAAAGGGTTGTGCCATCCCAGAGTCAAGGTAGGAAA
TGAATATGTCACCAAAGGCCAAAGTGTGGACCAAGTCTACTACCCCAACA
AGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTG
GGATAAAGCGCCATGTGGCCATGCACTCTGCCACAGCAGGGGATCTCAC
CTGTAAAGTATGCATGCAGACGTACGAGAGCACGCCCTGTGCTGTTGGAGC
ACCTCAAGAGCCACTCCGGAAAGTCTTCAGGAGGCACCAAGGAGAAGAAA
CACCCGTGCGACCACTGTGACCCCGTTTCTACACACGGAAGGATGTGAG

ACGGCACATGGTGGTGCACACAGGCCGAAAGGACTTCCTGTGCCAGTACT
GTGCCCAGCGCTTCGGCAGGAAGGATCATCTGACACGCCATGTGAAGAAG
AGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCTGATATGTT
AGGTCTTTTAGCTTCGGGTACCACCTTGCTCTGTGAAGGAGGAGCTCA
GCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCCCATGATGGGCAA
CCGTCCCTAGTGGGGCCCTTTTCCGATGGGCATGTACAACCCCA
T-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTACCCA-----C
ACCCATCCCTGATGCCACTTCCTTGTCTGCAGCTATGGGCATGGGCTGT
CACATGGAATATCTCATCTATGCCCTATTCTCATTCATGGGATGTTTACA
AATCAGTGATGGATCAAATATTGTGAACCTGCTGGCTAGTAACTCTCCAA
GTGTTTCATACGCTCTGACCCAGCAGAAATACTTCAGTAACTATAGTCCC
GTGATTGGGTTTTACATTTACGAGCCATTGAATACTGGAACCTCACGGT
GCAGGAGCACCTGAAGACTNTGAGTCATGGCTTCAACAAGATCTCCTGGAT
GGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCGTCAACAA
AGAATGACTTCATCACCATCCTCAAGGGCTCCTTCCCTGCGTAGCCCGGAG
TACCAGCACTTCACTGAGGACATCATATTCTCCAAGA--ACCGTGAGAC
TG-----ATGAGTACGATATTATTGCCTCACGGATGTACTTGGTGGCAC
GGACGACAGAGAAGAAGCGCGAAGAAGTGGTGGAGCTTCTGGAAAAGCTT
CGACCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAACCCTAC
GTTTGTGTTCTTGGACCGCTACAGCTCCTCTGTCTATCTCGCCCATCCTGA
CCTCAGGATTACAGCTACTCACAATCCTCATCCTCACTTTTCTTCCCTGGTC
ATCAACCCCTTGGGGAACCTTCTGGCTCATCCTTACTGTAACGTCCGTGGA
GCTGGGCGTCTTGGGTTTGANNNGCTTTCACCAGTTTGAATGGCAGCCAGCT
CTCAAGAATGTGTCTACATCTTGAATGTTGGCATTATTAATGGGCTCTC
TGGATGGGCTTCCCTCAGTGGATGAGTCCCCAGCTGACACCATCACTCGGC
GGTTTCGCTATGATGTGGCACTGGTGTGAGCATTAAAGGATCTGGAGGAG
GACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGACAGCGCTTGCAC
CTCAGGCTTTCAGTGTCTGATCAAGGAATCTTGTGATGGCATGGGAGATG
TCAGCGAGAAGCATGGTGGAGGACCAGTTGTTCTGAAAAGGCTGTACGT
TTCTCTTTCACTGTTATGTCTGTCTCTGTCTTGGCAGACGATGAGGAG--
-----GAAGAGGTTACCATCTTCACGG
AGCCAAAGCCAAACTCAGAACTGTCTGTAAGCCCTTTGCCTGATGTTT
GTGGATGAGTCAGACCATGAGACACTCACATCCGTCCTGTGGCCTATAGT
TGCAGAGCGTAATTCATGAAAGAGAGTAGGCTCATCCTATCTATGGGTG
GACTACCTCGCTCCTTCCGCTTCCACTTCAGAGGCACGGGATATGATGAA
AAGATGGTGCCTGAGATGGAGGGCCTTGAAGCATCAGGGTCCACCCATAT
CTGCACTCTTTGTGACTCCAGTCGGGCAGAGGCATCTCAAAACATGGTTC
TACACTCCATCACCCGCAATCATGAAGAGAACCTAGAACGTTATGAAATT
TGGAGAACCAACCCCTTTTCTGAGTCTGTGGATGAGCTGCGAGACAGAGT
CAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACTCATCCCACGCTGGATG
CATTACACTGTGACATAGGCAATGCCACTGAGTCTACAAAATCTTCCAA
GATGAGATCGGGGAGGTGTTCAAAAAGGT---CAAC---CCCACCCGGGA
GGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAAACAACTGAGGAAGAAGA
TGAAGCTTAAACCGGTAATGAGGATGAATGGGAACATGCCCCGAGGCTA
ATGACCCTGGAGGCTGTGGAGGTGGTGTGTGAGCTGGTGGCCTCAGAGGA
GAGGAGGGAGGCCCTGAGGGAGCTTATAAGGCTCTACCTACAGATGAAGC
CTGTGTGGCGTGCCACCTGCCAGCCAAGGAGTGCCCTGACCAGCTGTGC
CGCTACAGCTTTAACTCCCAGCGCTTTGCCGACCTCCTCTCCTCTACTTT
CAAATATAGGTACAAATGGAAGATAACCAATTACCTGCACAAGACCCTGG
CCCATGTGCCTGAAAATCATAGAGAGAGAYGGATCCATAGGAGCATGGGCC
AGCGAGGGGAACGAGTCAGCAAACAAANNNNNNNNNNNNNNTGGGTCCCATGGGGCCCTGTGG
AAGGATAGCCACAGCCTTTCTCCTGCTCCATTGAAGACCCCACTAAGCA
GACAAAGTTCAAGGGCATCAAGACGTACATTTTCGTACCGGGTGACGCCGA

GCCACACAGGGCGTCCTGTCTACAGGCGCTACAAACACTTTGACTGGCTG
TACAACCGCTTACTGCACAAGTTCACGTGTGATCTCCGTGCCTCACTTGCC
CGAGAAGCAGGCCACGGGGCGATTGAGGAAGATTCATTGAGAAGCGTA
AGAGGCGACTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTC
TCCCAGTATGAAGGCTTCGAGCACTTCTGTATGTGTGCTGATGACAAACA
GTGGAAACTGGGCAAGAGACGGGCTGAGAAGGACGAAATGGTGGGTGCC
ATTTTCATGCTGACCCCTCAGATCCCTAATGAGCACCAGGACCTTCAGGAT
GTAGAGGAGAGGATCGACTCCTTCAAATCCTTTGCTAAGAAAATGGATGA
CAGCGTGATGCAACTCACACATGTTGCCTCGGAGCTGGTTCGTAAGCACC
TGGGAGGGTTTCAGAAAGGAGTTCAGCGGCTGGGAAATGCCTTCCAGTCT
ATCAGCCAGGCGTTCGCGCTGGACCCCTCACACAGCTCAGAGACCTTCAA
CAACGCCATCTCCCATNNNNNNNNNNNGTTTCTCAAACCTGACCTCTCTGGGTTTCATCATT
GGAGTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGA
CAAGAGCCTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCT
CTGATATCCTGCGCTCCGCCATCTGCTTCCCCTTTGTCTTACCTCGGTC
AAGAATGGATCTGCATGGACCTATGGCAGCTAACCTGCAAAGTGATCGC
CTTCTGGGTGTGCTCTCCTGTTTCCACACGGCGTTTATGCTATTCTGTG
TCAGTGTACACGTTACCTGGCCATCGCACACCACCGTTTCTACACCAAG
AGGCTGACCTTCTGGACCTGTCTAGCTGTCATCTGCATGGTGTGGACATT
GTCAGTGGCTATGGCTTTCCACCGGTGCTAGACGTAGGGACGTACTCTT
TTATCCGGGAGGAGGACCAGTGCACGTTCCAGCACCGTTCTTCCAGGGCG
AATGATTCACTGGGCTTCATGCTCCTGCTGGCTCTCATCCTCCTGGCCAC
ACAGCTGGTTTACCTCAAGCTCATCTTTTTTCGTCCACGATCGTCGAAAGA
TGAAGCCTGTCCAGTTCGTGCCTGCTGTCAGCCAGAACTGGACCTTCCAC
GGGCCAGGCGCCAGTGGGCAGGCGGCGGCCAACTGGCTGGCTGGATTCCG
CCGAGGACCCACCCACCTACCTTGCTCGGCATCCGGCAGAACAGCAACG
CAGCAGGCCCGAGGCGTCTACTGGTATTGGATGAATTCAAACAGAGAAG
AGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTCCTGGCACGTG
GGGGCCCTATCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTG
TGGTCCCTGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCCAA
GCTGGGGTCAATCCTTTCATCTGCATCTTCTCCNNNNNNNNNGCCAAATCTCGCTTCA
CCCTGGCATGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCACTCG
GCAACAGCTTGCTATCCCCGAGCAAAACGAGGAGTCCACTGTTGCCACC
CCCCCGCAGCGATGGTTTGTACCC---CTGCCAACACCGACTGGACTT
TGCTGCCTCGGCATACGACGCTGCT-----GATTTCCGGGTAACG
CGGCCACCTTGCTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----TT
CCCCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGA
CCCGTCGG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTGGTG
TAAATAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCGCTAACTCTCTC
GGTGGCAGAACGGGCA---CC---AACTACCTGG-----CTGAGGA
---GGTA---GACTC---CATCCCGACAGAGAGGTCACCG---AT---CG
GCGGCTCGGAGGAG---GCCAAACCCAAAGACATGAC---ATCAGA---G
TCGAACTGGATAGAG---ACGCCGTCTCCATTAAGTCAATTGATTCAAG
CGATTCTGGTATCTTTG---AACAGGCCAAGAGGAGAAGAATCTCACCTT
CTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCATTAAANNNNNNNNCATC
ACTCAACAGGCGAAGTCCAGAGAGAGAAGTGGCGTTGGGGATAAATCCG
TTCGCTGATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCATGATAT
TGGCTCCGG---ACAAACGGCGTTTCTCCTCCAGGCG---CCCGGTAC-
---GCAGCAGCCGCCCTGGGA---CACCATCA-----CCACCCGACCCAC
GTTGGCTCT---TACTCCACGGCGGCTTCAACTCCACCAGGGACTTTCT
CTTCAGAAATCGGGGTTTCGGGGACGCCACCGG-----GGCGC
AGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----GCA
GGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCAGGGCT

>Myctophum punctatum
AGCCTCCTTATCCGAGCCGAACTCAGCCAACCCGGCGCCCTCCTCGGAGA
CGATCAAATTTACAACGTAATTGTTACGGCTCACGCCTTTGTAATAATCT
TCTTTATAGTCATGCCCATCCTAATTGGAGGATTCGGAAACTGACTAATC
CCCCTGATGATTGGGGCCCCCGACATGGCATTCCCCCGAATGAATAATAT
GAGTTTCTGACTTCTCCCTCCTTCCTCCTCCTGCTCCTAGCCTCCTCCG
GCGTAGAAGCGGGGCGAGGGACCGGCTGAACGTATACCCACCCCTCGCG
GGAAACCTCGCCACGCTGGAGCCTCAGTCGACTTAACAATTTTTTCGCT
CCACCTAGCAGGCGTGTCTTCAATTCTAGGCGCTATTAACCTTTATTACAA
CTATCATTAACATAAAAATCCCCTGCTATCTCACAGTACCAGACGCCCTC
TTTGCTGAGCCGTCCTAATCACCGCCGTACTCCTCCTTCTATCCCCTCC
TGTTCTAGCTGCTGGCATTACTATGCTCTTAACGGATCGAAACCTAAACA
CCACTTTCCTCGACCCAGCAGGGGGAGGAGACCCCATCCTTTACCAACAC
CTATTTTATTGCTTCGGGCACCCCTGAAGTCTATATTCCTTATCCTCCCCG
GTTTCGGAATAATTTCCACATCATCGCCTACTACTCAGGTAAGAAAAGAAC
CCTTCGGCTATATAGGCATGGTCTGAGCAATAATAGCTATCGGTTTCCTT
GGGTTTATTGTATGAGCCACCACATATTTACTGTCGGAATAGACGTAGA
TACACGAGCATA-----

-----GGATGAGTACATCGTAGTGTTTCAGT
CGCTCAACAACAAGACTCATTCTCAATGAAGCAGAACTGATTATGGCACT
GTCCAGGAGTTTCAGATGAGGGTGGTCACTGTGTCCCTTGAAGAGCAAT
CTTTCCCCAGTATAGTCCAGCTTATCAGTGGTGCCCAATGTTGGTTCAGT
ATGCATGGGGCTCAGCTTGTCACCTCACTCTTCCCTCCCCAGAGGAGCTGT
GGTGGTGGAGCTTTTCCCCTATGCTGTGAACCCAGAACAGTACACCCCTT
ATAAAACCCTCACCTCCTTACCAGGGATGGACCTGCAGTATGTTTCTG
AGGAATACGATGGAGGAAAACACCATCACCCACCCAGATAGATCCTGGGA
CCAAGGAGGCATCGCCCACCTCGAAAAGGATGAGCAAGAGCGAATCCTTG
CCAGCAAGGATGTCCCACGGCACCTGTGCTGCCACAACCCAGAATGGTTC
TTCCGAATCTATCAGGACACTCTGGTGGACATCCCTTCATTTCTGGAGGT
TCTCAA---AGATGGCCTGAAGATCACCAGACCAAACCTAAAAA---GG
CCAAGCCAGCCAGCACAGTACATCCAGGCCGGGTCAGGGAAGCACAGTGT
CAAACCTCAGTCCAAGCCACCAACGAAGCTAAACTCACGGTCTCCTGGCA
GATCCCATGGAACCTGAAATACCTGAAGGTGAGGGAGGTGAAGTACGAGG
TGTGGATCCGGAAGAGGGACACGAGCAAGGGAACCTGGAGGATCAAATC
ATCCAGGCCAACCTGC ACTGGAGGCCCTTCGGGAACGCCAAGACCATTG
CAACGACAACCTCGTCGCGCTTTGGCAAGTTCATCCGCATCCACTTTGGGA
CGAGCGGCAAGCTGGCGTCCGCCGACGTTGAGACCTACCTGCTGGAGAAG
TCACGCATCACCTTCAGCTCAAGGCCGAGCGAAACTACCACATCTTCTT
CCAGATCCTGTCCCAAGAGAAGCCGGAGCTGCTGGAGATGCTGCTGATCA
CCAACAACCCGTACGACTACAGCTACATCTCCAGGGCGAGGTGACGGTG
TCGTCCATCAACGACAACGAGGAGCTGATCGCCACGGACAGCGCCTTCGA
CGTGCTCGAGTTCACCCGGAGGAGAAGGCCTCATCTACAAGCTGACGG
GCGCCATCATGCACTACGGCAACATGAGGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCCGAGCCCAGCGCACCGAGGCCGCCGACAAGGCGGCGTACCT
GATGGGGCTGAACTCGGCCGACCTCATCAAGGGACTCTGCCATCCCGGG
TCAAGGTGGGTAATGAGTACGTCACAAAGGGCCAGGGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTA
CAATACCAAGCTGGGATAACAAGCGCCATGTGGCCATGCACTCAGCCACAG
CGGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTATGAGAGCACGCCC
GTGCTCCTGGAACACCTCAAGAGCCACTCGGGGAAGTCGTCGGGAGGCGC
CAAGGAGAAGAAGCATCCGTGCGACCACTGCGACCCCGCTTCTACACGC
GGAAGGACGTCCGGCGGCACATGGTGGTGCACACGGGACGGAAGGACTTC
CTGTGCCAGTACTGCGCACAGCGCTTCGGCCGGAAGGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTAAAGATCAAGACGGAGC
CTCCGGACATGCTGGGCCTGCTGGGCTCTGGCTCGCCCCCTGCTCCATC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAGGACCC

CATGATGGGCAAACCCCTTCCCCAGCGGGACCCCGTCCCCATGGGCATGT
ACAACCCACACCAT-----CTCCAGGCCATGTCCAGTCCAGGGGTGGGG
CACCCC-----CACCCCTCCCTGATGCCAGCTCCCTGTC---AGCCAT
GGGCATGGGCTGCCACATGGACTATCTGATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGCGATGGGTCAAACATCGTGAACCTGCTGGCA
AGTAACCTCTCCGAGTGTGTCTTTTGGCGCTCACCCAGCAGAAGTACTTCAG
TAACTACAGCCCTGTTATTGGGTTCTACATTTATGAACCCATTGAGTACT
GGAACGCCACGGTGCAGGAGCACCTGAAGACACTGAGTCACGGCTTCAAC
AAGATCTCCTGGATCGACAACCTTTTCCACTACCTGCGGGTGGTAAATGT
GAGTGCCTCGACCAAGAACGACTTCATCACCATCCTGAAGGGCTCCTTCC
TACGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATCTTCTCCAAG
A---ACCGCAGAGCG-----ACGAGTACGACATCATCGCCTCTCGCAT
GTACCTGGTGGCGCGCACCACAGAGAAGAAACGCGAGGAGGTGGTGGAGC
TGTTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAATTCATC
GCCTTCAACCCACCTTCGTCTTCATGGACCGCTACAGCTCCTCGGTCAT
ATCGCCCATCCTTACCTCAGGCTTCAGCGTGCTCACCATTCTCATCCTCA
CGTTCTTTCTTGTATCAACCCACTGGGGAACCTTCTGGCTCATCCTGACG
GTCACGTCTGTGGAGCTGGGCGTGTGGGTCTGATG-----

-----GCAA-----TCCC
TGAGAAAGCAGTCCGTTTCTCTTTCACCATTATGTCCATCTCTGTGATGC
CGGATGAGAAAGCA-----GAGGCG
GTTACCATCTTTCACAGAGCCTAAGCCCAACTCCGAGCTATCCTGTAGGCC
CCTCTGCCTGATGTTTGTGGATGAGTCGGACCACGAGATGCTCACTGCCG
TCTTGGGGCCCGTTCGTCGAGAGCGGACTGCAATGACAGAAAGCCGACTT
ATCCTGTCCATGGGTGGCCTCCCCGCTCATTCCGCTTCTACTTCAGAGG
CACAGGCTATGATGAGAAGATGGTACGCGAGATGGAGGGCCTGGAGGCTT
CAGGCTCTACCTATGTCTGCACTCTGTGTGACTCCACCCGGGCAGAGGCC
TCTCACAACATGGTGCTCCATTCTATCACCCGACCCACAGCGAGAACCT
GGAGCGCTACGAAATATGGCGGAGCAACCCCTTTTCGGAGTCTGTTGATG
AGCTGCGAGATCGGGTGAAGGGGGTCTCCGCCAAGCCCTTCATGGAAACC
CAGCCCACTCTGGATGCATTGCACTGCGACATTGGTAACGCCACTGAGTT
CTACAAAATCTTCCAGGATGAGATCGGAGAGGTGTCCGGAAGGC---CA
AC---CCCAGCCGCGAGGAAAGGCGCCGCTGGAGGGCTGCCCTTGACAAG
CAGTTGAGGAAAAAACTCAAGCTCAAGCCGGTGTGCGGATGAATGGGAA
CTATGCTCGGAGGCTGATGTCCGAGGAGACTGTGGACGTGGTGTGTGAAC
TGGTGCCTCAGAGGAAAGGCGGGAGGCTCTGAGGGAGCTAATGGGGC---

-----TCCTACA
CCATCGAGATGGGCCCCAAGGGCCCCTGTGGAAGGAGAGCCCGCAGCCC
TTCACCTGTTCCATCGAGGACCCCACTAAACAGACCAAGTTCAAGGGCAT
CAAGACGTACATCTCCTACCGGGTACGCCAAGCCACACGGGTACCCCTG
TGACAGACGCTACAAGCACTTTGACTGGCTGTACAATCGCCTGCTGCAC
AAGTTCACCGTGATCTCCGTCCCCACCTGCCAGAGAAGCAGGGGACTGG
GCGCTTCGAGGAGGACTTCATAGAAAAGCGCAAGAGGGCGGTTGATCCTCT
GGATAAACACATGACCAGTACCCTGTCTCTCCAGTATGAGGGGTTTC

GAACACTTCCTGATGTGTGGCGACGACAAGCAATGGAAGCTGGGCAAGCG
GCGAGCAGAGAAGGACGAAATGATCGGTGCCCACTTCATGCTGACCTTCC
AGATCCCCAACGAGCACCAGGATCTGCAGGATGTGGAGGAGCGCGTAGAC
TCCTTCAAGGCGTTTGCCAAGAAGATGGACGACAGTATCATGCAGCTGAC
ACACGTGGCCTCGGAACTCGTGCGCAAGCACCTTGGTGGGTTCCGCAAGG
AGTTCCAGCGGCTGGGGAATGCCTTCCAGAACATCAGCCAGGGCTTCATG
CTTGACCCACCACATAGCTCAGACAGCCTCAACAACGCCATCTCACAC--

-----GCCAAGTCCCGCTTT
CACCCCTGGCGTGGGGAGCGCTGCTGGCACGGAGC---GCAGCGTCCCACT
CAGCAACAGCTTGCTCTCTCCGCAACAAACCGAGGATCCCGCCGTCG---
CCTCCCCGAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGAC
TTCGCAGCCTCGGCATACGACGCCGCT-----GATTTCCGCCGTAA
CGCGGCCACCTTGCTGTCGTACGCCGCGGCCGGAGTGAAGGCTC-----
TCCCCTGCGGACCGCAGCGTGCTCCAACAGACCCCTGGGTTATTACGCG
GACCCGTCGG---GCTGG---GGCGCGGCACGCCCTCCCAGTACTGT--
-----AGCAAGTCGACCTCGGTCCTTTCTTGCTGGCCACGAATTCTG
TAGGGAGCAGAACGGGCA-----CAAACCTACCTAG-----TGGAG
GA---CGGATCGGACGC---CATCCCAACGGAGAGGTCCCG---AT---
TAATGGCTCGGAGGAG---GCGAAAGCCAAAGACTT-----GTCCGA--
-GWCTAGCTGGATAGAG---ACGCCATCTTCGATCAAATCAATTGACTCA
AGTGATTCTGGCATCTTTG---AGCAAGCAAAGCGGAGACGAATTCACC
GTCTGCCACACCA-----GTAACAGAAACGGTGTCTCCGTTGAGAT
CTGAA-----

>Nanobrachium lineatum

-----GCCAACCCGGAGCCCTTCTGGGCGA
CGACCAAATTTATAATGTGATCGTGACAGCCACGCTTTTGTAATGATCT
TCTTTATAGTAATGCCTATCATGATTGGAGGATTCGGAAACTGACTAATC
CCCCAATGATCGGAGCCCCAGATATGGCATTCCCCGTATAAATAATAT
GAGCTTCTGGCTCCTACCACCATCTTTCCTCCTTCTCCTAGCTTCATCAG
GCGTTGAAGCAGGGGCCGGTACTGGCTGAACAGTATATCCGCCGCTAGCA
GGCAACCTTGCCCACGCTGGGGCCTCTGTTGACCTAACAATCTTCTCACT
TCATCTAGCTGGTGTCTCATCAATTCCTGGTGCTATCAACTTTATCACAA
CGATCATCAACATGAAGCCCCCAGCAATTACTCAATACCAAACCCCTCTA
TTTGCTGAGCCGTAATGATTACAGCCGTAATCCTTCTCCTTTCACTCCC
AGTCCTAGCCGCTGGAATTACTATGCTTCTAACAGACCCGAAACTTAAATA
CCACCTTCTTTGACCCCGCTGGCGGGGAGACCCCATCCTCTACCAACAC
CTATTCTGATTCTTCGGGCACCCCGAAGTCTATATTCTTATTCTTCCCGG
CTTCGGCATGATCTCGCACATTGTTGCTTACTACTCAGGTAAGAAAGAAC
CTTTCGGGTACATGGGCATGGTCTGAGCAATAATGGCCATTGGGTTCCTC
GGCTTTATCGTCTGAGCTCATCACATGTTACCGTTGGAATAGACGTCGA
CGCACGAGCGTA-----

-----GGATGAGTACATTGTTGTGTTTCAGT
CGCTCAACGACGAGACTCATTCTCAACGAAGCAGAACTTATTATGGCACT
GTCCCAGGAGTTTCAGATGAGGGTGGTCACTGTGTCCCTTGAAGAGCAAT
CTTTCCCCAGTATAGTCCAGCTTATCAGTGGTGCCCTCATGTTGGTTCAGT
ATGCATGGGGCTCAGCTTGTCACTCACTCTTCCCTCCCCAGAGGAGCTGT
GGTGGTGGAGCTCTTTCCTATGCCGTGAACCCAGAACAGTACACCCCTT
ATAAAACCCTCGCCTCCTTACCAGGGATGGACCTGCAGTATGTTTCCTGG
AGGAATACGATGGAGGAAAACACCATCACCCACCCAGATAGACCTTGGGA
CCAAGGTGGCATCGCCACCTGGAAAAAGACGAGCAAGAGCGAATCCTTG
CCAGCAAGGATGTCCCGCGGCACCTGTGCTGCCACAACCCAGAAATGGTTC
TTCAGAATCTACCAGGACACTCTGGTGGACATCCCTTCATTCTGGAAGT
TCTCAA---AGATGGCCTGAAG---AGCAGACCAAGCTTAAAAAA---GG
CCAAGCCAGCGAGCACAGTACACCCAGGACGGGTTCAGGGAAGCACAAATGT

CAAACCTCGGTCCAAGCCACCAACGAAGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAACCTGAAG-----

-----TACCTGATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGCGACGGGTCGAACATCGTCAACCTGATGGCG
AGCAACTCTCCGAGCGTGGCTTTCGCGCTCACCCAGCAGAAGTACTTCAG
TAATTACAGTCCCGTTATCGGGTTCTACATTTATGAACCCATCGAGTACT
GGAATGCCACGGTGCAGGAGCACCTGAAGACACTGAGTCATGGCTTCAAC
AAGATCTCCTGGATCGACAACCTTCTTCACTACCTGCGGGTGGTCAATGT
GAGCGTGTGACCAAGAACGACTTCATCACCATCCTGAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCAACGAGGACATCATCTTCTCCAAG
A---ACCGCGAGAGTG-----ACGAGTACGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCACCGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TGCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTCGTCTTCATGGACCCTACAGCTCCTCGGTCAT
ATCGCCATCCTTACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CGTTCCTTCTCGTCATCAACCCGCTGGGGAACCTTCTGGCTCATCCTGACG
GTCACGTCCGTGGAGCTGGGCGTGCTGGGTCTGATGGGCTACCACCCCTT
TGAGTGGCCTCCGGCCCTCCCGAGCGTGTCCCCCTCTNGCCGCGTGGGAAT
CATCGTCCGGCTTTCCTGGCTGGGCCGACTCGGTGGATGACTCGCCGGCGG
ACACCATAAGCCGGAGGTTTCGCTACGATGTGGCCCTTGTGTCTGCTTTG
AAGGACCTGGAGGAGGAAGTGATGGAGGGACTGAAAGAGTGCGGGCTAGA
TGACAGTGCATGCACTTCNGGCTTCAGCGTAATGATCAAAGAGTCCTGCGA
TGGCATGGGAGACGTCAGCGAGAAGCATGGCGGGGGCCTGCGATCCCCG
AGAAAGCGGTCCGCTTCTCTTTCACGATTATGTCCATCTCTGTGACGCCG
GACGGGAAAGCG-----GAGGCGGT
CACCATCTTACGGAGCCGAAGCCCAACTCCGAGCTGTCCTGTAAGCCCA
TGTGCTGATGTTTGTGGACGAGTCGGACCACGAGATGCTCACCGCCGTC

-----TCAGGCGAAGTCACGGAGAGAGAAGTGGCGTTGGGGAT
CAACCCGTTTCGCGGACGGGATGGGCGCCTTCAAGATCAACCACGGCTCCC
ACGACATCGGCTCCGG---ACAGACGGCGTTCTCCTCGCAGGCG---CCC
GGCTAC---GCGGCGGCCGCCCTGGGG---CACCACCA-----CCACCC
GACCACGTCAGCTCG---TACTCCACGGCAGCCTTCAACTCCACCCGGG
ACTTCTGTTCAGAAATCGGGGCTTCGGAGACGCCACCAG-----C
GCCGCCAGCACAGTTTGTTCGCCCTCCGC---CGCGGGGAGTTT---C--
----GCGGGGCC--CATGGACACTCGGATGCCGCGGGGCACCTGCTCTTCC
CCGGGCTCCACGAA---CAAGCCGCGAGCCACGCGTCTCCAACGTTGTC
AACGGCCAGATGCGGCTGGCTTTTTTCGGGGGACATGTACGGCCGGGCGGA
CCAGTATGGCCACGTCACGAGCCCGCGGT---CCGACCACTACGCGTCGA
CCCAGTTGCACGGCTACGGCCCCATGAACATGAACATGGCCGCG---CAC
CACGGGGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATCAAGCAGGA
GCTCATCTGCAAGTGGATCGAGCCGAGCAGCTGTCGAACCCCAAGAAGG
CGTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGTCACCCATCTGACG
GTGGAGCATGTGGGGGGGCCCGAGCAGGCGAACACATTTGCGTCTGGGA
GGACTGTGCTCGGGAGGGCAAGCCGTTCAAAGCCAAATATAAACTTGTGA
ATCATATCAGAGTACACACTGGAGAAAAACCCTTTCCTGTCCCTTCCCC
GNNN-----

>Nansenia ardesiaca

AGCCTTTTAAATCCGGGCCGAGCTAAGCCAACCGGGAGCCCTCCTGGGGGA
CGACCAAATTTATAATGTTATCGTAACAGCACATGCTTTCGTTATAATCT
TTTTTATAGTATGATGCCAATCATGATCGGCGGCTTTGGAAACTGATTAATT
CCCCAATAATCGGGGCCCTGACATAGCCTTTCCCGAATAAATAACAT
GAGCTCTGACTTCTGCCCCCTCTTTCCTTCTTCTCCTAGCTTCTTCCG
GGGTGAAGCCGGAGCCGGGACAGGCTGAACAGTATACCCTCCTTTAGCA
GGAAACCTTGCTCACGCAGGGGCTCCGTAGACCTAACCATCTTCTCCCT
CCATCTCGCGGGTATCTCCTCAATCCTCGGGGCCATTAACCTTATTACAA
CGATCATTAACATGAAACCCCAACCATCTCCCAATACCAGACCCCCATA
TTCGCTGAGCAGTACTTATTACAGCAGTCCTTCTGCTCCTCTCTCTTCC
CGTCTAGCTGCCGATATTACCATGCTACTGACAGACCGAAACTTAAATA
CCACTTCTTTGACCCCGCAGGGGGAGGGGACCCCATCCTCTACCAGCAC
CTGTCTGGTTCTTTGGCCACCCTGAAGTCTATATTTTAATTCTTCCCTGG
CTTCGGTATAATCTCCACATTGTTGCTTACTATTCGGTAAAAAGAAC
CTTTCGGCTACATAGGCATGGTTTGAGCAATGATGGCTATCGGGCTTCTA
GGCTTATTGTCTGAGCCACCACATGTTTACCGTCGGAATGGACGTAGA
CACTCGTGNNNN-----

TCGCCAAGAAAATGGATGACAGTGTGCATGCAGCTGACGCACGTGGCATCA
GAACTGGTGCAGAACCTCGGAGGATTCGGAAGGAGTTTCAGCGGCT
GGGGAACGCATTCCAGTCCGTCCAGTCCAGGCATTCATGCTGGACCCCTCCTC
ACAGCTCAGAGACCCCAACAACGCCANNNNNNNNN-----

-----GCCAAATCTCGCTTTACCCCTGGCGTAGGGACTGGT
CCTGGCACAGACC---GCAGCGTCCCACCTTAGTAACAGCTTGCTATCCCC
GCAACAACCGAAGAGCACACAGTTC---CTTCCCCGCAGCGATGGTTTG
TCACCC---CTGCCAATAACCGACTGGACTTTGCCGCCCTCGGCATACGAC
GCCGCCCGCGCTGCTGATTTTGCCGGTAACCGGCCACCTTGCTGTCCTA
CGCAGCGCTGGAGTAAAAGCAC-----TTCCCCGCCCACTGCTGGGT
GTTCAAACAGACCTTTGGGTTATTATGCCGACCCATCCG---GCTGG---
GGCACC CGCACACCTCCTCAGTACTGT-----AGTAAATCCAGCTC
AGTGCTTTTCGTGCTGGCCACAAATGCTGTTGGAAGCAGAACAGGCA---
CATCCAATTACCTGA-----CGGAAGA---TGGG---GACAC---C
ATCCCCACGGAGAGTCTCCA---AT---CGTAGTGCCAGAGGAG---AC
AAAACCAAAGACTT-----GTCCGA---ATCCAGCTGGATAGAG---A
CGTCATCTTCAATAAAGTCGATAGATTCAAGTGATCTGGGATCTTTG--
-AGCAGGCCAAACGGAGAAGAATTCGCCGTATCCACAACG-----
-GTCTCGGAGACAGNNNNNNNNNNNNNNNNNNNNNNNNN-----ACAGGCGAGGTACACAGACAGAGAAGTG
GCTTTGGGGATAAATCCGTTTCGCRGACGGGATGGGCGCTTTCAAAATCAA
CCACAGCTCTCATGATCTGGGCTCCGG---GCAAACGGCGTTTTCTCCC
AGGCT---CCCGGTAC---GCAGCGCCGCCTTGGGG---CACCATCA-
-----CCACCCGACCCATGTCAGCTCY---TACTCCACC GCGCTTTCAA
TTCCACCCGGGACTTTCTTTTTCGAAATCGGGCTTCGGAGACGCGACCA
G-----CGCGCAACACAGCCTGTTCGCCCTCCGC---AGCGGGG
AGTTT---T-----GCAGGGCCACATGGACTCGGATGCCCGGGACA
CCTGCTCTTCCCTGGACTCCACGAG---CAAGCCGCGAGCCACGCGTCCT
CCAATGTTGTGAACAGTCAGATGCGATTGGGTTTTTCGGGGGACATGTAC
GGGCGGGCTGACCAATATGGCCATGTTACGAGCCCACGGT---CCGACCA
CTACGCCTCGACCCAGTTGCACGGCTATGGTCCCATGAACATGAATATGG
CCGCA---CACCACGGAGCAGGGGCCTTCTTCCGTTACATGAGGCAGCCG
ATCAAACAAGAGCTSATCTGCAAGTGGGTGAGCCGGAGCAGTTGTCGAA
CCCGAAAAGTCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGTGA
CCCACCTGACAGTGAACATGTGGGGGACCAGAGCAGTCGAACCATATT

TGCTTTTGGGAAGAGTGTGCGGAGAAGGGAAACCGTTCAAAGCTAAATA
CAAACCTTGTAATCATATCAGAGTACACACCGGAGAGAAACCGTCCCCT
GTCCGTTCCCCGGCTGTGGCAA

>Naso lituratus

AGTCTACTTATTCGGGCAGAACTAAGCCAACCAGGCGCCCTCCTCGGAGA
TGACCAAATCTATAATGTAATTGTTACAGCACATGCTTTCGTAATAATTT
TCTTTATAGTAATGCCAATTATAATTGGAGGGTTTGGAACTGACTAATC
CCACTAATGATCGGGGCCCGGATATGGCATTTCCTCCGAATGAACAACAT
GAGCTTCTGACTACTCCCTCCTTCTTTCCTTCTCCTTCTTGCATCATCTG
GGGTTGAAGCTGGGGCCGGAACCGGATGAACAGTCTACCCCCCTCTAGCT
GGTAACCTAGCACACGCAGGGGCTTCCGTTGATCTAACTATCTTCTCCCT
TCATCTGGCAGGGATTTCCCTCAATTCAGGGGCAATTAATTTTATCACAA
CTATCATTAACATGAAACCTCCTGCTATTTCTCAGTACCAAACCCCTCTA
TTCGCTGAGCTGTATTAATCACGGCAGTACTGCTCCTTCTTTCTCTTCC
AGTCCTTGCTGCTGGCATCACAATACTCCTCACCAGCCGAAACCTGAACA
CAACCTTCTTCGACCCTGCAGGCGGAGGAGATCCGATTCTTTACCAACAC
CTC-----

-----NNNCTAGAGAGAAACCTTACCCATCTAACTGTCCTGGCAT

GCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCT
GGGGCATGTGCTTGAGCAACTTCCCTGCTATTTGCAAGACAGAGGACTTC
CTCCAGCTGCCCAAAGATATGGTAGTGCAGCTTTTGTACATGAAGAGCT
AGAAACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGATCA
ACTATGACTTGGAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGAACA
GTTTCGCTCGGCCCTCCTGCCTGCCATCTTTCTCATGGAGAATGTTTCTAC
AGAGGAGCTGATCAACGCCCAGGCCAAGAGCAAAGAGCTAGTGGATGAAG
CCATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGTGTTCGTTAACAGC
CCGTGTGCTCGACCAAGAAAACCAGCCATGCCCTCTTTCTTCTAGGAGG
GCAGACTTTTATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCAAAG
AGATCATCCCCAAGGCCGATATTCCCAGTCCCAGGAAGGAGTTCAGCGCC
TGTGCCATCGGCTGTAAGGTGTACATCACCGGTGGAA--GAGGCTC-AGA
GAATGGTGTGTCCAAAGATGTATGGGTCTACGACACTGTCCACGARGAAT
GGTCGAAGGCAGCACCTATGCTCATTGCCAGGTTTCGGCCATGGCTCTGCA
GAGCTGAAGCACTGCCTCTATGTGGTAGGAGTACACGGCTGCCACTGG
CTGCCTCCCGGCCCTCCTCCGTCTGGATGAATACATAGTTGTGTTTAGTCGT
TCCACAACAAGACTGATTCTGAATGAAGCGGAGGTAATCATGGCTCTGGC
CCAGGAATTCAGATTAGAGTGGTACCGGTATCTTTGGAGGAACAGTCTT
TCCCCAGTATTGTCCAGGTAATCAGCAGTGTACCATGTTAGTCAGCATG
CATGGAGCTCAGCTAATTACCTCACTCTTTCTTCCAGAGGAGCTGCTGT
AGTGGAACCTGTTCCCTTTTGTGCTGTTAACCCAGAGCAGTACACCCATATA
AAACCTAGCGTCCCCTCCAGGCATGGACCTTCACTATATCTCCTGGAGG
AACACTAAGGAAGAGAACACCATCACCCACCCAGACAGACCTTGGGAACA
AGGGGGCATCAGTCACTTGGAAAAGAAGGAGCAAGAGAGAATACTGGCAA
GCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTC
CGTATCTACCAGGACACTTTAGTAGACATCCCTTCCCTTCCCTGGAAGTCCT
CAA---AGAGGGCATGAAA---ACAAAGCCCAGCTTGAAGAA---GTCAA
AGCCAGCCAGCACTGTTACCCAGGTCGAGTTAGAGAGCCCCAGTGTGAG
ACCTCAGTACAAACCACTAATGAGGCTAAACTCACGGTCTCCTGGCAGAT
CCCATGGAATCTGAAATACCTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
AACAAGGGGACACTGGA
GGATCAAATCATCCAGGCAAACCTGCGTTAGAGGCCTTCGGCAACGCCA

AAACGGTAAGAAATGACAACTCATCTCGGTTTGGAAAATTCATCCGAATT
CACTTTGGTACGAGTGGCAAGCTTTCGTCTGCTGATATTGAGACGTACCT
GCTGGAGAAGTACAGTGTAACTTTCAGCTCAAGGCTGAGAGGAATTACC
ACATCTTCTACCAGATCCTTTCCAATCAGAAGCCAGAGCTGCTCGACATG
CTGCTGATCACTAACAAATCCATATGACTATTCTTACATCTCCCAAGGAGA
GGTAACTGTGCGCATCCATCAATGACTCAGAGGAGCTGATGGCCACAGACA
GCGCCTTCGATGTGCTTGGCTTTACCCTGAGGAGAAGATGGGAGTCTAC
AAACTGACAGGCGCCATCATGCACTACGGTAATATGAAGTTTAAACAGAA
ACAGCGTGGAGGAGCAGGCTGAGCCTGATGGCACCAGGCTGCTGATAAAT
CAGCTTACCTAATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGC
CATCCCAGAGTCAAGGTAGGAAATGAGTACGTCACCAAGGGCCAAAAGTGT
GGACCAAGTCAACTATCCCAACAAGGAGGCTTCAAGTGTGAGGAGTGTG
GAAAGCATTACAACACAAAGCTAGGATATAAGCGCCATGTGGCCATGCAC
TCTGCCACGGCAGGAGATCTCACCTGTAAAGTGTGCATGCAGTCGTACGA
GAGCACACCAGTGCTCTTGGAGCACCTCAAGAGCCACTCTGGGAAGTCTT
CAGGTGGCACCAGGAGAAAAAACATCCTTGGCACCCTGTGACCGTCGT
TTCTATACACGCAAGGATGTGAGAAGGCACATGGTCGTCCACACGGGCCG
AAAGGACTTCTATGCCAGTACTGTGCCCAACGCTTCGGTAGGAAGGACC
ATCTGACACGCCATGTGAAGAAGAGTCACTCGCAAGAGCTGCTGAAGATC
AAGACGGAGCCTCCTGATATGTTAGGCCTTCTAGCCTCCGGGTCACCACC
TTGTTCTGTGAAGGAGGAGCTCAGCCCATGGTGTGCGGCATGGGTTC
ACAAAGACCCCATGATGGGCAAACCTTTCCCCAGTGGGGCCCCTTTTCCG
ATGGGCATGTACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTC
TGGGGTGGGTCAACCA-----CACCGTCCCTGATGCCAGTTCCTTGT
CTGCAGCTATGAGCATGGGCTGTCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATGTTT
ACAGATCAGTGA
TGGATCAAATATCGTGAACCTGCTGGCTAGTAACTCTCCGAGTGTTTCGT
ACGCTCTGACCCAGCAAATACTTTAGTAACTACAGTCCTGTGATTTGGG
TTTTACATTTATGAGCCTATTGAGTACTGGAACCTCACGGTGAAGAGCA
CCTGAAAACCTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACA
TTTTCCACTACCTGCGGGTAGTGAATGTAAGTGCATCAACTAAGAGCGAC
TTCATCACCATCCTGAAAGGCTCCTTCCTGCGCAGCCCGGAGTACCAGCA
CTTCACTGAGGACATCATATTCTCAAAGA---GCCGTGAGACTG-----
ATGAGTACGACATTATTGCCTCACGGATGTACTTGGTGGCACGGACGACA
GAGAAGAAGCGCAAGAGGTTAGTGGAGCTTCTGGAAAAGCTTCGTCCATT
GATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCGACATTTGTGT
TCATGGACCGCTACAGTCCTCTGTCATCTCGCCATCCTGACCTCAGGA
TTTAGCGTACTCAAACTCCTCATCCTCACNN
NNNGGCTTTCACCAGTTTGAATGG
CAGCCAGCTCTCAAGAATGTGTCTACATCTTGCAATGTTGGCATTATTAA
TGGGCTCTCTGGAAGGGCTTCTCGGTGGATGACTCCCAGCTGACACCA
TCACTCGGCGGTTTCGCTATGATGTGGCACTTGTGTGTCAGCATTAAAGGAT
ATGGAGGAGGACATCATGGAGGGGCTGAGAGAGAAAAGAGATGGAAGACAG
CATTTGCACCTCAGGCTTCAGTGTGATGATCAAAGAATCCTGTGATGGCA
TGGGCGATGTGAGCGAGAAGCATGGCGGAGGACCAGTTGTTTCCTGAGAAG
GCTGTGCGTTTTCTCTTTCACGATTATGTCTATTTCTGTCTTGGCAGATGG
TGAAGAG-----GAAGAGGTACCA
TCTTCACTGAGCCAAAGCCAAACTCAGAAGTGTCTGTAGGCCCCCTTTGC
CTGACATTTGTGGATGAGTCAGACCATGAGACACTCACAGCCATCCTGTC
GCCTTTAGTTGAGAGCGTGACGCGATGAAACACAGCAGGTTGATCTTAT
CCATCGGTGGACTATCTCGCGCCTTCCGCTTTCACTTCAGGGGCACGGGA
TATGACGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCTCGGGGT
AACCTATGTCTGTACACTTTGTGACGCCGAACGGGCAGAGGCTCCCAA

-----ACGGCATT TTC
CTCCCAAGCT---CCCGGCTAC---GCAGCCGCTGCCCTGGGA---CATC
ACCA-----CCATCCGACTCATGTCAGTTCT---TACTCTACTGCGGCT
TTCAATTCCACCCGGGATTTTCTCTTCAGAAATCGAGGCTTCGGAGACGC
CACCAG-----CGCTCAGCATAGTCTATTCGCCTCTGC---AG
CGGGAAGTTT---T-----GCAGCCCCACATGGACACTCAGATGCAGCG
GGACACCTGCTCTTCCAGGACTTCACGAA---CAAGCAGCGAGCCATGC
TTCTCAAATGTTGTTAATAGTCAGATGCGATTGGGCTTTTCGGGGGACA
TGTACGGCAGAGCCGACCAGTACGGCCACGTTACCAGCCCGCGGT---CC
GACCACTATGCATCGACCCAGTTGCATGGCTATGGCCCTATGAACATGAA
TATGGCCGCG---CATCATGGAGCAGGGGCCTTCTTCCGTTACATGAGGC
AGCCGATAAAACAAGAGTTGATTTGCAAATGGATCGAACC GGAACA ACTA
ACGAATCCAAAAAAGTCGTGCAACAAA ACTTTTAGCACAATGCACGAGCT
CGTCACTCATTGACAGTGGAGCATGTAGGGGGACCGGAACAGTCAAACC
ACATTTGCTTCT-----

>Neoscopelus macrolepidotus
AGCCTCTTTATTCGGGCCGAGCTCAGTCAACCGGGAGCCCTCGTGGGGGA
CGACCAGATCTATAATGTAATTGTAACAGCCCATGCCTTTGTAATAATTT
TCTTTATGGTAATGCCTATTATGATTGGAGGGTTTGGAAACTGACTAATC
CCCCTTATAATTGGAGCCCCCGACATAGCATTCCCCCGTATAAATAATAT
AAGCTTCTGACTTCTCCCCCCTCTTTTCTCCTCTTTTAGCATCATCTG
GTGTAGAAGCCGGAGCCGGGACCGGTTGAACAGTATACCCCCCCTTGCA
GGTAACCTCGCCCATGCGGGAGCCTCTGTTGACCTAACAATTTTTTCACT

TACTACCCCAACAAGGAGGCCTTCAAGTGTGATGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATAACAAGCGCCATGTGGCCATGCACTCCGCTACCG
CCGGGGATTAAACCTGCAAGGTGTGCATGCAGAGTTACGAGAGCACGCCG
GTTCTCTTGGAGCACCTCAAGAGCCACTCGGGAAAAGTCTTCGGGTGGTGC
CAAAGAGAAAAAGCACCTTGTGACCACTGCGACCGACGTTTCTACTACTC
GGAAGGATGTGAGACGGCATATGGTGGTCCATACAGGCCGCAAGGACTTT
CTCTGCCAGTACTGTGCCAGCGGTTTGGCAGGAAGACCACCTGACGCG
GCATGTGAAGAAGAGCCACTCGCAGGAGCTCCTAAAGATCAAGACAGAGC
CTCCAGATATGTTGGGCTTGCTAGCGTCAGGGTCCCCGCCATGCCCTGTC
AAGGAAGAGCTCAGCCCCATGATGTGTGGCATGGGGCCCAACAAAGACCC
GATGATGGGTAAAGTCTTCCCCAGCGGTGCACCATTTCCCATGAGCATGT
ACAACCCCACCAT-----CTCCAGGCCATGTCCAATTCTGGGGTGGCT
CACCCG-----CACCCCTCCCTGATGCCAGTTCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAATATCTCATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGACGGGTGCAACATCGTGAACCTGCTGGCG
AGTAACTCTCCGAGTGTGTGCTACGCGCTCACCCAGCAGAAGTACTTCAG
CAACTACAGCCCTGTGATTGGGTCTACATTTACGAACCCATCGAGTACT
GGAACGCCACGGTGCAGGAGCACCTGAAGACACTGAGTCACGGCTTCAAT
AAGATCTCCTGGATGGACAATTCTTCCACTACCTGCGGGTGGTGAATGT
GAGCGCGTCAACCAAGAACGACTTCATCACCATCCTCAAGGGCTCCTTCT
TACGCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTCTCCAAG
A---ACGCGAGAGCA-----ACGAGTATGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCACCGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TGCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTCGTGTTTCATGGACCGCTATAGCTCCTCCGTCAT
ATCGCCCATCCTTACCTCGGGCTTCAGCGTGTCTACCATCCTCATCCTCA
CGTTCTTTCTCGTCATCAACCCGCTGGGGAATTTCTGGCTCATCCTGACG
GTCACGTCCGTGGAGCTGGGCGTGTGGGTCTGATGNNNNNNNNNNNNNNNN
NN
NNNNNNGATGGACACCATCG
GCGGGAGGTACCGCTACCACCTGGCGCTGGCGTCCGCATTGAAGGACCTG
GAGGAGGACGTGATGGAGGGACTGAGAGAGCGAGGGCTGGAGGACAACAC
CGGCACATCGGGCTTCAGCGTGATGATCAAAGAGTCTTGCAGCGCATGG
GAGACGTGAGCGAGAAGCACGGCGGGGGCCCCCGTCCCCGAGAAGGCG
GTGCGTTCCTTTTACCATCATGTCCGTCTCCGTGCGGCCGACGGGCG
AGCG-----GAGCCGGTCACTATCT
TCACGGAACCGAAGCCCAACTCGGAGCTGTCCTGTAAGCCCCTGTGCCCTG
ATGTTTCGTGGACGAGTCCGACCACGAGATGCTCACCGCCGTCCTGGGGCC
CGTGGTTCGCCGAGCGGAAGGCGATGACGGAGAGCCGGCTCATCCTGTCTA
TGGGCGGCCTCCCCGCTCCTTCCGCTTCCAATTCGAGGCACCGGCTAC
GACGAGAAGATGGTGCAGGAGATGGAGGGCCTGGAGGCCTCGGGCTCCAC
CTACGTCTGCACCCGTGTGTGACTCCACCCGGGCGGAGGCCTCTCACACA
TGGTGTCCACTCCGTCACCCGCAGCCACAGCGAGAACCTGGAGCGCTAC
GAGATCTGGCGGAGCAACCCCTTCTCCGAGTCCGTTCGAGGAGCTGCGAGA
TCGGGTGAAGGGGGTCTCCGCCAAGCCCTTTCATGGAGACCCAGCCACTC
TGGACGCGCTGCACTGCGACATCGGCAACGCCACCGAGTTCTACAAAATT
TTCCAGGACGAGATCGGGGAGGTGTTCAGAGGGC---CAAC---CCAC
CCGCGAGGAGAGGCGGAGCTGGAGGGCCGCCCTCGACAAGCAGCTGAGGA
AGAAAATTGAAGCTCAAGCCTGTGATGCGGATGAACGGGAACCTATGCCCGG
AGGCTGATGTCCGAGGAGACCGTGGACGTGGTGTGCGAACTGGTGCCCTC
GGAGGAAAGGCGGGAGGCCCTGAGGGAGCTAATGGGGCTTTACCTCCAGA
TGAAACCCGTGTGGCGTGCCACCCACCCAGCCAAGGAGTGCCCTGACCAG
CTGTGCCGCTACAGTTTCAACTCCAGCGCTTTGCGGACCTCCTCTCCAC

CACCTTCAAATATAGGTACGACGGAAAGATCACCAATTACCTGCACAAGA
CCCTGGCCCACGTCCCTGAAATCATAGAGAGAGACGGCTCCATCGGAGCA
TGGGCCAGCGAGGGGAACGAGTCAGCCAACAAATCATACACCATTGAGAT
GGGCCCAAAGGGCCCCTGTGGCAGGAGAGCCCTCAGCCCTTCTCCTGTA
ACATCGAGGACCCACCAAACAGACCAAGTTCAAGGGCATCAAGACGTAC
ATCTCCTACCGGGTCACGCCGAGCCACACGGGTGACCCGTGTACAGACG
CTACAAACACTTTGACTGGCTGTACAACCGCTTGCTGCACAAGTTCACCG
TGATCTCCGTCCCCACCTGCCGAGAAGCAGGCGACCGGGCGCTTCGAG
GAGGACTTCATAGAAAAGCGCAAGAGACGACTGATCCTCTGGATGAACCA
CATGACCAGTCACCTGTCTCTCCAGTACGAGGGGTTCGAACACTTCC
TGATGTGTGCCGACGACAAGCAATGGAAGCTGGGCAAGCGGGCAGAG
AAGGACGAGATGGTGGGTGCCACTTCATGCTGACCTTCCAGATCCCCAA
CGAGCACCAGGACCTTCAGGATGTGGAGGAGCGCGTCTGACTCCTTCAAGG
CGTTTGCCAAGAAGATGGACGACAGTGTATGCAGCTGACACACGTGGCC
TCAGAGCTCGTGCGCAAGCACCTTGGGGGGTTCCGCAAGGAGTTCAGCG
GCTGGGGAACGCCTTCCAGAACATCAGCCAGGCCTTCATGCTGGACCCAC
CACATAGCTCGGACGCCCTCAACAACGCCATCTCCACCCTCTCGCCACG
TTCTCAAACACTGACCTCTCTGGGTTTTATCATCGGGCTCGGCGTGGTTCGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGGG
CGCCCTACTACTTCTGCTGGACCTGTGCGCCTCCGACATCCTGCGCTCC
GCCATCTGCTTCCCTTTCGTCTTACCTCGGTCAAGAATGGATCCGCCTG
GACGTACGGCAGCTGACCTGCAAAGTGATCGCCTTCCCTGGGGGTGCTCT
CCTGTTTCCACACGGCGTTTTATGCTGTTCTGCGTGAGCGTCACGCGATAC
TTGGCCATCGCGCACCACCGTTTCTACACCAAGAGAGTGACCTTTTGGAC
CTGTCTGGCCGTACATCTGCATGGTGTGGACGTTGTGCGTTGCGATGGCGT
TCCCGCCGGTGCTAGACGTAGGGACGTA CTCTTTCATACGCGAGGAGGAC
CAGTGCACGTTCCAGCACCGCTCCTTCAGGGCGAACGATTCGCTGGGCTT
TATGCTCCTGCTGGCTCTCATCCTCCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTCTTCGTCCACGACCGCCGGAAGATGAAGCCCGTCCAGTTC
GTGCTTGGCGTCAGCCAGA ACTGGACTTTCCACGGGCCAGGCGCCAGCGG
GCAGGCGGGGCTAACTGGCTGGCCGGGTTTCGGTCGAGGCCCCACCCGC
CTACCTTGCTGGGCATCCGGCAGAACAGCAACGCGGGGGCCGAGGCGT
CTACTGGTGTGGATGAATTCAAAACGGAGAAGAGGATTAGTAGGATGTT
CTACATCATGACGTTTTCTTCTCCTGGCGCTGTGGGGGCCCTATCTGGTTCG
CCTGCTACTGGCGGGTGTGTTGCGAGGGGGCCCGTGGTCCCCGGGGTTAC
CTGACGGCGGGCGTGTGGATGAGCTTTGCCAGGCCGGGGTCAATCCTTT
CATCTGCATCTTCTCCAACAGGGAGGCCAAGTCCCGCTTCCACCCGGGCG
TCGGGAACGCTCCTGGCACGGAGC---GCAGCGTCTACTCAGCAACAGC
TTGCTGTCTCCGCAACAACCGAAGAACCCACTGTCG---CTCCCCACA
GCGCTGGTTTTGTACCC---CCGCCAACAACCGACTGGACTTTGCAGCCT
CGGCATACGATGCCGCT-----GATTTCCGCCGTAACGCAGCCACC
TTGCTGTCTACGCAGCGGCTGGAGTGAAGGCTC-----TTCTCTGCC
GACCGCAGGTTGCTCCAACAGACCTCTGGGGTATTACGCAGACCCGTCCG
---GCTGG---GGAACACGCACACCCGCTCAGTACTGT-----AGC
AAATCAGCCTCGGTCTCTCCTGCTGGCCCACGAATCTGTGGAGGCAG
AACGGGCA-----CTAACTACCTGG-----CGGAGGA---TGGA-
--GACGC---CATCCCCACGGAGAGATCCCCA---AT---GAACGGCTCT
GAGGAG---ACCAAAGCCAAAGACTT-----GTCTGA---GTCGAGCTG
GATAGAG---ACGCCATCTTCGATAAAGTCCATTGATTCAAGTGATTTCTG
GAATCTTTG---AACAAAGCAAAGCGGAGAAGGATTTACCCGTCTGCTACA
CCA-----GTTACAGACACTGTGTCCCCGTTAAAATCTGAG-----

GTCACCGTGTCCCTTGAAGAGCAATCTTTCCCCAGTATAGTCCAGCTTAT
CAGTGGTGCCTCCATGTTGGTCAGTATGCATGGGGCTCAGCTTGTACCT
CACTCTTCCTCCCCAGAGGAGCTGTGGTGGTGGAGCTCTTTCCCTATGCC
GTGAACCCGGAACAGTACACCCCATATAAAACCCTCGCCTCCCTACCAGG
GATGGACCTGCAGTATGTTTCCTGGAGGAATTTGAGGGAGGAAAACACTG
TCACCCACCCAGATAGACCCTGGGACCAAGGAGGCATCGCCACCTGGAA
AAAGACGAGCAAGAGCGAATCCTCACTAGCAAGGATGTCCCGCGGCACCT
GTGCTGCCACAACCCAGAATGGTTTTTCCGAATCTACCAGGACACTCTGG
TGGACATCCCTTCATTCCTGGAAGTTCTCAA---AGAGGGCCTGAAG---
ACCAGACCTAGCTTAAAAAA---GGCCAAGCCAGCCAGCACAGTACATCC
AGGCCGGGTGAGGGAAGCACAGTGTCAAACCTCGGTCCAAGCCACCAACG
AAGCTAAACTCACAGTCTCCTGGCAGATCCCGTGGAACCTGAAATACCTG
AAGGTGAGAGAGGTGAAGTACGANNNNNNNNNNNNAAGAAGGACACCAGTAAGGGAACCTTG
GAGGATCAAATCATCCAGGCCAACCCCTGCGCTGGAGGCCTTTGGGAACGC
CAAAACAGCCAGGAATGACAACCTCATCCCGTTTTGGAAAATTCATCCGGA
TCCACTTCGGGACAAGCGGTAAGCTATCATCTGCTGACATCGAGACCTAC
CTGCTGGAGAAGTACAGTGTACCTTTCAGCTCAAGGCCGAGAGGAAC
CCACATCTTCTCCAGATTTTGTCCAATCAGAAGCCGGAGCTGTTGGACA
TGCTGCTCATCACTAACAACCCATACGACTACTCCTACATCTCCCAAGGA
GAGGTGACAGTAGCTCCATCAACGACTCTGAGGAGCTGATGGCCACGGA
CAGCGCCTTCGATGTGCTCGGCTTCACTCAGGAGGAGAAGATGGGAGTCT
ATAAGCTGACTGGTGCCATTATGCACTACGGCAACATGAAGTTTAAGCAG
AAGCAGCGTGAGGAGCAGGCAGAGCCTGACGGCACTGAGGCTGCTGATAA
GTCAGCTTATCTAATGGGGCTGAACTCTGCTGACCTCATCAAATGTCTTT
GCCATCCCAGAGTCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGGGT
GTAGATCAAGTCTACTACCCCAACAAGGAGGCCTTCAAGTGCGAGGAGTG
TGGCAAGCACTACAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGC
ACTCCGCCACGGCGGGGACCTCACTTGCAAAGTGTGCATGCAGAGCTAC
GAGAGCACGCCCGTGTCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTC
CTCGGGAGGGCGCAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCC
GCTTCTACACGCGGAAGGACGTGAGCGGCACATGGTGGTGCACACGGGC
CGGAAGGACTTCTGTGCCAGTACTGCGCGCAGCGCTTCGGCCGGAAGGA
CCACCTGACGCGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGA
TCAAGACGGAGCCTCCGGACATGCTGGGTCTGCTGGGTCCGGCTCGCCG
CCCTGCTCCATCAAGGAGGAGCTCAGTCCCATGATGTGCAGCATGGGTCC
CAACAAGGACCCCATGATGGGCAAGCCCTTCCCCAGCGGGACCCCTTTCC
CCATGGGCATGTACAACCCCCACCAC-----CTCCAGGCCATGTCCAGT
CCCGGGGTGGGACACCC-----CACCCCTCCCTGATGCCAGCTCCCT
GTCAGCGGCCATGGGCATGGGCTGCCACATGGAGTATCTCATCTACGCTT
CCTTCTCCTTCATGGGATGTTTACAAATCAGCGACGGGTGCAACATCGTG
AACCTGCTGGCGAGTAACCTCCTCGAGCGTGTGATGCGCTCACCAGCA
GAAGTACTTCAGCAACTACAGCCCTGTGATTGGGTCTACATTTACGAAC
CCATCGAGTACTGGAACGCCACGGTGCAGGAGCACCTGAAGACACTGAGT
CACGGCTTCAACAAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCG
GGTGGTGAATGTGAGCGCGTGCACCAAGAATGACTTCATCACCATCCTCA
AGGGCTCCTTCTTACGCAGCCCGGAGTACCAGCACTTACCAGGACATC
ATCTTCTCCAAGA---ACCGCGAGAGCA-----ACGAGTACGACATCAT
CGCCTCGCGCATGTACCTGGTGGCGCGCACCACCGAGAAGAAGCGCGAGG
AGGTGGTGGAGCTGCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGC
ATCAAGTTCATCGCCTTCAACCCACCTTCGTGTTTCATGGACCGCTATAG
CTCCTCCGTATATCGCCATCCTTACCTCGGGCTTACGCGTGTCTACCA
TCCTCATCCTCACTTTCTTTCTCGTCATCAACCCGCTGGGGAATTTCTGG
CTCATCCTGACGGTACAGTCCGTGGAGCTGGGCGTGTGGGTCTGNNN-----

-----GGAAGATTACATTGTGGTCTTCTCT
CGCTCCACAACAAGGTTGATCCTAAATGAAGCGGAGCTGATCATGGCGCT
GGCCCAGGAGTTTCAGATGCGAGTCTTGACGGTGTCCCTGGAGGAGCAGT
CTTTTGCCAGCATCGTGCAGGTGATCAGCGGAGCAGCCATGCTGTT CAGT
ATGCACGGTGCTCAGCTCATCACAGCGTGTTCCCTGCCAGAGGTGCAGC
CGTGGTGGAGCTGTTCCCTACGCCGTGAACCCGGAGCAGTACACCCCAT
ATAAAACCCCTTGCCTCCCTGCCGGGCATGGACCTCCAGTACGTCTCCTGG
AGGAACACAATGGAGGAGAACACCGTCACTCACCCGGACCGGCCCTGGGA
CCAAGGGGGCGTTGTGCACCTGGAGAAGGAGGAACAAGAGCGCATACTAG
CCAGCAAGGACGTCCCCAGGCACCTGTGCTGCCGTAACCCAGAGTGGCTT
TTCAGAATCTACCAGGACACTTTGGTGGACATCCCTTCACTCCTCGAGGT
GCTCAA---GGAGGGCCTCAGA---ACCAGGCCAACTTGAAAAA---GA
GCAAGGCGGCCAGCACGGTTCACCCGGGGCGGGTCCGAGAACCCAGTGC
CAGACCTCGGTCCAAGCCACCAACGAGGCCAAACTCACAGTGTCTGGCA
GATCCCGTGGAACTGAAGTTCCCTGAAGGTGAGAGAGGTGAAGTACGAAG
TG-----

-----CCCAACAAAGAGGCCTTCAGGTGCGAGGAGTGCGGCAAGCACTA
CAACACCAAGCTGGGCTACAAACGCCATGTGGCCATGCACTCGGCCACGG
CGGGCGACCTGACCTGCAAGGTGTGCCTGCAGAGCTACGAGAGCACGCCG

ACAAAACCTGGCCCTGTTACCAGGCATGGACCTCCAGTACGTGGCTTGG
AGGAACACCATGGAGCAGAACTCGGTGGCTTACCCGAGCGCGCTGGGA
CCAGGGTGGCATCGCCACCTGGAGAAGGAGGAGCAGGAGCGCATCCTGG
CGAGCGACGACGTGCCGCGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATTTACCAGGACACCCAGGTGGACGTCCCTCCTTGCTGGAGGT
CCTCCG---AGAAAATCTGAAG---GCCAAGCCTAACCTGAGAAA---GG
CCAAGGCAGCTAGTACAGTACACCCCGGTAGAGTCAGGGAGCCCAAGTGC
CAGACCTCGGTCCAGGCCACCAACGAGGCCAAGCTGACAGTGTCTGGCA
GATCCCTGGAACCTCAAATACC-----
-----AAGAAGGATGCCAGCAAAGGGACCTTGGAGGATCAAATC
ATTCAAGCTAACCCAGCACTGGAGGCTTTTGGCAATGCCAAAACAGTGAG
AAATGACAACCTCCTCACGCTTTGGGAAGTTCATTCGTATTCATTTTGGAA
CGAGCGGCAAACCTCTCCTCTGCTGACATAGAAACTTACTTGCTTGAGAAA
TCCCGTGTGACCTTTCAGCTCAAATCGGAGAGGAACTACCACATCTTCTT
CCAGATATTGTCCAATGAAAAGCCAGAGCTGCTGGACATGCTGTTGATTA
CCAACAACCCCTTATGATTATTGCTTCATCTCCCAAGGAGAAGTAACAGTT
AAATCTATCAATGACAGTGAGGAGTTGCTTGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACAG
GTGCCATTATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCAGAGCCTGATGGCACTGAGGCAGCTGACAAGTCAGCCTACCT
GATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCAGGG
TCAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTC
TATTACCCCAACAAGGAGGCCTTCAAGTGCAGAGGAGTGCAGGCAAGCTA
CAACACCAAGCTGGGCTACAAGCGGCACGTGGCCATGCACTCGGCCACGG
CGGGCGACCTCACCTGCAAGGTGTGCCTGCAGAGCTACGAGAGCACGCCG
GCGCTGCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCGTGCGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCCGCTTCTACACGC
GCAAGGACGTGCGCCGCCACATGGTGGTGCACACGGGCCGCAAGGACTTC
CTGTGCCAGTACTGCGCGCAGCGCTTCGGCCGCAAGGACCACCTGACGCG
CCACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGACATGCTGGGCCTGCTGGGCTCGGGCTCGCCGCCCTGCGCCATC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGCCCCGCAAGGACCC
CATGATGGCCAAGCCCTTCCCAGTGGCACCCCCCTCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAACCCCGGAGTGGGC
CAC-----CACCCTCCCTGGTGGCCGCTCCCTGTGCGCCGCCAT
GGGGATGGGCTGCCACATGGAGTACCTGATTTACGCTTCCTTCTCGTTCA
TGGGATGTTTACAAATCAGCGACGGATCCAACATAGTTAACCTTTTGGCC
AGCGACTCGCCGAGCGTGTGTACGCTCTGACCCAGCAGAAGTATTTTCA
CAACTACAGCCCAGTGATAGGGTCTACATCTATGAGCCCATTGACTACT
GGAACGCCACTGTGCAGGAGCACCTCAAGACACTGGGCCAGGGGTCAAT
ACGATATCGTGGATCGATAATTACTTTCAGTATCTGAAGGTGACGAACGT
CAGCGCGTGCACCAAAAACGACTTCATCGCCGTCTCAAGACCTCGTTCC
TGAGGAGCCCCGAGTATCAGCACTCACGGACGACATCATCTTTTCCAAA
A---CGGGGG-----ACGACTTCAACATCATCGCGTCCAGGAT
GTACCTGGTGGCACGGACCACAGAGAAGACCCGGGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTCCGGCCGCTCTCGCTCATCAACAGCATCAAGTTCATC
GTGTTCAACCCACCTTCGTGTTTCATGGACCGCTACAGCTCCTCGGTCTGT
CTCGCCATCATGACGTCCGGCTTCAGCGTCTGACCATCCTCGTGCTCA
CGTTCCTCCTCGTCAACCCCTGGGAACTTCTGGTTGATACTGACC
GTCACCTCCGTGGAGCTGGGAGTCTGGGCCTGATG-----

CTGTGCCAGTACTGTGCTCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCAGACATGTTGGGCCCTCCTGGCTTCAGGGTCGCCACCGTGCTCCGTG
AAGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGGCCCAACAAAGACCC
CATGATGGGCAAAGCCTTCCCCGGCGGGGCCCTTTTCCAGTGGGCGTGT
ACAACCCTCACCCAC-----CTGCAGGCCATGCCTCACCCCTGGGGCGGCT
CACTCG-----CACCCGTCCCTGATGCCAGGCTCCCTGTCTGCGGCGAT
GGGCATGGGCTGTCCCATGGACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAGATCAGT
GACGGGTCAAATA

TCGTGAACCTGCTGGCGAGTAACTCTCCAAGTGTCTCATATGCTCTGACC
CAGCAAAAATACTTACAGTAACTACAGTCCGGTCATTGGGTTTTTACATTTA
TGAGCCCATCGAGTACTGGAACGCTACAGTGCAGGAGCACCTGAAGACTT
TGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACTTTTTTCCACTAC
CTGCGGGTGGTGAATGTGAGTGCATCAACCAAGAGCGACTTCATCACCAT
CCTCAAGGGCTCCTTCCTGCGCAGCCCGGAGTACCAGCACTTCACTGAGG
ACATCATTTTTTTCAAAGA---ACCGTGAGACAG-----ACGAGTACGAC
ATCATTTGCCTCGCGGATGTACTTGGTGGCGCGGACTACAGAGAAGAAACG
TGAAGAAGTGGTAGAGCTTCTGGAAAACTTCGCCATTGATGCTGATCA
ACAGCATCAAGTTCATTTGCCTTCAATCCTACGTTTGTTGTTTACATGGACCGC
TACAGTCCCTCGGTCATCTCGCCCATCCTGACCTCAGGATTCAGCGTACT
CACAACTCCTCATCCTCACTTTGTTCCCTGGTCAACCCCTTGGNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN

-TCTTACACCATCGAGATGGGTCCCGTGGGGCCCCGATGGAARGAGAGCC
CGCAGCCGTTCTCCTGCTCCGTTGAAGACCCACGAAACAGACAAAAGTTC
AAGGGCATCAAGACGTACATTTTCATACAGGGTGACCCGAGCCACACCGG

CCAGCAAGGATGTCCCCAGGCACCTGTGCTGYCGCAAYCCGGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTAGACATCCCCTCCTTCTGGACGT
CCTCAG---GGAGGGCCTGAAG---ACGAGGCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTCACCCCGCCGGGTTCGAGAACCCAGTGC
CAGACTTCGGTCCAAGCCGCCAACGAGGCTAAACTTACGGTGTCTGGCA
GATCCCGTGGAACTTAAGTACCTGAAGGTGCGAGAGGTGAAGTACGA-G
TATGGATCCGGAAGAAGGACACAAGCAAGGGAACCTGGAGGATCAAATC
ATTCAGGCAAACCCCGCGCTGGAGGCTTTCGGTAATGCCAAAACACTGAG
GAACGATAATTCTCCCGTTTTGGAAAATTCATCCGAATCCACTTTGGAA
CCAGTGGTAAGCTGTCTTCTGCGGACATCGAGACCTACCTGTTGGAGAAG
TCACGGGTACCTTTCAGCTGAAGGCAGAGAGGAACTACCACGTCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGTTGATCA
CCAACAACCCCTATGACTACTGCTACATCTCCCAAGGAGAAGTCACCGTA
GCGTCCATCAATGATTCAGAAGAGCTGATGGCCACCGACAGTGCCTTCGA
TGTGCTTGGCTTACGCAAGAGGAGAAGATGGGAGTCTACAAGTTGATAG
GGGCCATTATGCACTTTGGCAACATGAGGTTCAAGCAAAGCAGCGCGAG
GAACAGGCMGAGTCTGATGGCACAGAGGCTGCTGATAAGGCAGCTTATCT
AATGGGGCTGAATACAGCAGACCTAATCAAGGGGCTCTGCCATCCCAGAG
TCAAGGTAGGGAATGAGTACGTCACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTAAAGTGTGAAGAGTGTGGCAAGCACTA
CAACACCAAGGTGGGATACGAGGTGGTGGTAGAGGAACAGTGGTTCCATA
GGCGGGACCTCACCTGCGAAGTGTAAATGCAGAGTTACGAGAGCACCCCG
GTGCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCCTGCGACCCTCGCTTCTACACGC
GGAAGGATGTCAGGCGGCACATGGTCGTCCACACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACGCG
GCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGACATGCTGGGCCTGCTGGGCTCCGGCTCGCCTCCTTGCTCTGTC
AAGGAGGAGCTGAGTCCCATGATGTGCAGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAAACCTTCCCAGCGGGACCCCTTCCCATGGGCATGT
ACAACCCCCACCAC-----CTCCAGGCCATGTCTAATCCCGGGTGGGC
CACCCC-----CACCCCTCCCTTATGCCAGTTCCTGTCTGCAGCTAT
GGGCATGGGCTGTCATATGGAA-----

-----GGCTACCACACATT
CGAGTGGCAGCCAGCCCTAAAAAATGTGTCCCCATCCTGCCACGTGGGTA
TCATCAATGGGCTTTCGGGTGGGCAGCCTCGGTGGATGATGTCTTGCT
GACACCATCACCCGTCGGTTCGCTATGACGTGGCGCTTGTATCGGCCCT
GAAGGACTTAGAGGAGGACATCATGGAAGGACTGAGGGTGCATGGGCTGG
AAGACAGCGCTTGCACTTCAGGCTTCAGTGTATGATCAAGGAATCCTGT
GATGGCATGGGAGATGTCAGCGAGAAGCACGGCGGGGGCCAGCTGTGCC

-----ACAGGCGAAGTCACAGAAAGAGAAGTGGCTTTGGGG
ATAAATCCGTTTCGCGGACGGCATGGGCGCCTTCAAATAAACACAGCTC
CCACGATATTGGCTCCGG--GCAAACGGCGTTTTCTCCAGGCG--C
CCGGCTAC--GCGGCGGCCGCCCTGGGA--CACCATCA-----CCAC
CCGACCCACGTCAGTCC--TATTCCACGGCAGCCTTCAATTCCACGCG
GGACTTCTCTTCAGAAATCGGGGCTTCGGAGACGCCACCAG-----
----CGCGCAGCACAGTCTGTTTCGCCTCCGC--CGCGGAAGTTT---T
-----GCAGGGCCACACGGACACTCAGATGCCGCGGGCCACCTGCTCTT
CCCCGGGCTTACAGAG---CAAGCCGCGAGCCACGCGTCGTCTAACGTCTG
TGAACAGCCAGATGCGACTGGGCTTTTCCGGGGACATGTACGGCCGGGCC
GACCAGTATGGCCACGTTACAAGCCCAGGT---CCGACCACTACGCTTC
GACCCAGCTGCACGGCTATGGCCCTATGAACATGAATATGGCCGCT---C
ACCACGGAGCGGGGCTTCTTTTCGGTACATGCGGCAGCCGATCAAACAA
GAGCTGATCTGCAAGTGGATCGAACCAGGCAACTGTCGAATCCCAAGAA
GTCGTGCAACAAAACCTTTCAGCACGATGCATGAGCTCGTGACCCACCTGA
CGGTGGAGCATGTGGGAGGACCCGAGCAGTCGAACCACATTTGCTTCTGG
GAAGATTGTGCCAGGGAAGGGAAACCGTTCAAAGCCAAATACAACTCGT
AAATCATATCAGAGTTCACACCCGAGAAAACCGTTCCTCGTGTCCGTTCC
CCGGCT-----

>Onuxodon parvibrachium
AGTCTACTTATCCGGGCAGAATAAGCCAGCCTGGTGCTCTCCTCGGTGA
TGACCAAATTTATAATGTAATCGTCACAGCACACGCATTCGTAATAATCT
TCTTTATAGTAATACCGATCATGATCGGGGGCTTCGGGAATTGACTAATC
CCGCTAATAATTGGTGCCCCAGACATGGCCTTTCCTCGAATGAATAACAT
AAGCTTCTGATTACTTCCACCCTCTTTTCTTCTTCTACTGGCGTCATCAG
GCGTAGAAGCCGGGCGGGAACCGGATGAACTGTCTACCCGCCCTTATCT
GGCAACTTAGCCCACGCAGGGGCTTCTGTAGACCTAACAATTTTTTCTCT
GCACTTAGCAGGCATTTCTCCATCTCGGGGCAATTAACCTTTATACCA
CCATCATCAACATGAAACCCCTGCTATTTCTCAGTACCAGACACCCCTG
TTCGTATGGGACAGTACTAATTACTGCAGTCCTTCTTCTCCTTTCTCTCC
AGTCCTAGCGGCTGGTATCACCATGCTCCTAACTGATCGAAACCTCAACA
CCACCTTTTTTGCACCAGCTGGGGGTGGGGATCCAATTCTATAACCAACAC
CTA-----

-----TTTCTAGAGAGAAACCTGCACCCGTCTAACTGCCTTGG
CATGCTTTTGTGTCCGATGCCCATCAGTGTACCAAGCTGTCAGAGCTGT
CCTGGGGCATGTGTCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCCTGCAATTGCCCAAAGACATGGTGGTGCAGCTTCTGTACACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAGGAGGCAC TGCCACCTCCCAGAGCTCCTGAGA
ACAGTTCGTCTGGCTCTGCTGCCTGCCATCTTTCTCATGGAGAATGTCTC
AACAGAAGAGCTGATCAATGCCCAGGCCAAGAGCAAGGAGCTTGTGGATG
AGGCCATACGCTGTAACTGAAGATCCTGCAGAATGATGGCGTAATCAAC
AGCCCATGTGCCCGTCCAAGAAAAACCAGCCATGCACTCTTTCTGTTGGG
AGGGCAGACATTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCTGACATCCCCAGCCCCAGGAAGGAGTTTAGT
GCCTGTGCCATTGGCTGCAAGGTTTACATCACAGGTGGGA--GAGGTTT-
AGAGAACGGTGTGTCCAAAGATGTATGGGTCTACGATACCGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTTATTGCCAGGTTTGGTACGGCTCT
GCTGAGCTGAAACACTGCCTGTATGTGGTGGGAGGCCACACGGCAGCGAC
TGGCTGCCTCCCGCCTCTC NNNNNNGGACAAATACATTTGTTGTCTTCAGTCTGTTT
AGCAACAAGGCTAATCTTGAATGAAGCAGAGCTAATCATCGCACTGGCCC
AGGAATTTTGAATGAAAGTTGTTACAATTTTCACTGGAGGAACAAACTTTT
CCCAATATTGTCCAGGTGATTAGTGGTGTTCATGTTGGTTAGCATGCA
TGGAGCCCAGCTCATAACCTCACTCTTCCCTACCTAGAGGAGCTGCTGTAG
TTGAACTCTTCCCTATGCTGTGAATCCAGAGCAGTACACACCATATAAA
ACCTGGCTTCTCTTCCAGGCATGGACCTACACTATGTCTCTTGGAGAAA
CATCATGGAGGAAAACACAGTAACCCACCCAGACAGATCCCCGGAACAAG
GGGCATAGTTCACTTTGAGAAGGATGAGCAGGAGCGCATACTGGCTAGC
AAAGATGTTCCAGGCACCTGTGCTGCCGCAATCCAGAGTGGCTCTTTTCG
GATCTACCAGGACACTTTGGTTGATATCCCTTCATTCCTGGAAGTCATCA
A---AGAAGGCTTGAAG---ACCAAGCCTAGTTGGAAGAA---AGCCAAG
GTGGCCAGCGCAGTTCACCTGGTTCGGGTGAGAGATGCCCAGTGTGAGAC
CTCAGTGCAAACCAGCAGTGAGGCTAACTCACAGTTTCTTGGCAGATCC
CATGGAATCTAAAGTACCTTAAGGTGAGAGAAGTGAAGTACGAGGTG---
-----AAGAAAGACACCAGCAAGGGGACACTGGAAGATCAAATCATCCA
GGCGAACCCAGCCCTGGAGGCTTTTGGGAATGCCAAAACAGCAAGAAATG
ACAACATCATCCCGTTTCGGAAAATTCATTCGAATTCACCTTTGGAAACAGT
GGCAAGTTGTATCTGTGACATTGAGACATATCTGCTGGAAAAATCACG
TGTCACCTTTCAACTCAAGGCTGAGAGGAACTATCACATCTTCTACCAGA
TATTATCAAATCATAAACCAGACCTGCTGGACATGCTGCTGATCACAAAT
AACCCATATGACTACTCCTACATTTCTCAAGGGGAGGTAAGTGTGCGCATC
AATCAATGATGCAGAAGAACTGATAGCCACAGACAGTGTCTTTGATGTTT
TCGGCTTCACTCCAGAGGAAAAGATGGGTGTTTATAAGCTGACTGGTGCC
ATCATGCACTATGGCAACCTCAAGTTCAAGCAGAAGCAACGTGAGGAGCA
GGCCGAACCCGACAGCACGGAGGCTGCTGATAAATCGGCTTACCTAATGG
GTCTGAACTCTGCAGACCTCATTAAGGGCTATGCCATCCCAGAGTTAAA
GTGGGAATGAGTATGTTACCAAAGGCCAAAGTGTGGACCAAGTCTACTA
TCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGTGGCAAGCACTACAACA
CCAAGCTGGGATACAAGCGACATGTGGCCATGCACTCTGCCACAGCAGGG
GATCTCACGTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCCGTGCT
CCTGGAACACCTCAAGAGCCACTCTGGGAAGTCTCGGGTGGCACCAGG
AGAAAAAGCACCCGTGCGACCACTGCGACCGCCGCTTCTACACGCGGAAG
GATGTGAGGCGGCACATGGTGGTCCACACGGGCCGCAAGGACTTCCGTGT
CCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTGACGCGCCACG
TGAAGAAGAGCCACTCCCAGGAGCTGCTGAAGATCAAGACGGAGCCGCCG
GATATGTTGGGTCTTTTAGCTTCGGGGTTCGCCCCGTGCTCTGTGAAGGA

GGAGCTTAGCCCCATGATGTGCGGCATGGGTCCAAATAAAGACCCCATGA
TGGGAAAACCCTTCCCGAGTGGGGCCCCTTTTCCGATGGGCATGTACAAC
CCCCACCAT-----CTCCAGGCCATGTCCAATTCGGGGTGGGCCACCC
C-----CACGCCTCCTTGATGCCAGTCCCCTGTCTGCAGCTATGGGCA
TGGGCTGCCACATGGAGTATCTCATCTACGCCTCCTTCTCCTTCATGGGA
TGTTTACAAATCAGCGACGGCTCCAACATCGTCAACCTGCTGGCCAGCAA
CTCCCCAGCGTGTCTACGCCTGACTCAGCAGAAGTACTTCAGCAACT
ACAGCCCCGTGATCGGTTTTTACATCTACGAGCCCATCGAGTACTGGAAC
TCCACCGTGCAGGAGCACCTGAAGACTCTGAGTCACGGGTCAACAAGAT
CTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGAGCG
CCTCCACCAAGAGCGACTTCATCTCCATCCTCAAGGGTTCCTTCCTGCGC
AGCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTCTCCAAGA---A
CCCCGAGACGG-----ACGAGTACGACATCATCGCCTCGCGGATGTACC
TGGTGGCCCCGACCACGGAGAAGAAGCGCGAGGAGGTGGTGGAGCTGCTG
GAGAAGCTGCGGCCGCTGATGCTGATCAACAGCATCAAGTTCATCGCCTT
CAACCCCACCTTCGTCTTCATGGACCGCTACAGCTCGTCGGTGATCTCGC
CCATCCTCACGTGGGGCTTCAGCGTGCTACCATCCTCGTCCTGACTTTC
TTCTGGTTCATCAACCCCCCTGGGGAACTTCTGGCTCATCCTGACGGTCAC
CTCCGTGGAGCTGG-----

-----TCCTACACTATT
GAGATGGGCACCGTGGGACCCCTGTGGAAGAGAGCCACAGCCGTTCCTC
TTGCTCCATTGAAGACCCCACAAAACAGACAAAGTTCAAGGGCATCAAGA
CCTACATTTCTACAGGGTCACTCCGAGCCACACGGGGCAGCCCGTCTAC
AGACGCTACAAACACTTTGACTGGCTGTACAACCGCCTACTGCACAAGTT
CACTGTGATCTCAGTTCCACACTTGCCCGAGAAGCAGGCTACCGGGCGAT
TCGAGGAAGATTTTCATCGAGAAGCGTAAAAGCGGGCTGATACTGTGGATG

ACTACGCGTCGACCCAGTTGCACGGCTACGGCCCCATGAACATGAATATG
GCCGCG---CACCACGGAGCGGGGCTTCTTTCGATACATGCGGCAGCC
GATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGA
ACCCCAAAAAGTCGTGCAACAAAACCTTTCAGCACGATGCATGAGCTTGTG
ACCCATCTGACGGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACAT
CTGCTTCTGGGAGGACTGCCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN

>*Ophiblennius atlanticus*

AGCTTATTAATTTCGAGCAGAATTAAGCCAGCCAGGAGCTCTCTTAGGAGA
TGACCAAAATTTACAATGTAATCGTTACAGCCCATGCCTTCGTTATAATTT
TCTTTATAGTAATACCAATTATGATTGGAGGCTTTGGAAACTGACTTATT
CCTCTTATGATCGGGGCCCTGATATAGCTTTCCCCGAATAAAACAATAT
GAGCTTTTGACTTCTTCCTCCTTCCTTCCTTCTTCTTGCCTCTTCAG
GTGTTGAAGCGGGAGCCGGGACAGGGTGGACTGTTTACCCCCACTTTTCG
GGAAACTTAGCTCATGCAGGTGCATCTGTTGACCTTACCATCTTCTCCCT
TCACCTGGCAGGGATCTCGTCAATTTTAGGTGCAATTAATTTTATTACAA
CTATTATTAACATGAAACCTCCAGCCATTTCTCAGTACCAAACACCCTG
TTTGTCTGAGCCGTTCTAATTACAGCTGTCCTTCTTCTTATCCCCTCC
AGTGTTAGCTGCGGGC/CATCACTATGCTCTTAAGTACCGAAACCTAAACA
CAACCTTTTTTTGATCCGGCTGGCGGGGAGACCCAATTTCTTACCAACAT
CTT-----

-----TTCCTGGAGAGGAACCTTCACCCATCCAACCTGTCCTCGG
TATGCTGCTTCTGTCCGATGCCCATCAGTGTACCAAGCTGTTCGGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCCGCGATTGCAAAACAGAGGAC
TTCTTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTATCACATGAGGA
ACTAGAGACAGAAGATGAAAGACTGGTTTATGAAGCTGCCCTCAACTGGA
TCAACTATGACCTGGAAAGGAGGCACCTGTCATCTTCCAGAGCTCTTGAGA
ACAGTCCGCCCTCGCATTGCTGCCATCTTTTAAATGGAAAATGTCTC
AACAGAAGAACTCATCAATGCCCAAGCCAAGAGCAAAGAGTTGGTGGACG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAATGACGGGGTCGTAAC
AGTCCCTGTGCTCGACCAAGAAAAACAGCCATGCCCTCTTTCTCCTGGG
TGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTTGACCAGAAAGCCA
AAGAGATCATCCCGAAAGCTGATATCCCCAGCCAAAGGAAGGAGTTCAGC
GCTTGCGCCATTGGCTGCAAGGTGTACATCACAGGCGGGC--GAGGCTC-
TGAGAATGGAGTGTCCAAGATGTATGGGTCTATGACACCGTCCACGAGG
AATGGTCAAAGGCTGCGCCGATGCTCATCGCCAGGTTTCGGCCATGGATCT
GCAGAGCTGAAGCACTGCCTCTATGTTGTAGGAGGTCACACAGCCGCAAC
CGGTGCTCCCGAGCTNNNNNNNNNNAGATGAATATATTGTTGTGTTAGTTCGACA

ACCAGGCTGATTTTAAATGAAGCTGAATTGATAATGGCCTTGGTTCAGGA
GTTTCAGATGAAAGTTCGCTCACTGTGTCTTTAGAGGAACAGTCTTTTCCA
GCATCGTCCAGGTGATCAGTCGTGCTTCCATGCTGGTCAGCATGCACGGA
GCTCAGCTGATCACCTCACTGTTTCTGCCAGAGGAGCTGCTGTGGTGA
GCTGTTCCCTTTGCAGTGAACCCAGAACAGTACACCCCATATAAACTC
TGGCCCTCCCTCCCTGGCATGGACATTTACTANGTTTCTGGAGGAACACGA
TGGAGGAGAACTGTCACCCATCCAGACAGACCCCTGGGAACAAGGAGGC
ATTGCACATTTAGAGAAGGAGGAGCANGAGCGTATCCTGGCAAGCAAGGAT
GTCCCAGACACCTGTGCTGCCGCAACCCGGAGTGGCTCTTCAGGATCTA
CCAGGACACCAGGGTGGACATCAGTTCCTTCTTGGAGGTCCTGCG---GG
AAGGCATGAAG---TCCAAGCCAAACCTGAAGAA---GTCCAAGGCAGTC
AGCATCGTTCACCCGGGGCCGGGTCCGAGAGCCCCAGTGTTCAGACATCGGT

ACAGACAAGCAGCGAGGCCAAACTCACGGTTTCCTGGCAGATCCCGTGGAA
ATCTGAAGTACCTCAAAGTCCGAGAGGTAAAGNNNNNNNNNNNNNNNNNAAGAAAGACACCAGCAA
GGGACCCTGGAGGACCAGATTATCCAGGCCAACCAGCGCTGGAAGCCTT
CGGTAATGCCAAAACATTACGAAATGACAACTCGTCCCGGTTTGAAAAT
TCATCCGGATTCACTTTGGCNGAGTGGGAAGCTCTCGTCTGCTGACATCGA
GACATACCTGTTGGAGAAGTCGCGAGTCACTTTTCAGCTGAAGGCTGAGA
GAAACTACCATATCTTCTACCAGATCCTTTCCAATCAGAAGCCAGAGCTG
CTGGACATGCTGCTGATCACCAACAACCCGTATGACTACTCCTACATCTC
TCAGGGGGAGGTGACGGTTGCCTCCATTAACGACGCAGAGGAGTTGATGG
CAACCGATAGCGCCTTTGACGTGCTGGGCTTTACGCCAGACGAGAAGATG
GGCGTCTACAAGCTGACCGGCGCCATCATGCACTACGGCAACATGAAGTT
CAAACAGAAACAACGCGAGGAACAAGCTGAACCTGACGGCACCGAAGCAG
CCGACAAATCTGCCTACCTGATGGGGTTGAACTCAGCCGACCTCATCAAG
GGACTGTGCCATCCCCGGGTCAAAGTGGGCAACGAGTACGTGACAAAAGG
CCAAGGCGTGGACCAGGTGTACTACCCAACAAGGAAGCCTTCAAGTGTG
AGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATACAAGCGCCATGTG
GCCATGCACTCTGCCACCGCAGGGGATCTAACCTGCAAAGTGTGCATGCA
GAGCTACGAGAGCACGCCTGTTCTCCTGGAGCATCTCAAGAGCCACTCGG
GGAAGTCTTCAGGCGGCGCAAGGAGAAGAAACACCCATGCGACCCTGT
GATCGTCTGTTTTTACACACGAAAGACGTGCGACGGCACATGGTGGTCCA
CACTGGTCTGAAAGGACTTCTGTGTCAGTACTGCGCGCAGCGCTTTGGCA
GGAAAGACCATCTGACACGCCATGTGAAGAAGAGCCACTCGCAGGAGCTG
CTGAAGATCAAGACTGAGCCTCCGGACATGCTCGGTCTTTTAGCTACGGG
GTCCCCGCCATGCTCCGTGAAAGAGGAGCTCAGCCCCATGATGTGTGGCA
TGGGCCCAATAAAGATCCTATGATGGGCAAACCATTTCCAGTGGAGCG
CCTTTCCCGATGGGCATGTACAACCCCATCAT-----CTCCAGGCCAT
GTCGAATTCCGGGGTGGGTCAACCA-----CACCTCCCCTGATGCCTG
GCCCTTTGTCTGCAGCTATGGGCATGGGATGCCACATGGAGNATCTGATTT
ACGCGTCTTTCTCGTTCATGGGATGTTTACAAATTAGCGATGGGTCTGAAT
ATCGTGAACCTTGCTGGCGAGTAACTCTCCAGCGTTTCCTACGCGTTGAC
CCAGCAGAAATACTTCAGTAACTACAGTCCCGTGATTGGGTTTTATATTT
ACGAGCCCATCGAATACTGGAACCTCACGGTGCAGGAGCACCTGAAGACT
CTGAGTCACGGCTTCAACAAAATCTCCTGGATGGACAATTTTTTCCACTA
CCTGCGGGTGGTGAACGTGAGCGCCTCGACGAAGAGCGACTTCATCAGCA
TCCTGAAGGGTCTTTTCCTTCGGAGCCCGGAGTACCAGCATTTACCGAG
GACATCATATTCTCTAAGA---ACCGCGAGACTG-----ATGAATACGA
GATCATCGCATCCAGGATGTACTTGGTAGCACGGACCACAGAGAAGAAGC
GNGAGGAGGTGGTGGAGCTTTTAGAAAAGCTCCGCCCCCTGATGCTGATCA
ACAGCATCAAATTCATTGCCTTCAACCCACCTTTGTGTTTATGGACCGA
TACAGTCCCTCCGTATCTCACCCATCCTGACCTCAGGCTTACAGCTACT
CACCATCCTCATCCTCACCTTCTTCTCGTATCAACCCCTTGGGAAACT
TCTGGTTCATCCTCACGGTTACGTCCGTGGAGCTGGGCGTCTTGGGTTTA
NNNGTTTTTACCAGTTTGAATGGCAGCCAGCTCTCAAGAATGTGTGCGACCAC
TTGCAGTGTAGGCATTAATAATGGGCTCGCCGGTTCGCTTTCTCGGTGG
ATGATGCCCCAGCTGACACCATCACTCGGCGCTTTCGCTATGATGTGGCG
CTGGTGTGACGCTTAAAGGATCTGGAGGAGGACATCATGGAGGGATTGAG
AGAGAATGGGATGGAAGACAGTGTGTCACCTCAGGCTTTCGTGTTATGA
TCAAGGAATGCTGCGATGGCATGGGCGATGTCAGCGAGAAGCACGGCGGA
GGACCAGCTGTTCTGAGAAGGCTGTACGTTTCTCTTTCACCGTTATGTC
TGTCCTCGGTCTGCCAGACGAGGAGGAG-----
-----GAGGAGGTTTCCATTTTCACTGAGCCAAAGCCAAACTCAGAA
CTGTCTGTAAGCCTCTCTGCCTGATGTTTGTGGATGAGTCAGACCATGA
GACACTCACAGCTGTCTGGGGCCGATCATCGCAGAGCGGAACGCAATGA

AAGAGAGCAGACTCATCCTGTCCATGGGAGGCTTACTTCGCTCTTTTCGC
TTCCACTTCAGGGGCACGGGGTATGATGAGAAGATGGTGCGTGAGATGGA
GGGACTGGAAGCCTCGGGTCTTATGTCTGCACGCTGTGTGACGCCA
CTCGGACAGAGGCGTCTCACAACATGGTGCTGCACTCAATCACACGTAAT
CACGAAGAGAACTTAGAACGTTACGAAATATGGAGAACGAATCCCTTTTC
TGAGTCTGTGATGAGCTTCGAGACAGAGTCAAAGGGGTGTCTGCCAAAC
CCTTCATGGAGACTCATCCCCTCTCGACGCGTTGCATTGCGACATCGGC
AACGCCACCGAATTCTACAAAATCTTCCAGGACGAGATTGGGGAAAGTTTA
CCAAAAGGT---CAAC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGG
CAGCCCTAGATAAACAGCTGAGGAAGAAGATGAAGCTTAAACCGGTAATG
AGGATGAATGGAACTATGCCCGCAGGCTAATGACCCAGGAGGCTGTGGA
GGTGGTGTGTGAGCTGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGG
AACTTATGAGGCTGTATATACAGATGAAGCCTGTGTGGCGTGCCACCTGC
CCAGCAAAGGAGTGCCCGACCAGCTGTGCCGCTACAGCTTCAACTCACA
GCGCTTTGCTGACCTCCTCTCCTCTACCTTCAAATATAGGTACAGCGGAA
AGATAACCAACTATCTGCACAAGACCCTTGCTCACGTTCTGAGATCATT
GAGAGAGATGGATCTATTGGAGCCTGGGCCAGCGAGGGTAACGAGTCAGC
TAAACAAGTCATACACTATTGAGATGGGCACCCTAGGGCCCCAGTGGAAAG
ACAACCCACAGCCTTTCAACTGCTCCATTGAAGATCCCACTAAACAGACC
AAGTTTAAAGGGATCAAACCTACATTTTCATACCGGGTCACCCCGAGTCA
CACAGCGCACCCGGTCTACAGACGCTACAAACACTTTGACTGGCTGTACA
ACCGCCTACTGCACAAGTTCACTGTGATCTCTGTGCCCTCACCTGCCCTGAA
AAGCAGGCCACGGCCGATTTGAGGAGGATTTTATCGAGAAGCGCAAGAG
GCGACTGATCTTGTGGATGAACCACATGACCAGCCACCCTGTCTGTGCG
AATACGAAGCCTTCGAGCACTTTCTCATGTGTGCTGACGACAAACAGTGG
AAGCTGGGTAAGAGGCGGGCGGAGAAGGACGAGATGGTAGGCGCCATTT
CATGCTGACTCTCCAAATCCCCAACGAGCACCAGGACCTTCAAGATGTGCG
AGGAGCGGGTTGACAACCTCAAGGCCCTTTGCTAAAAAATGGACGACAGC
GTGCTTACAGCTCACTCATGTTGCCCTCCGAGTTGGTGCGCAAGCATTGGG
TGGATTACAGAAAGAGTTTACGCGACTGGGTAATGCTTTCCAGTCCATCA
GCCAGGCTTTTCATGCTGGACCCTCCCCATAGGTCAGACACCCTCAACAAC
GCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGGGTTTCATCATTTGGAGTCGGTGTGG
TGGGAAACCTC
CTGATCTCCATCCTGCTGGTTAAAGACAAGAGCCTGCATCGAGCGCCCTA
CTATTTCCCTGTTGGACCCTGTGCGCCTCTGATATCCTGCGCTCTGCCATTT
GCTTCCCCTTTGTCTTCACCTCAGTCAAGAATGGATCTGCGTGGACCTAC
GGCAGCTGACCTGCAAAGTGATTGCCTTCTGGGTGTGCTCTCCTGTTT
YCACACGGCGTTCATGCTGTTCTGTGTCAGCGTCACCCGATACTGGCCA
TCGCACATCACCGTTTCTACACCAAGAGGCTGACGTTCTGGACGTGCTTG
GCTGTGATCTGCATGGTGTGGACACTGTGCGGTGGCTATGGCGTTCACC
GGTGTGACGTTGGGCACCTACTCTTTTATCCGGGAGGAGGACCAGTGCA
CATTCAGCACCGTTCCTTCCAGGGCGAATGATTCACCTGGGYTTTCATGCTC
CTAYTGGCGCTCATCCTTCTTGCCACGCAGCTAGTTTACCTCAAGCTCAT
CTTCTTCGTCCACGACCGTCGAAAGATGAAGCCTGTCCAGTTTCGTGCCTG
CTGTCAGTCAGAACTGGACTTTCCATGGGCCTGGTGCTAGCGGGCAGGCG
GCGGCCAACTGGCTGGCTGGATTTCGGTCGAGGTCCGACCCCGCTACKTT
GCTGGGCATCCGACAGAACAGCAACGCAGCAGGCCGAGGCGTCTTCTGG
TRCTAGATGAATTCAAAACMGAGAAGAGGATTAGTAGGATGTTCTACATC
ATGACGTTTTTGTTCCTGGCGCTGTGGGGACCCTATCTGGTGGCCTGCTA
CTGGCGGGTGTTCACGGGGCCCTGTAGTCCCTGGAGGCTACCTGACAG
CAGCTGTGTGGATGAGCTTTGCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGC
CAAATCTCGCTTTCACCCTGGCGTGG
GGACTGGTCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTG

CTATCCCCGCAGCAAAGCGAGGAGCCACTGTTGCCACCCCCCGCAGCG
ATGGTTTGTCACCC---CTGCCAACACCGACTGGACTTTGCTGCCCTCGG
CATACGACGCCGCT-----GATTTTGCCGGTAACGCGGCCACCTTG
CTGTCTACGCAGCGGCCGAGTGAAAGCTC-----TCCCTGCCGGC
TGCAGGCTGCTCCAATCGGCCCTTGGCTATTACGCAGACCCGTCTG---
GCTGG---GGAGGACGCACGCCGCGCAGTACTGCGGCGTCAATACGAAA
TCCGGCTCGGTCTTTTCCTGCTGGCCGCCAACTCCATCGGTAGCAGAGC
NGGCG---CC---AACTACCTGT-----CCGAGGA---GGGC---GA
CTC---CATCACGACGGAGAGGTGCCCC---AT---CGGCGCGTCGGAGG
AG---ACCAAACCCAAAGACATGAC---GTCCGA---GTCGAACTGGATA
GAG---ACGCCGTCTCTATCAAGTCTATTGATTCCAGCGACTCTGGCAT
CTTTG---AGCAGGCCAAACGGAGGAGAATCTCACCGTCGGCCACACCG-
-----GTTTCAGAGACGGTGTCCCCGCTAAAAATNNNNNNNNNNNTTCAACAGAGGAAG
TCACAGAGAGAGAAGTGGCGTTGGGAATAAATCCGTTTGTGGATGGGATG
GGCGCCTTCAAAATAAACACAGCTCCCACGATATCGGCTCCGG---ACA
GACGGCGTTTTTCTCCAGGCT---CCCGGTAC---GCGGCRGCTGCSC
TGGGA---CACCATCA-----TCACCCGACCCACGTTGGCTCT---TAC
TCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTTTCAGAAATCGGGG
TTTCGGAGATGCCACCGG-----GGCGCAGCACAGTTTGTTTCG
CCTC-----CGGAAGTTT---T-----GCAGGGCCACACGGACAC
TCAGATGCAGCGGGGACCTGCTCTTCCCGGGGCTGCACGAG---CAAGC
GGCGAGCCACGCGTCTTCAACGTGGTCAACAGCCAGATGCGGCTGGGCT
TCTCGGGGACATGTACGGACGGGCCAGTACGGCCACGTTACGAGC
CCGAGGT---CCGACCACTAYGCCCTCACCAGCTGCACGGCTACGGCC
CATGAATATGAACATGCCGCG---CATCAGGAGCAGGGCCTTCTTYC
GATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAG
CCGGAGCAGCTGACGAACCCCAAAAAGTGTGCAACAAAACTTTTAGCAC
CATGCACGAGCTGGTGACCCACCTGACGGTGGAGCATGTGGGGGGACCGG
AGCAGACCAACCACATYTGCTTCTGGGAGGAATGCTCCAGAGAAGGAAAG
CCATTCAAAGCCAAATACAACTTGTAATCATATCACAGTTCACACCGG
AGAAAAGCCCTTCCGTGNNNNNNNNNNNNNNNNNNNNNNNNNNN

>Opisthoproctus grimaldii

-----GGAGAGAAACCTGCATCCGTCCAACTGCTTGGG
CATGCTGCTGCTGTCAGATGCCACACGTCACCAAGCTCTCAGAGCTCT
CCTGGGGCATGTGTCTCAGCAACTTCCCTGCAATCTGCAAGACAGAGGAC
TTCTGCAGCTGCCAAGGACATGGTGGTTTCTCCTGTCCCATGAGGA
GCTGGAGACTGAGGACGAAAGGCTGGTCTACGAGGCCGCTCTCAACTGGG

TCAACTACGACCTGGAGAGGAGGCACTGCCACCTGCCGGAGATGCTGAGG
ACCGTCCGTCTGGCCCTGCTGCCC GCCATCTTCCTCATGGAGAATGTGTC
CACGGAGGAGCTGATCAACGCCAGGTCAAGAGCAAGGAGCTGGTGGATG
AGGCCGTCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGTCTATGCGCCCGGCCAGGAAGACCAGCCATGCCCTCTTCCTGCTGGG
CGGCCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATTATCCCCAAGGCAGACATCCCCAAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGATGTAAGGTCTATGTCACAGGGGGGA--GGGGCTC-
TGAGAACGGCGTGTCCAAAGACGTGTGGGTCTATGACACCATCCAGGAGG
AGTGGTCCAAGGCAGACCCATGCTCATCGCCCGGTTTGGCCATGGCTCA
GCAGAGCTGAAACACTGCCTCTACGTGGTTCGGAGGTCACACAGCTGCCAC
AGGCTGCCTGCCCCCTCCCCATCT-----

-----AAGAGGGATCCAAGCAAGGTACCCTAGAGGATCAAATC
ATTCAAGCTAACCCCTGCACTGGAGGCTTTCGGTAATGCCAAAACACTGAG
AAATGATAAATTCATCACGTTTTGGCAAATTCATCCGTATTCATTTCCGAC
AAAGTGGCAAATTGTCTCTGCTGACATAGAGACTTATCTGCTTGAGAAG
TCACGTTGCACCTTTCAGCTGAAATCGGAGAGGAACACCATATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAATCCATATGACTATGCCTACATCTCCAAGGAGAGGTGACTGTA
GCATCCATCAATGATTCTGAGGAGCTGATTGCCACTGACAGTGCCTTTGA
TGTGCTGGGCTTTACTGCAGAGGAGAAAATGGGGATCTACAAGTTGACAG
GTGCCATAATGCACTATGGCAACATGAAGTTCAAGAACAAGCAGCGGGAG
GAGCAGGCAGAGCCTGACGGTACAGAGGCTGCTGACAAATCAGCTTATCT
AATGGGACTGAACTCTGCAGATCTTATTAAAGGACTGTGCCATCCAAGAG
TCAAGGTTGGCAATGAGTATGTCACCAAAGGTGAGAGTGTAGATCAAGTC
TACTAC-----


```

-----GCCAAATCTCGCTTT
CACCCCTGGCGTAGGGACTGGTCCTGGCACAGACC---GCAGCGTCCCACT
TAGTAACAGCTTGCTATCCCCGCAACAAACCGAAGAGCACACAGTTG---
CTTCCCCGCGAGCGATGGTTTTGTCACCC---CTGCCAATAACCGACTGGAC
TTTGCCGCGCTCGGCATACGATGCCCGCCGGCTGCTGATTTTGCCGGTAA
CGCGGCCACCTTGCTGTCCTACGCAGCGGCTGGAGTAAAAGCAC-----
TTCCCTGCCCACGGCTGGGTGTTCAAACAGACCTTTGGGTTATTATGCC
GATCCATCCG---GCTGG---GGCACCCGCACACCACCTCAGTACTGT---
-----AGTAAATCCAGCTCAGTGCTCTCGTGCTGGCCAACAAATGCTG
TTGGAAGCATTACGGGCA---CGTCCAATTACCTGG-----CGGAG
GA---TGGG---GACAC---CATCCCTACGGAAAGGTCTCCA---AT---
AAGAGTGCCAGAGGAG---CCAAAACCAAAGACTT-----GTCCGA--
-ATCCAGCTGGATAGAG---ACGCCGTCTTCAATAAAGTCGATAGATTCA
AGTGATTCTGGAATCTTTG---AGCAGGCCAAACGGAGAAGAATTCACC
GTCTGTACACCG-----GTTTCGGAGACAGTGTCCTCCCGCTGAAAT
CAGAGCATCACTCAACAGGCGAAGTCACAGACAGAGAAGTGGCTTTGGGG
ATAAATCCGTTTCGCAGACGGGATGGGCGCTTTTAAAATCAACCACAGCTC
TCATGATCTTGCTCCGG---GCAAACGGCGTTTTCCTCCCAAGCG---C
CCGGCTAC---GCAGCCGCTGCCTTGGGA---CATCATCA-----CCAT
CCGACCCATGTCAGCTCC---TACTCCACCGCTGCTTTCATTCACCCG
GGACTTTCTTTTTCGAAATCGGGGTTTCGGAGACGCGACCAG-----
----CGCTCAACACAGTCTGTTTCGCCCTCGGC---AGCGGAAGTTT---T
-----GCAGGGCCACATGGACTCAGATGCCCGGGACACCTGCTCTT
CCCAGGACTTCACGAG---CAAGCCGCGAGCCATGCGTCCTCCAATGTTG
TAAACAGTCAGATGCGATTGGGTTTTTCGGGGGACATGTACGGGCGGGCT
GACCAGTATGGCCATGTTACGAGCCCACGGT---CCGACCACTACGCTTC
GACCCAGTTGCATGGCTATGGCCCCATGAACATGAATATGGCCGCA---C
ACCACGGAGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGTTGTGCAACCCGAAAAA
GTCGTGCAACAAAACTTTCAGCACGATGCACGAGCTCGTGACCCACCTGA
CAGTGAACATGTGGGGGGACCAGAGCAGTCAAACCATATTTGCTTTTG

```

GAAGAGTGTTGCCGAGAAGGAAAACCATTCAAAGCTAAATACAAACTTGT
AAATCATATCAGAGTACACACYGGAGAAAAACCGTCCCATGTCCATTCC
CCGGCTGTGGCAA
>Opsanus pardus

NNNNNNNNNNNNNNNNNNNNNNNCATTCCTAACTGCCTTGCCATGCTTTTGCTATTTGATGC
TCACCAGTGTACCAAGCTATCAGAGCTGTCCTGGGGTATGTGCCCTCAGCA
ACTTCCCTTCTATTTGCAAGACAGAGGACTTCCTTCAGTTACCCAAAGAT
ATGGTGGTGCAGCTTTTGTACATGAGGAGCTGGAAACAGAAGATGAGAG
ACTGGTTTATGAAGCTGCCCTGAACTGGATCAACTATGACCTAGAGAGGA
GACACTGCCACCTCCAGAGCTTCTGAGAACAGTCCGTCTAGCGCTGTTG
CCTGCCATCTTCTGATGGAGAATGTCTCGACGGAAGAGCTGATCAATGC
CCAGGCCAAAAGCAAGGAGCTGGTGGATGAAGCGATCCGTTGTAAGCTGA
AGATCCTGCAAAATGATGGCGTTGTTAACAGCCGTGTGCCCGGCCGAGA
AAAACCAGCCATGCTCTGTTTTCTTCTGGGCGGGCAGACCTTTATGTGTGA
CAAGTTGTACTTGGTGGATCAGAAAGCCAAAGAAATCATCCCAAAGGCTG
ACATCCCCAGTCCAAGGAAGGAGTTCAGTGCCTGCGCTATTGGCTGTAAG
GTGTATATCACTGGCGGGA--GAGGCTC-AGAGAATGGTGTATCCAAAGA
TGTGTGGGCTTACGACACTGTCCACGAGGAATGGTCCAAGGCAGCGCCCA
TGCTCATTGCCCCGGTTTGGCCATGGCTCTGCAGAGTTAAACACTGCCTC
TATGTAGTAGGAGGGCATACTGCAGCAACTGGATGCCTCCAGCTTCTCC
ATCCGGACGAATACGTTGTTGTGTTAGTTCGCTCAACAACCAGACTGATA
CTGAACGAAGCCGAGCTCATCATGGCTCTGGCTCAGGAGTTTCAGATGAG
AGTGGTGCAGGTTGTCCCCTGGAGGAACAGTCTTTTCCAGCATTGTCCAGG
TGATCAGCGGTGCTTCCACGTTGGTTAGCATGCACGGAGCTCAGCTCATT
ACGTCCCTCTTCCCTCCAGAGGAGCTGCTGTGGTTGAGTTGTTTCCCTT
TGCTGTCAACCCGGAGCAGTACACCCATATAAAAACCTGGCCTCTCTTC
CAGGCATGGACCTCCACTACATCTCCCTGGAGGAACACCATGGAGGAGAAC
ACAGTCACCCACCCGGAGAGACCTGGGAGCAGGGAGGCATTGCTCACCT
GGCGAAAGAGGAGCAAGAGCGAATACTGGCCAGCAAAGACGTCCCGAGGC
ACCTGTGCTGCCGCAACGCAGAGTGGCTCTTCCGAATCTACCAGGACACG
CTGGTAGACGTTCCCTTCTTTGGTGGAAAGCCCTCAG---AGAAGGCTTAAA
G---ACGAAGCCCAATTGAAGAA---GGCGAAGACGGCCAGCACGGTCC
ATCCGGGCCGGGTCAAGGAAAGCCAGTGTACAGCGTCTGTGCAGACCACC
AGTGAGGCCAAACTCACAGTGTCTGGCAGATCCCGTGGAAACCTGAAGTA
CCTGAAGGTGAGAGAAGTTAAGTACGAGGTGTGGATCCAGAAAAAAGACA
CCAGCAAGGGGACGCTGGAAGATCAAATCATTACAGCGAATCCTGCACTT

GAGGCTTTTGGCAACGCCAAAACGGCAAGAAACGATAACTCTTCTCGTTT
TGGAAAATTCATCAGAATTCACCTTGGAAACCAGTGGAAAGCTCTCGTCTG
CAGACATCGAGACGTACCTGCTCGAGAAGTCACGCGTCACCTTCCAGCTC
AAGGCTGAGAGGAACTACCACATCTTCTACCAAATCCTGTCCAATCAGAA
GCCAGAGCTGCTGGACCTGCTGCTGATCACCAACAACCCATACGACTACT
CCTACATCTCCCAAGGAGAGGTAACGGTGGCATCCATTAACGATCCGGAG
GAGCTGATGGCTACAGACAATGCCTTTGATGTGCTGGGCTTCACTCCAGA
GGAGAAGACGGCTGTCTACAAGCTGACCGGCGCCATCATGCACTACGGGA
ACATGAGGTTTAAGCAGAAGCAACGTGAGGAGCAGGCTGAACCTGATGGG
ACCGAGGCGGCCGATAAGTCGGCATACTTAATGGGGCTGAACCCCGCTGA
CCTCATCAAAGGCCTGTGCCATCCCCGGGTCAAGGTAGGAAACGAGTACG
TCACCAAAGGGCAGAGTGTGGACCAAGTCTACTACCCTAACAAAGGAGGCA
TTCAAGTGTGAAGAGTGTGGGAAGCACTACAATACCAAGCTGGGATATAA
GCGCCATGTGGCCATGCACTCAGCCACAGCAGGAGATCTCACCTGCAAAG
TGTGTATGCAGAGCTATGAGAGCACACCAGTGCTCCTAGAGCATCTGAAG
AGCCACTCGGGGAAAATCCTCAGGTGGCGCCAAGGAGAAAAAACACCCGTG
TGATCACTGTGATCGCCGTTTTTACACGCGAAAGGATGTGAGACGACACA
TGGTGGTACACACGGGCCGAAAGGACTTCCCTGTGCCAGTACTGTGCTCAG
CGCTTTGGAAGGAAGACCATCTGACACGTACGTAATAAAAAAGCCACTC
ACAGGAGCTGCTGAAGATCAAGACAGAGCCACCTGATATGTTAGGTCTTT
TAGCTTCGGGCTCACCACCTTGCTCAGTGAAAGAGGAGCTTAGCCCCATG
ATGTGTGGCATGGGTGCCAACAAAGACCCCATGATGGGCAAACCGTTTCC
CAGTGGTGCACCTTTCCCATGAGCATGTACAACCCTCATCAT-----C
TCCAGCCATGTCTAATTCTGGGGTTGGTCATCCA-----CACCCCTCT
TTGATGCCAGTTCGCTGTCTGCAGCTATGNNNNNNNNNNNNNNNNNNNTACCTCATCTACGCGTCTT
T
TTCTTTCATGGGATGTTTACAGATCAGTGATGGGTCCAACATCGTAAACC
TGTTAGCTAGCAACTCTCCGAGCGTGTCTGACGCTCTGACACAGCAGAAG
TACTTCAGCAACTACAGTCCCGTGATTTGGATTTTACATTTATGAACCCAT
TGAGTACTGGAACCTCACGGTGCAGGAGCACCTGAAGACTCTGAGCCACG
GCTTCAACAAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTG
GTGAATGTGAGCACGTCGACCAAGAGCGACTTCATCGCGATCCTCAGAGG
CTCGTCTTGCGCAGTCCAGCATAACCAGCATTTCACAGAGGACATCATAT
TCTCTAAGA---ACCGGGAGACTG-----ATGAGTATGACATCATTGCC
TCACGCATGTACTTGGTGGCACGGACCACGGAGAAGAAACGTGAGGAGGT
GGTGGAGCTTCTGGAGAAGCTTCGCCCATTTGATGCTCATCAACAGCATCA
AGTTCATTGCCTTCAATCCCCTTTGTGTTTATGACCGCTACAGTTCT
TCTGTCATCTCGCCCATCCTGACCTCAGGCTTCAAGTGTGCTCACCATCCT
CATTCTCACCTTCTTCCCTGGTCATCAACCATTAGGGAACCTTCTGGCTCA
TTCTGACGGTTACGTCCGTGGAGCTTGGCGTCTTGGGTTTGTGNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NN
GCATTATTAATGGGCTTTCTGGACGAGCATCCTCCGTGGACGACATCCCA
GTCGACACCATCACTCGCCGTTTTAGATATGATGTGGCGCTGGTATCAGC
ATTAAAAGACCTGGAGGAGCATATCATGGAGGGGCTGACAGAGTGTGGAA
TGGAAAGACAGCGCTTGCACCTCAGGCTTTCAGCGTCATGATCAAAGAATCT
TGTGACGGCATGGGTGACGTCAGCGAGAAACATGGTGGGGGACCTGCGGT
TCCTGAGAAGGCGGTACGCTTCTCATTCAGTGTATGTCTATCTCCCTCA
TGGCAGACGGCGAGGAA-----AAG
TCGGTTACCATCTATACTGAGCCAAAGCCAAACTCAGAACTGTCCCTGTAA
GCCCCTTTGCCTGATGTTTGTGACGAGTCAGACCATGAAACCCCTCACAG
CTGTCTGGGGCCAAATGTTGCTGAGCGTGAAGCGATGAAAGACAGCAGA
CTCATTCTGTCAATGGGTGGCTTGCCTCGCTCCTTCCGCTTCTACTTCAG
AGGCACGGGATATGATGAGAAGATGGTACGTGAACTGGAGGGCTAGAGG

CCTCAGGTTCCAGCTATATCTGCACGCTGTGTGACTCCAGTCGGGCAGAG
GCCTCTCACAATATGGTGTGCTGCATGCCATTACCCGCAGCCATGAAGAGAA
CCTGGAGCGTTACGAAATATGGAGAACTAATCCCTTTTCAGAGTCTGTCTG
ATGAGCTGCGGGACCGTGTCAAAGGGGTCTCTGCCAAACCCTTTATGGAG
ACCCATGCAACGCTGGATGCATTACACTGTGACATTTGGCAATGCCACTGA
GTTCTACAAAATCTTCCAAGATGAGATCGGGGAAGTGTACAAAAAAGC--
-CAAC---CCCACCCGTGAGGAACGGCGTAGCTGGAGAGCAGCCCTAGAT
AAACAGTTGAGGAAGAAAATCAAGCTGAAACCAATAATGAGGATGAATGG
GAACTATGCCCGGAAGCTAATGACCATGGAGGCGATGGAGGCGGTGTGTG
AGTTGGTACCCACAGAGGAGAGGAGGGAAGGCCTGAGGGAGCTCATGAGT
CTCTACATTCAGATGAAGCCTGTCTGGCGTGCCCTGTCCAGCCAAAGA
ATGCCCTGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCTG
ACCTCCTGGCCTCCACATTCAAATATCGGTACAATGGAAAGATCACCAAC
TACCTCCACAAGACGCTGGCTCATGTCCCTGAAATTGTTGAACGAAATGG
GTCTATCGGAGCCTGGGCCANNNNNNNNNNNNNNNNNNNNNNNNNNNNTCGTACACTATTGAGATGGGTCCC
TTGGGG

CCGAGATGGAAGGAGAATCCACATCCTTTCTCTTGTTCATTGAAGATCC
AACAAAACAGACAAAAGTTTAAAGGCATCAAACGTACATTTTCGTACCGGG
TCACGCCAAGCCACACAGGGCGTCTGTCTACAGGCGCTACAAGCACTTT
GACTGGCTATAACAACCGGTTACTGCATAAGTTCACTGTGATCTCCGTGCC
TCACCTTCCCAGAAACAGGCCACTGGGCGATTTGAGGAAGACTTCATCG
AGAAGCGTAAGAGACGATTGATACTGTGGATGAACCACATGACTACTCAC
CCGGTTCTCTCGCAGTATGAAGGCTTTGAGCACTTTCTCATGTGTGCTGA
TGACAAGCAATGGAAACTGGGCAAGAGACGGGCAGAGAAGGATGAGATGG
TGGGTGCCCATTTTCATGCTGACCCCTCAGATTCTTATTGAGCACCAGAC
CTTCAGGATGTAGAGGAGCGAGTTGATTCTTCAAGACATTTGCTAAGAA
AATGGACGATAGTGTTCATGCAGCTCACACTTGTACCTCGGAGCTGGTGC
GCAAGCACCTTGGTGGATTTCAGGAAGGAGTTCCAACGGCTAGGAAATGCC
TTTCAGTCTATCAGTCAGGCGTTCATGCTGGACCCCTCCCATTCTTCAGA
GGCTCTCAATCATNNNNNNNNNNNNNNNNNNNNNNNCCGTTCTCAAACCTGACCTCCCTGGGTTTCATCATC
GG

CGTCGGCGTGGTTCGAAACCTCCTGATTTCCATCCTGCTGGTCAAAGACA
AGAGCCTGCACCGGGCGCCCTACTACTTCTGCTGGACCTGTGCGCTTCC
GACATCCTCCGCTCGGCCATCTGCTTCCCCTTCGTCTTACCTCGGTCAA
GAATGGGTCCGCTCGGAGCTACGGCACGCTCACCTGCAAAGTGATCGCCT
TCCTGGGCGTGTCTCCTGCTTCCACACGGCGTTCATGCTCTTCTGCGTC
AGCGTCACCCGCTACCTGGCCATCGCGCACCACCGTTTCTACACCAAGCG
GTTGACCTTCTGGACGTGCCTGGCCGTCATCTGCATGGTGTGGACGTTGT
CGGTGGCCATGGCGTTCGCGCCGGTGTGGATGTGGGGACGTACTCTTTT
ATCCGCGAGGAGGACAGTGCACGTTCCAGCACCGCTCCTTCCGGGCGAA
CGATTCCCTCGGCTTCATGCTCCTGYTGGCGCTCATCCTCCTGGCCACAC
AGCTGGTTTACCTCAAGCTTATCTTCTTTCGTCCACGACCGTCGAAAGATG
AAGCCCGTCCAGTTTGTGCCTGCCGTCAGCCAGAACTGGACTTTCCASGG
GCCGGGCGCAAGCGGCCAAGCGGCGGCAACTGGCTAGCTGGATTCGGTA
GAGGCCACCCCGCTACTCTGCTAGGCATCCGGCAGAACAGCAACGCG
GCGGGCCGACGGCGTCTACTGGTGTGGATGAGTTTAAACGGAGAAGAG
GATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTCCTGGCTCTGTGG
GGCCCTACCTTGTGCGCTGCTACTGGCGGGTTTTTGCAGGGGGCCCCGTG
GTCCCCGAGGGTATCTGACGGCGGCGTGTGGATGAGCTTTGCCCAAGC
CGGGGTCAACCCTTTCATCNNNNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCCTGCTGGCGTGGGG

A
CTGGCCCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTG
TCCCCGCACCAAACCGAGGAGCCCACTGTTGCTTCCCCCGCAGCGATG

ACTGTGCGTCTGGCTCTCCTTCCCTGCCATCTTCCCTTATGGAGAATGTCTC
TACGGAGGAGCTCATCATCGCAGAGGCTAAAAGCAAAGAGCTGGTAGATG
AGGCCATCCGCTGCAAACGCGCATCTTGCAAAACGACGGCGTCGTCAAC
AGTCTTGCGCCCGCCCCGCAAGACCAGTCATGCCCTTTTCTTGCTGGG
CGCCCCACGTTTATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATTCCAAAAGCAGACATCCCCAGCCCAAGAAAGGAGTTCAGC
GCCTGTGCCATTGGCTGCAAAGTGTACGTGACGGGTGGCC--GGGGCTC-
AGAGAACGGAGTGTCTAAGGATGTTTGGGTGTACGATACATTACACGAGG
AATGGTCCAAAGCGGCTCCGATGCTGATAGCACGTTTCGGTCATGGTTCC
GCTGAGATGCGCCACTGCCTGTATGTCGTAGGAGGTCACACAGCTGCCAC
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCGATGACTACATTGTGGTTTTTAAACGTACCACTAACAGGCTCAT
CCTTA

ATGAGGCAGAACTTCTTCTGGCTTTAGCCCAAGAGTTTCAAATGAGGACT
GTCACTGTGTCTTTGGAGGAGCAGTCGTTTCGATAGCGTCATCCAAATGAT
CAGTGGGGCGACTATGTTGGTCAGCATGCACGGAGCCAGATGGTCACCT
CCATGTTCTTGCCCCGTGGTGGCGCTGTGGTTGAACTCTTCCCTTATGCT
GTAAACCCAGAGCAGTACACTCCCTATAAAACCTTGGCCTCTTTGCCCGG
CATGGACCTTTCAGTATGTCGCATGGAGAAATACCAATGAAATGAACACCG
TTACATATCCCGATCGGCCCTGGGATCAGGGTGGCATCGTCCACTTGGAC
AAAGAGGAACAAGAACGTATCCTCGCCAGCAAGGAGGTGCCGAGACATCT
TTGTTGTCGTAATCCAGAGTGGCTTTTTTCGCATTTACCAGGACACTATTG
TGGACATTGCCTCTTTTCTGGACGTACTTAG---AGAAGCTCTAAAA---
---AGGCCAATCTCAAAA---GGCAAAGGTGGCTAGCACTGTACATCC
TGGTCGAGTCAGAGAGCCCAAGTGTGACAGCTCGGTACAGGCCACCAATG
AAGCAAAGCTCTCAGTGTGATGGCAGATTCCCTTGAATCTGAAGTACTTG
AAGGTGAAAGAGGTGAAATATGAGGTGTGGATCCAGAAGAAAGACTCTAA
CAAGGGAACCTGGAGGATCAGATTATTCAGGCCAATCCTGCACTCGAGG
CTTTTGGCAATGCTAAAACGCTCCGAAACGACAACCTCCTCCCGCTTTGGG
AAATTCATCCGCATTCATTTTTGCAACAAGCGGTAAACTCGCTTCAGCGGA
TATCGAAACATACCTGCTGGAGAAGTCTCGGGTGCATTTTCAGCTGAAGT
CGGAGGGAACCTACCATATTTTCTTCAAATACTGTCCAATGAAAAGCCT
GAACTGCTGGACATGCTGTTGATAACTAATAATCCATATGACTACTCTTA
CATCTCCAAGGAGAAGTAACCGTAGCTTCCATCAATGACAACGATGAGC
TGATTGCGACCGACAAGGCATTTGATGTACTCGGCTTCACGTCCGAAGAA
AAGATGGGAGTCTACAAGCTGACAGGTGCTATCATGCACTATGGCAATAT
GAAATTCAAACAGAAACAGCGTGAGGAGCAGGCAGAGCCTGACGGTACTG
AAGATGCAGATAAGGCGGCATATCTAATGGGGCTGAACTCTGCTGACCTG
CTCAAAGGACTCTGCCATCCAAGGGTCAAGGTAGGCAATGAGTATGTCANNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNA

CAAGGAGGCCTTAAAGTGGCAGGAGTGTGGCAAACACTATAACACAAAAC
TGGGCTACAAGCGCCACATGGCTATGCACTCAGCCACAGCCGGTGATCTT
ACCTGTAAGGTGTGCTTGCAAAGCTACGAGAGCACGCCTGCACTCTTGGA
GCACCTCAAGAGCCACTCAGGCAAGTCTTCAGGTGGAGCCAAGGAGAAGA
AACACCCCTGTGACCACTGTGATCGTCGCTTTTACACACGAAAGGATGTT
CGCCGACACATGGTGGTACACACGGGACGCAAAGACTTCCTGTGCCAGTA
CTGTGCCCAACGTTTTGGGCGGAAGGACCATCTGACGCGACACGTCAAGA
AGAGTCACTCGCAGGAGCTGCTGAAGATCAAGACGGAACCTCCGGATATG
TTGGGTTTACTTGGGTCTGGTTCTCCACCATGTGCTGTGAAAGAAGAAAT
AAGCCCTATGATGTGTAGCATGGGACCTACCAAGGACTCGATGATGGCAA
AGCCTTTCACGGTGCCACCCCTTTTCCCATGGGCATGTACAACCCTCAT
CAT-----CTCCAGGCCATGTCCAATTCGGGTGTGGGCCAC-----
-CATCACTCATTGGTTCCCTGGGACTTTATCCACAGCTATGGGCATGNNNNNNNNNNNNNNNNNTACC
TGATTTACGCCTCCTTTTCATTCATGGGATGTTTACAAATCAGTGTGGC

TCCAACATAATTAATCTGCTAGCTAGTAATTCACCCAGTGTGTGTCGTTTCGC
CCTGACTCAACAGAAATACTTCAGCAACTACAGTCCTGTGATTGGGTTTT
ACATCTACGAACCCATCGAGTACTGGAACCTCCACAGTGCAGGAGCACCTC
AAGACATTGGGCCAGGGCTTTAATAAGATTTTCATGGATCGATAATTACTT
CCACTATCTGAGGGTCGTTAATGTCAGCGCATCAACCAAAGTGATTTCA
TTAACATCCTCAAGACTTCTTTTCTGAGGAGCCAGAATATCAACACTTT
GTGGACGACATCATTTTCTCTAAAA---ATGGAG-----ATGA
GTACGACATCATCGCGTCCAAGATGTACTTGGTGGCCAGGACGACCGAGA
AGACCAGGGAGGAGGTCGTGGAGTTGCTGGAGAGACTTCGACCTCTCTCC
CTTATAAACAGCATCAAGTTCATCGTTTTCAACCAACGTTTCGTGTTTCAT
GGACCGCTACAGTTCCCTCCATCATCTCCCCATCTGACGTGGGGTTTCA
GCGTGCTCACTATTCTCATCCTCACCTTCTTCTGGTCATTAACCCACTG
GGAACTTCTGGTTGATCTTGACCGTCACCTCGGTGGAAGTGGGCGTCTT
GGGTCTCANN
NGCATCATTGACGGCCTCTCTGGTTGGACAACCTTTGTTGAGG
ATGTCCCTGCAGAGACCATCGCCAGACGATTCCGCTATGATGTGGCACTG
GTTTCTGCATTAAGAACCTGGAGGAGGACATAATGGAAGGACTAAGAGA
GAGGGGGCTGGATGACAGCATGTGCACCTCGGGCTTACTGTGGTGGTGA
AAGAATCATGTGATGGTATGGGAGATGTCAGTGAGAAGCATGGAAGTGGT
CCAGCGGTTCTGAGAAGGCAGTGAGGTTTTCTTCACAATCATGTCCAT
CTCCATCCGAGTTGAGGGTGAGGAC-----
-----GATGGCATCACCATCTTCCAAGAACAAAAGCCAAACTCTGAGCTC
TCTTGTAGACCTTTGTGCCTCATGTTTGTGGATGAGTCCGACCACGAGAC
CCTGACAGCTATCTTGGGACCTGTGGTAGCAGAGCGAAAAGCCATGATGG
AAAGTCGGCTCATCATATCTGTTGGTGGTCTGCTACGCTCATTTAGGTTT
TTCTTCCGGGGCACAGGCTATGATGAGAAGATGGTTCGTGAAATGGAAGG
GCTAGAAGCATCAGGCTCCACTTATATATGCACACTCTGCGACTCAACCC
GAGCTGAAGCCTCTCAAACATGGTCTTACATTCCATCACACGTAGCCAC
GATGAAAATCTTGAACGCTATGAGATCTGGAGGACAAATCCTTCTCAGA
GTCCGCAGATGAACTCCGTGACCGGGTCAAAGGTGTTTCCGCCAAGCCTT
TCATGGAGACCCAGCCTACTCTGGATGCCCTGCACTGCGACATAGGCAAT
GCGACTGAATTCTACAAGATCTTTCAGGATGAGATCGGCGAAGTCTACCA
GAGGAG---CAAT---CCGAGTCGAGAGGAACGCCGTCGTTGGCGGTCAA
CCCTGGACAAGCAGCTACGAACATAAATGAACTGAAGCCTGTGATGAGG
ATGAATGGAACATATGCCCCTCGGCTGATGACACGTGAGGCTGTGGAGGT
GGTCTGTGAGCTGGTCCCTTCCGAGGAACGACGTGAGGCACTACGGAGAC
TGATGGAACCTTACCTCCAGATGAAGCCGGTGTGGCGTTCACCTGTCCC
TCCCAGACTGCCCTGACCAGCTCTGCCGATATAGCTACAACCTCTCAGCA
ATTTGCTGACATCCTTTCACCACATTTAAGTACCGCTATGATGGAAAAA
TTACCAACTACCTCCACAAGACTCTGGCTCATGTTCTGAGATTGTTGAG
AGAGACGGGTCTATTGGAGCATGGGCCAGTGAAGGGAATGAGTCTGGAAA
CAAGTCGTACTCCATTGAAATGGGCCCCGGGGCCGAGTGGAAAGGAGA
GCCCTCAACCCTTCTCCTGTTCCATTGAAGACCCACCAAACAGACGAAG
TTCAAAGGTATTAAGACGTACATCTCGTACCGCGTGACCCCAGCCATAC
TAGCAGGCCAGTTTACCGCCGCTACAAGCACTTTGACTGGCTGTACAACA
GACTACTGCACAAATTCACAGTGATTTCTGTGCCGCACCTCCCCGAGAAA
CAGGCCACTGGACGGTTCGAGGAAGACTTCATCGAGAAGAGGAAGAGGAG
GCTCATTTTATGGATGGATCACATGACCAGCCACCTGTGCTGTCCAGT
ATGAGGGTTTGAACACTTCCTCATGTGCGGAGACGACAAACAGTGGAAA
CTCGGGAAGAGACGGGCAGAGAAGGACGAGATGGTTGGGGCTCATTTTCAT
GCTCACCTTCCAGATTTCCAACGAGCACCAGGACCTTCAGGACGTGGAGG
AGCGTATTGACTCCTTCAAGGCGTTCGCCAAAAAGATGGACGACAGTGTG
ATGCAGTTGACGCACGTGCGCTCGGAACTAGTCCGCAAACATCTTGGAGG

ATTCCGGAGGGAGTTCCAGAGGCTGGGGAACGGCTTCCAGTCCATCAGCC
AGTCATTCCTGCTGGACCCTCCTTACAGCTCGGACGCCCTGAGCAACGCC
ATCTCGCAC-----

-----GCCA
AGTCCCGCTTTACCCCTGGCGTCCGAGGCGCTCCTGGCACGGACC---GC
AGCGTCCCACTTAGTAACAGCTTGCTCTCCCCGCAACAAACCGAGGAGAC
CACGGTGG---CCTCCCCGAGCGATGGTTTGTCACCC---CTGCCAACA
ATCGACTGGACTTTGCCGCTCGGCATACGATGCTGCCGCGGCTGCTGAT
TTCGCCGTAACGCGGCCACCCTTCTGTGCTACGCAGCTGCCGGAGTTAA
AGCGC-----TGCCCCGCCCCGGGCGGGATGCTCCAACAGACCTCTGG
GGTATTACGGCGAGCCGCCG---GGTGG---GGCACGCGCACGCCACCG
CAATATTGC-----AGCAAGTCCAGCTCCGTCTCTCGTGCTGGCC
GTCCAACTCCGTAGGAGCAGAACGACCT---CGTCCAGTTACCTGGTCC
CTGGCCTCGAGGA---CGGA---GACGC---CATCGCGCCCGAGAGGTCA
CCG---CT---AGGCGGAGCGGATGAG---TCCAAACCCAAAGACCT---
---GTCTGA---ATCCAGCTGGATAGAA---ACCCGTCCTCAATTAAGT
CGATCGATTGAGCGATTCTGGGATTTTTG---AGCAAGCCAAGCGGAGG
AGGATTTGCGCCATCTGCCACGCCG-----GTTTCAGAGACATCGTC
TCCATTTAAAATCTGAA-----NNNNNNNNGTTACAGACAGAGAAGTGGCTTTGG
GTATCAATCCGTTGCGCCGACGGCATGGGCGCTTTTAAAATCAACCACAGC
TCCCACGATCTTGCTCTGG---GCAAACAGCGTTTCCTCGCAAGCG--
-CCCGGCTACGCCGCCCGCTGCCCTGGGA---CACCATCA-----TC
ACCCCACTCATGTGAGCTCG---TACTCCACCGCCGCTTCAACTCCACT
CGGGACTTTCTGTTTCGCAATCGGGGCTTCGGAGACGCCACGAG-----
-----CGCGCAGCACAGCCTCTTCGCCTCCGC---CGCTGGAAGTTT--
-C-----GCCGGCCACATGGACACTCTGACGCCGCTGGGCACCTGCTC
TTCCCGGACTGCACGAG---CAAGCGGCCACGCACGCGTCCTCCAACGT
GGTGAACAGTCAGATGCGCCTGGGCTTTTCCGGGGACATGTACGGCAGGG
CCGAGCAATACGGTCACGTCGCGAGTCCGAGGT---CCGAGCACTACGCC
TCGACTCAGTTGCACGGCTACGGCCCCATGAACATGAACATGGCTGCT--
-CATCACGGGGCAGGGGCTTCTTTTCGGTACATGCGACAGCCCATAAAGC
AAGAGCTCATCTGCAAATGGGTGGAACCCGAGCAGTTGACGAATCCGAAA
AAGTCTGCAACAAAACTTTCAGCACCATGCACGAGCTTGTGACCCACCT
GACGGTGGAGCACGTTGGGGGACCGGAGCAGTCGAATCACATTTGCTTTT
GGGAAGAGTGTTCCCGGGAAGGGAAACCGTTTAAAGCAAAGTATAAACTC

GTGAATCATATCCGAGTGCACACCCGGAGAGAAACCGTTTCCGTGTCCGTT
CCCCGGCTGTGGAAAA

>*Oryzias latipes*

AGCCTGCTAATTCGGGCTGAATTAAGTCAGCCCCGGTCTCTATTAGGTGA
CGACCAAATCTATAATGTAATTGTAACCGCGCATGCCTTCGTAATAATTT
TCTTTATAGTAATACCAATCATGATTGGGGGCTTTGGCAACTGATTAATT
CCTCTAATGATCGGGGCCCTGATATGGCCTTTCTCGAATAAAACAACAT
GAGCTTCTGACTACTTCCCCCTCCTTCCTTCTATTGTTAGCTTCTCTG
GCGTGGAGGCCGGTGGGGGACAGGATGGACCGGTACCCGCCTCTATCA
GGCAACCTAGCGCATGCGGGAGCATCCGTGGATTTAACCATCTTTTCCCT
CCATCTGGCAGGTATCTCCTCTATCTTAGGGGCTATTAATTTTATTACAA
CAATTATTAATAAAAACCCCGGCCATCTCTCAGTATCAGACCCCTTTA
TTCGTGTGAGCTGTACTAATTACCGCAGTATTACTTCTACTCTCCCTCCC
TGTGCTCGCTGCAGGTATCACTATGCTCCTAACGGACCGAAACCTAAATA
CAACATTCCTTTGACCCTGCAGGGGGAGGGGACCCTATTCTCTACCAGCAC
CTGTTCTGATTTTTTGGTCACCCCGAAGTTTATATTTTAATTCTCCCCGG
CTTCGGAATAATTTACATATTGTGGCCTATTATTCGGGTAAAAAGAAC
CTTTTCGGGTACATGGGTATGGTCTGAGCCATAATGGCAATTGGGCTTCTA
GGGTTTATTGTATGAGCCACCACATATTCACCGTAGGGATAGATGTGGA
TACTCGGG---TTCTTGAGAGAAACCTTCATCCATCCAACCTGCCTTGG
CATGCTGCTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGTCTTAGCAACTTCCCTGCTATTTGCAAGACAGAGGAT
TTCTCCAACCTGCCAAAGACATGGTGGTGCAGCTGTTGTCCCATGAGGA
ACTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGA
TCAACTACGATCTGGAGAGGAGGCACCTGCCATCTTCCAGAACTCCTCAGA
ACAGTCCGCCTTGCTCTGCTTCCCTGCCATCTTTTTAATGGAGAATGTGTC
AACAGAGGAGCTGATCAACGCTCAGGCAAAGAGTAAGGAACCTGGTAGATG
AGGCTATACGCTGTAAGCTTAAGATCCTGCAGAATGACGGCGTTGTCAAC
AGCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTCTTCTGGG
TGGGCAGACCTTCATGTGTGACAAGTTGTACTTGGTTGATCAGAAAGCCA
AAGAGATCATTCCCAAAGCTGACATTCCCAGTCCTAGGAAAGAATTGAGT
GCATGTGCCATTGGTTGTAAAGTCTACATTACAGGTGGAA--GGGATC-
AGAGAACGGAGTGTCCAAGATGTCTGGGTCTATGATACTGTCCACGAGG
AATGGTCAAAGGCTGCCCCATGCTAATCGCCCCGGTTGGGACATGGGTCC
TCTGAGCTGAAACACTGTCTCTATGTCTGTTGGAGGACACACTGCAGCTAC
TGTTGCTGGCCGGCTTCTCCATCTTGATCAATACGTCGTCATCTTTAGC
CGTTCAACGACTAGGTTAATCCTGAATGAAGCTGAGGTGGTTCATGGCCAT
AGTCCAGGAGTTACAGATGAGGGTGGTCCAGTTTCTCTAGAGGAACAAT
CTTTTCCCAGCATCGTCCAGGTGATCAGCGGTGCCCTCCATGCTTGTGAGT
ATGCATGGAGCTCAGCTCATTACCTCACTGTTTCCCTCCCAGAGGTGCTGT
TGTTGTTGAATTGTTCCATTTGCTGTCAACCCTGAGCATTACACCCCAT
ATAAAACCCTGGCGTCCCTTCCCGGCATGGACCTTCACTACATTTCCCTGG
AGGAATACTAAAGAAGAAAACACTGTCACCTATCCAGAAAGACCCCTGGGA
GCAAGGAGGAATAGTTCACCTGGAAAAAGAGGATCAGAGGCGAATTTTGA
AAAGCAAGGAAGTCCCGCGACACTTGTGCTGCCGGAACCCAGAGTGGCTC
TTCCGCATCTACCAAGACACTTTGGTGGACATACTTCTTTTCATCGAGCT
TCTCAA---AGAGGCTTCGAAG---ACCAAGCTAAGCCTGAGAAA---AG
ACAAAGCGTCCAGTACGGTCCACCCCTGGTCCGCTCAGAGAAGCCAGTGT
CAAACCTCAGTTCAAACGACCAAGGAAGCCAAGCTCTCCGTCTCTGGCA
GATCCCATGGAATCTAAAATACCTGAAGGTTAGAGACGTGAAGTACGAAG
TGTGGATCCAGAAAAAGATAGCAGCAAGGGTACATTGGAGGATCAAATC
ATTCAGGCAAACCCCTGCACTTGAGGCCTTTGGGAATGCCAAAACGGCGAG
AAATGACAACCTTCTCGTTTTGGTAAATTCATCCGTATTCATTTTGGCA

CAAGTGGCAAACCTGTCATCTGCCGACATTGAAACATACCTGCTGGAGAAG
TCCCGTGTACCTTTTCAAGCTCAAGGCTGAAAGGAATTATCACATCTTCTA
CCAGATCCTGTCCAATCAAAGCCAGAGCTGCTGGACCTGCTGCTCATAA
CAAACAACCCATACGACTATTCTACATCTCCCAAGGAGAGGTAACGTGT
GCCTCCATCAATGACTCGGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTCTTGGCTTCACTCAAGAGGAGAAAATGGGTGTCTACAAGTTGACCG
GTGCCATAATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGGGAG
GAGCAGGCTGAACCTGACGGCACAGAGGCTGCTGATAAATCAGCTTACCT
AATGGGGCTGAACTCTGCAGACCTCATTAAGGACTCTGTCATCCCAGAG
TTAAGGTTGAAATGAATACGTACCAAAGGCCAAGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGACGAGTGCAGGAAAGCACTA
CAACACCAAGCTGGGATACAAACGCCACGTGGCCATGCACTCTGCAACTG
CGGGGGACCTGACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACCCCC
GTTCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCGGGTGGTGC
CAAGGAGAAGAAGCATCCATGTGACCACTGTGACAGACGTTTTCTACACGC
GGAAGGACGTGCGGCGTACATGGTGGTCCACACGGGCGGAAAGGACTTC
CTGTGCCAGTACTGTGCCAACGCTTCGGCAGGAAGGACCATCTGACGCG
CCACGTGAAGAAGAGCCACTCTCAGGAGCTGCTGAAGATTCAAAACAGAAC
CTCCGGATATGCTGGGCCTCCTGGCGTCGGGGTCTCCGCCGTGCTCTGTG
AAGGAGGAGCTCAGTCCCATGATGTGTGGCATGGCGCCCAACAAAGACCC
CATGATGGGCAAGTCGTTCCCGAGCGGGGCATCTTTTCCGATGAGCATGT
ACAACCCCCACCAT-----TTGCAGGCCATGTCTAAACCCGGGGTGGGT
CATCCA-----CACCCGTCCCTGATGCCCAACTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTTCCATGGAGTATCTCATCTATGCCTCTTTCTCCTTCA
TGGGATGTTTACAAATCAGTGTGATCGAACATTTGTGAACCTGCTGGCT
AGTAACTACCAAGCGTTTTCTACGCTTTAACCACAGAAATACTTCAG
TAACTATAGTCTGTATTATTGGATTCTACATTTACGAACCCATAGAGTACT
GGAACTCCACTGTGCAGGAGCACCTAAAGACTTTGAGCCATGGATTCAAC
AAGATCTCTTGGATGGACAACCTTTTTCCACTACCTTCGGGTGGTGAACGT
GAGCGCATCAACCAAGGGCGACTTTATCTCCATCCTGAAGGGCTCTTTCT
TGCGCAGCCCGGAGTACCAGCATTTACGGAGGACATAATATTCTCTAGG
A---ACCGCAGACTA-----ACGAATACGACATTTATGCCTCACGAAT
GTACTTGGTAGCACGACGACTGAAAAGAAGCGAGAGGAGGTGGTGGAGC
TTTTGGAGAAGCTCCGCCATTGATGCTAATCAACAGCATCAAGTTCATT
GCCTTCAACCCACATTTGTTTTTATGGACCGCTACAGCTCATCCGTCAT
CTCCCTATCTTGACCTCAGGCTTCAGTGTACTTACCATTCTAATACTCA
CATCTTCCCTGGTTATCAATCCCTTGGAAATTTCTGGCTCATTCTCACT
GTTACTTCTGTTGAGCTGGGTGTCTTGGGATTGATGGGCTTTACCTTTT
TGAATGGCAGCCAGCCCTCAAAAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGACTCTCCGGGTGGACGTCATCTGTTGATGATATCCCGGCT
GAGACCATCACTCGGCGCTTTTCGCTATGATGTGGCACTGGTGGCAGCATT
GAAGGATCTGGAGGAGGACATCATGGATGGGCTGAGAGAGAGTGGGATGG
AAGACAGCACTTGACCTCAGGCTCAGCGTTTTGATCAAAGAATGCTGT
GATGGCATGGGTGATGTCAGTGAGAAACACGGTGGGGGACCAGCTGTTCC
TGAGAAAGCTGTCCGCTTCTCTTTTACCATCATGCTATATCTGTCCAAG
TAGAAGACGGAGAC-----AAAGAA
GTTACCATTTTACAGAGCCAAAGCCAAACTCAGAGCTGTCCTGCAAGCC
CCTTTGCTTAATGTTTGTGGATGAGTCAGACCACGAGACTCTCACAGCCA
TCCTGGGGCCGATAGTGGCAGAGAGAGATTCAATGAAACACAGCAGGCTC
ATATTGTCCATTGGAGGCCTGCAACGCTCCTTTTCGCTTCCACTTTAGGGG
CACGGGTTACGATGAGAAAATGGTGCCTGAAATGGAGGGCCTGGAGGCCT
CGGGGTCAACTTATGTTTGCACACTGTGTGACTCCAGCCGAGCAGAGGCT
GCTCAGAACATGGTCTTACACTCCGTCACCCGCAGTCACGACGAGAATCT

TGAACGCTATGAAATATGGAGAACNAACCCCTATTCTGATTCTGTGGATGA
GCTGCGGGACAGAGTCAAAGGCGTGTCTGCCAAGCCGTTCTTGGAGACGC
AGCCCACGCTGGACGCATTACACTGCGACATCGGCAATGCCACAGAATTT
TACAAAATCTTCCAGGATGAAATCGGAGAAGTGTACAAAAGGT---CAA
C---CCCAGTCGGGAGGAACGGCGCAGTTGGAGAGCAGCCTTAGATAAAC
AGCTGAGGAAAAACATGAAGCTCAAGCCAATAATGAGGATGAATGGAAAT
TACGCCCGCAAGCTAATGACCATGGAGGCTGTGGAGGTGGTGTGTGAGCT
GGTGCCATCCGAGGAGAGGAGAGAGGCTCTTAGGGAGCTGATGAAGCTCT
ACCTTCAGATGAAGCCAGTGTGGCGGGCCACATGCCCAGCCAAGGAGTGC
CCTGACCAGCTGTGTGCTACAGTTTCAACTCCCAGCGTTTTGCTGACCT
CCTCTCCTTACCTTTAAATACAGGTACAATGGAAAAGATAACAAAATTACC
TGCACAAGACCCTGGCTCATGTGCTGAAATCATAGAGAGAGATGGATCC
ATAGGGGCTGGGCCAGTGAGGGAAAACGAGTCAGCAAACAAATCTTACAC
TATTGAAATGGGTCCTTTGGGACCCAAGTGGAAGGAAAACCCCAACCCTT
TCATCTGCTCAATTGAAGATCCCACCAAACAGACAAAGTTCAAGGGCATC
AAGACCTACATATCATACAGGGTCACACCAAGTCACACCGGGCGTCCCGT
CTACCGGGCGCTACAAGCACTTCGACTGGTTGTACAACCGACTGCTAAACA
AGTTCACTGTGATCTCAGTCCCTCATTTGCCTGAGAAGCAAGCAACGGGG
CGCTTTGAAGAGGACTTCATCGAGAAGCGCAAGAGGCGCCTGATACTGTG
GATGAACCACATGACCAGTCACCCGTTCTCTCCCAGTACGAAGGCTTTG
AGCACTTCCTCATGTGTGCCGACGATAAACAGTGGAACCTGGGCAAGAGG
CGGGCTGAGAAGGATGAAATGGTGGGCGCCATTTTCATGCTGACTTTCA
GATCCCAATGAGCACCAGGACCTTCAGGATGTGGAGGAGCGGGTTGACA
ACTTTAAGACCTTCGCCAAAAAAATGGATGACAGCGTGATGCAGCTCACA
AATGTGGCCTCCGAGCTGGTGAGAAAACATCTGGGTGGATTCCGGAAGGA
GTTCCAGCGACTGGGGAACGCCTTTCAGTCCATCAGCCAGGCGTTTATGC
TGGACCCCCCATCGCTCGGACGGCCTCAACAATGCCATCTCCCACCCT
CTCGCCACGTTCCCTCAAACCTGACCTCTCTGGGTTTCATCATCGGCGTCGG
CGTGGTAGGAAACCTACTGATCTCCATCCTGCTGGTCAAAGACAAGAGCT
TGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCCGACATC
CTGCGCTCGGCTATCTGCTTCCCGTTCGTCTTTACCTCGGTGAAAAATGG
ATCGGCGTGGACGTACGGCACGCTGACCTGCAAGGTGATCGCTTTTCTGG
GCGTGTCTCCTGTTTCCACACCGCCTTCATGCTGTTCTGCGTCAGCGTC
ACCCGCTACCTGGCCATCGCGCATCACCGCTTCTACACAAAAGGCTCAC
CTTCTGGACGTGCTTGGCTGTGATCTGCATGGTGTGGACGCTGTGCGTGG
CGATGGCATTCCC GCCGGTCTTGGACGTGGGGACGTA CTCTTCATCCGG
GAGGAGGACCAGTGCACGTTTTCAGCACCGCTCCTTCCGGGCCAACGATTC
TTTGGGCTTCATGCTCTTGGCTGGCGCTCATCCTCCTAGCCACACAGCTGG
TTTACCTCAAACCTCATCTTCTTCGTCCACGACCGGCGAAAGATGAAGCCC
GTCCAGTTTGTGCCCGCCGTGAGCCAGAACTGGACCTTCCACGGTCCGGG
CGCTAGTGGGCAGGCAGCGGCCAACTGGCTGGCTGGATTCCGGTCGGGGCC
CTACCCCGCCAACCTTGCTGGGCATTCGGCAGAACAGCAACGCAGCGGGC
CGCCGGCGTCTACTCGTACTGGATGAGTTCAAACAGAGAAGAGGATTAG
TAGGATGTTCTACATCATGACCTTTTTTTTTCTTGGCGCTTTGGGGGCCCT
ACTTGGTGGCCTGCTACTGGCGGGTGTGTTGCCAGGGGGCCCGTGGTTCCC
GGGGGTTACCTAACAGCAGCCGTGTGGATGAGCTTTGCCCAGGCGGGGGT
CAACCTTTTCATCTGCATCTTCTCCAATAGGGAGGCCAAATCTCGCTTTC
ACCCTGGCGTGGGGACTGCTCCTGGCACGGAGC---GCAACGTTCCACTC
GGCAACAGCTTGTGTCTCCTCAGCAAGCCGAGGAGCCCACTGTTGCCAC
CCCCCGCAGCGATGGTTTGTACCC---CTGCCAACACCGACTGGACT
TTGCAGCCTCGGCATACGACGCCGCT-----GATTTCCGGGTAAC
GCGGCCACCTTGTGTCTCCTCAGCAAGCCGAGGAGCCCACTGTTGCCAC
CCCCCTGCCGACTGCGAGCTGCTCCAACCGGCCCTCTTGGCTATTACGCAG

ACCCGTCTG---GCTGG---GGAGGACGCACGCCGCCGCACTACTGCGGC
GTCAACAGCAAAGCCAGCTCGGTCTTTTCCTGCTGGCCCCGGAACACCAT
CGGGGGCCGCTCAGGCA---CC---AGCTACCTGC-----AGGAGG
A---GGGG---GACTC---CATCAGCACGGAGAGGTCACCG---AT---C
GGTGGCGCGGAGGAG---AGCAAAGCCAAAGACATCAC---ATCTGA---
GTCTAGCTGGATAGAG---ACGCCCTCCTCCATCAAATCCATCGATTCCA
GCGATTCTGGGATCTTTG---AACAGGCCAAACGGAGGAGAATCTCCCC
ACTGCCACGCCG-----GTTTCAGAGACTGTGTCCCCGTTAAAGTC
TGAGCATCACTCAACAGGCGAAGTCACGGAGAGAGAAGTGGCGCTGGGGA
TAAACCCATTTCGCGGATGGGATGGGCGCCTTCAAAAATAAACACAGCTCC
CACGACATCGGCTCCGG---ACAGACTGCGTTTTCTCCAGGCG---CC
CGGCTAC---GCGGCAGCCGCTTTGGGA---CACCATCA-----CCATC
CGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGG
GACTTTCTTTTTAGAAAATCGGGGTTTCGGGGATGCCACCG-----
---AGCGCAGCACAGCCTGTTTGCCTC-----CGGAAGTTT---C-
-----GCAGGGCCACATGGACACTCCGATGCAGCGGGGCACCTGCTCTTC
CCCCGGCTGCACGAG---CAAGCGGCGAGCCACGCGTCTTCCAACGTGGT
CAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGGCGGGCTG
ATCAGTACGGCCACGTTACGAGCCGAGAT---CCGACCACTATGCTTCG
ACTCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCA---CA
CCACGGAGCAGGGCCCTTCTTCCGATACATGAGGCAGCCGATCAAACAAG
AGCTCATCTGTAAGTGGATCGAACCGGAGCAGCTGACAAACCCCAAAAAG
TCTTGCAACAAAACCTTTCAGCACGATGCACGAGCTCGTCACCCATCTGAC
CGTGGAACATGTGGGGGGACCGGAGCAGACGAACCACGTTTGCTACTGGG
AGGACTGCTCCAGAGAAGGGAAGCCGTTCAAAGCCAAATACAAACTTGTA
AATCACATCCGAGTACACACCGGAGAAAAGCCCTTCCGTGTCCGTTC
CGGCTGTGGCAA

>Osmerus mordax

AGCCTCCTTATCCGAGCCGAGCTAAGCCAACCTGGTGCCCTCCTGGGGGA
CGACCAGATTTATAATGTTATCGTCACTGCGCACGCTTTTGTATAATCT
TTTTTATAGTAATACCAATCATGATTGGAGGTTTCGGTAACTGGCTCATC
CCCCTTATGATTGGGGCCCCAGACATGGCCTTCCCCGTATAAACAACAT
AAGTTCTGACTTTTACCTCCCTCCTTTCTACTCCTTAGCTTCTTCTG
GAGTTGAAGCAGGGGCTGGGACCGGCTGAACAGTCTATCCCCACTTGCT
GGTAATCTAGCCCATGCTGGAGCTTCGGTAGATCTAACAATTTTTTCTCT
TCACCTTGCGGGAATCTCCTCTATCTAGGGGCAATCAATTTTATTACAA
CTATTATTAATATGAAGCCTCCAGCCATCTCCCAGTACCAGACCCCTTA
TTCGTCTGAGCCGTTCTGATCACGGCCGTCCTTCTCTCCTTTCCCTCCC
AGTACTAGCTGCTGGGATTACCATGCTTCTGACAGACCGAAACCTGAACA
CTACTTTCNN
NN
NN
NN
NNNTTCTGGAGAGGAACCTG
CACCCGTCCAACCTGCCTGGGCATG
CTGCTGCTCTCCGACGCCACCAGTGCACCAAGCTGTCCGAGCTGTCCTG
GGGCATGTGCCTGAGCAACTTCCCAGGCAATTTGTAAGACGGAGGACTTCC
TCCAGCTCCCAAGGACATGGTGGTCCAGCTGCTGTCCCACGAGGAGCTG
GAGACGGAGGACGAGAGGCTGGTGTACGAGGCGGCCCTCAACTGGGTGAA
CTACGACCTGGAGAGGCGCCACTGCGGCCTGCCGAGCTGCTGCGCACGG
TCCGCTGGCGCTGCTGCCCGCCATCTTCTCATGGAGAACGCTCCACG
GAGGAGCTGATCAACGCCAGGTGAAGAGCAAGGAGCTGGTGGACGAGGC
CATCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAACAGCC
CCTGCGCCCCGCCCGCAAGACGAGCCACGCCCTCTTCTGTTGGGCGGA

CAGACCTTCATGTGCGACAAGCTCTACCTGGTGGACCAGAAGGCCAAGGA
GATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGTGCCT
GTGCCATCGGCTGCAAGGTCTACGTCACGGGGGGGC--GGGGCTC-GGAG
AACGGCGTGTCCAAAGATGTGTGGGTGTACGACACCGTGCAGGAGGAGTG
GTCCAAGGCGGCACCGATGCTCATCGCCCGGTTTGGCCACGGCTCAGCCG
AGCTGAAACACTGCCCTCTACGTGGTGGGAGGGCATAACCGCCGCCACGGGC
TGCTTGCCGGCCTCGCCCTCCGGACCAGTACATTGTGGTGTTCAGTCGTT
CCCAAACCAGGCTGATCCTCAACGAGGCCGAGCTGATCCTGGCGTTGGCG
CAGGAGTTCAGATGAGGGTGGTGACGGTCTCCATGGAGGACCAGACCTA
CTCCAGCATCGTGCAGTTGATCAGCGGAGCCTCCATGCTCGTCAGCATGC
ACGGAGCTCAGCTCGTCACCTCGCTCTTCCCTCCCCAGAGGGGGCGGCTGTG
GTTGAGCTCTTCCCCACGCGGTGACGGTCTCCATGGAGGACCAGACCTA
GACCTTGGCCACCTTGCCAGGCATGGACCTCCAGTATGTCGCCTGGAGGA
ACACCATGGAGGAGAACTCCGTGGCCACCCAGATAGACCCTGGGATCAG
GGGGGCATCGCTCACCTGGACAAGGATGAGCAGGAGCGCATCCTGGCCAG
CAGAGAGGTGCCCAGACACCTTTGCTGCCGAAACCCCGAGTGGCTGTTCC
GCATCTACCAGGACACCAGGTTGGACATCCCCTCTCTGCTGGACGTCCTC
AG---GGAGAGCCTGAAG---ACCAGGCCCAACCTCAAGAA---GACCCG
GCCTGCCAGCACTGTTTCATCCAGGCAGGGTGGAGGGAGCCTCAGTGCCAGA
CCTCAGTCCAGGCTACCAACGAAGCCAAGCTCACAGTATCCTGGCAGATC
CCTTGGAACCTCAAGTACTTGAAGGTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGAGAGATCCCA
GCAAGGGAACC

TTGGAGGATCAAATCATCCAGGCTAACCCCTGCCTTGGAGGCTTTTGGTAA
TGCCAAAACCTTTGAGRAATGACAACCTCGTCACGCTTCGAAAATTCATCC
GGATTCACCTTCGGAACCAGTGGCAAGCTGTCCTCAGCTGACATAGAGACT
TATCTTCTGAAAAGTCACGTGTCACCTTCCAACCTCAAGTCAGAAAGGAA
TTACCATATCTTCTTTCAGATCTTGTCCAATAAAAAGCCAGAGCTGTTGG
ACATGCTTCTGATTACCAACAACCCATATGACTACTCGTACATCTCCAA
GGAGAGGTAACAGTAGCATCTATCAATGATGCTGATGAATTGATGGCCAC
TGACAGTGCCTTTGATATCCTTGGCTTTACTCAAGAGGAGAAAATGGGGG
TCTACAAGTTGACAGGAGCTATCATGCATTATGGCAACATGAAGTTCAAG
CAAAAGCAGCGTGAGGAGCAGGCAGAGCCTGACGGCACTGAGGCGGCTGA
CAAGTCAGCTTACCTAATGGGGCTGAACTCTGCAGATCTTGTGAAAGGAC
TCTGCCATCCCAGGGTAAAGGTTGGCAATGAGTATGTCACCAAAGGGCAG
GGTGTAGATCAAGTCTACTATCCAAACAAGAGGCCTTCCGCTGCCAGGA
CTGTGGGAAGCACTACAACACCAAGCTGGGCTACAAACGCCATGTAGCCA
TGCACTCGGCCACAGCAGGGGACCTCACCTGCAAGGTGTGCCTGCAGAGC
TACGAGAGCACGCCGGCGCTGCTGGAGCACCTGAAGAGCCATTTCGGGGAA
GTCGTCCGGCGGGCCCAAGGAGAAGAAGCACCCCTGCGACCACTGCGACC
GCCGCTTCTACACGCGCAAGGACGTCCGCCGCCACATGGTGGTGCACACG
GGCCGCAAGGACTTCTGTGCCAGTACTGCGCCAGCGCTTTGGCAGGAA
GGACCACCTCACGAGACACGTGAAGAAGAGCCACTCCAGGAGCTGCTGA
AGATCAAGACGGAGCCGCCAGACCTGCTGGGGCTGCTGGGGTCTGGACC-
-----CATCAAGGAGGAGCTCAGCCCCATGATGTGCAGCATGAG
CTCCACCAAGGACCCCTCATGGCCAAGCCCTTCCCCGGTGGGACGGCCT
TCCCCATGGGCATGTACAACCCCCACCAC-----CTCCAGCCCTGCCC
AGCCCTGGAGGGGGGCAC-----CACCCCTCCCTGATGCCAGCTC
CCTGTCTGCCGCTATGGGCATGGGCTGCCACATGGAC-----

-----GC
TTTGGTGTCTGCCCTGAAGGACCTGGAGGAGGACATCGTGGAGGGCTTGA
GGGAGCACGGCCTGGAAGACAGTTCTGCACCTCCGGCTTACCGTGACC
ATCAAGGAGTCTGTGATGGCATGGGGGACGTCAGTGAGAAGCACGGAGG
GGGGCCGGCCATTCTGAAAAGGCCGTCCGCTTCTCCTTACCGTCATGT
CCGTGTCCGTCTGGCCGAGGGGAGGAG-----
-----GAAGCGGTCACCGTCTTTCAGAGAGCAGAAGCCCAACTCGGA
GATGTCCTGYAAACCTCTCTGCCTGATGTTTGTGGACGAGTCGGACCACG
AGACCTTGACGGCCATCTTGGGGCCTGTGGTGGCCGAGAGGAACGCCATG
AAGAACAGCCGCTCATCCTGGCCATGGGCGGCCCTCCCTCGCTCCTTCCG
CTTCCACTTCAGGGGCACGGGCTATGATGAGAAGATGGTGCCTGAGATGG
AGGGCCTGGAGGCCTCAGGCTCCACCTACGTCTGCACCCTCTGCGACGCC
ACCAGAGCTGAGGCCCTCCAAAACATGGTGTCTCCACTCAGTCACCCGCAG
CCACGACGAGAACCTGGACCCTACGAGATGTGGAGGAGAAACCCCTACT
CTGAATCGGCGGACGAGCTGCGAGACCGGGTGAAGGGGTCTCCGCCAAG
CCCTTCATGGAGACCCAGCCACATTTGGACGCGCTGCACTGTGACATCGG
CAACGCCACCGAGTTCTACAAGATCTTCCAGGACGAGATCGGGGAGGTGC
ATTGCAGGCC---CAAC---CCGAGCAGGGAGGAGCGTCGGAGCTGGAGG
GCGGCTCTGGACAAGCAGCTCAGGAAGAAGATGAAGCTGAAGCCCGTGAT
GAGGATGAACGGAAACTTTGCCCGGCGACTGATGACGGCGGAGGCGGTGG
AGGTGGTGTGCGAGCTGGTGCCTGCGCAGCAGCGGAGCGAAGCCCTCAGG
GAGCTGATGAACCTTACCTCCAGATGAAGCCCGTCTGGCGCGCCACGTG
CCCAGCCAAAGAGTGCCCCGACCAGCTGTGTGCTACAGCTTCAACTCCC
AGCGCTTTGCTGATCTCCTCTCTTCCACCTTCAAGTACAGGTACGACGGG
AAGATCACCAACTACCTCCACAAGACTCTGGCCACGTTCTTCAAATCAT
AGAGAGAGATGGCTCCATCGGGCCTGGGCCAGTGAGGGGAACGAGTCGG
GAAACAAATCATAACCATTGAGATGGGCCAAAAGGGCCCCAGTGAAAA
GAGAGCCCTCAGCCTTCTCCTGTCTGTGGAGGACCCTACCAAACAGAC
CAAGTTCAAAGGCATCAAGACCTATATATCTTACCGGGTCACCCCAGCC
ATACAGGGCGACCTGTCTACCGCCGGTACAAGCACTTCGATTGGCTATAC
AACCGTCTGCTGCATAAGTTACCGTCATCTCTGTGCCTCACCTGCCGGA
AAAACAGGCCACAGGACGTTTTGAGGAGGACTTCATCGAGAAGCGCAAAA
GACGGTTGGTCATCTGGATGGACCACATGACCAGTCATCCTATCCTTTCA
CAGTACGAGGGCTTGGAACACTTCTCATGTGTGCTGATGACAAGCAGTG
GAAGCTGGGAAAGCGGCGGGCGGAGAAAGATGAGATGGTGGGTGCCACT
TCATGCTGACCTTTCAGATACCCAACGAGCACCAGGACCTGCAGGATGTG
GAGGAGCGAGTGGACACCTTCAAGTCCTTTGCTAGGAAGATGGATGAAAG
CGTCATGCAGCTGACCCACGTGCGCTCAGAACTGGTTGAAAACACCTTG
GTGGCTTTCAGGAAAGAGTTTCAGCGCCTGGGAAATGCGTTCCAGTCCATC
AGCCAGGCGTTCTGCTTACCCCTCCTCAGACTCGGATGCCCTCAACAA
TGCCATTTCTCACNNNNNNNNNNNNNNNNNNNNNNCTGACCTCCTTGGGTTTCATCATCGGCGTTGGAGTG

G

TCGGCAATCTTCTGATCTCCATCCTACTGGTCAAAGACAAGAGCCTGCAC
CGAGCGCCCTACTACTTCTTGCTGGACCTGTGCGCCTCCGACATCCTGCG
TTCCGCCATCTGCTTCCCCTTCGTGTTACCTCCGTCAAGAATGGTTCCG
CCTGGACGTACGGAACCCTAACCTGNNNGNNGATCGCCTTCTGGGGTCTGTC
CTGCTTTCACACGGCCTTCATGTTGTTCTGCGTCAGCGTGACCCGCTACC
TGGCCATCGCCACCATCGCTTCTACACCAAGAGGCTGACCTTCTGGACG
TGCTTGGCCGTATCTGCATGGTGTGGACGCTGTCAGTGGCCATGGCCTT
TCCCCAGTACTGGATGTAGGGACGTACTCCTTCATCAGAGAGGAAGACC
AGTGCACCTTCCAGCACCGCTCCTTCAGAGCCAACGACTCCCTGGGCTTC
ATGCTGCTGCTCGCCCTCATCCTGCTGGCCACGCAGCTGGTCTACCTCAA
GCTCNTCTTTTTTCGTCCACGACCGCCGGAAGATGAAGCCGGTCCAGTTCGT
GCCGGCGGTGAGCCAGAAGTGGACCTTCCACGGGCGGGGGCCAGCGGCC
AGGCGGCGGCTAACTGGCTGGCGGGCTTCGGGAGAGGCCCCACCCCGCCC
ATCCTTCTGGGCATCAGGCAGAACAGCAACGCGGCGGGCCGAGGCGACT
CCTGGTGTGGACGAGTTCAGACGGAGAAGAGGATCAGCCGGATGTTTT
ACATCATGACCTTCTTCTTCTGCTGGCCTGTGGGGGCCCTATCTGGTGGCC
TGCTATTTGGANAGTGTTCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
CCCTGGCGTAGGGACT
GGTGTGGCACGGACC---GCAGCGTCCCCTTAGTAACAGCTTGCTATC
CCCGCAACAAACCGAAGAGCCCACAGTTG---CTTCCCACAGCGTTGGT
TTGTCACCC---CTGCCAACAACCGACTGGACTTTGCCGCCTCGGCATAC
GATGCTGCCGCTGCTGCAGATTTTTCGGGCAACGCGGCCACCTTGCTGTC
CTACGCAGCGGCTGGAGTGAAGGCGC-----TTCCCCTCTCCACGGCAG
GTTGCTCCAACAGACCGCTCGGGTATTACGCCGACCCGTCAG---GCTGG
---GGTGCCCGTACGCCACCACAGTACTGT-----AGCAAGTCGAG
CTCCGTTCTCTCATGCTGGCCCACGAATACTGTTACCGGCAGAACGGGCC
---CGTCCAGTTACCTGG-----CCGAGGA---GGGA---GACGC-
--AATCCCACAGAGAGGTCTCCA---AT---AGGGGCGTCAGACGAG--
-GCAAAACCAAAAGACTT-----GTCCGA---ATCCAGCTGGATAGAA-
--ACGCCGTCTTCAATAAAGTCAATTGATTCCAGTGATTCTGGAATCTTT
G---AGCAAGCAAAACGGAGAAGAATTTCTCCGCTGCCACACCA-----
----GTTTCGGAGACAGTGTCCCCGTAAAATCCGAA-----ACAG
GCGAAGTACAGAAAGAGAAGTGGCTTTGGGGATAAATCCGTTTCGCAGAC
GGGATGGGTGCTTTCAAATCAACCACAGTTCGCATGATCTTGGCTCCGG
---GCAAACCTGCATTTTCTCCCAAGCG---CCCGGTAC---GCAGCCG
CTGCACTGGGA---CATACCA-----CCACCCGACTCATGTCAGTTCT
---TACTCTACGGCGGCTTCAATTCCACCCGGGATTTTCTCTTCAGAAA
TCGAGGCTTCGGAGACGCTACCAG-----CGCTCAGCATAGTC
TCTTCGCCTCCGC---AGCGGGAAGTTT---T-----GCAGCCCACAT
GGACACTCAGATGCAGCGGGACACCTGCTCTTCCCAGGACTTCACGAA--
-CAAGCCGCGAGCCATGCTTCTCAAATGTTGTTAATAGTCAGATGCGAT
TGGGCTTTTCGGGGGACATGTACGGCAGGGCCGACCAGTATGGCCATGTT
ACAAGCCCGCGGT---CCGACCACTATGCTTCGACCCAGTTGCATGGCTA
TGGCCCTATGAACATGAATATGGCCGCG---CATCATGGAGCAGGGGCCCT
TCTTCCGTTACATGAGGCAGCCGATAAAACAAGAGCTGATCTGCAAGTGG
ATCGAACCAGAGCAACTAACGAACCCGAAAAAGTTCGTGCAACAAAACCTT
TAGCACAATGCACGAGCTCGTCACCCATCTGACGGTGGAGCATGTGGGAG
GACCGGAGCAGTCGAACCACATTTGCTTCTGGGAAGAGTGTGCCCGAGAA
GGAAAACCATTCAAAAGCCAAATACAACTTGTGAACCACATCAGAGTGCA
CACCGGAGAGAAACCATTTCCATGTCCATTTCCCGGTTGTGGCAAA

>Ostracoberyx dorygenys

-----NNNNNNNNNGAAACCTTCACCCATCTAACTGCCTTGGCATGCTGTTG
 CTGTCTGACGCCACCCAGTGCACCAAGCTGTGAGAGCTCTCCTGGGGCAT
 GTGCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGACTTCCCTCCAAC
 TGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGAGCTAGAGACA
 GAAGATGAGAGACTGGTTTTACGAAGCTGCCCTTAACTGGATCAACTATGA
 CCTGGAAGAGGGCACTGCAACCTTCCAGAGCTCCTGAGAACGGTCCGT
 TGGCCCTGCTGCCTGCAATCTTTCTCATGGAGAACGTTTCTACAGAAGAG
 CTGATCAACGCCCAGGCCAAAAGCAAGGAGCTGGTGGATGAAGCTATCCG
 CTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAACAGCCCATGTG
 CTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGGAGGGCAGACT
 TTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAAGCCAAAGAGATCAT
 CCCCAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCA
 TCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAAATGGT
 GTGTCCAAGATGTGTGGGTCTACGACACCATCCACGAGGAATGGTCGAA
 GCGGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTGCGGAGCTGA
 AACACTGCCTCTACGTGGTAGGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGATG
 AATACATTGTTGTGTTTCAGTC
 GTTCAACAACGAGGCTGATACTGAATGAAGCGGAGCTAATCATGGTGCTG
 GCCCAGGAGTTCAGATGAGAGTGGTTCACGGTATCCCTGGAGGAACAGTC
 TTTCCCAGTATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGTA
 TGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCAGAGGAGCTGCT
 GTGGTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCGTA
 TAAAACCTTTGCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCTGGA
 GGAACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGAA
 CAAGGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATATGGC
 GAGCAAAGATGTTCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCT
 TCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCTTCTGGAAGTT
 CTCAA--AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA--GTC
 AAAGCCGGCCAGCACAGTCCACCCAGGCCGGGTCAGAGAACCCACAGTGTC
 AGACCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCAG
 ATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTTCAAATACGAAGT
 G-----AAAAAAGACACCAGTAAGGGGACACTGGAGGATCAAATCA
 TCCAGGCGAACCCCTGCGCTGGAGGCCTTCCGCAATGCCAAAACATGAGA
 AACGACAACCTCGTCTCGTTTTGGAATAATTCATCCGAATTCCTTCGGTAC
 GAGCGGCAAGCTGTGCTGCTGACATCGAGACGTACCTGCTGGAGAAGT
 CACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTAC
 CAGATCCTGTCCAATCAGAAGCCAGAGCTCCTGGACATGCTGCTGATCAC
 CAATAACCCGTACGACTACTCTACATCTCCAAGGAGAGGTAACGGTTG

CTTCCATCAATGACTCAGAGGAGCTGATGGCCACCGACAGCGCCTTCGAT
GTGCTCGGCTTCACTCCAGACGAGAAGATGGGCGTCTATAAACTGACTGG
TGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGG
AGCAGGCAGAGCCGGACGGGACGGAGGCTGCTGATAAAACAGCTTACCTA
ATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAGT
CAAGGTAGGAAATGAATACGTCACCAAAGGCCAAAGTGTGGATCAAGTCT
ACTACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGGGATATAA
GCGCCATGTGGCCA
TGC ACTCTGCCACAGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGACC
TACGAGAGCACACCCGTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAA
GTCTTCGGGTGGCACCAAGGAGAAAAACACCCATGCGATCACTGTGACC
GTCGTTTCTACACACGGAAGGATGTGAGACGGCACATGGTGGTCCACACA
GGCCGAAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAA
GGACCATCTGACGCGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGA
AGATCAAGACGGAGCCTCCTGATATGTTAGGTCTTTTAGCATCGGGGTCA
CCACCCCTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGG
TCCCAACAAAGACCCCATGATGGGCAAACCGTTCCCCAGTGGGGCCCCTT
TCCCGATGGGCATGTACAACCCCAACCAT-----CTCCAGGCCATGTCT
AATTCTGGGGTGGGTCACCCA-----CACCCGTCCCTGATGCCAGTTC
TTTGTCTGCAGCTATGGGCATGGGCTGTNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGTGAACCTGCTGGCTAGTAACT
CTCCGAGTGTTTTCGTATGCTCTGACCAGCAGAAAATACTTCAGTAACCTAC
AGTCCCCTAATTGGGTTTTACATTTACGAGCCCATAGAGTACTGGAACCTC
AACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCT
CCTGGATGGACAACCTTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCG
TCAACCAAGAGTGACTTTCATCACCATCCTCAAGGGCTCCTTCCTGCGCAG
CCCGGAGTACCAGCACTTCACTGAGGACATCATATTTCTCCAAGA---ACC
GCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGATGTACTTG
GTGGCACGGACGACAGAGAAGAAGCGTGAAGAGGTGGTGGAGCTTCTGGA
GAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCA
ATCCTACGTTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCTATCTCGCCC
ATCTTGACCTCAGGCTTTCAGCGTACTCACAATCCTCATCCTCACTTTCTT
CCTGGTCAACCCCTTGAAAACCTCTGNNN
NNNTCTTGCAATGTTG
GCATTAT
TAATGGGCTCTCTGGATGGACTTCTCGGTGGATGACTCCCCATCTGACA
CCATCACTCGGCGGTTTTCGCTATGATGTGGCATTGGTGTGAGCAATAAAG
GATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGA
CAGTGCATGCACCTCAGGCTTCAAGTGCATGATCAAGGAATCTTGTGATG
GCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCTGAG
AAGGCTGTACGTTTCTTTCCTACTGTTATGTCTGTCTCTGTCTGCTGGCAGA
CGATGAGGAG-----GAGGAGGTTA
CCATCTTCACCGAGCCAAGCCAACTCAGAACTGTCCTGTAAGCCCCTT
TTCTGACGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCCATCCT
GGGGCTATTGTTGAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCC
TATCCATGGGTGGACTACCTTGCTCCTTCCGCTTTCCTTTCAGAGGCTCG
GGATACGATGAGAAGATGGTGGCTGAGATGGAGGGCCTCGAGGCTCAGG
GTCTCCTATATCTGCACTCTTTGTGACTCCAGTCGGGCAGAAGCCTCTC
AAAACATGGTGCTACACTCCGTCACCCGCAGTCATGAAGAGAACC TAGAA
CGTTATGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAGCT
GCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCCATC
CCACGCTGGATGCATTACTGTGACATTGGCAATGCCACTGAGTTCCTAC
AAAACTTCCAGGACGAGATCGGGGAGGTGTACCAAAGGT---CAAC--

AACCCAAAGACCTGAC---ATCAGA---GTCGAGCTGGATAGAG---ACG
CCGTCTCCATTAAGTCCATTGATCAAGCGATTCTGGTATCTTTG---A
ACAGGCCAAAAGGAGAAGAATCTCACCTTCTGCCACGCCG-----G
TTTCAGAGACAGTGTCCCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNGTTTCGCGGATGGGGAGGGCGCCTTCAAAATA
AACCCAGCTCCCACGATATTGGCTCCGG--ACAAACGGCGTTTTCCCTC
CCAGGCG---CCCGGCTAC---GCAGCAGCCGCCCTGGGA---CACCATC
A-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGGCGTTC
AACTCCACCAGGGACTTTCTCTTTCAGAAATCGGGGTTTCGGGGACGCCAC
CGG-----GGCTCAGCACAGTTTGTTCGCCTC-----CG
GAAGTTT---C-----GCAGGGCCACATGGACTCAGATGCAGCGGGG
CACCTGCTCTTCCCAGGGCTCCACGAG---CAAGCGGCGAGCCACGCGTC
TTCCAATGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGT
ACGGACGGGCCGACCAGTACGGCCACGTTACAAGTCCGCGGT---CCGAC
CACTATGCTTTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATAT
GGCCGCA---CACACGGAGCAGGGGCCTTCTTTTCGATACATGAGGCAGC
CGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACG
AATCCCAAAAAGTCTGTGCAACAAAACTTTTAGCACGATGCACGAGCTTGT
GACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGACGAACCACA
TCTGCTTCTGGGAGGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
>Pachypanchax playfairii

-----NNNNNNNNNNNAACCTTACCCGTCCTGCTGCTGCT
GTCTGACGCCACAGGTGTACAAAGTTATCAGAGCTCTCTTGGGGCATGT
GTCTMAGCAATTTTCTGCCATTTGCAAGACAGAGGACTTTCTCCAATG
CCCAAAGATATGGTAGTGCAGCTGTTGTACACAGAGGAGCTTGAGACAGA
AGATGAGAGATTGGTTTATGAAGCTGCCCTTAACTGGATTAACTATGACC
TAGAAAGGAGGCATTTGCCATCTCCAGAGCTCCTGAGRACAGTTCGTCTC
GCCCTGCTGCCTGCCATCTTTCTAATGGAGAATGTTTCAACAGAAGAGCT
GATAAATGCCAAAGAAAAGAGCAAGGAGCTGGTGGATGAAGCTATTCGCT
GTAAGTTGAAGATCTCCAGAATGACGGCGTCGTC AACAGTCCATGTGCT
CGGCCGAGAAAAACCAGCCATGCCCTTTTCTCCTTCTTGGAGGTGAGACCTT
CATGTGTGATAAGTTATACTTGGTGGACAAAAGGCCAAAGAGATAATCC
CAAAAGCTGACATTTCCAGTCCAGGAAGGAGTTTAGTGCCTGCGCCATT
GGCTGCAAGGTGTACATTACTGGTGGGA--GGGGATC-AGAGAACGGTGT
GTCCAAAGATGTGTGGGCTCTACGACACTGTGCATGAAGAATGGTCAAGG
CTGCTCCCATGCTCATGCCCCGGTTTGGTGCATGGCTCTGCAGAACTGAAA

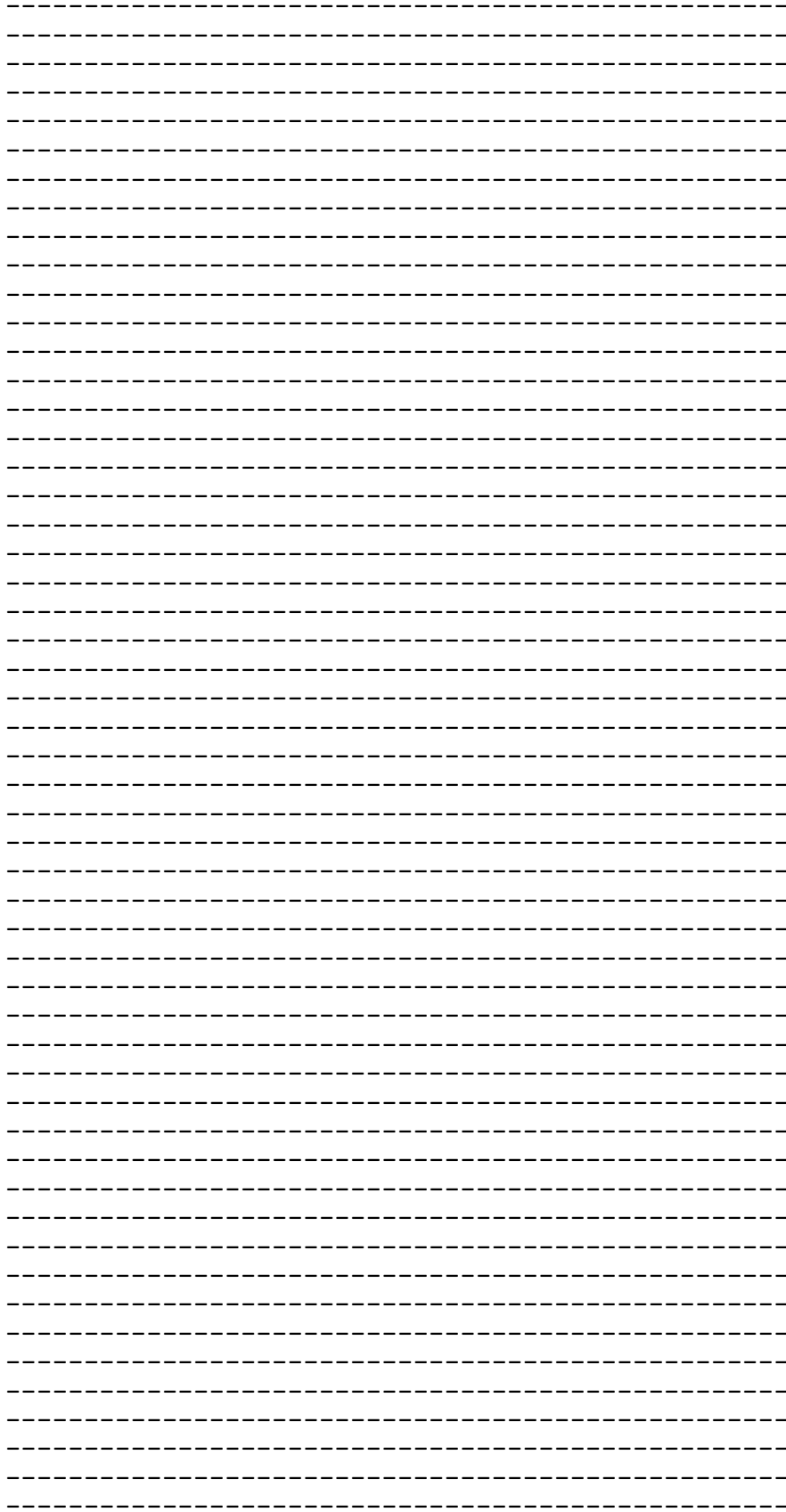
CACTGTCTGTATGTTGTTGGAGGACACACTGCAGCAACCGGCTGCCTCCC
AGCNNNNNNNNNNAGATGAATACATTGTAGTTTTTCAGCCGTTCAACGACAAGGCTAATAC
TGAATGAAGCCGAGCTAATCATGGCACTGGCTCAAGAGTTCAGAAAGAGA
GTAATCACAGTATCTTTGGAGGAACAGTCTTTTTTTAATATCATCCAGGT
GATCCGTGGTGCTCCATGTTAGTCAGCATGCATGGAGCTCAGCTTATCA
CCTCACTCTTCCTCCCCAGAGGTGCTGTTGTTGTAGAGCTGTTTCCCTTT
GCTGTGAATCCTGAGCAGTACACGCCATACAAAACCCTTGCTCCCTTCC
AGGCATGGATCTTCACTATGTCTCTTGGAGGAACATGAAAGAAGAGAATA
CTGTAACCCATCCAAATAGACCCTGGGAACAAGGCGGAATATCCCATTTG
GAAAAAGACGAGCAGGAGCGAATCCTGGCGAGTAAGGACGTCCCAAGGCA
CTTGTGTTGCCGTAACCCAGAGTGGCTCTTCCGAATTTACCAGGACACTT
TGGTAGACATCCCATCCTTTCTCAGTGTGCTCAG---AGATGCAATGAAG
---GCCAAACCCAACTTGAAGAA---GGCCAAGATAGCGAGCACAGTCCA
TCCTGGCCGGGTCAGAGAAGCCCGTTGTCCAGACTTCAGTTCAAACGTCTA
ATGAAGCAAAGCTCACAGTCTCTTGGCAGATCCCATGGAATCTGAAATAC
CTGAAAGTAAGAGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAGATCAGTGATGGGTCA
AATATAGTGAACCTGTTGGCTAGTAACCTACCAAGTGGTTTCTTATGCTTT
GACCCAACAGAAGTACTTCAGTAATTATAGTCCGTGCATTTGGGTTTTATA
TTTACGAACCCATTGAGTATTGGAACCTCACTGTGCAGGAACACCTGAAG
ACACTAAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACTTCTTCTA
CTACCTGCGGATGGTGAATGTGAGCGCATCAACTAAGAGCGACTTCATCA
ATATTTTAAAAGGTTCCTTTCCTGCGCAGCCAGAGTACCAGCACTTCA
GAGGACATCATCTTCTCCAAA---ACCGTGAGACAG-----ACGAATA
TGACATCATTGCCTCACGGATGTATTAGTAGCACGGACACAGAGAAGA
AGCGGGAAGAGGTGGTGGAGCTTTTGGAAAAGCTTCGTCCATTGATGCTG

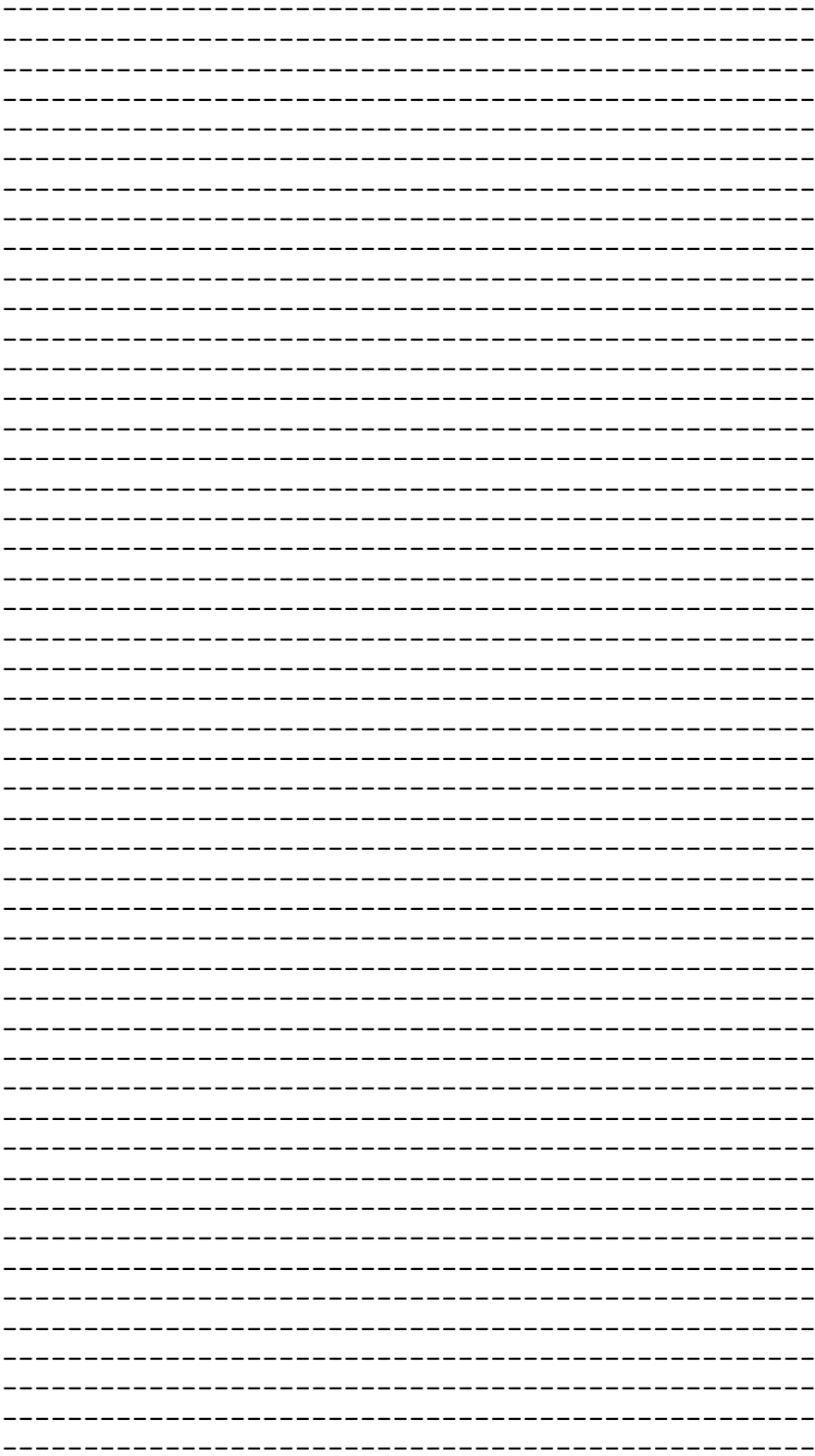
ATTAACAGCATTAAATTCATTGCCTTCAATCCAACGTTTGTTTTATGGA
CCGTTACAGCTCCTCTGTCTCATCTCACCCACCCTGACCTCAGGTTTCAGTG
TACTCACTATTCTCATTTCTAACTTTCTTCCTGGTCATCAACCCCTTGGANNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNT
CTGCATCTTACAGTGTGGCATTATTAATGGTCTTCTGGATGGGCTTCC
TCGGTGGATGACTCCCCAGCTGACACCATATCTCGACGCTTCCGCTATGA
TGTGGCACTGGCTGCAGCACTGAAAAGATCTGGAGGAGGACATCATGGAGG
GGCTTAGAGAGACTGGGATGGAAGACAGCGCTTGCACCCTGGGCTTTAGT
GTCATGATCAAGGAATGCTGTGACGGCATGGGTGATGTCAGCGAAAAACA
TGGAGGAGGACCAGCTATTTCCTGAAAAGGCTGTTTCGCTTCTCCTTCACTG
TTATGTCTGTCTCTGTCCAGTCTGAAGACGATGGT-----
-----CAAGATGTCACCATATTTCACTGAGCCGAAACCAA
CTCAGAACTGTCTGTAAAGCCCCTTTCGCTTATGTTTGTGGATGAGTCAG
ATCATGAGATGCTCACGGCTGTCTGGGGCCCATAGTTGCAGAGCGTAAT
GCCATGAAGGAAAGCAGGCTCATTTCTGTCCATGGGCGGCATGCCACGCTC
CTTTTCGCTTCCACTTCAGAGGCACGGGGTACGATGAAAAAATGGTGCGAG
AGATGGAGGGATTGGAGGCTTCGGGGTCCACATATATCTGCACCTTATGT
GATTCCAGTCGCGCAGAAGCTGCTCAAAACATGGTGTACTACTCCGTCAC
CCGCTGCCACGAGGAGAACTTGGAAACGTTATGAAAATATGGAGAACCAACC
CTTATTTCAGAGTCAGCAGATGAGCTGAGAGACAGAGTCAAAGGAGTCTCT
GCAAAGCCCTTCATGGAACCCAGCCACTCTTGATGCATTACACTGTGA
TATTGGTAATGCCACAGAATTTTACAAAATCTTCCAAGATGAGATCGGAG
AAGTGTATAAAAAGGT---CAAC---CCCAGCCGGGAGGAACGACGCAGC
TGGAGGGCAGCTTTAGATAAACAGCTGAGGAAGAAGATGAAGCTTAAACC
AGTAATGAGAATGAATGGAAACTACGCCCGCAGGTTAATGACCATGGAGG
CTATGGATGTGGTGTGTGAGCTGGTGCCTCAGAGGAAAGGAGAGAAGCC
CTGAGGGAGCTTATGAGGCTCTACCTCCAGATGAAGCCTGTGTGGCGCGC
CACCTGCCAGCTAAGGAATGCCCGACCAGCTGTGCCGCTACAGCTTTA
ACTCCCAGCGCTTTGCTGACCTGCTCTCCTCCACTTTCAAATATAGATAC
AATGGTAAGATAACTAATTACCTGCACAAGACCCTGGCTCATGTGCCTGA
AATCATAGAAAGAGATGGATCCATCGGCGCCTGGGCCAGCGAAGGAAACG
AGTCNNNNNNNNNNNTCATATTTCCATTGAGATGGGTCCCTTGGGGCCACGGTGGAAAGGACA
ACCCACAGCCTTTCACTTGCTCCATTGAAGACCCTACCAAGCAGACCAAG
TTCAAGGGTATCAAGACCTACATATCATAACGGGTACACCCGAGTCACAC
TGGGCTTCCTGTTTACAGACGTTACAAACACTTTGACTGGCTTTACAACC
GTTTACTGCACAAGTTCCTGTGATTTCCGTTCCCTCACCTCCCAGAGAAG
CAGGCCACAGGCCGATTTGAGGAAGACTTCATCGAGAAGCGTAAAAGACG
ATTAATACTGTGGATGAACCACATGACAAGTCACCCAGTCTCTCCAGT
ATGAAGGTTTTGAGCATTCTCTGATGTGTACTGATGATAAGCAGTGAAA
CTGGGTAAGAGGCGGGCAGAGAAGGATGAGATGGTAGGGGCCCATTTTCAT
GCTGACCCTCCAAATCCCCACTGAGCACCAGGACCTTCAGGATGTTGAGG
AAAGGGTTGACAATTTCAAGACTTTTGCCAAGAAAATGGATGACAGTGTG
ATGCAGCTCACGCACGTTGCTTCAGAGCTGGTTCGCAAACACCTAGGTGG
ATTCAGGAAGGAATCCAACGTCTAGGAAATGCCTTCAGTCCATCAGCC
AAGCATTCATGCTGGATCCACCCTACAAGTCAGATACACTCAACAACGCC
ATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAACTGACCTCTCTGGGTTTTATCATTGGAGTTGGTGTGGTAG
GGAACC
TCCTGATCTCCATCCTGTTGGTCAAAGACAAGAGTCTGCACCGGGCACCC
TACTATTTTCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCAGCCAT
CTGTTTCCCCTTTGTCTTCACCTCAGTAAAGAATGGATCTGCCTGGACTT
ATGGCAGCTAACCTGCAAAGTGATGTCCTTCCCTGGGTGTGCTGTCTTGT
TTCCACACGGCATTTCATGCTATTCTGCGTCAGTGTACCCGCTACCTGGC

CATAGCACACCACCGCTTCTACACCAAGAGGCTGACTTTCTGGACGTGCT
TAGCTGTCATCTGCATGGTGTGGACATTGTCAGTGGCTATGGCGTTTCCT
CCGGTGCTAGATGTTGGAACGTACTCCTTTATCCGGGAGGAGGATCAGTG
TACATTTTCAGCACCAGTCTTTCAGGGCGAATGATTCAGTGGGCTTCATGC
TCCTGCTGGCTCTCATCCTCCTGGCCACGCAGCTGGTTTACCTCAAACCTC
ATTTTCTTTGTCCATGACCGCCGAAAGATGAAGCCTGTTTCAGTTTGTGCC
TGCTGTCAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGTGGGCAGG
CTGCGGCCAACTGGCTGGCTGGATTTGGTTCGTGGCCCCACCCCGCTACC
TTGCTGGGTATCCGACAGAACAGCAATGCTGCAGGCCGAGGCGTCTACT
AGTACTGGACGAATTCAAAACAGAGAAGAGGATTAGCAGGATGTTCTACA
TAATGACGTTTTTCTTCCCTGGCATTATGGGGGCCCTACCTGGTGCCTGC
TACTGGCGGGTGTGTTGCAAGGGGCCCGTGGTCCCTGGAGGCTACCTGAC
AGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCCTTCATCT
GNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCGTGGGGACTGGTCCTGGCACGGAGC
---GCAGCGTCCCACCTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAG
GAGCCCACCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGC
CAACAACCGACTGGACTTTGCAGCCTCGGCATACGACGCCGCC-----
--GATTTTGCCGGTAACGCGGCCACCTTGCTGTCTACGCAGCGGCCGGA
GTGAAGGCTC-----TCCCCCTGCCGACAGCGGGTTGCTCCAACCGGCC
TCTTGGCTATTACGCAGACCCGTCTG---GCTGG---GGAGGACGCACGC
CGCCTCAGTACTGTGGCGTAAACAGTAAATCCAGCTCGGTCTTTTCTCTGC
TGGCCCGCTAACTCCCTCAGCGGCAGGGCGGCCA---CC---AACTACCT
GT-----CGGAGGA---GGGA---GACTC---CATCGCGACGGAGA
GGTCACCG---AT---CGGTGGCTCGGAGGAG---ACCAAACCCAAAGAC
ATCAC---GTCTGA---GTCGAGCTGGATTGAG---ACGCCGTCTCAAT
TAAGTCGATTGATTTCGAGTGATTCTGGGATCTTTG---AACAGGCCAAAC
GGAGAAGAATCTCACCTCTGCTACACCG-----GTCTCAGAATCG
GTGTCCCCGTTAAAAATCTGAGNNNNNNNNNNNCAGAGAAGTCGCAGAGAGAGAAGTGGCGC
TGGGGATAAACCCTGTCGCGGATGGGATGGGCGCCTTCAAATAAACCAC
AGCTCCCACGACATTGGCTCCGG---ACAGACGGCGTTTTCTCTCAGGC
T---CCCGGCTAC---GCGGCAGCCGCTTTGGGA---CACCATCA-----
-CCACCCGACCCACGTCGGCTCT---TACTCCACGGCGGCTTTCAACTCC
ACCAGGGACTTTCTCTTTAGAAATCGGGGTTTCGGAGATGCTACTGG---
-----GGCGCAGCACAGTCTGTTTGCCTC-----CGGAAGTT
T---C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTG
CTCTTTCCGGGGCTTCACGAG---CAAGCGGCGAGCCACGCGTCTTCCAA
CGTGGTCAACAGCCAGATGCGACTGGGCTTCTCGGGGGACATGTACGGAC
GGGCCGACCAGTACGGCCACGTTACGAGCCCACGAT---CCGACCACTAC
GCCTCCACTCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGC
G---CACCACGGAGCAGGGGCCTTCTTCCGATACATGAGGCAGCCGATCA
AACAAGAGCTTATCTGCAAGTGGATCGAACCAGGAGCAGCTGACGAATCCC
AAAAAGTCGTGCAACAAAACCTTTCAGCACGATGCACGAGCTTGTGACCCA
TCTGACGGTGGAGCATGTGGGGGGACCCGAGCAGACCAACCACATCTGCT
TCTGGGAGGACTGCTCCAGAGAAGGGAAGCCGTTCAAAGCCAAATACAAA
CTTGTAATCATATCAGAGTTCACACCGGAGAAAAACCCCTTTCCGTGTCC
GTTCCNNNNNNNNNNNNNNNN

>Paragalaxias mesotes



CCCTGACCAGCTGTGCCGCTACAGCTTCAACTCGCAGCGCTTCGCCGAGC
TCCTCTCCACCACCTTCAAGTACAGGTATAACGGCAAGATCACCAACTAC
CTCCACAAAACGCTGGCCCATGTGCCCGAGATCATAGAGAGGGATGGGTC
CATTGGAGCGTGGGCCAGCGAGGGGAATGAGTCGGGCAACAAG-----



GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTGTCCCTTGAGGAGCAGT
CTTTCCCCAGTATCGTCCAGGTGATCAGCGGTGCGTCCGTGTTGGTCAGT
ATGCATGGTGCTCAGCTCATCACCTCACTCTTCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCTTTGCCGTGAACCCAGAGCAGTACACCCCGT
ATAAAACCTTGCCACCCTTCCAGGCATGGACCTTCACTATATCTCCTGG
AGGAACACTCKGGAGGAGAACACCATCACCCACCTGACAGAGCCTGGGA
GCAAGGGGGCATCGTCACTTGGAGAAGGAGGAGCAAGAGCGTATACTGG
CGAGCAAAGATGTCCCCAGGCACCTGTGCTGTGCAACCCGGAGTGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCTTCTGGAAAM
CCTGAA---AGAGGGCATGAAG---ACRAAGCCCAGCGTGAAGAA---GT
CAAAGCCAGCCAGCACAGTCCACCCGGGCGGGTCCGAGAACCCAGTGT
CAGACCTCGGTACAAACCACCAACGAGGCCAAACTCACAGTCTCCTGGCA
GATCCCGTGGAATCTGAAGTACTTGAAGGTGCGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAGAGAGACCCGAGCAAGGGGACGCTGGAGGACCAGATC
GTCCAGGCCAACCCGGCGCTGGAGGCTTTCGGCAACGCCAAAACGCTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGCATTCACTTCGGTA
TGAGCGGGAAGCTGTGCTCCGCCGACATCGAGACCTACCTGCTGGAGAAG
TCCCGGTGCACCTTCCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGGGAGGTCACCGTC
GCCTCCATCAACGACTCGGAGGAGCTGMTGGCCACCGACTGCGCCTTCGA
CGTGCTGGGCTTCACCGCAGAGGAGAAGATGGGCATCTATAAACTCACCG
GCGCCATCATGCACTTCGGCAACATGAAGTTCAAACAGAAGCAGCGCGAG
GAGCAGGCGGAGTCCGACGGCACGGAGGCGGCCGATAAGACGGCGTACCT
CATGGCCTGAACTCCGCCGACATCATCAAGGGCTGTGCCACCCAGAG
TCAAGGTGGGGAATGAGTACGTCACCAAAGGCCAGAGTGTGGACCAGGTC
TACTAC-----

-----TATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAGATCAGTGATGGATCAAATATAGTGAACCTGCTGGCT
AGTAACTCCCCGAGTGTGTCTTACGCTCTGACGCAGCAGAAGTACTTAC
CAACTACAGTCCCGTGATTGGGTTCTACATTTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGGGCATCTGAAGACCCTGAGTCATGGCTTCAAC
AAGATCTCTTGGATGGACAACCTTTTCCACTACCTGCGTGTGGTGAACGT
GAGGCATCAACCAAGGGCGATTTTCACTACTATCCTCAAGGGCTCCTTCC
TTCGCAGCCCGGAGTACCAGCACTTACAGAGGACATAATATTCTCCAAG
A---ACCGCGAGACTG-----ACGAGTACGACATCATCGCCTCGCGGAT
ATACCTGGTGGCACGAACGACGGAGAGAAAACGCGAGGAGGTGGTGGAGC
TTCTAGAAAAGCTTCGTCCCTTAATGCTGATCAACAGCATCAAGTTCATC
GCCTACAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCAT
CTCGCCATCCTGACCTCAGGGTTCAGCGTACTACAATCCTCATCCTCA
CTTCTTCCTGGTCATCAACCCGTTGGGAACTTTGGCTCATCCTCACG

GTGACCTCCGTAGAGCTCGGCGTCTTGGGTTTGATGNN
NNNNNNNGTCTACATCTTGCA

GTGTTGGCATTATCAATGGGCTCTCTGGATGGGCTTCCTCGGTGGATGAT
TTCCCAGCTGACACCATCACTAGACGGTTCGCTACGATGTGGCTCTGGT
GTCAGCGTTGAAGGATCTGGAGGAGGACATCTTGGAGGGGCTGAGAGAGA
GTGGGATGGAAGACAGTGCTTGCACTCATGCTTCAAGTGTCAAGATCAAG
GAATCCTGTGATGGCATGGGCGATGTCAACGAGAAGCACGGTGGAGGACC
AGCTGTTCTGAGAAGGTTGTGCGTTTTTCTTTCACTGTTATGTCGGTCT
CTGTCCGGCAGACGATGAGGAG-----
---GAAGACGTTACCATCTTCACTGAGCCAAAGCCAAACTCAGAAGTGT
CTGTAAGCCCCTGTGCCTGATGTTTGTGGATGAGTCAGACCATGAGACAC
TCACAGCTGTCTGGGGCCTGTGGTTGCCGAGCGTAATGCAATGAAAGAG
AGCAACCTCATCTGTCCGTGGGCGGACTTCCTCGTTCCCTCCGCTTTCA
CTTCAGAGGCACAGGATATGATGAGAAGATGGTGC GCGAGGTGAGGGCA
TGGAGGCCTCAGGGTCCACCTACGCTGCACTCTTTGTGACTCCACTCGG
GCACAGGCCTCTCAAACATGGTGCAACACTCCATCACTCGCAGTCATGA
AGAGAACCTCGATCGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGT
CTGTAGATGAGCTGCGCGACAGGGTTAAAGGGATCTCTGCCAAGCCCTTC
ATGGAGACCCACCCAACGATGGATGCATTACATTGTGACATCGGCAATGC
CACTGAGTTCTACAAAATCTTCCAGGACGAGATCGGAGAGGTGTACAAA
AGTT---CAA---CCAGCCGGGTGGAACGGCGCAGCTGGAGAGCAGCC
CTGGATAAACAGCTTAGGAAGAAAATGAAGCTTAGACCAGTGATGAGGAT
GAATGGGAACATATGCCCGCAGGCTTATGACCCAAGAGGCTGTGGAGGTGA
TCTGTGAGCTAGTGCCCTCAGAGGAGAGGAGGGAGGCTCTGAGGGAGCTG
ATGAGGATCTACATCCAGATGAAGCCGGTGTGGCGGCCACCTGCCCTGC
TAAGGAGTGTCCCGACCAGCTGTGCCGCTACAACCTTAACTCCCAGCGCT
TTGCCGAACCTCTCTCCTCCACCTTCAAATACAGGTACAATGGAAAGATA
ACCAATTACCTGCACAAGACCCTGGCCCATGTGCCCTGAAATCATAGAGAG
AGATGGATCCATCGGAGCCTGGGCCAGCGAAGGAAACGAGTCNNNNNNNNNNNTCCTACAC
CGTGCAGATGGGACCCGCGGGGGCCCCGGTGGCAGGAGAGCCCGCAGCCGT
TCTCCTGCTCCGTCGAGGACCCACGAAACAGACCAAGTTCAAGGGCATC
AAGACCTACATCTCGTACCGGGTCACGCCGAGCCACACGGGGCGTCCCCT
CTACCGGCGCTACAAACACTTCGACTGGCTGTACAACCGCCTGCTGCACA
AGTTCACCGTGATCTCGGTGCCCCACCTGCCCGAGAAGCAGGCCACGGGG
CGCTTCGAGGAGGACTTCATCGAGAAGCGCAAGCGGCGGCTGGTCTGTG
GATGAACCACATGACCAGCCACCCGGTCCCTCCTCCAGTACGAGGGCTTCG
AGCACTTCCCTGACGTGCGCCGACGACAAGCAGTGAAGCTGGGCAAGAGG
CGGGCGGAGAAGGAGGAGATGGTGGGCGCCACTTCATGCTGACCCTGCA
GATCCCAACGAGCACCAGGACCTTCAGGACGTGGAGGAGCGGATCGACA
CCTTCAAGGCCTTCGCCAAGAAAATGGACGACAGCGTGATGCAGCTCRCG
CACGTCGCCTCGGAGCTGGTGC GTAAGCACCTGGGCGGCTTCCGGAAGGA
GTTCCAGCGGCTGGGGAATTCGTTCCAGTCCGTGAGCCTGGCGTTCACGC
TGGACCCTCCCCACGGCTCGGAGGCCCTCAACAAAGCCGTCTCCAC---

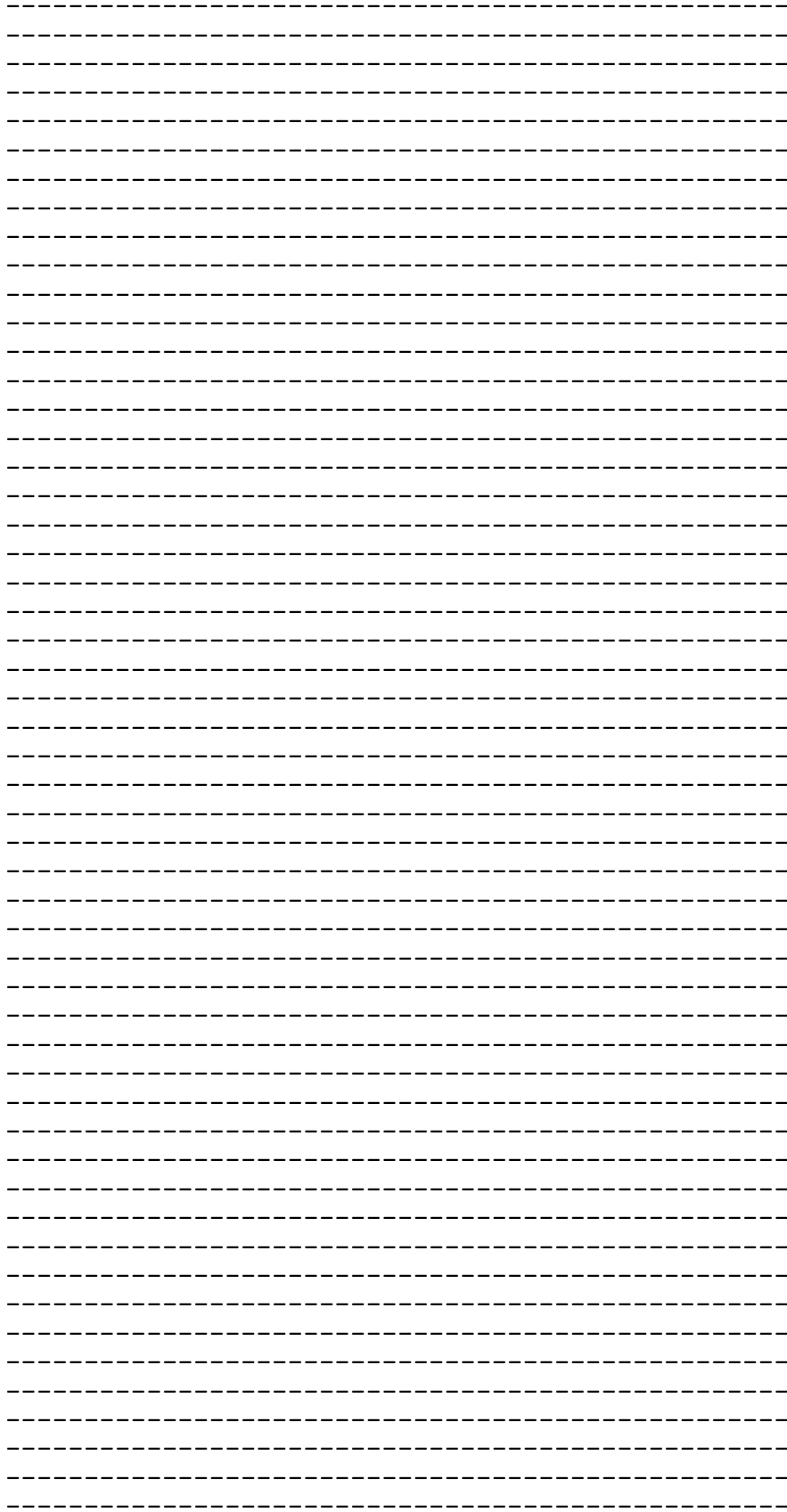
-----GCCAAATCTCGCTTTC
ACCCTGGCGTGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCCTC
GGCCACAGCTTGTGTCCCCGACGAAACCGACGAGCCAGTGTGCCAC
CCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACT
TTGTGCCTCGGCATACGACGCCGCT-----GATTTGCGCCGGTAAAC
GCGGCCACCTTGTGTCTACGCAGCGGCCGGAGTGAAGGCTC-----T
TCCCCTGCCGACTGCAGGCTGTCCAACCGGGCTCTTGGCTATTACGCAG
ACCCGTCAG---GCTGG---GGAGGACGCACACCGCCGACGACTGCGGC
GTAAACAACAAATCCAGCTCGGTCTTTTCCTGTGGCCCGCTAACTCTAT
CGGGGGCCGAGCAGGTA---CC---AACTACCTGG-----CCGAGG
A---AGGA---GACTC---CATCACGACAGAGAGGTCGCCG---AT---C
GGCGGCTCGGACGAG---ACCAAACCAAAGACATGAC---ATCAGA---
GTCGAGCTGGATAGAG---ACACCGTCTCCATTAAGTCCATTGATTCGA
GCGATTCTGGTATCTTTG---AACAGGCCAAACGGAGAAGAATCTCACCT
TCTGCCACGCCG-----GTTTCAGAGACAGTGWCCCCGTTAAAATC
TGAGNN
NNNNNNNNNTTCAAATAAACCACAGCTCCACGATATCGGCTCCGG---ACAAA
CGGCGTTTTCTCCCAGGCG---CCTGGCTAC---GCGGCAGCCGCCCTA
GGA---CACCATCA-----CCACCCGAGCCACGTTGGCTCT---TACTC
CACGGCGGCTTTCAACTCCACGAGGGACTTTCTCTTCAGAAATCGGGGGT
TCGGGGACGCCACCGG-----GGCACAGCATAGTTTGTTCGCC
TC-----CGGAAGTTT---C-----GCTGGGCCACATGGACACTC
AGATGCAGCGGGGCACCTGTCTTCCCAGGGCTCCATGAG---CAAGCGG
CGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGACTGGGCTTC
TCGGGGACATGTACGGACGGGCCGACCAGTACGGCCACGTTACGAGCCC
GCGGT---CCGACCACTACGCTTCGACCCAGCTGCACGGCTATGGCCCCA
TGAACATGAATATGGCCGCA---CACACGGAGCAGGGGCCTTCTTTCGA
TACATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCC
GGAGCAGCTGACGAATCCTAAAAAGTCGTGCAACAAAACCTTTTAGCACGA
TGCACGAGCTTGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAG
CAGACCAACCACATCTGCTTCTGGGAGGAATGTGCCAGAGAGGGAAAGCC
ATTCAAAGCCAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN

>Parapercis clathrata
AGCCTTCTTATTTCGAGCAGAATAAGTCAACCAGGTGCTCTTCTAGGAGA
CGACCAATTTATAATGTTATCGTTACAGCCCATGCCTTCGTAATAATTT
TCTTTATAGTAATGCCTATTATAATCGGGGGCTTCGGTAACTGATTAGTC
CCTCTGATAATTGGAGCTCCGGACATAGCATTCCCCGTATAAACAATAT
AAGCTTTTACTTCTCCCTCCTTCCCTCCTTCTTCTTCTTAGCCTCTTCCG
CAGTAGAGGCCGGAGCCGGAACCTGGATGAACCGTGTATCCCCCTCTAGCC
GGAAACCTAGCTCACGCAGGGGCATCAGTAGACTTAACCATTTTCTCCCT
GCATTTAGCTGGCATTTCATCTATTTTAGGGGCCATCAACTTCATCACAA
CTATTCTTAATATGAAACCTCCAGCAGTCAACCAATATCAGACCCCTCTC
TTTGTCTGAGCCGTTCTAATCACTGCTGTCTCTCCTCCTCCTCCTCCC

AAGAGTCACTCTGGAAAGTCTTCAGGTGGCACCAAGGAGAAAAACACCC
GTGCGATCACTGTGACCGCGTTTCTATACGCGAAAGGATGTGAGACGGC
ACATGGTGGTTACACGGGCGAAAGGACTTTCTGTGCCAGTACTGTGCC
CAGCGCTTTGGCAGGAAGGACCATCTGACACGTCATGTGAAGAAGAGCCA
CTCACAGGAGCTCCTGAAGATTAAGACAGAGCCTCCTGATATGTTAGGTC
TTTTAGCTTCGGGGTCACCGCGTGTCTGTGAAGGAGGAGCTCAGCCCC
ATGATGTGCAGCATGGGTCCCAACAAAGATCCCATGATGGGCAAACCCTT
CTCCAGTGGGCCTCCTTTTCCAATGGGCATGTACAACCCCCACCAT----
--CTTCAGGCCATGTCTAATTCTGGGGTGGGTACCCG-----CACCCG
TCCCTGATGCCTAGTTCCTTATCTGCAGCTATGGGCATGGGCTGTCACAT
GGAATATCTCATATACGCCTCTTTCTCGTTCATGGGATGTTTACAAATTA
GTGATGGATCGAATATCGTGAACCTGCTGGCGAGTAACTCTCCAAGCGTT
TCGTACGCTATGACCCAGCAGAAGTACTTCAGTAACTACAGTCCCGTGAT
TGGGTTTTACATTTACGAGCCCATCGAGTACTGGAACCTCGACTGTGCAGG
AGCACCTGAAGACTNTGAGTCATGGGTTCACAAGATCTCCTGGATGGACA
ACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCAACAAAGAGC
GACTTCATCACCATTCTCAAGGGCTCCTTCCTGCGCAGCCCGGAGTACCA
GCACTTCACAGAGGACATCATATTCTCCAAGA---ACAGGGAGACCG---
---ATGAGTACGACATTATCGCCTCACGGATGTACTTGGTTCGCACGAACG
ACAGAGAAGAAGCGGGAAGAGGTGGTGGAGCTTCTGGAGAAGCTTCGTCC
GCTGATGCTGATCAACAGCATCAAATTCATTGCCTTCAACCCACGTTTG
TGTTTATGGACCGCTACAGCTCCTCCGTTCATCTCGCCCATCCTGACCTCA
GGCTTCAGCGTGTCTACAATCCTCATCCTCACTTTCTTCTGCTCATCAA
CCCCTTGGGGAACCTTGGCTCATCCTCACAGTAACTCCGTGGAGCTGG
GTGTNNNNNNNNNNNNNGGCTTTCACCAGTTTGAATGGCAGCCCGCTCTCAAGACTGTGTCTA
CATCTTGCAACATTGGCATTATTAATGGGCTCTCTGGATGGGCTTCGTCCG
GTGGATGACGCCCCGGCTGACACCATCACTCGGCGCTTTCGCTATGATGT
GGCACTGGTGTACGCTTTAAAGGATCTGGAGGAGGACATCATGGAGGGGC
TGAGAGAGCGTGGGCTGGAAGACAGCGCTTGCACCTCAGGCTTCAGTGT
ATGATCAAAGAGTCTGTGATGGCATGGGCGATGTCAGCGAGAAGCACGG
CGGAGGACCAGTTGTTCCCGAGAAGGCTGTACGTTTCTTTTCACTGTTA
TGCTATCTCTGTCCGGGCAGACGAGGAGGAG-----
-----GAAGAGTTTACCATCTTCACTGAGCTGAAGCCAAACTC
GGAGCTGTCTGCAAGCCCCCTGCTGCTGATGTTCTGTGGATGAGTCAGACC
ACGAGACGCTCACTGCTGTCTGGGGCTATAGTGGCGGAGCGTAAGGCG
ATGCAACAGAGCCGGCTCATCCTTCCATCGGTGGACTGCCTCGCTTCTT
CCGCTTCCATTTTCAAGGAACAGGGTACGACGAGAAGATGGTGCCTGAGA
TGGAGGGCCTCGAGGCCTCGGGATCCGCCTACATCTGCACCCTTTGTGAC
TCCAGTTCGCGCAGAGGCTTCTGAGAACATGGTGTGCTGCACTCGGTCACACG
CAGTCACGAGGAGAACTTAGAGCGTTATGAAATATGGAGAAGCAACCCCT
TCTCTGAGTCTGCGGAAGAGCTGCGAGACAGAGTCAAAGGGGTCTCTGCT
AAGCCGTTTATGGAGACCCAGCCAACGCTCGATGCATTACACTGTGACAT
TGGCAATGCCACCGAGTTCTACAAAATCTTCCAGGACGAGATTGGGGAGG
TGTACAAAAGGT---CAAC---CCCACACGGGAGGAGCGGCGCAGCTGG
AGGGCAGCCCTAGATAAACAGCTGAGGAAGAAAATGAAGCTTAAACCAGT
AATGAGGATGAATGGGAACCTTGGCCGAGGCTAATGACCCTGGAAACTG
TGGAGGTGGTGTGTGAGCTGGTGGCCCTCAGAGGAGAGGAGGGAGGCCCTG
AGGGAGCTCATGAGGCTTACCTCCAGATGAAGCCCGTGTGGCGAGCCAC
CTGCCAGTCAAGGAATGCCCGACCAGCTGTGCCGCTACAGCTTTAACT
CCCAGCACTTCGCCGACCTCCTCTCTACCTTCAAATACAGGTACAAC
GGGAAGATAACCAATTACCTGCACAAGACCCTGGCCCACGTGCCTGAGAT
CATCGAGAGAGACGGGTCCATCGGAGCCTGGGCCAGCGAGGGAGACGAGT
CAGCCAACAAATCGTACACCATCGACATGGGTCTTTGGGTCCCCGTGG

-----GCCAAATCTCGCTTT
CACCCCTGGCATGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCC
CGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCCACTGTTGCCA
CCCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGTCTGCCTCGGCATACGACGCCGCC-----GATTTCCGCCGTTAA
CGCGGCCACCTTGCTGTCTTACGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCCAACCGCCTCTTGGCTATTACGCA
GACCCGTCGG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGCGG
CGTAAATAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCGCTAACTCTA
TCGGTGGCAGAGCCGGAG---CC---AACTACCTGG-----CCGAG
GA---GGGA---GACTC---CATCCCGACGGAGAGGTCACCG---AT---
CGGCGGCTCGGAGGAG---GCCAAACCCAAAGACCTGAC---GTCGGA--
-GTCGAGCTGGATAGAG---ACGCCGTCCTCCATTAAGTCCATCGATTCTG
AGCGACTCTGGGATCTTTG---AACAGGCCAAAAGGAGGAGAATCTCCCC
CTCTGCCACGCCG-----GTTTCAGAGACTGTGTCCCCGTTAAAAT
CGGAG-----TGGGG
ATAAATCCGTTTGCGGATGGGATGGGCGCCTTCAAATAAACACAGCTC
CCACGACATCGGCTCCGG---ACAAACGGCGTTTCTCCAGGCG---C
CCGGCTAC---GCAGCGGCCGCCCTGGGA---CACCACCA-----CCAC
CCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTCAACTCCACCAG
GGACTTCTCTTTCAGAAATCGGGGTTCGGGGACGCCACCG-----
----GGCGCAGCACAGTTTGTTCGCCTC-----CGGAAGTTT---C
-----GCAGGGCCACATGGACTCGGATGCGGCGGGGACCTGCTCTT
CCCGGGGCTCCACGAG---CAGGCGGAGCCATGCGTCTTCCAACGTGG
TCAACAGCCAGATGCGACTGGGCTTACGGGGGACATGTACGGACGGGCC
GACCAGTACGGCCACGTTACGAGCCCGCGGT---CCGACCACTACGCCTC
GACCCAGCTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCA---C
AYCACGGAGCAGGGGCCTTCTTTGATACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCAAAAA
GTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTCGTGACCCATCTGA
CGGTGGAGCATGTGGGGGGACCCGGAGCAGACCAACCACATCTGCTT----

>Parasudis truculenta



>Paratilapia polleni
 AGCCTGCTAATCCGGGCAGAATTAAGCCAACCGGGCTCTCTTCTTGGAGA
 TGATCAAATTTACAATGTAATCGTAACTGCACACGCTTTTGTAAATAATCT
 TCTTTATAGTAATGCCAATTATGATCGGAGGCTTCGGAAACTGATTAGTC
 CCTTCTATGATTGGGGCCCTGATATAGCCTTCCCTCGAATGAATAATAT
 GAGCTTCTGGCTTCTCCCGCCGTCATTTCTTCTCCTCTTAGCCTCTTCAG
 GCGTTGAAGCTGGAGCTGGAACAGGATGAACTGTCTATCCCCCTTAGCA
 GGCAACCTGGCCCACGCTGGTCCATCCGTTGATTTAACAATTTTCTCTCT
 TCATCTAGCCGGAGTCTCCTCCATCCTAGGGGCTATTAATTTTATTACTA
 CAATTATTAATATGAAACCTCCTGCTATTTTACAGTACCAAACACCTCTC
 TTTGTCTGTTCTGTTCTTATTACGGCCGTTCTCCTTCTCCTTTCTTCTTCT
 AGTTCCTTGC CGCCGCATTACCATGCTCCTGACAGACCGAAATCTTAACA
 CAACCTTTTTTCGACCCTGCAGGAGGAGGCGACCCATTTCTATAACCAACAC

-----TTCCTGGAGAGAAACCTCCACCCGTCCAACCTGTCTTGG
 CATGCTTCTGCTGTCAGATGCCCATCAGTGTACCAAGTTGTCAGAGCTCT
 CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
 TTCCCTCAACTGCCCCAAGATATGGTGGTGCAGCTTTTGT CACACGAGGA
 GCTAGAGACAGAAGATGAAAGACTGGTTTATGAAGCTGCCCTTAACTGGA
 TCAACTACGACCTGGAAAGGAGGCACTGCCATCTTCCGGAGCTCCTGAGA
 ACGGTCCGCCTTGCACTGTTGCCCGCCATCTTTTAAATGGAGAACGTCTC
 AACAGAAGAGCTGATTAACTCCCAGGCCAAGAGCAAGGAGCTGGTGATG
 AAGCTATCCGCTGTAAGCTGAAGATCCTTCAGAAATGATGGCGTTGTTAAC
 AGCCCATGTGCTCGACCAAGAAAAACTAGCCATGCCCTCTTCTTCTGGG
 GGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGACCAGAAAGGCCA
 AAGAGATCATCCCAAAGGCTGACATCCCCAGTCCCCGGAAGGAGTTCAGT
 GCCTGTGCCATTGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
 AGAGAATGGTGTGTCCAAGATGTGTGGGTCTATGACACTGTGCATGAGG
 AATGGTCAAAGGCGGCTCCCATGCTCATCGCCAGGTTTGGCCATGGCTCT
 GCTGAGCTGAAACACTGTCTCTACGTTGTAGGAGGTCACACTGCAGCAAC
 CGGCTGCCTTCCAGCATCTCCGTCAAGATGAATACATTGTTGTGTTTCT
 CGTTCAACAACAAGACTGATACTGAATGAAGCAGAGCTAATTATGGCGCT
 GGCCCAAGAGTTCCAGATGAGAGTGGTCACAGTGTCCTTGGAAAGAAGT
 CTTTCCCCAGTATTGTCAGGATGATCAGCGGTGCTTCCATGTTAGTTAGT
 ATGCATGGAGCTCAGCTTATCACCCTCGCTCTTCCCTCCCTAGAGGTGCTGC
 TGTCGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACACCAT
 ATAAAACCCTTGCCCTCCCTTCCAGGCATGGCCCTTCACTATGTCTCTTGG
 AGGAACACTAAGGAGGAGAACACTGTCACCCACCCAGACAGGCCCTGGGA
 GCAAGGAGGCAATTGCTCACTTGGAAAAAGAGGAGCAGGAGCGAATCCTGG
 CAAGCAAGGACGTCCCCAGGCACCTTTGCTGCCGCAATCCAGAGTGGCTC

TTCAGGATATAACCAGGACACTTTGGTGGACATCCCATCCTTCTGGAAGT
CCTCAA---AGAAGGCATGAAG---ACTAAGCCCAGCTTAAAAA---AG
CCAAGGTAGCCAGCATGGTCCATCCGGGCCGGGTCAGAGAACCCAAATGT
CACACTTCAGTACAAACCTAATGAGGCTAGACTCACAGTCTCTTGGCA
GATCCCGTGAATCTGAAATTCCTGAAAGTGAGAGAGGTGAAGTATGAAG
TGTGGATCCAGAAAAAGACAGCAGCAAGGGGACCCTGGAGGATCAAATC
ATCCAGGCGAACCCGGCACTGGAGGCCTTTGGCAACGCCAAAACGGTGAG
AAATGACAACCTCATCTCGTTTTGGAAAATTTATCCGAATCCATTTTGGCA
CGAGCGGCAAGCTGTCATCTGCCGACATTGAGACATACCTGCTGGAGAAG
TCACGAGTCACCTTTCAGCTGAAGTCCGAAAGGAACTACCATATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGTTGGACATGCTGCTGATCA
CCAACAATCCGTACGACTACTCTTACATCTCCCAAGGAGAGGTAACAGTC
GCCTCCATCAATGACTCAGAGGAGCTCATGGCCACTGATGGTGCCTTTGA
TGTGCTTGGCTTCACTCCAGAGGAGAAGATGAGTGTCTACAAGCTGACCG
GTGCTATCATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAGCGCGAG
GAGCAGGCTGAACCTGACGGAACCGAGGCTGCTGATAAATCAGCTTACCT
AATGGGGCTGAACTCTGCTGATCTCATCAAAGGGCTGTGTCAACCCCGAG
TGAAGGTAGGAAATGAATATGTCACAAAAGGGCAGAGTGTGGACCAAGTC
TATTATCCCAACAAAAGAGGCCTTTAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCCGCCACAG
CGGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACGCCT
GTTCTACTGGAGCACCTCAAGAGCCACTCCGAAAAGTCCCTCGGGTGGTGC
CAAGGAGAAAAAACACCCCGTGCACCCTGTGACCGGCGTTTTCTACACGC
GGAAGGATGTGAGACGACACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTATGCCAGTACTGTGCCAGCGCTTTGGCAGGAAAGACCATCTGACCCG
CCATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGATATGCTGGGTCTTTTAGCCACGGGGTCTCCACCCTGCTCTGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGCATGGGGCCCAACAAAGACCC
CATGATGGGCAAACCATTCCCTAGCGGGGCACCTTTTCCGATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCGAATTCTGGGGTGGGT
CACCCA-----CATCCATCCCTGATGCCAGCTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTCACATGGAATATCTCATTATATGCCTCTTTCTCATTCA
TGGGATGTTTACAAATCAGTGATGGGTGCAATATGTTGAACCTGCTGGCA
AGTAACTCTCCAAGTGTTCATACGCTGTGACCCAGCAGAAATACTTTAG
TAACTACAGTCCAGTGATTGGGTTTTATATTTATGAACCTATTGAGTACT
GGAATCCACGGTGCAGGAGCACCTGAAGACTCTGAGTCACGGTTTCAAC
AAGATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTAGTGAATGT
GAGTGCATCAACTAAGAACGACTTCATCACCATCCTTAAGGGTTCCTTCC
TGCGCAGCCCAGAGTACCAGCACTTCACTGAGGACATCATATTTCCAAG
A---ACAGCGAGACTG-----ATGAATACGACATTATTGCCTCAAGAAT
GTATTTGGTAGCACGGACCACTGAGAAGAAGCGTGAGGAGGTGGTGGAGC
TTTTGGAAAAGTTGCGTCCCTTGATGCTGATCAACAGCATCAAATTCATT
GCCTTCAATCCTACGTTTGTGTTTCATGGATCGGTACAGCTCCTCTGTCAT
CTCACCAATTCTGACCTCAGGCTTCAGTGTACTCACCATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGAAACTTTTGGCTCATCCTCACT
GTTACGTCCTGTGGAGCTGGGCGTTTTGGGTTTGGTGGTGGTGGTGGTGGT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCCCATCCTATAATGTTGGCA
TTATTAATGGGGTCTCTGGGTGGTCTTCCACAGTGGATGATGCCCCAGCT
GACACCATCACTCGGCGCTTTCGCTATGATGTGGCACTGGTGTCTGCTTT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGTGCCTGCACATCAGGCTTTAGTGTGATGATCAAGGAATGTTGC
GATGGCATGGGTGATGTCAGCGAGAAGCATGGCGGAGGACCGGTTGTTCC
CGAGAAGGCTGTTTCGTTTTTCTTTCATATTATGTCGTCTGTCTGTCCTGG

CAGAGGATGAGGAG-----GAGGAG
GTTACCATTTTACCCGAGCCAAAGCCAAATTCAGAACTGTCCTGTAAGCC
TCTTTGCCTGATGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCTG
TCTTGGGGCCTATAGTTGCAGAGCGTAACGCAATGAAAGAAAGCAGGCTT
ATCCTATCTATAGGTGGCCTGCCTCGCTCCTTTTCGCTTCCACTTCAGGGG
CACGGGATATGATGAGAAGATGGTGCCTGAGATGGAGGGGCTGGAGGCCT
CTGGGTCCACATACATCTGCACTCTATGTGACTCCAGTCGTGCAGAGGCC
TCTCAAACATGGTGCTGCACTCCATCACCCGCAATCATGAAGAGAACCT
AGAACGCTATGAAATATGGAGAACCAACCCCTTTTTTGTAGTCCGTAGATG
AGCTGCGTGACAGAGTCAAAGGGGTGTCTGCAAAGCCCTTCTTGGAGACG
CAGCCCACGCTAGATGCATTGCACTGTGACATTGGCAATGCTACTGAATT
CTACAAAATCTTCCAGGACGAGATTGGAGAAGTGTACAAAAGGT---CA
AC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGCTGAAGCTTAAACCAGTAATGAGGATGAATGGGAA
CTACGCCCCGAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGAAGGGAGGCCCTGAGGGAGCTTATGCGGCTC
TACCTCAAATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAGTG
CCCTGACCAGCTATGCCGCTACAGTTTTAACTCTCAACACTTTGCTGACC
TTCTCTCCACTGCCTTCAAATATAGGTACAATGGAAAGATAACCAATTAT
CTGCACAAGACCCTGGCCCATGTACCTGAAATTATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAAGGGAATGAGTCAGCAAACAAATCTTATA
CCATCGATATGGGTCCCCTGGGGCCCCGGTGGAAGGAGAACCCACAGCCT
TTCTCCTGCTCCATTGAGGACCCCCACCAAACAGACTAAATTCAAGGGCAT
CAAGACCTACATTTTCATACCGGGTGACGCCGAGCCACACAGGGCATCCTG
TCTACAGACGCTACAAACACTTTGACTGGCTGTACAACCGTTTGCTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCCCGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTCATTGAGAAGCGCAAGAGGCGACTGATACTGT
GGATGAACCATATGACCAGTCAACCAGTCCTCTCCAGTATGAAGCCTTT
GAGCACTTTCTGATGTGTGCCGATGACAAACAGTGAAACTGGGCAAGAG
ACGGGCAGAAAAGGACGAGATGGTGGGCGCCACTTCATGCTGACCCTCC
AAATCCCCAACGAGCACCAGGACCTTCAGGATGTTGAAGAGCGTGTAGAC
AACTTCAAGGCCTTTGCTAGAAAAGATGGACGACAGCGTGATGCAGCTGAC
ACATGTTGCGTCCGAGCTCGTGCGTAAACACCTGGGTGGATTTCAGGAAGG
AGTTTCAGCGCCTTGAAATTCCTTCCAGTCTATCAGCCAGGCATTCATG
TTGGACCCTCCCTATAGGTGAGATGTACTCAACAACGCCATCTCCATNNNNNNNNNCG
TTCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAG
CGCCCTACTATTTCTGTTGGACCTGTGCGCCTCTGACATCCTGCGCTCC
GCCATCTGCTTCCCCTTTGTCTTACCTCAGTCAAGAATGGATCTGCCTG
GACCTATGGCACGTTGACCTGTAAAGTGATCGCATTCCTGGGTGTGCTCT
CCTGTTTTACACGGCGTTCATGCTATTCTGCGTCAGCGTCACCCGTTAC
CTGGCCATTGCGCATCACCGTTTCTACACCAAGAGGCTCACTTTCTGGAC
GTGTTTGGCTGTGATCTGCATGGTGTGGACGTTGTCTGTGGCTATGGCGT
TCCCACCGGTGCTAGATGTAGGGACGTA CTCTTTTATCCGGGAGGAGGAC
CAGTGCACATTCCAGCACCGTTCTTCAGGGCAAATGATTCACTGGGCTT
CATGCTCCTGCTGGCACTCATCCTCCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTTTTCGTCCACGACCGTCGAAAGATGAAGCCCGTCCAGTTC
GTGCTGCGGTGACCCAGAACTGGACCTTCCACGGCCCAGGTGCCAGCGG
GCAGGCGGACGCAACTGGCTGGCTGGATTTGGTAGAGGCCCCACCCCGC
CTACTTTGCTGGGCATCCGGCAGAACAGCAATGCAGCGGGCCGACGGCGT
CTACTGGTATTGGATGAATTCAAAACCTGAGAAGAGGATTAGTAGGATGTT
CTACATCATGACGTTTTTCTTCCCTGGCACTGTGGGGGCCATACCTGGTGC
CCTGCTACTGGCGGGTGTGTTGCAAAGGGGCCCGTTGTCCCTGGAGGCTAC

CTGACAGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTT
CATCTGCATCTTCTCCAACAGAGAGGCCAAATCTCGCTTTCACCCCTGGCG
TGGGGACTGGGCTTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGC
TTGCTATCCCCGCAGCAAACCGAGGAGCCAGTGTGCCACCCCCCGCA
GCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCCT
CGGCATACGACGCCGCT-----GATTTTGCCGGTAACGCGGCCACC
TTACTGTCCTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCCTGCC
GACTGCAGGCTGCTCCAACCGGCTCTTGGCTATTACGCAGACCCGTCTG
---GCTGG---GGAGGACGCACGCCGCCGAGTATTGTGGTGTAAATAGT
AAATCCAGCTCGGTCTTTTCTGCTGGCCACTAATCCATCGGTGGCAG
AACAGGCA---CC---AGCTACCTGT-----CCGAGGA---GGGA-
--GACTC---CATCACGACAGAGAGGTCACCC---AT---CGGCGGCTCG
GAAGAG---ACCAAACCAAAGACATGAC---ATCTGA---ATCGAGCTG
GATAGAG---ACGCCGTCCTCCATTAAGTCCATCGATTGAGCGATTCTG
GTATCTTTG---AACAGGCCAAGCGGAGAAGAATCTCACCTTCTGCAACA
CCA-----GTTTCAGAGACAGTGTCCCCGTTAAAGTCTGAGCATCA
CTCAACAGGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGT
TCGCGGATGGGATGGGCGCTTCAAATAAACCACAGCTCCCACGATATT
GGCTCCGG---ACAGACGGCGTTTTCTCCAGGCT---CCCGGCTAC--
-GCAGCAGCTGCCTTGGGA---CACCATCA-----CCACCCGACTCACG
TTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTC
TTCAGAAATCGGGTTTTGGGGACGCCACCGG-----GGCGCA
GCACAGTCTGTTTCGCTC-----CGGAAGTTT---C-----GCAG
GGCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCAGGGCTC
CACGAG---CAAGCAGCAAGCCATGCCTCTTCCAACGTGGTCAACAGCCA
GATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCCGACCAGTATG
GCCACGTTACAAGCCCAAGGT---CTGACCACTATGCTTCAACCCAGCTG
CACGGCTATGGCCCCATGAACATGAATATGGCCGCA---CACCATGGAGC
AGGGCCCTTCTTTGATACATGAGGCAGCCGATCAAACAAGAGCTTATCT
GCAAGTGGATCGAACCGGAGCAGCTGACGAATCCCAAAAAGTCGTGTAAC
AAAACTTTTAGCACGATGCACGAGCTTGTGACCCATCTAACGGTGGAGCA
TGTGGGGGGACCAGAGCAGACCAACCACGTTTGCTTCTGGGAGGACTGCT
CCAGAGAAGGAAAGCCATTCAAAGCCAAATACAAACTTGTAATCATATC
AGAGTACACACCGGTGAAAAGCCCTTCCGTGTCCGTTCCCCGGCTGTGG
CAA

>Paraulopus oblongus

AGTCTTCTTATCCGTGCCGAACCTGAGCCAACCCGGGATCCCTCTGGGTGA
CGACCAGATTTATAATGTAATTGTTACTGCACACGCTTTCGTAATAATTT
TTTTTATAGTTATAACCCCTAATAATTGGGGGCTTTGGAAACTGACTAATT
CCTTTAATGATCGGGGCCCCGACATGGCATTCCCCGAATAAATAATAT
GAGCTTCTGGCTCCTCCCCCCTCATTCCTTCTTCTTTTAGCCTCTTCTG
GTGTTGAGGCCGGGGCCGAACCGGGTGAACCTGTCTACCCCTCTTGCT
GGCAATTTAGCCCATGCCGGAGCCTCTGTAGACCTAACTATTTTTTCATT
ACATTTGGCTGGTATTTCTTCTATTTAGGGGCTATTAATTTTATTA
CAATTATCAATATGAAACCCCTGCCATGTACAGTACCAAACACCCTTA
TTTGTATGAGCAGTCTTATTACGGCTGTGCTGCTTCTTCTCTCTTCC
CGTCTTAGCAGCAGGGATTACTATGCTCCTCACAGACCGAAACCTCAACA
CAACCTTTTTTGACCCGGCGGGAGGAGGGACCCCATTTCTTTATCAACAC
CTCTTCTGGTTCTTCGGCCACCCTGAAGTTTACATCCTTATTCTTCCCGG
CTTCGGGATAATTTCCACATCGTAGCCTATTACGCCGAAAAAAGAGC
CTTTTGGTTATATGGGCATGGTCTGAGCTATAATGGCCATCGGACTACTT
GGTTTTATCGTATGAGCTCACACATGTTTACAGTAGGAATAGACGTTGA
CACACGGCCTAATTCCTAGAGAGGAACCTTACCCGTCCAATTGCCCTGG

CATGCTGCTACTGTCAGACGCCCACCAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACTGAGGAT
TTCTCCAGCTTCCCAAAGACATGGTGGTGCAGCTTCTGTCCCACGAGGA
GCTGGAGACGGAAGATGAGAGACTGGTTTACGAGGCTTCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGTCACCTGCCAGAGCTGCTGAGA
ACCGTGCCTCTGGCCTTGCTTCCCTGCCATCTTCCCTCATGGAGAACGTCTC
TACAGAGGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGTTGGTGGACG
AGGCCATCCGGTGCAAGCTGAAGATCCTGCAGAATGACGGTGTGGTGAAC
AGTCCCTGTGCCCGGCCAGAAAGACCAGCCATGCCCTTTTCCCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCTAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGCTGTAAGGTCTACGTCACAGGGGGAA--GGGGTCTC-
AGAGAACGGCGTGTCTAAAGACGTGTGGGTCTACGACACCGTCCATGAGG
AGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTTAAACACTGCCTCTATGTGGTTGGAGGACACACAGCAGCTAC
TGGTTGCCTCCCAGCCTCTCCCTCTGGATGAGTACATTGTAGTGTTCAGT
CGTTCTACAACAAGGCTGATTCTAAATGAAGCTGAGCTGATCCTGGTCCCT
GGCACAAGAGTTTTCAGATGAGGGTGGTTACAGTGTCCCTGGAGGAACAGT
CTTTTCCCAGCATCGTCCAGGTGATCAGCAAGGCCCTCCATGTTGGTTAGT
ATGCATGGAGCTCAACTAGTCACCTCACTTTTTCTCCCTAGAGGAGCTGC
TGTGGTGGAGCTCTTCCCCTATGCTGTGAACCCAGAACAATACACCCCAT
ACAAAACCTTAGCCTCCTTACCAGGCATGGATCTTCAATACGCATCCTGG
AGGAACACTATTGAGGAGAACAACACTGTCACCCACCCAGACAGACCCCTGGGA
CCAAGGAGGCATTGCCATTTGGAGAAAGAGGAGCAGGAGAGAATCCTAG
CCAGCACGGACGTCCCAGGCACCTGTGCTGCCGAAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTCTGGTGGACATCCCCCTCCTTCCCTGGAAGC
TCTCAA---GGAGGGACTGAAG---ATGAGGCCAAGCTTGAAGAA---GT
CCAAGCCAGCCAGCACAGTTACACCAGGCCGGGTTCGAGATCCCCAATGC
CAGACATCAGTCCAAGCCACCAATGAAGCTAAGCTTACGGTATCCTGGCA
GATCCCATGGAATCTTAAGTACCTGAAGGTGCGAGAGGTGAAGTACGA-G
TGTGGATCCGAAAAGGGATTCAACCAAGGGAACCCCTGGAGGATCAAATA
ATTCAGGCAAWCCCTGCACTGGAGGCTTTTGGTAATGCCAAAACATTGAG
GAATGATAATTTCATCCCCTTTTGGAAAATTCATCAGAATTCACTTCGGAA
CCAGTGGTAAACTGTCTCTGCGGACATTGAGACATACCTGCTGGAGAAG
TCACGGGTACCTTTCAGCTTAAAGTCCGAGAGGAACCTACCACATCTTCTT
CCAGATTCTGTCCAATCAAAGCCAGAGCTGTTGGATATGCTGTTGATCA
CCAACAACCCCTATGACTACTCCTACATCTCCAAGGGGAAGTAACTGTA
GCATCCATCAATGATTCAGAGGAGCTGATGGCCACTGACAGTGCCTTTGA
TGTGCTGGGCTTCACTCAAGAGGAGAAGATGGGAGTCTACAAGTTGACGG
GGGCTATCATGCACTATGGCAACATGAGGTTCAAGCAAAGCAGCGTGAG
GAGCAGGCTGAGCCTGATGGTACAGAAGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCAGCAGACCTCATCAAAGGACTCTGCCATCCAAGAG
TCAAGGTAGGAAATGAGTATGTCACATAAAGGCCAGAGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCGAAGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGGTACAAGCGCCATGTGGCCATGCACTCCGCCACGG
CGGGGGACCTCACCTGCAAAGTGTGCATGCAGAGTTACGAGAGCACACCC
GTGCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCCTCGGGCGGCGC
CAAGGAGAAGAAGCACCCATGCGACCACTGTGACCGTTCGCTTCTACACGC
GGAAGGACGTACGGCGGCACATGGTTCGTCACACGGGCGCAAAGGACTTC
CTGTGCCAATACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACACG
GCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGATATGTTGGGTCTCCTGGGCTCCGGATCGCCGCCTTGTCTGGTC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGCCCAATAAAGACCC

ACCACGGAGCCGGGGCCTTTTTTCGGTACATGAGGCAGCCGATCAAGCAA
GAGTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAACCCCAAAA
GTCGTGCAACAAAACTTTTAGCACCATGCACGAGCTGGTGACCCACCTGA
CGGTGGAGCACGTCCGGGGTCCCGAGCAGTCCAACCACATCTGCTTCTGG
GAGGACTGCGCCCCGGAGGGGAAGCCCTTCAAAGCCAAATACAAAACCTGT
GAATCATATCCGCGTGACACCCGGAGAAAAGCCCTTCCCTTGTCCGTTCC
CCGGCT-----

>Pempheris scchomburgkii

-----TTCCTTGAAAGAAACCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCTCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCAGCCATTTGCAAGACCGAGGAC
TTCCCTCAAACCTGCCCAAAGATATGGTGGTGAACCTTTTGTACACGAAGA
GCTAGAGACAGAAGACGAGAGACTAGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAAGAGGCACCTGCCATCTTCCAGAGCTCCTGAGA
ACAGTGCCTGGCCCTGCTTCCCTGCCATCTTCTCATGGAGAACGTTTC
TACGGAAGAGCTGATCAATGCCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGTGTGTTAAC
AGTCCGTGTGCTCGACCAAGAAAACCCAGCCATGCCCTCTTCTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCAGACATTCAGTCCAGGAAGGAGTTCAGC
GCCTGTGCAATCCGGCTGCAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAGATGTGTGGGTCTACGACACGGTCCACGAGG
AATGGTCAAAGGCTGCACCCATGCTTATTGCCAGGTTTGGCCATGGCTCG
GCAGAGCTGAAACACTGCCTCTACGTTGTGCGGAGGCCACACCGCAGCAAC
TGGCTGCCCTCCCGCTTCTCCTTCTGGATGAATACATTGTTGTGTTTCTCAGT
CGTTCAACAACAAGGCTGATTCTGAATGAAGCTGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACGGTGTCCCTGGAAGACCAGT
CTTTCCCGAGTATCGTCCAGGTGATAAGCGGCGCTCCATGTTGGTTCAGT
ATGCATGGAGCTCAGCTCATCACCTCACTCTTCCCTCCCCAGAGGAGCCGT
GGTGGTGGAGCTGTTCCCTTTGTGTGAACCCGGAGCAGTACACCCCAT
ATAAGACGCTTGCCTCTTCCAGGCATGGATCTTCACTATGTCTCCTGG
AGGAACACGAAGGAGGAGAACACCGTCAACCCAGACAGACCTTGGGA
ACAAGGGGGCATTGTTCACTTGGAGAAAGAGGAACAGGAGCGAATACTGG
CGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAATCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTCTGGTGGACATCCCTTCTTTTGTGGATGT
CCTCAA--AGAGGGCATGAAG--ACAAAACCTAGCCTGAAAAA--GT
CGAAGGTTGCCAGCATAGTCCATCCTGGCCGGGTGAGAGAACCTCAGTGT

CAGCTATGGGCATGGGCTGCCACANN
NNNNNNNNNNNNNNNNNNNNNNNGTGAATCTGCTAGCAAGTAACTCTCC
AAGTGTTCGTATGCTCTTACCCAGCAGAAATACTTCAGTAACTACAGTC
CTGTGATTGGGTTTTACATTTATGAGCCAATTGAGTACTGGAACCAACG
GTGCAGGAGCATCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTG
GATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCATCGA
CCAAGAGTGAACATTCATCACCATCCTCAAGGGCTCCTCCTGCGCAGCCCG
GAGTACCAGCACTTCACAGAGGACATCATATTTCTCAAGA---ACCGTGA
GACCG-----ATGAGTACGACATCATCGCTTCGCGGATGTACCTGGTGG
CACGAACCACGGAGAAGAAACGCGAGGAGGTGGTGGAGCTTCTGGAGAAG
CTTCGTCCGTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCC
TACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCATCTCACCATCC
TGACCTCAGGCTTCAGCGTACTCACTATTCTCATCCTTACTTTTTCTCCTG
GTCATCAACCCCTTGGGAACTTCTGNNN
NNNTCTTGCAATGTAGGCAT
TATTAAT
GGGGTCTCTGGATGGGCTTCTCTGTGCTGACTCCCCAGCTGACACCAT
CACTCGGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCAATAAAGGATC
TGGAGGAGGACATCATGGAGGGCTGAGAGAGAGTGGGATGGAAGACAGC
GCGTGTCTCTCAGGCTTCAGTGTGATGATCAAGGAATCTTGCGATGGCAT
GGGCGATGTGAGCAGGAGAAGCACGGTGGAGGACCAGTTGTTCTGAGAAGG
CTGTACGTTTTCTCTTCACTGTTATGTGAGTCTCTGTCTGAGAGGAT
GAGGAG-----GAAGCGGTTACCAT
CTTCACAGAGCCAAAGCCAAACTCAGAGCTGTCTGTAAGCCCTTTGCC
TAATGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCTGTCTGGGG
CCTATAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGACTCATCCTGTC
CTTGGGCGGACTACCTCGCTCCCTCCGCTTTCACTTCAGAGGCACGGGAT
ACGATGAGAAGATGGTGCCTGAGATGGAAGCCCTCGAGGCTCAGGGTCT
TCCACATCTGCACTCTGTGACTCCAGTCCGGCAGAGGCTCTGAAAA
CATGGTGTCTCACTCAGTACCCGCAATCATGATGAGAACCTAGAGCGTT
ACGAAATATGGAGAACCAACCCCTTTCTGAGTCTGTAGATGAGCTGCCA
GACAGAGTCAAAGGGTCTCTGCCAAGCCCTTCATGGAGACCCATCCAC
CTTAGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTCTACAAA
TCTTCCAGGATGAGATCGGGGAGGTTTACAAAAGGT---CAAC---CC
AGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAG
GAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGAACTATGCCC
GCAAGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGAGCTGGTGGCC
TCAGAGGAGAGGAGGGAAGCCCTGAGGGAGCTTATGAGGCTTACCTCCA
GATGAAGCCTGTGTGGCGTGCCACCTGCCCCGCCAAGGAGTGCCCCGACC
AGCTGTGCCGTACAGTTTTAACTCCAGCACTTCGCTGACCTCCTCTCC
ACTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACCTGCACAA
GACCTTGGCCANN
NNNNNNNNNNNNNNNTCGTACACCATCGACATGGGCCCTTGGGTCCCCTGTG
GAAGGAGAGCCACAGCCCTTCTCTGCTCCATCGAAGACCCACGAAAC
AGACAAAGTTCAAGGGCATCAAGACGTATATTTTCGTACCGGGTCACGCCG
AGCCACACGGGGCGTCCCGTCTACAGGCGCTACAAACACTTTGACTGGCT
GTACAACCGCTTACTACACAAGTTCACTGTGATCTCAGTTCCTCACCTGC
CTGAGAAGCAGGCCACGGGCGGTTTTGAGGAAGACTTCATCGAGAAGCGC
AAGAGGCGACTGATTTTGTGGATGAACCACATGACCAGTACCCGGTCTCT
CTCCAGTATGAAGGCTTCGAGCACTTTCTGATGTGCGCTGATGACAAGC
AGTGGAAGTGGGCAAGAGACGGGCGGAGAAGGACGAGATGGTGGGAGCC
CATTTTCATGCTGACCTGACGATCCCCAACGAGCACCAGGACCTTCAGGA
TGTGGAGGARCGGATCGACTCTTTCAAGGCCCTTTGCCAAGAAAATGGATG

TCGTCTCGTTTTGGAAAATTCATTCGAATTCACTTCGGTACAAGCGGCAA
GCTGTCTGCTGACATCGAGACGTACCTGCTGGAGAAGTCACGTGTCA
CCTTTCAGCTCAAGGCTGAGAGGAACACCACATCTTCTATCAGATCCTG
TCCAATCAGAAGCCAGAGCTCCTGGACATGCTGCTGATCACCAACAACCC
GTACGACTACTCTACATCTCCCAAGGAGAGGTAACGTGTCGCCTCCATCA
ACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGATGTGCTCGGC
TTCACTCCAGACGAGAAGATGGGCGTCTATAAACTGACCGGCGCCATTAT
GCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGGGG
AGCCGGACGGGACGGAGGCTGCTGATAAATCAGCTTACCTAATGGGGCTG
AACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAGTCAAGGTAGG
AAATGAATACGTCACCAAAGGCCAAAGTGTGGATCAAGTCTACTACNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNGGAA
GCACTACAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTG
CCACGGCAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGC
ACACCCGTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGG
TGGCACCAGGAGAAAAAACACCCGTGCGACCACTGTGACCGTCTGTTTTCT
ACACGCGGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAG
GACTTCTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCT
GACACGGCACGTGAAGAAAAGCCACTCGCAGGAGCTGCTGAAGATCAAGA
CGGAGCCTCCTGATATGTTAGGTCTTTTAGCGTCGGGGTACCACCCTGC
TCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAA
AGACCCCATGATGGGCAAACCGTTCGCCAGTGGGGCCCCCTTCGGATGG
GTATGTACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGG
GTGGGTCACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGC
AGCTATGGGCATGGGGTGCCACANN
NNNNNNNNNNNNNNNNNNNGTGAACCTGCTGGCTAGTAACTCTCCG
AGTGTTCGTCACGCTCTGACCCAGCAGAAATACTTCAGTAACTACAGTCC
CGTGATTGGGTTTTACATTTACGAGCCCATCGAGTACTGGAACCTCAACGG
TGCAGGAGCACCTGAAGACTCTGAGTCATGGATTCAACAAGATCTCCTGG
ATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCAAC
CAAGAGCGACTTCATCACCATCCTCAAGGGTCCCTCCTGCGCAGCCCGG
AGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA--ACCGCGAG
ACTG-----ATGAGTACGACATTATCGCCTCACGGATGTACTTGGTGGC
GCGGACGACAGAGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTGGAGAAGC
TTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCT
ACGTTTGTGTTTATGACCGCTACAGCTCCTCTGTCTATCTCACCCATCCT
GACCTCAGGCTTACGCTACTCACAATCCTCATCTCACTTTCTTCTGCTG
TCATCAACCCCTTGGGAAACTTCTGNNN
NNNTCTTGCAATGTTGGCATT
ATTAATG
GACTCTCTGGATGGGCTTCTCGGTGGATGACTCCCCAGCTGACACCATC
ACTCGTCCGTTTTCGCTATGATGTGGCACTGGTGTGTCAGCAATAAAGGATCT
GGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGACAGTA
CGTGCACCTCAGGCTCAGTGTGATGATCAAGGAATCTTGTGATGGCATG
GGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTTCTGAGAAGGC
GGTACGTTTCTCTTCACTGTTATGTCTGTCTCTGTCCTGGCAGACGAGG
AGGAG-----GAAGAGGTTACCATC
TTCACCGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAAGCCCCTTTGCCT
GACGTTTGTGGATGAGTCAAGCATGAGACACTCACAGCCGTCTGGAGC
CTTTAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCTATCC
GTGGGTGGACTACCTCGCTCCTTCCGCTTTCACTTCAGAGGCACGGGATA
CGATGAAAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCTCGGGGTCCT
CCTATATCTGCACTCTTTGTGACTCCAGTCCGGGCAGAAGCCTCTCAAAC

ATGGTGCTACACTCCGTCACCCGCAGTCATGAAGAGAACCTAGAACGTTA
CGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAGCTGCGAG
ACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCCATCCCACG
CTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTCTACAAAAT
CTTCCAGGATGAGATCGGGGAAGTGTACCAAAGGT---CAAC---CCCA
GCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCTGAGG
AAGAAGGTAAAGCTTAAACCGGTAATGAGGATGAA TGGGAACTATGCCCCG
CAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGCGAGCTGGTGCCCT
CAGAGGGGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTCTACCTCCAG
ATGAAGCCTGTGTGGCGGCCACCTGCCAGCCAAGGAGTGCCCCGACCA
GCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACCTCCTCTCCT
CTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACCTGCACAAG
ACCTTGGCCATNN
NNNNNNNNNNNNNNNTCGTACACCATCGACATGGGGCCCTTGGGTCCCCGGTG
GAAGGAGAGCCACAGCCTTTCTCCTGCTCCATTGAAGACCCACAAAAC
AGACAAAGTTCAAAGGCATCAAGACGTACATTTCTGACCGGGTCACGCCG
AGCCACACAGGGCATCCCCTTACAGGCGCTACAAACACTTTGACTGGCT
GTACAACCGCTTACTGCACAAGTTCACTGTGATCTCCGTGCCTCACCTGC
CTGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTCATCGAGAAGCGT
AAGAGGCGGCTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCT
CTCCCAGTATGAAGGCTTTGAGCACTTTCTGATGTGCGCTGATGACAAGC
AGTGAAACTGGGCAAGAGACGGGCGGAGAAGGACGAGATGGTGGGTGCC
CATTTTCATGCTGACCCTCCAGATCCCCTAATGAGCACCAGGACCTYCAGGA
TG TAGAGGAGCGGGTGC ACTCCTTCAAGGCCTTTGCTAAGAAAATGGATG
ACAGCGTGATGCAGCTCACGCACGTTGCCTCGGAGCTGGTGCCTAAGCAC
CTGGGTGGGTT CAGGAAGGAGTTCAGCGGCTGGGAAACGCCTTCCAGTC
TATCAGCCAGGCCCTCATGCTGGACCCTCCCCACAGCTCAGAAACCTTCA
ACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGTTTCATCATGGGAGTCGG
TGTGGTCCGAAAC
CTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCGCC
CTACTATTTCTGCTGGACCTGTGCGCCTCTGATATTTCTGCGCTCCGCCA
TCTGCTTCCCCTTTGTCTTACCTCGGTCAAGAATGGTTCTGCTGGACC
TACGGCACGCTGACCTGCAAAGTGATCGCCTTCTGGGTGTGCTCTCCTG
TTTCCACACGGCGTTATGCTATTCTGTGTCAGTGTCACTCGCTACCTGG
CCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGT
CTAGCTGT CATCTGCATGGTGTGGACGTTGT CAGTGGCTATGGCGTTCCC
GCCGGTGCTAGACGTAGGGACATACTCTTTTATCCGGGAGGAGGACCAGT
GCACATTCAGCACCGTTCTTCCAGGGCGAATGATTGCTGGGCTTCATG
CTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCT
CATCTTCTTCGTCCACGACCGTTCGAAAGATGAAGCCTGTCCAGTTCGTGC
CTGCTGTCAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGGCAG
GCGGCGGCCAACTGGCTGGCTGGATTGGTTCGAGGCCCCACCCCGCCTAC
TTTGTGCGGCATCCGGCAGAACAGCAACGCAGCGGGCCGCAGGCGTCTAC
TGGTATGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTAC
ATCATGACGTTTTTCTTCTGGCACTGTGGGGGCCCTATCTGGTTCGCCTG
CTACTGGCGGGTGT TGGCAAGGGGCCAGTGGTCCCTGGGGGCTATCTGA
CGGCAGCCGTGTGGATGAGCTTTGCNN
NNNGAGC---
GCAGCGTCCCCTCGGCA
ACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTGCCACCCCC
CCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGC
TGCTTCGGCATAACGACGCCGCT-----GATTTCCGGGTAACGCGG
CCACCTTGCTGTCTTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCC

AGGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGACGGCGTTGTTAAC
AGCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCTCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCAAAGGCGGACATTTCCAGCCCAAGGAAGGAATTCAGC
GCCTGTGCCATTGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGCGTGTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAAGCGGCACCCATGCTGATTGCGAGGTTTGGTCATGGCTCC
GCAGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTCCCTGCTTCTCCATCCGGATGAATACATMGTCGTGTTTCA
CGTTCAACAACAAGGCTGATACTGAACGAAGCCGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACAGTTTCCCTTGAGGAGCAAT
CTTTCCCCAGCATTGTCCAGGTGATCAGCGGCGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTTTGCTGTGAACTCAGAGCAGTACACCCCAT
ATAAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTTCATTATGTTTCCCTGG
AGGAACACTCTGGAGGAGAACACCGTCACCCATCCAGAYAGACCCCTGGGA
ACAAGGAGGCATCGCTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGA
CCAGCAAAGACGTCCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTAGACATCCCTTCCCTTTCTGGAAGT
CCTCAA---GGAGGGAATGAAG---ACCAAGCCAAGCTTGAAGAA---GT
CCAAACCAGCCAGTACAGTCCATCCGGGCCGGGTCAGAGAAGCCAGTGT
CAGACCTCAGTACAAACCACCAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCGTGGAATCTGAAATACCTGAAAGTAAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAGAGACACCAGCAAGGGAACCTCTGGAGGATCAAATC
ATCCAGGCAAACCCGGCGCTGGAGGCCTTCGAAATGCCAAAACGCTGAG
AAACGACAATTCGTCCTCGTTTTTGGAAAGTTCATCCGAATTCACTTTGGAA
ACAGTGGCAAGCTGTCTCGTCCGCTGACGTTGAGACGTACCTGCTGGAGAAG
TCTCGTGTACCTTTCAGCTCAAGGCTGAAAGGAACATCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTATTAATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTC
GCCTCCATCAATGACTCAGAGGAGCTGATGGCCACCGACAGTGCCTTTGA
TGTGCTCGGCTTCACTCCAGAGGAGAAGATGGGCGTCTACAAGCTGACCG
GTGCTATCATGCACCACGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCTGAGCCTGATGGGACAGAGGCTGCTGATAAATCAGCTTACTT
GATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCAGAG
TCAAAGGTAGGAAATGAGTATGTTACCAAAGGCCAGAGTGTGGACCAAGTC
TACTACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGGGATATA
AGCGCCATGTGGCC
ATGCACTCTGCCACGGCGGGGACCTCACCTGTAAAGTGTGCATGCAGAG
CTACGAGAGCACGCCGTTCTCCTGGAGCACCTCAAGAGCCACTCGGGGA
AGTCCTCGGGTGGAGCCAAGGAGAAGAAGCACCCGTGCGACCACTGCGAC
CGCCGTTTCTACACGCGGAAGGATGTGAGACGGCACATGGTGGTCCACAC
GGGCCGAAAGGACTTCCGTGTGCCAGTACTGCGCCCAGCGCTTCGGCAGGA
AGGACCACCTGACCCGCCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTG
AAGATCAAGACGGAGCCTCCTGATATGTTAGGTCTTTTAGCTTCAGGGTC
GCCGCTTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGCGGCATGG
GTCCAACAAGACCCCATGATGGGCAAACCGTTCCCCAGCGGCGCCCCG
TTTCCGATGGGCATGTACAACCCCCACCAC-----CTTCAGGCCATGTC
GAATTCGGGGTGGGTCACCCG-----CACCCGTCCCTGATGCCAGCT
CCCTGTCTGCAGCTATGGGCATGGNNNNNNNNNNNNNNNTATCTCATCTACGCCTCTTTTTCTTT
CATGGGATGTTTACAAATCAGTGATGGATCAAACATTTGTGAACCTGCTGG
CTAGTAACTCTCCAAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTC
AGCAACTACAGTCCCGTGATTGGGTTTTACATTTACGAGCCATTGAGTA

CTGGAACTCCACAGTGCAGGAGCACCTGAGGACTCTGAGTCACGGCTTCA
ACAAGATCTCCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAAT
GTGAGTGCCTCAACCAAGAGTGACTTCATAACCATCCTCAAGGGCTCCTT
CCTGCGCAGCCCAGAGTACCAGCACTTCACTGAGGACATCATATTCCTCA
AGA---ACCGTGAGACTG-----ATGAGTACGACATTATCGCCTCACGC
ATGTATTTGGTGGCACGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGG
GCTTCTGGAGAAGCTTCGCCRTTGATGCTGATCAACAGCATCAAGTTCA
TTGCCCTCAATCCCAGTTTTGTGTTTCATGGACCGCTACAGTTCTCCGTC
ATCTCGCCCATCCTTACCTCAGGCTTCAGCGTGCTTACCATCCTCATCCT
CACTTCTTCTCCTGGTCATCAACCTTTGGGGAACCTTCTGGCTCATCCTGA
CAGTTACGTCCGTGGAGCTGGGTGTCCTGGGTTTGATGGGCTTTCACCAG
TTTGAGTGGCAGCCAGCTCTCAAGAATGTGTCTGCATCTTGGAATGTTGG
CATTATTAATGGGCTCTCTGGATGGACTTCCTCAGTGGATGATTCCCCAG
CTGACACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTAGTGTGAGCA
TTAAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGAT
GGAAGACAGTGCTTGCACCTCAGGCTTCAGTGTTATGATCAAGGAATCTT
GTGATGGCATGGGCGATGTCAGCGAAAAGCACGGTGGAGGACCAGTTATT
CCTGAGAAAGCTGTACGTTTTCTCTATCACTATTATGTCTGTCTCTGTCT
GGCAGATGATGAGGAG-----GAGG
CGGTTACTATCTTACAGAGCCAAAACCAAACCTCAGAACTGTCTGTAAAG
CCCATCTGCCTGATGTTTGTGGATGAATCAGACCATGAGACACTTACCGC
TCTCCTGGGGCCTGTAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGC
TCATCCTTTCTATCGGCGGCCTGCCTCGCTCCTTCCGCTTCCACTTCAGA
GGCACGGGATACGATGAGAAGATGGTGCAGAGATGGAGGGTCTGGAGGT
TTCAGGGTCCAGCTATGTCTGCACTCTGTGTGATTCCAGTCGGGCAGACG
CATCTCAAAACATGGTGCTTACGCCATCACCCGCAGCCATGAAGAGAAC
CTTGAACGTTACGAAATATGGAGAACCAACCCCTTTCCGAGTCTGGAGA
AGAACTGCGGGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGA
CCCAGCCAACGCTGGATGCATTACACTGTGACATTGGCAATGCCACTGAG
TTCTACAAAATCTTCCAGGATGAAATTTGGAGAGGTGTACAAAAGGCC---
CAAT---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCTTAGATA
AACAGCTGCGGAAGAAGTTGAAGCTTAAACCGGTAATGAGGATGAATGGG
AACTATGCCCCGAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTA
GCTGGTGGCCTCAGAGGAAAGGAGGGCCCTGAGGGAGCTTATGAGGC
TATATATCCAGATGAAGCCTGTGTGGCGCTCCACCTGCCAGCCAAGGAG
TGCCCTGACCAGTTGTGTGCTATAGCTTTAACTCCAGAGCTTTGCTGA
CCTCCTCTCCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATT
ACCTGCACAAGACCCTGGCCCATGTCCCTGAAATCATTGAAAGAGATGGA
TCCATTGGAGCCTGGGCCAGTGAGGGGAATGAGTCAGCAAACAAATCATA
CACCATCGATATGGGTCCCCTGGGGCCCCTGTGGAAGGAGAGCCACAGC
CTTTCTCCTGCTCTATTGAAGACCCACAAAACAGACAAAGTTCAAAGGC
ATCAAGACGTACATTTTCGTACCGGGTCACTCCGAGCCACACAGGGCATCC
TGTCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCCTGCTGC
ACAAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACG
GGGCGATTTGAGGAAGACTTTATTGAGAAGCGGAARAGACGACTGATACT
GTGGATGAACCACATGACCAGTCACCCTGTCTCTCYCAGTATGAAGGCT
TTGAGCACTTCTGATGTGTGCTGACGACAAGCAGTGGAAAGCTGGGCAAG
AGACGAGCTGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCCT
CCAGATCCCTARCGAGCACCAGGACCTTCAGGATGTAGAGGAGAGAGTTG
ACACCTTCAAGGCCTTTGCTAAGAAAATGGAYGACAGCGTCATGCAGCTC
ACACATGTTGCCTCGGAGCTGGTGCGAAAGCACCTGGGTGGATTCAGGAA
GGAGTTCAGCGGCTGGGAAATGCCTTCCAGTCTATTAGCCAGGCATTCA
TGCTGGACCCTCCCATAGCTCAGATGCCCTCAACAATGCCATCTCCCAT

NNNNNNNNNNCGTTCCTCAAACCTGACCTCTCTGGGTTTCATCATTTGGAGTTGGTGTGGTT
GGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCG
AGCACCTACTATTTTCTGCTGGACCTGTGTGCCTCCGATATCCTTCGCT
CTGCCATCTGCTTCCCCTTTGTCTTCACCTCGGTCAAGAATGGATCAGCC
TGGACCTATGGCACACTGACCTGCAAAGTGATCGCCTTCCTGGGTGTGCT
CTCCTGTTTCCACACAGCGTTCATGCTATTCTGCGTGAGCGTCACCCGCT
ACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACTTTCTGG
ACCTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGTCAGTGGCTATGGC
GTTCCCGCCGGTACTAGACGTAGGGACGTATTCTTTTATCCGGGAGGAGG
ACCAGTGCACATTCCAGCACCGCTCCTTCAGGGCGAATGATTCGCTGGGC
TTCATGCTCCTGCTGGCGCTCATTTCTCCTGGCCACACAGCTGGTTTACCT
CAAGCTCATCTTCTTCGTCCATGACCGTCGAAAGATGAAGCCTGTCCAGT
TCGTGCCTGCTGTCAGCCAGAACTGGACCTTCCACGGGCCAGGTGCCAGC
GGGCAGGCGGGCCAACTGGCTGGCCGGATTTGGTAGAGGCCCCACCCC
GCCTACTTTGCTGGGTATCCGGCAGAACAGCAACGCAGCGGGCCGCAGGC
GTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATG
TTCTACATCATGACGTTTTTCTTCCCTGGCACTGTGGGGGCCCTATCTGGT
AGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTAGTCCCTGGGGGCT
ACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCT
TTCATCTGCATCTTCTCCAACAGGGAGNNNNNNNCTCGTTTTACCCCTGGCGTGGGG
ACTGGTCCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGCT
ATCCCCGCAGCAAAACGAGGAGCCACTGTTGCCACCCCCCGCAGCGAT
GGTTTGTACCC---CTGCCAACACCGACTGGACTTTGCTGCCCTCGGCA
TACGACGCCGCT-----GATTCGCCCGGTAACGCGGCCACCTTGCT
GTCCCTACGCAGCGGCCGGAGTGAAAGCTC-----TCCCTTGCCGACTG
CAGGCTGCTCCAACCGCCTCTTGGCTATTACGCAGACCCGTCAG---GC
TGG---GGAGGACGCACGCCGCCGCAATACTGTGGCGTAAATAGCAAACC
CAGCTCGGTCTTTTCTGCTGGCCCGCTAACTCTATCGGCGGCAGAGCAG
GCA---CC---AACTACCTGG-----TCGAGGA---GGGA---GAC
TC---CATAGCGACGGAGAGGTCACCC---AT---C---GGCTCTGAGGA
G---ACCAAACCCAAAGACATGAC---ATCAGA---GTCAAACCTGGATAG
AG---ACGCCGTCTCCATTAAATCCATTGATTCAAGCGATTCTGGTATC
TTTG---AACAGGCAAAGAGGAGAAGAATCTCCCCCTTCTGCCACGCCG--
-----GTTTCAGAGACAGTGTCCCCGTTAAAACTCTGAGNNNNNNNNNACAGGCGAAG
TCACAGAGAGAGAAGTGGCGTTGGGGATCAATCCGTTTCGCGGATGGGATG
GGCGCCTTCAAATAAACCACAGCTCCCACGATATTGGCTCCGG---ACA
AACGGCGTTTTCTCCCAGGCA---CCCGGCTAC---GCAGCAGCCGCC
TGGGA---CACCACCA-----CCACCCGACCCACGTTGGCTCT---TAC
TCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGG
TTTCGGGGACGCCACCGG-----CGCGCAGCACAGTTTGTTCG
CCTC-----CGGAAGTTT---C-----GCAGGGCCACATGGACAC
TCAGATGCAGCAGGGCACCTGCTCTTCCCAGGGCTCCACGAG---CAAGC
GGCGAGCCATGCATCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCT
TCTCGGGGGACATGTACGGACGGGCCGACCAGTACGGCCACGTTACGAGC
CCGCGGT---CAGACCACTATGCTTCGACCCAATTGCACGGCTATGGCCC
CATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCCTTCTTTC
GATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCGAG
CCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGCAC
GATGCACGAGCTAGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAG
AGCAGACSAACCATACTGCTTCTGGGAAGAGTGCTCCAGAGAAGGAAAG
CCATTCAAAGCCAAAATACAACTTGTAATCATATCAGAGTACACACCCGG
AGAAAAGCCCTTTCCGTGTCCGTTCCCCGGCTGTGGCAA
>Percopsis omiscomaycus

AGCCTGCTGATTTCGGGCCGAATTAAGTCAACCCGGGGCCCTTCTTGGGGA
CGACCAAATTTACAATGTAATCGTCACAGCACACGCTTTCGTAATAATCT
TCTTCATGGTGATACCTATCATAATTGGGGGCTTCGGCAACTGATTAATC
CCCCAATAATTGGCGCCCCGACATGGCCTTCCCGGAATAAATAACAT
AAGCTTCTGGCTTCTCCCTCCCTCCTTCCTTCTCCTGCTTGCCTCCTCAG
GCGTAGAGGCGGGAGCGGGCACGGGGTGGACCGTTACCCGCCCTGGCG
GGTAACCTTGCCACGCAGGGGCTCCGTCGACCTCACAATTTTCTCCCT
GCACCTTGACAGGTGCCTCTTCTATCCTCGGGGCTGTAAATTTTATTACAA
CAATTATTAACATAAAAACCACCTGCGATCTCTCAGTACCAGACACCCCTG
TTTGTCTGATCCGTGCTCATTACCGCCGTAAGTCTGCTGCTTTTATCCCTCC
AGTTCTCGCAGCCGAATTACAATGCTGCTACTGACCGAAACCTGAATA
CAACCTTCTTTGACCCTGCAGGGGGAGGAGACCCAATTCTTTATCAACAC
CTT-----

-----TTCTGGAGAGGAACCTGCACCCGTCCAACCTGCCTGGG
CATGCTGCTGCTGTCGGACGCCACCAGTGCGCCAAGCTGTGGAGCTCT
CCTGGAGCATGTGCCCTCAGCAACTTCCCGCCATCTGCAAGACGGAGGAC
TTCTCCAGCTGCCAGGGACATGGCGGTGCAGCTGCTGTCCACGAGGA
GCTGGAGACGGAGGACGAGAGGTTGGTCTACGAGGCGGCCCTCGGCTGGG
TCAACTACGACCTGGAGGGGAGGCACAGCCACCTGCCGGAGCTGCTGAGG
ACGGTGCCTCGCCCTCCTTCCCGCCATCTTTCTGATGGAGAACGTCTC
CACGGAGGAGCTGATCAACTCCAGGCCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCCGCTGCAAGCTGAAGATCTTGCAGAACGACGGCGTGGTCAAC
AGCCCCTGCGCCCGGCCGCGGAAGACCAGCCACGCCCTCTTCTGCTGGG
CGGGCAGACCTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCGGACATCCCAGTCCCAGGAAGGAGTTCAGC
GCGTGCGCCATCGGCTGTAAGGTTTACATCACCGGCGGGA--GAGGCTC-
GGAGAACGGGGTGTCCAAGACGTGTGGGTGTACGACACCGTGCACGAGG
AATGGTCCAAGGCGGCCCATGCTCATCGCCAGGTTTCGGCCACGGTTCR
GCCGAGCTGAAACACTGCCTCTACGTGGTGGGAGGTCACACGGCGGCGAC
GGGCTGCCCTCCCCGCTCGCCCTCCGGATGAATAACATTGTAGTGTTCAGT
CGGTCAACAACAAGACTGATTCTGAATGAAGCGGAGCTGATTATGGCACT
TGCACAAGAGTTCAGATGAGAGTGGTCACTATCTCCCTGGAGGAACAGC
CTTTTGCCAGTATCGTGCAGGTGATCAGTGGAGCCAACATGTTGGTAAGC
ATGCATGGAGCTCAGCTTGTGCCTCACTGTTCTTGGCCAGAGGTGCCGC
CGTGGTGGAGCTGTTCCCTTATGCTGTGAACCCAGAGCAGTACACTCCAT
ATAGAACTCTGGCCTCCCTACCAGGCATGGACCTTCAGTATGTTTCATGG
AGGAACACTATGGAGGAGAACACTGTCACCCACCCAGACAGACCTTGGGA
CCAAGGAGGCATTGCCCACTTGGAAAAGGAAGAACAAGAGCGAATACTGG
CCAGTAAGGATGTCCCAGGCATTTGTGCTGCCGCAACCCAGAGTGGCTT
TTCCGAATCTATCAGGACACTTTGGTAGACATCCCTTCAATCCTGGAGGT
CCTGAA---AGAGGGCCTGAAG---ACGAGGCCTAGCTTAAAGAA---AA
CCAGGCCGGCCAGCACAGTTCATCCTGGACGCGTCAGGGAAGCCAGTGT
CAGACGTCGGTCCAAGCCGCAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTCAAATACCTGAAGGTAAGAGAAGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGACACCAGCAAGGGAACCTTTGAGGATCAAATC
ATCCAGGCCAACCCGGCACTGGAGGCATTTGGCAACGCCAAGACCACCAG
GAACGACAACCTTCCCGCTTCGGAAAATTCATCCGGATTCACTTCGGAA
CAAGCGGGAAGCTGGCGTCTGCCGACATTGAAACATACCTTCTGGAAAAG
TCCCGGGTATCCTTTTTCAGCTCAAGGCTGAGAGGAATTACCATATCTTCTT
CCAGATTCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA

CCAACAACCCGTACGACTACTCCTACATCTCCCAGGGAGAAGTGACCGTC
TCCTCTATCAACGACTCCGAGGAGCTAATGGCCACAGACAGTGCCTTTGA
CGTGCTTGGATTCACTCCTGAGGAGAAGATGGGCGTGTACAAGCTAATAG
GAGCCATCATGCATTACGGCAACATGAAGTTTAAACAGAAACAGCGTGAG
GAGCAGGCAGAGCCAGACGGAACCGAAGCAGCTGATAAGTCAGCATACT
GATGGGTCTAAACTCTGCTGACCTCATCAAAGGACTGTGCCATCCCAGGG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGACAAGGTGTAGACCAAGTC
TACTACNCCAACAAGGAGGCCTTCAAGTGCGAAGAGTGTGGCAAGCACTAC
AATACCAAGCTCGGATACAAGCGTCAATGTGGCCATGCACTCCGCCACGGC
AGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGCACCCCA
TACTCCTGGAACACCTCAAGAGCCACTCTGGGAAGTCGTCAGGTGGCGCC
AAGGAGAAGAAGCACCCGTGCGACCACTGTGACCGTCGCTTCTACACCCG
CAAGGACGTCAGGCGGCACATGGTGGTTCACACTGGCCGAAAGGACTTCT
TGTGCCAGTACTGCGCCAGCGCTTCGGCAGGAAGGACCACCTGACTCGT
CACGTCAAGAAAAGCCACTCGCAGGAAGTGTGAAGATCAAGACAGAGCC
TCCGGACATGCTTGGGCTTCTGGGTTCAAGGCTCGCCGCCTTGCTCCGTCA
AGGAGGAGCTAAGCCCCATGATGTGCAGCATGGCTCCCAATAAAGACCCA
ATGATGGGCAAACCCCTCCCCAGTGGGACCCCTTCCCCATGGGCATGTA
CAACCCACCAC-----CTCCAGGCCATATCCAATTCTGGTGTGGCTC
ACCT-----
CACCCCTCTCTGATGTCCNNNTATCTCATCT
ATGCTTCCTC
TCCTTCATGGGATGTTTACAAATCAGCGACGGATCGAACATTGTCAATTT
GCTGGCCAGTAACTCTCCAAGTGTTCCTACGCTCTGACCCAGCAGAAGT
ACTTCAGCAACTACAGTCCGGTGATCGGGTTCTACATTTACGAACCCATC
GAGTACTGGAACTCCACAGTGCAGGAGCACCTGAAGACGCTGAGCCACGG
CTTCAACAAGATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGG
TGAACGCGAGTGCCTCGACGAAGAACGACTTCATTAACATACTCAAGGGC
TCTTTCTTGCGCAGTCCGGAGTACCAGCACTTCACAGAGGACATAATCTT
CTCCAAGA---ACCGCGAAAACA-----ACGAGTACGACATAATTGCCT
CGCGGATGTATCTGGTAGCGCGCACACAGAGAAGAAACGTGAGGAGGTG
GTGGAACCTTCTGGAAAAGCTGCGTCCGCTAATGCTGATCAACAGCATCAA
ATTCATTGCCTTCAACCCCACTTTTGTGTTTCATGGACCGTTACAGCTCAT
CGGTAATCTCGCCATACTGACTTCAGGCTTTAGCGTGTAAACCATCCTC
ATCCTTACCTTCTCCTGGTTCATCAACCCCTTGGGGAATTTCTGGCTCAT
TTTGACAGTCACTTCTGTGGAGTTGGGGTTCTGGGTTTGATGGGCCACC
ACCCGTTTCGAGTGGCAGCCCGCGCTGAAGAGTGTGTCCGCCTCCTGCCAC
GTGGGCATCATCAACGGACTCTCTGGGTGGGCTGCTTCCGTGGACGACTT
CCCCATCGAGACCATCACCCGCCGGTTCGGCTACGACGTGGCCCTGGTGT
CGGCCTGAAGGACCTCGAGGAGGACATCCTGGAGGGTTTGACGGAGCAC
GGGCTGGACGACAGCGCTTGCGGCGCGGGCTTACCCTGGTGATAAAGGA
GTCTGTGACGGCATGGGAGATGTGAGCGAGAAGCACGGAGGGGGTCCAG
CCATCCGGGAGAAGGCCGTGCGATTCTCCTTACCATCATGTCCGGTGTCT
GTGCTGCCGGAGGGAGAGGAC-----
-GAGGCGGTACCGTCTTCAGGGAGCCCAAACCGAACTCGGAACTGTCTC
GTAAGCCCCTGTGCTGATGTTTCGTGAATGAGTCCAACCACGAGATGCTC
ACCGCCGTCTGGACCTCTGCTCGCCGAGAGGAGCGCCATGAAACAGAG
CCGGCTCATCTGTCCATAGGTGGCTGCCTCGGTCCTTCCGCTTCCACT
TCAGGGGGACCGGCTACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTG
GAGGCTCTGGTTCACCTACGTGTGCACCCTGTGCGACTCCACCAGAGC
GGAGGCTCCCAGAACATGGTGTCTCACTCCGTCACCCGCAGCCACCAG
AGAATCTGGAGCGCTATGAAATCTGGAGGACCAATCCCTTCTCGGAGTCT
GCGGAGGAGCTGCGGGACCGGTGAAAGGGGTCTCCGCCAAGCCATTCAT

-----AAGAAGGATGCCAGCAAGGGGACCTT
GGAGGATCAAATCATTCAAGCTAACCAGCACTGGAGGCTTTTGGAATG
CCAAAACAGCGAGAAATGATAACTCCTCACGCTTGGGAAGTTCATTCGT
ATTCATTTTGAACGAGCGGCAAACCTCTCCTCTGCTGACATAGAACTTA
CTTGCTTGAGAAATCCCGTGTGACCTTTCAGCTCAAATCGGAGAGGAACT
ACCACATCTTCTTCAGATATTGTCCAATGAAAAGCCAGAGCTGCTGGAC
ATGCTGTTGATTACCAACAACCCTTATGATTATTGCTTCATCTCCCAAGG
AGAAGTAACAGTTAAATCTATCAATGACAGTGAGGAGTTGCTTGCCACTG
ACAGTGCCTTTGATGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATC
TATAAGTTGACAGGTGCCATTATGCACTATGGCAACATGAAGTTCAAGCA
GAAGCAGCGTGAGGAGCAGGCAGAGCCTGATGGCACTGAGGCAGCTGACA
AGTCAGCCTACCTGATGGGGCTTAACCTCTGCTGATCTTGTGAAAGGACTC
TGCCATCCCAGGGTCAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGG
TGTAAGTCAAGTCTATTACCCCAACAAGGAGGCCCTTCAAGTGCAGGAGT
GCGGCAAGCACTACAACACCAAGCTGGGCTACAAGCGGCACGTGGCCATG
CACTCGGCCACGGCGGGGACCTCACCTGCAAGGTGTGCCTGCAGAGTTA
CGAGAGCACGCCGGCGCTGCTGGAGCACCTGAAGAGCCACTCGGGCAAGT
CGTCGGGCGGCACAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGC
CGCTTCTACACGCGCAAGGACGTGCGGCGCCACATGGTGGTGCACACGGG
CCGCAAGGACTTCCTGTGCCAGTACTGCGCGCAGCGCTTCGGCCGCAAGG
ACCACCTGACGCGCCACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAG
ATCAAGACGGAGCCCCCGGACATGCTGGGTCTGCTGGGCTCGGGCTCGTC
GCCCTGCGCCATCAAGGAGGAGCTCAGCCCATGATGTGCAGCATGGGCC
CCGGCAAGGACCCCATGATGGCCAAGCCCTTCCCAGCGGCACCCCTTC
CCCATGGGCATGTACAACCCCAACCAC-----CTCCAGGCCATGTCCAA
CCCCGGAGTGGGCCAC-----CACCCTCCCTGGTGCCCGCTCCC
TGTCGGCCGCATGGGGATGGGCTGCCACATGGAGTACCTGATTTACGCT
TCCTTCTCCTTCATGGGATGTTTACAAATCAGCGACGGATCCAACATAGT
CAACCTTTTGGCCAGCGACTCGCCGAGCGTGTGCTACGCTCTGACCCAGC
AGAAGTATTTTACAACTACAGCCCAGTGATAGGGTTCTACATCTATGAG
CCCATTGACTACTGGAACGCCACTGTGCAAGGAGCACCTCAAGACACTGGG
CCAGGGCTTCAATACGATATCGTGGATCGATAATTACTTTCAGTATCTGA
AGGTGACGAACGTCAGCGCTGACCCAAAAGCGACTTCATTGCCGTCCTC
AAGACCTCGTTCTGAGGAGTCCCAGTATCAGCACTTCACGGACGACAT

CATCTTCTCCAAA---CGGGG-----ACGACTTCAACATCA
TCGCGTCCAGGATGTACCTGGTGGCGCGGACCACGGAGAAGACCCGGGAG
GAGGTGGTGGAGCTGCTGGAGAGGCTCCGGCCGCTCTCGCTCATCAACAG
CATCAAGTTCATCGTGTTCACCCCACCTTCGTGTTCATGGACCGCTACA
GCTCCTCGGTCGTCTCGCCCATCATGACGTCCGGCTTCAGCGTCCTGACC
ATCCTCGTGCTCACGTCTTCTCCTCGTCGTCAACCCCCTGGGAAACTTCTG
GTTGATACTGACCGTCACCTCCGTGGAGCTGGGGGTCCTGGGCCTGATG-

-----TCCTACACCATAGAGATGGGCCCGAGAGGACCTCAGTGGAAGGA
GAGCCCCAGCCGTTCGCCTGCTCCATCGAGGACCCACTAAGCAAACCA
AGTTCAAGGGGATTAAGACTTACATATCGTACCGCGTGACTCCCAGCCAC
GTTGGCCGGCCTGTGTACCGTCGCTACAAGCACTTCGACTGGCTGTATAA
CAGGCTGCTGCACAAGTTCACCGTCATCTCCGTGCCCCACCTGCCCGAGA
AGCAGGCGACCGGGCGTTTCGAGGAGGACTTTATCGAAAAGCGCAAGAGG
CGGCTCATCCTCTGGATGGACCACATGACCAGCCACCCTGTCTCTCGCA
GTACGAGGGCTTCGAGCACTTCTTCATGTGCGGGGACGACAAGCAGTGGA
AGCTGGGCAAGCGGAGGGCGGAGAAGGATGAGATGGTGGGCGCCCACTTC
ATGCTCACCTTCAGATCCCCAACGAGCACCAGGACCTGCAGGACGTGGA
GGAGCGGGTGGACTCCTTCAAGGCCTTCGCAAAGAAGATGGACGACAGCG
TCATGCAGTTGACGCACGTGGCCTCCGAGCTGGTGGCGCAAACACCTGGGA
GGGTTCGCAAAGAGTTCCAAAGGCTGGGGAACCTTCCAGTCCATCAG
CCAGGCGTTCATGCTGGACCCCCCTACAGCTCCGACGCCCTGAATAACG
CCATCTCCCAC

-----GC
CAAATCCCGCTTTCACCATGGCGTCGGCACGGGGCCTGGCACGGACC---
GCAGCGTCCCCTC---AACAGCTTGTATCCCCGCAACAAACCGATGAG
ACCGCAGTGG---CCTCCCCGAGCGATGGTTTGTCAACC---CTGCCAA
CAACCGACTGGACTTTGCCGCTTCGGCATAACGATGCCGCCGCTGCAGCTG
ATTTTGGCGGTAACGCGGCCACCCCTTCTGTCTACGCAGCTGCCGGAGTG
AAAGCGC-----TCCCCTGCCCCACTGCAGGCTGCTCCAACAGGGCCCT
GGGCTATTACGCGGAGCCGCCAG---GGTGG---GGCACACGCACTCCAC
CGCAGTACTGT-----AGTAAATCAAGCGCGGTTCTCTCATGCTGG
CCCGCCAATTCCGTTGGGTGCAGAACATCCA---CCTCCAATTACCTGG-
--TTGGCTTGGACGA---CGTG---GACGC---TATCGCACCTGAGAGGT
CACCT---CT---CGGGGGGGCAGACGAA---GCCAAGCCAAAAGACCT-
-----GTCGGA---GTCAAGCTGGATAGAG---ACTCCGTCTTCAATTAA
GTCAATCGATTCAAGTGATTCTGGGATCTTTG---AGCAGGCCAAACGGA
GGAGGATTTCCGCATCTGCTACACCG-----GTTTCAGAGACGTCG
TCCCCATTTAAAATCAGAACATCACTCAACAGGCGAAGTCACAGACAGAGA
AGTGGCTTTGGGGATAAATCCGTTTCGCCGACGGGATGGGCGCTTCAAAA
TCAACCACAGCTCCCACGATATTGGCTCGGG---GCAAAGTGGCTTTGCC
TCGCAGGCG---CCCGGCTAC---GCAGCCGCTGCCCTGGGA---CACCA
TCA-----CCACCCAACCCATGTCAGCTCC---TACTCCACCGCGGCGT
TCAATTCACCCCGGACTTTCTCTTTCGGAATCGGGGATTTCGGAGACGCC
ACTAG-----CGCGCAGCACAGTCTCTTCGCCTCAGC---TGC
GGGAAGTTT---C-----GCAGGGCCACATGGACACACCGATGCCACGG
GACACCTGCTCTTCTCGGGACTGCACGAG---CAAGCGGCGACCCACGCG
TCTTCGAACGTGGTGAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACAT
GTACGGCAGAGCCGAGCAGTACGGTCATGTAACGAGCCCCCGGT---CCG
AGCACTACGCTTCGACTCAGTTGCACGGCTATGGCCCCATGAACATGAAT
ATGGCTGCC---CACCACGGGGCAGGGGCCTTCTTCCGTTACATGAGGCA
GCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCAACCAGAGCAGCTGT
CGAATCCGAAAAAGTCTGCAACAAAACCTTTCAGCACGATGCACGAGCTC
GTGACCCACCTCACGGTGGAAACACGTCGGGGGACCAGGAACAATCGAATCA
CATTTGTTTTTGGGAAGAGTGTCCGCGAGAAGGGAAACCATTTAAAGCCA
AGTACAAAACCTGTAAATCATATCAGAGTGCACACCCGAGAGAAGCCGTTT
CCATGTCCATTCCCCGGCTGTGGCAAG

>Plecoglossus altivelis
AGCCTCCTCATTTCGAGCCGAACCTAAGTCAACCTGGCGCTCTCCTAGGAGA
CGACCAGATCTATAACGTTATCGTTACTGCACACGCTTTCGTAATAATCT
TTTTTATGGTTATGCCAATCATGATCGGGGGTTTCGGCAACTGACTGATC

AAAAACAGCGCGAGGAGCAGGCAGAGCCTGACGGCACTGAGGCTGCTGAC
AAGTCAGCTTACCTAATGGGGCTGAACTCCGCAGATCTTGTGAAAGGACT
CTGCCACCCAGGGTCAAGGTTGGCAATGAGTATGTCACCAAAGGGCAGA
GTGTAGATCAAGTCTACTAC-----

GGCTATCATCCCTTCGAATGGCAGCCGGCCCTCCGGAACGTCTCCTTGGC
CTGTCAGGTGGGCATCATTGACGGCCTTTCAGGATGGATGGCGTCGGTGG
ACGACTCCCCGGCGGACACCATCTCACGGAGGTTCCGCTACGACGTGGCT
TTGGTGGCTGCTCTGAAGGACCTGGAGGAGGACATCGTAGAGGGCTTGAA
GGAGCGGGCCTGGAAGACAGCTCCTGCACCTCAGGCTTCACCGTGACCA
TCAAGGAGTCCCTGCGACGGCATGGGGGACGTGAGTGAGAAACACGGCGGG
GGCCGGTGGTTCCCTGAAAAGGTCGTCCGCTTCTCCTTCACCGTCATGTC
CGTCTCCATCCTGGCCGAGGGGGAGAAA-----
-----GAGACGGTCACCATCTTCAGAGAGCAGAAGCCTAACTCGGAG
ATGTCCTGCAAACCTCTCTGTCTGATGTTTGTGGATGAGTCGGACCACGA
GACCCTGACAGCCATCTTGGGGCCTGTGGTGGCTGAGAGGAACGCCATGA
AGAACAGCCGACTCATCCTCTCCATGGGTGGCCTCCCTCGTCTCTCCGC
TTCTGTTTCAGGGGAACAGGCTACGACGAGAAGATGGTGCGGGAGATGGA
GGGTTTAGAGGCCTCAGGCTCCACCTACGTCTGCACCCTCTGCGACGCCA
CCAGAGCTGAGGCCTCCAAAACAAGGTGCTCCACTCCATCACCCGCAGC
CACCATGAGAACCTGGACCGCTACGAGATGTGGAGGACTAATCCCTACTC
TGAATCGGCTGACGAACTGCGAGATCGGGTGAAAGGGGTTTCCGCCAAGC
CATTTCATGGAGACCCAGCCCACGTTGGACGCGCTCCACTGCGACATCGGC
AAYGCCACCGAGTTCTACAAGATCTTCCAGGACGAGATTGGGGAGGTGCA
TAGCAGGCC---CAAC---CCGAGCAGGGAGGAGCGGGCGGAGCTGGAGGG
CGGCTCTTGACAAGCAGCTCCGGAAGAAGATGAAGCTGAAGCCCCTGATG
AGGATGAACGGAACTTGGCCCGGCGACTGATGACGGTGGAGGCCGTGGA

GGCGGTGTGTGAACTGGTGCCTTCGCAGGAGCGGGGGGAAGCCCTCAGGG
AGCTGATGAACCTCTACCTCCAGATGAAGCCCGTCTGGCGTGCCACGTGC
CCGGCCAAAGAGTGCCCTGACCAGCTGTGTGCTATAGCTTCAACTCCCA
GCGCTTCGCCGACCTCCTCTCTTCCACTTTCAAGTACAGGTACGACGGGA
AGATCACCAACTACCTCCACAAGACTCTGGCCCAYGTTCTGAAATCATA
GAGAGGGATGGCTCCATCGGGGCTGGGCCAGTGAGGGGAACGAGTCGGG
GAACAAATCATAACCATTTGAGATGGGTCTAAAAGGACCTCAGTGGAAG
AAAGCCCTCAGCCGTTCTTGTCTGTGGAAGACCCAATAACAGACC
AAGTTCAAAGGTATCAAGACCTATATATCTTACCGGGTCACACCCAGCCA
TACAGGCCGACCTGTCTACCGCCGTTACAAGCACTTTGATTGGCTGTACA
ACCGTCTGCTGCATAAGTTTACCGTCATCTCCGTGCCCCACCTGCCCGAG
AAGCAGGCTACTGGACGCTTCGAGGAGGACTTCATCGAGAAGCGCAAAG
ACGATTGGTCATCTGGATGGATCACATGACCAGCCATCCTGTCTATCGC
AGTACGAAGGCTTGGAACTTCCCTCATGTGTGCCGATGACAAGCAGTGG
AAGCTGGGCAAAAGGCGGGCGGAGAAAGATGAGATGGTTGGAGCTCACTT
CATGTTGACCTTTCAGATTCCCTAACGAGCATCAGGACCTGCAGGACGTGG
AGGAGCGGGTGGACACTTTCAAGTCGTTTCGCTAGGAAGATGGACGAAAGC
ATCATGCAGCTGACTCATGTGGCGTCAGAGCTGGTTCGAAAACACCTTGG
AGGCTTCAGGAAAAGATTTCAACGTTTGGGAAAACGCTTTCAGTCCATCA
GCCAGGCGTTTATGCTCGATCCTCCCCACAGCTCGGATGCCCTCAACAAC
G-----
-----C-GCGTCG-AGTG-TCGGCAATCT-CTGATCTCCAT-CTACTGG
TCAAAGACAAGAGCCTGCACCGAGCGCCCTACTACTTCCCTGTTGGACCTG
TGCGCCTCTGACATCATGCGTTCGCCATCTGCTTCCC-TTCGTGTTAC
CTCCGTCAAGAATGGTTCCGCTGGACGTACGGAACCTTAACCTGCAAAG
TGATCGCCTTCCCTCGGGGTGCTGTCTGCTTTCACACAGCCTTCATGTTG
TTCTGCGTCAGCGTGACCCGATACCTGGCCATCGCCCACCACCGCTTCTA
CACCAAGAGGCTGACCTTCTGGACGTGCCTGGCCGTCATCTGCATGGTGT
GGACGCTGTGCGGTAGCCATGGCCTTCCCTCCGGTGTGGATGTGGGGACC
TATTCCTTCATCAGAGAAGAGGACCAGTGCACCTTCCAACACCGATCCTT
CAGAGCCAACGACTCCCTTGGCTTCATGCTACTGCTCGCGCTCATCCTGC
TGGCCACACAGCTGGTCTACCTCAAGCTCATCTTTTTCGTCCATGACCGC
CGGAAGATGAAGCCGGTTCAGTTTGTGCCAGCGGTCAGCCAGAACTGGAC
CTTCCACGGGCCGGGGCTAGCGGCCAGGCGGCGGCTAACTGGCTGGCGG
GCTTCGGAAGAGGCCCCACACCGCCACCTTCTGGGCATCAGGCAGAAC
AGCAACGCGGCGGGCCGAGGCGACTCCTGGTGTGGACGAGTTCAAGAC
AGAGAAAAGGATCAGCAGGATGTTCTACATTATGACCTTCTTCTTCTTGG
CACTGTGGGGGCCCTATCTGGTGGCTGCTACTGGAGGGTGTTCGCTAGG
GGCCCTGCTGTACCAGGGGGCTACCTGACCGCCGCGTGTGGATGAGCTT
TGCCAGGCAGGGGTCAACCCC-TCATCTGC-----G
CCAAATCTCGCTTTCACCCTGGCGTAGGGACCGGTCCTGGCACGGAGC--
-GCAGCGTCCCCTTAGTAACAGCTTGCTATCCCCGCAACAAACCGAAGA
GCCACAGTTG---CTTCCCCACAGCGTTGGTTTGTCAACC---CTGCCA
ACAACCGACTGGACTTTGCCGCCTCGGCATACGATGCTGCCGCTGCTGCA
GATTTTGCCGGCAACGCGGCCACCTTGCTGTCTACGCAGCGGCTGGAGT
GAAGGCGC-----TTCCCCTCTCCACGGCAGGTTGCTCAAACAGACCGC
TCGGGTATTACACCGACCCGTCAG---GCTGG---GGCACTCGTACGCCA
CCACAGTACTGT-----AGCAAGTCGAGCTCCGTTCTCTCATGCTG
GCCTACGAATACTGTTACGGGCAGAACGGGCC---CTTCCAGTTACCTTG
-----CCGAGGA---TGGA---GATGC---TATACCCACAGAGCGG
TCTCCA---AT---AGGGGCGTCAGACGAG---GCTAAACCAAAGACTT
-----GTCCGA---GTCCAGCTGGATAGAG---ACGCCGTCTTCAATAA
AGTCCATTGATTCTAGTGATTCTGGAATCTTTG---AGCAAGCAAACCG

AGAAGAATTTCTCCGTCTGCCACACCA-----GTTTCGGAGACGGT
GTCTCCGTTAAAATCCGAG-----

-----ACTGCATTTTC
CTCCAAGCG---CCCGGCTAT---GCAGCCGCTGCCCTGGGA---CATC
ACCA-----CCACCCTACTCATGTCAGTTCT---TACTCTACGGCGGCT
TTCAATTCACCCCGGATTTTCTCTTCAGAAATCGTGGCTTCGGAGACGC
TACCAG-----CGCTCAGCACAGTCTCTTCGCCTCCGC---AG
CGGGAAGTTT---T-----GCAGCCCCACATGGACACTCAGATGCAGCG
GGACACCTGCTCTTCCAGGACTTCACGAA---CAAGCCGCAAGCCATGC
TTCTCAAATGTTGTTAATAGTCAGATGCGATTGGGCTTTTCGGGGGACA
TGTACGGCAGAGCCGACCAGTATGGCCACGTTACCAGCCCGCGGT---CC
GACCACTATGCATCGACCCAGTTACATGGCTATGGCCCTATGAACATGAA
TATGGCCGCG---CATCATGGAGCAGGGGCCTTCTTCCGTTACATGAGGC
AGCCGATAAAACAAGAGCTGATCTGCAAGTGGATCGAACC GGAGCAACTA
ACGAACCCCAAAAAGTCGTGCAACAAAAC TTTTAGCACAATGCACGAGCT
CGTCACCCATCTGACCGTGGAGCATGTGGGAGGACCGGAGCAGTCAAACC
ACATTTGCTTCT-----

>Polymetme thaeocoryla

AGCCTGCTTATCCGAGCGGAATTAACCAACCCGGCACCCTTTTAGGAAA
CGACCAAATTTATAATGTAATTGTTACAGCACATGCCTTTGTAATAATCT
TCTTCATAGTGATAACCAATCATAAATTGGAGGCTTTGAAACTGACTAATC
CCTCTTATGATTGGGGCTCCTGATATAGCCTTTCCCGAATAAATAACAT
AAGCTTTTGGCTTCTCCCACCCTCCTTCCTCCTTCTACTTGCCTCCTCCG
GAGTTGAAGCCGGGGCTGGGACTGGATGAACAGTCTATCCCCACTTGCC
GGCAATTTAGCCCACGCAGGGGCCTCCGTTGACCTAACCATTTTCTCCCT
GCATCTTGCAGGGATCTCTTCAATCCTTGGGGCAATCAACTTTATTACCA
CAATTATTAACATGAAACCCCCAGCTATTTCCCAATACCAAACACCCCTC
TTTGTCTGAGCTGTCCTTGTACCCTGTTCTTCTTCTCCTATCTCTCCC
AGTCTTAGCTGCTGGAATTACCATGCTTTTGGACAGACCGAAACCTGAACA
CGACCTTCTTTGACCCAGCAGGAGGGGAGACCCCATTTCTTTACCAACAC
CTCTTCTGATTCTTTGGGCACCCCGAGGTATATATTTAATCCTTCCAGG
CTTTGGTATAATCTCTCACATTGTTGCCTACTATTCAGGGAAAAAGAAC
GCTTTATTGTCTGGGCCATCATATGTTTACAGTCGGAATGGACGTAGA
CACCCGAGCCTATTCTGAGAGGNACCTGCACCCGTCCAACCTGTCTGGGA
ATGCTGCTCCTCTCGGACGCCACCAGTGCGCCAAGCTGTCTGGAGCTGTC
CTGGGGCATGTGCCTCAGCAACTTCCCCGCCATCTGCAAGACGGAGGACT
TCCTGCAGCTGCCCAAAGACATGGCGGTCCAGCTGCTGTCCCACGAGGAG
CTGGAGACGGAGGACGAGAGGCTGGTCTACGAGGCYGCCCTCAACTGGGT
CAACTACGACCTGGAGAGGCGGCACCTGCCACTTGCCGGAGCTGCTGAGAA
CCGTTTCGTCTGGCGCTGCTGCCCCGCATCTTCTCATGGAGAACGTCTCC
ACGGAGGAGCTGATCAACGCCCAGACCAAGAGCAAGGAGCTGGTGGACGA
GGCCATCCGCTGCAAGCTGAGGATCCTGCAGAACGAGGGCGTGGTCAACA
GCCCCGTGGCGCGGCCAGGAAGACCAGCCACGCCCTCTTCTGCTGGGC
GGGACAGACCTTCATGTGCGACAAACTCTACCTGGTGGACCAGAAGGCCAA
GGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCG
CCTGCGCCATCGGCTGCAAGGTCTACATCACCGGAGGCA--GGGGCTC-T
GAGAACGGGGTCTCCAAAGATGTTTGGGTCTACGACACGTCCCATGAGGA
GTGGTTCGAAGGCGGCTCCCATGCTCATCGCCCGGTTCCGGCCATGGTTCTG
CAGAACTCAAACACTGCCTCTACGTGGTGGGCGGACACACGGCCGGCAGC

GGCTGCCTCCCCGCCTCCCCCTCG-----

-----AAGAGGGATCCCAGCAAGGGAACCTTGGAGGATCAAATCA
TCCAGGCTAACCTGCCCTGGAGGCTTTCGGTAATGCCAAAACGGCGAGA
AATGACAACTCGTCACGCTTTGGCAAATTCATCCGGATTCACTTTGGAAC
CAGTGGCAAGCTGTCCCTCTGCAGACATAGAGACTTACCTTCTGGAAAAGT
CACGTGTACCTTTCAGCTCAAGGCAGAGAGGAACTACCATATCTTCTTC
CAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTTCTAATCAC
CAACAATCCATATGACTACTCCTACATCTCCAAGGAGAGGTAACAGTAT
CATCCATCAATGATTCTGAGGAATTGATCGCCACTGACAGTGCATTCGAT
GTGCTTGGCTTTACTCAAGAGGAGAAAATGGGGGTCTACAAGTTGACAGG
TGCAATCATGCATTACGGTAACATGAAGTTCAAGCAAAGCAGCGCGAGG
AGCAGGCAGAGCCTGACGGCACCGAGGCTGCTGACAAGTCAGCTTACCTA
ATGGGGCTGAACTCTGCAGATCTAGTGAAAGGACTGTGCCATCCCAGGGT
TAAGGTTGGCAATGAGTTTGTCTACTAAAGGGCAGGGTGTAGACCAAGTCT
ACTAC-----

-----TACCTGATCTACGCCTCCTTCTCCTTCAT
GGGATGTTTACAAATCAGCGACGGATCCAATGTGGTCAACCTGTTAGCCA
GCAACTCCCCGAGCGTGACCTACGCTCTGACCCAGCAGAAGTACTTCAGT
AACTACAGCCCTGTGATCGGGTCTATATCTACGAGCCCGTGGAGTACTG
GAACTCCACGGTGCAGGAGCACCTGAAAACCCTGGGCCACGGCTTCAACA
AGATCTCCTGGATGGACAACTACTTCCACTATCTGAAGGTGGTGAATGTG
ACCGCTCCACCAAGAGCCACTTCATCGCCATCCTCAAAGGTTCTTCCCT
AAGGAGCCCGGAGTACCAGCACTTCACGGAGGACATCATCTTCTCCAAGA
---ACGGCG-----AGGAGTATGACATCATCGCGTCCAGGATG
TACCTGGTGGCGCGGACCACAGAGAAGACCCGGGAGGAGGTGGTGGAACT
GCTGGAGAGGCTCCGCCCCCTCTCCCCTCATCAACAGCATCAAGTTCATCG
TCTTCAACCCACCTTCGTCTTCATGGACCGCTACAGCTCCTCGGTCATC

TCTCCCATCCTCACCTCGGGCTTCAGCGTCCTCACCATCCTCATCCTCAC
CTTCTTCCTGGTCATCAACCCCTGGGGAACCTTCTGGTTGATCCTGACGG
TGACCTCGGTGGAGCTGGGCGTTTTGGGCCTGATGGGCTACCACCTCTTT
GAGTGGCAGCCGGCCCTCAAGAATGTGTCCACGTCTGCCAGGTGGGCAT
CATCGACGGGCTGTCAGGGTGGGCTGCCTCCGTAGATGACTCCCCGGCGG
ATACCGCCGCCCGGCGTTCCGCTACGACGTGGCGCTGGCCTCGGCTCTG
AAGGACCTAGAGGAGGACATCATGGAGGGGCTGAGGGAGCGCGACCTGGA
GGACAGCGCCTGCACCTCGGGCTTCAGCGTGATGATCAAGGAGTCTGCG
ACGGCATGGGCGACGTCAGCGAGAAGCACGGCGGGGGGGCGGCGGTGCC
GAAAAGGCAGTGCGATTCTCCTTCACCGTCATGTCTGTCTCCGTGCAGGC
TGAGGGGGAGGAC-----AAGGCCG
TCACCATCTTCAGGGAGCCCAAGCCCAACTCTGAGCTGTCCTGCAAGCCT
CTGTGTCTGATGTTTTGTGGATGAGTCTGATCATGAGATGCTGACGGGCGT
CCTTGGGCCTGTGGTGNCCGAGAGGAACGCCATGAAGAACAGCCGCCTCAT
CCTGTCTCTGGGAGGCCTCCCTCGATCCTTCCGCTTCCACTTCAGGGGCA
CCGGCTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTCG
GGCTCCACATACATCTGCACCCTCTGTGACTCCACCCGGGCGAGAGGCCTC
CCACAACATGGTGCTGCACTCCGTTACCCGCAGCCACGACGAGAACATGG
AGCGCTACGAGATCTGGAGGACCAACCCCTACTCCGAGTCNCCAGATGAGC
TTCGGGATCGGGTCAAAGGCGTCTCAGCCAAACCTTCATGGAGACCCAG
CCCACCCTGGACGCACTGCACTGTGACATCGGTAACGCCACTGAGTTCTA
CAAGATCTTTCAGGATGAGATCGGGGAGGTGTACCGGAGGCC---GAAT-
--GCAAGCAGGGAGGAACGCCGGAGCTGGCGGGCTGCTCTGGACAAGCAG
CTGAGGAAGAAGATGAAGCTGAGGCCAGTGATGAGGATGAATGGGAACTA
TGCCCGGCGGCTGATGACCAGCGAGGCGGTGGAGATCGTGTGTGAGCTGG
TCCCCTCAGAACAGCGGCAGGAGGCCCTCAGGGAGCTGATGGGGCTCTAC
CTCCAAATGAAGCCTGTTTTGGCGCGCCACCTGCCAGCCAAAGAGTGCCC
TGACCAGCTTTGCGGCTACAGCTTCAACTCCAGAGGTTTCGCTGAGCTCC
TCTCCTCCATCTTCAAGTACAGATACGACGGTAAGATCACCAACTACCTC
CACAAGACACTGGCCACGTCGCGGAGATCGTAGAGAGGGACGGCTCCAT
CGGGCCTGGGCCAGCGAGGGAAACGAGTCGGGCAACAAGTCTTACACAA
TCGAAATGGGCCCCAAAGGGCCTCAGTGGAAGGAGAGCCCTCAGCCTTTC
TCTTGTTCCGTTGAGGACCCTACCAAACAGACCAAGTTCAAAGGCATCAA
GACTTACATATCTGACGGGGTCACTACCAGCCACACCGGGCGATCGGTAT
ACAGTCGGTACAAGCACTTTGATTGGCTGTACAACCGCATGCTGCACAAG
TTCATGTATCTCTGTGCCTCACCTGCCAGAGAAAACAGGCCACCGGGCG
TTTCGAGGAGGACTTCATCGAAAAGCGAAAAGGCGGCTGATCCTCTGGA
TGGACCACATGACCAGCCACCCGGTCTCTCCCAATACGAGGGCTTTGAG
CACTTCTCATGTGMGCCGACGACAAAACAGTGGAAGCTGGGCAAGCGGCG
GGCGGAGAAGGACGAGATGGTGGGCGCCACTTCATGCTGACCTTTCAGA
TTCCAACGAGCACCAGGACCTGCAGGACGTGGAKGAGCGGGTGGACTCC
TTCAAGTCGTTTGCTAAGAAGATGGACGATAGCGTCATGCAGYTGACGCA
MGTGGCCTCGGAGCTGGTGCGGAAACACCTAGGGGGTTTTCCGGAAGGAGT
TCCAGCGTCTGGGGAACGCTTTCAGTCCATTAGTCAGGCGTTCATGCTG
GACCTCCTCACAGCTCTGATGCCCTCAACAACGCCATCTCACAC-----
-----AACTGACCTCCC TGGGATT CATCATCGGTGT CCGGAG
TGGTCCGCAACCTCCTGATCTCCATCCTGCTGGTTAAAGACAAGAGCCTG
CACCGAGCGCGTACTACTTCCCTGTTGGACCTGTGCGCCTCCGACATCCT
GCGCTCCGCCATCTGCTTCCCTTCGTGTTACCTCCGTCAAGAACAGCT
CCGCCTGGACCTACGGCACGCTCACCTGCAAAGTGATCGCCTTCTGGGC
GTGCTGTCCTGCTTTCACACTGCCTTCATGTTATTCTGCGTCAGTGTGAC
CCGCTACCTGGCCATAGCCCACCACCGCTTCTACACCAAGAGGCTGACCT
TCTGGACCTGCCTGGCTGTATCTGCATGGTGTGGACACTGTCTGTGGCC

ATGGCGTTTCCTCCGGTGCTGGACGTGGGGACTTACTCCTTCATCAGAGA
GGAGGACCAGTGCACCTTCCAGCATCGCTCCTTCAGAGCTAACGACTCGC
TGGGCTTCATGCTGCTGCTAGCCCTCATTCTGCTGGCCACACAGCTGGTC
TACCTCAAGCTCATCTTCTTCGTCCACGACCGCCGGAAGATGAAGCCCGT
CCAGTTCGTACCCGCCGTAGCCAGAACTGGACCTTCCACGGGCCGGGTG
CCAGCGGGCAGGCAGCTGCTAACTGGCTGGCGGGCTTCGGTAGAGGCCCC
ACCCCGCCCACCCTGCTGGGCATCAGGCAGAATAGCAACGCGGGCGGGCCG
CAG-CGGCTCCTGGTGCTGGACGAGTTCAAGACGGAGAAGAGGATCAGCA
GGATGTTCTACATCATGACCTTCTTCTTCTGCGCTGTGGGGGCCCTAC
CTGGTGGCCTGCTATTGGAG-GTGTTTGCCAGGG--CCCGCGTGCCCGG
-GGCTACCTGACCGCTGCCGTGT-GATGAGCTTTGCCAG--CGGGGTCA
ACCC--GCCAAATCTCGCTTTCAC
CCTGGCGTAGGGACCGTCTGGCACGGACC--GCAGCGTCCCCTCAG
TAACAGCTTGCTATCCCGCAACAAACCGAGGAGCCACGGTTG---CCT
CCCCACAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTC
GCCGCTCGGCATACGATGCTGCCGCTGCCGAGACTTTGCCGGCAACGC
GGCCACCTTGCTGTCTACGCAGCGGCTGGAGTGAAGGCTC-----TTC
CCCTGTCCACGGCAGTTGCTCTAACAGACCTCTCGGGTATTATGCCGAC
CCGTCAG---GCTGG---GGCGCACGCACACCACCACAGTACTGT-----
----AGCAAGTCCAGCTCGGTTCTCTCCTGCTGGCCACAAATACTGTTG
GGGGCAGAACAGGCG---CCTCCAATTACCTGT-----CTGAGGA-
--CGGG---GACGC---TCTCCCCACAGAGAGGTCCTCG---AT---AGG
CGCGTCCGACGAG---ACAAAACCAAAGACTT-----GTCCGA---AC
CCAGCTGGATAGAG---ACGCCGCTTCAATAAAGTCAATTGATTCAAGT
GATTCTGGAATCTTTG---AGCAAGCAAACCGAGAGAAGATTTCTCCTTC
TGCCACACCA-----GTTTCGGAGGCTGTGTCCCCGTTGAAATCCG
AG-----ACAGGCGAAGTACAGAAAGGGAAGTGGCTTTGGGGATA
AATCCGTTTCGACAGCGGGATGGGCGTTTTCAAATCAACCACAGCTCGCA
TGATCTTGGCTCCGG---GCAAACAGCGTTTTCTCCCAAGCG---CCCG
GCTAC---GCAGCCGCTGCCCTCGGA---CACCACCA-----CCATCCG
ACACATGTCAGCTCG---TACTCCACTGCGGCTTCAACTCCACCCGGGA
CTTTCTCTTCAGAAATCGGGGCTTCGGAGACGCCACCAG-----
-TGCKAACACAGTCTCTTCGCATCCGC--AGCGGGAAGTTT---T---
---GCAGGGCCACATGGACACTCAGATGCCGCGGGACACCTGCTCTTCCC
GGGACTTCACGAG---CAAGCCGCGAGTCATGCGTCTTCAAATGTTGWTA
ACAGTCAGATGCGGTTGGGCTTTTCGGGGGACATGTACGGGCGGGCCGAC
CAGTATGGCCACGTTACCAGCCCACGGT---CCGACCACTATGCTTCGAC
CCAGTTGCATGGCTATGGCCCTATGAACATGAATATGGCCGCA---CATC
ATGGAGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATAAAACAAGAG
CTGATCTGCAAGTGGATCGAACCAGAGCAACTAACGAATCCGAAAAAGTC
GTGCAACAAAACCTTTAGCACGATGCACGAGCTGGTGACCCATTTGACGG
TAGAACATGTGGGGGACCGGAGCAGTCGAACCATATTTGCTTCTGGGAA
GAGTGTGCCCCGAGAAGGAAAACCATTCAAAGCCAAATACAAACTTGTGAA
CCACATCAGAGTGCACACCGGAGAAAAACCGTTTCCATGTCCTTTTCCCG
GCTNNNNNNNN

>Polymixia japonica

AGTCTCCTCATCCGGCAGAATTAAGTCAACCCGGGGCCCTACTAGGGGA
CGATCAAATCTACAACGTTATTGTTACGGCACATGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGTGGATTTGGCAACTGACTTATC
CCACTAATGATCGGAGCCCCGATATGGCATTTCCTCGAATAAATAACAT
AAGCTTTTGACTACTACCCCCCTCATTCCTCCTATGCTAGCTTCTCTG
GCGTAGAAGCAGGGGCTGGCACAGGGTGAAGTGTATATCCCCCTCTTGCA
GGCAACCTTGCGCACGCTGGTGCTCAGTTGATCTGACTATTTTCTCCCT

TCACTTAGCAGGTGTCTCCTCAATTCCTGGGGCCATCAATTTTATTACAA
CTATTATTAACATGAAACCCCCAGCTATTTCCCAGTACCAAACACCTTTA
TTTGTGTGATCAGTTTTAATTACAGCTGTCCTTCTACTACTCTCCCTGCC
CGTGCTTGCGGCTGGTATTACCATGCTACTAACAGACCGAAATCTAAACA
CTACTTTCTTTGACCCCGCTGGAGGAGGAGACCCCTATTCTATAACCAGCAC
TTGTTCGATTCTTTGGCCACCCCGAAGTATATATTTTAATTTTACCAGG
ATTTGGTATAATTTCCCACATTGTTGCATACTACTCCGGCAAAAAAGAAC
CCTTCGGCTATATGGGCATGGTCTGAGCCATAATGGCCATCGGACTACTT
GGGTTTATCGTATGAGCCATCATATGTTCACTGTTGGTATGGATGTGGA
CACACGAGCTTATTTCTGGAGAGGAACCTCCACCCATCCAAGTCCCTGGG
CATGCTGTTGCTGCTGATGCCACCAGTGTACCAAATTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAAGAC
TTCTCCAAGTCCCAAAGACATGGTGGTGCAGCTTCTGTCTCATGAGGA
GCTGGAGACAGAAGATGAAAGACTGGTTTATGAGGCTGCTCTTAACTGGG
TCAACTATGACCTGGAAAGGAGGCACTGCAACCTTCCAGAGCTGTTGAGA
ACAGTTCGCCTGGCACTGCTTCCCTGCCATCTTCCCTTATGGAGAATGTCTC
CACAGAAGAGCTGATAAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCGCTGCAAGCTGAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCCGTGTGCCCGGCCACGAAAAACCAGCCACGCCCTCTTTCTRCTGGG
AGGGCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGTGCCATCGGCTGTAAGGTTTACATCACAGGCGGGA--GAGGCTC-
AGAGAATGGTGTGTCGAAAGACGTGTGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCCGTGGTGTACGGTCT
GCTGAGCTGAAACACTGCCTCTATGTGGTGGGAGGTCACACAGCAGCGAC
CGGCTGTCTTCCCTGCCTCTCCCTCCGGATAATTACATTGTAGTGTTCAGT
CGTTCAACAACAAGGCTGATTCTGAACGAAGTGGAGCTGATCATGTCGCT
GGCCAGGAGTTTCAAATGAGAGTAGTACAGTCTCCCTGGAGGAGCAGT
CTTTCCCCAGCATTGTCCAGCTGATCAGCAGAGCCTCCATGTTAGTGAGC
ATGCATGGAGCTCAGCTTGTACCTCGCTGTTCCCTGCCGAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTATGCTGTGAACCCAGAACAGTACACTCCAT
ATAAGACCCTTGCCCTCCCTACCAGGCATGGACCTGCAATATGTTTCCTGG
AGGAACATAATGGAGGAGAACACTGTCACCCACCCAGACAGACCCCTGGGA
CCAAGGGGGCATTGCCACCTGGAAAAGCAGGAGCAAGAACGCATACTTT
CCAGCAAAGATATTTCCAGGCACCTGTGTTGCCGAAACCCAGAGTGGCTC
TTTTCGAATCTACCAGGAYACTTTGGTGGACATCCCTTCATTCTGGAAGT
CCTCAA---AGAGGGCTTAAAG---ACCAGGCCAGCTTGAAGAA---GT
CCAAGCCAGCCAGCACAGTACATCCAGGCCGGGTGAGAGAACCCCAATGC
CAGACTTCAGTCCAAGCCACAAATGAGGCTAAGCTTACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATATCTGAAGGTGAGAGAAGTGAAGTAYGAAG
TGTGGATCCAGAAGAAGGATGCCAGCAAAGGAACACTGGAGGATCAAATC
ATCCAGGCCAACCCCTGCACTGGAGGCCTTTGGTAATGCCAAAACAGTTAG
GAATGATAACTCCTCCCGTTTTGGAAAATTCATCCGAATTCACCTCGGAA
ACAGTGGCAAGCTGTCTCTGCTGACATTGAGACTTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTTAAAGCTGAGAGGAACTACCACGTCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGTTGCTGATCA
CCAACAATCCATACGATTACTCCTTCATCTCCCAAGGAGAGGTGACAGTA
GCATCCATCAACGACTCAGAGGAGCTGTTAGCCACTGACAGCGCCTTTGA
TGTGCTTGGCTTCACTCAGGAGGAGAAGATGGGAGTGTACAAGTTGATTG
GTGCCATTATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAA
GAGCAGGCTGAACCTGATGGAACCTGAGGCTGCTGATAAGTCAGCTTACTT
GATGGGGCTGAACTCTGCAGACCTTATCAAAGGACTGTGTTCATCCCAGAG
TCAAAGTAGGAAATGAATATGTCACCAAAGGTCAAGGTGTAGACCAAGTC

TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGCGGGAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTCCTGGAGCACCTGAAGAGCCACTCGGGGAAGTCCACGGGCGGCGC
CAAGGAGAAAAAGCACCCGTCGCATCACTGCGACCGTCGTTCTACACCC
GCAAGGACGTCAGGCGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTTGGCCGGAAGACCACCTGACGCG
TCACGTCAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGACATGTTAGGTCTCCTAGGTTCTGGCTCTCCGCCTTGCTCTGTC
AAGGAGGAGCTTAGCCCTATGATGTGCAGCATGGGTCCCAACAAGGACCC
CATGATGGGCAAACCCCTTCCCCAGTGGGACCCCTTCCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAACCTCTGGGGTGGGT
CACCC-----CACCCCTCCCTGATGTCTAGTTTCGCTCTCTGCAGCCAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGTGACGGATCAAACATCGTGAATTTGCTGGCT
AGTAACTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTTAG
TAACTACAGTCTGTGATTGGGTTCTACATTTATGAGCCTATTGAATACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTATCACTACCTGCGGGTGGTGAACGT
GAGCGCTCCACAAAAGAATGACTTCATTACCATCCTCAAGGGCTCCTTCT
TACGCAGCCCGGAGTACCAGCACTTACCAGGACATCATCTTCTCCAAG
A---ACCGTGAAAAGTG-----ACGAGTATGACATTATCGCCTCACGGAT
GTACCTGGTGGCGCGGACCACGGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TTCTGGAGAAGTTGCGACCACTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTGTTTCATGGACCGTTATAGCTCCTCGGTAAT
ATCGCCCATCCTGACCTCGGGCTTTAGCGTGCTCACCATTCTCATCCTCA
CCTTCTTCTGGTTCATCAACCCCTTGGGAACTTCTGGCTCATCCTAACG
GTCACCTCTGTGGAGTTGGGCGTGCTGGGTTAATGGGCTATTACCCGTT
CGAGTGGCAGCCGGCCCTCAAAAACGTGTCCGCGTCTGCCACGTGGGTA
TTATCAACGGGCTGTGCGGGTGGGCTTCCTCGGTGGATGATTCCCTGCC
GACACCATCACTCGGAGGTTTCGCTACGATGTGGCCTTGGTGTCCGCCCT
AAAGGATCTGGAAGAGGACATCGTGGAGGGTTTGAGACAGTGTGGCCTGG
AAGACAGCGTGTGCACCTCAGGCTTCAGCGTTATGATTAAGGAGTCTGC
GATGGCATGGGAGACGTCAGCGAGAAGCACGGTGGAGGGCCGGCAGTCCC
TGAGAAGGCTGTACGCTTTTCTTTCACCATTATKTCCTGTCTCTGTTCAGG
GAGATGGAGAGGAA-----GAGGCG
GTTACAATCTTCAGGGAGCCAAAGCCAAACTCCGAACTGTCCTGTAAACC
CCTATGCCTGATGTTGTGGATGAGTCAGACCACGAGACACTCACTGCTG
TCCTGGGGCCGCTGATTGCGGAACGGAGCGCAATGAAGCATAGCCACCTT
CTCCTGTCAATAGGTGGCCTCACGCGCTCCTTTCAGCTTCCACTTCAGAGG
CACGGGCTATGATGAGAAGATGGTACGTGAGATGGAGGGCCTGGAGGCCT
CAGGCTCCACCTACGTCCTGCACCTGTGTGACTCCACTCGAGCACAGGCC
TCTGAAAACATGGTGTCCACTCCATCACCCGCAGTCACGATGACAACCT
GGAACGCTATGAAATATGGAGGACCAATCCCTTTTCAGAGTCCATAGAAG
AGCTGCGAGACCGGGTGAAAGGGGTCTCAGCCAAGCCCTTTATGGAGACC
CAGCCCACTATGGACGCATTGCACTGTGACATTGGTAATGCCTCTGAGTT
CTACAAAATCTTTTCAGGATGAGATTGGGGAGGTATTCAGAAGGC---CA
AC---CCCACTCGGGAGGAGCGTCGGAGCTGGCGGGCCGCCCTCGACAAG
CAGCTGAGGAAGAAGATGAAGCTGAAACCGGTGATGAGGATGAACGGGAA
CTACGCCCCAAGGCTGATGAGTCAGGAAGCTGTAGAGCTAGTGTGCGAGC
TGGTGGCCTCAGAGGAAAGGCGGGAGGCCCTGAGGGAGCTCATGGCGCTC
TACCTCCAGATGAAAACCTGTGTGGCGTGCCACCTGTCCAGCCAAAGAGTG
CCCAGACCAGCTTTGCCGCTACAGCTTCAACTCCAGCGATTTGCTGATC

TCCTCTCTACTAAATTCAAATATAGGTACAACGGGAAGATTACCAATTAC
CTGCACAAGACCCTGGCCCATGTCCCTGAAATTATAGAAAGAGATGGTTC
CATTGGAGCCTGGGCCAGTGAGGGGAATGAGTCAGCAAACAAATCGTACA
CCATTGAGATGGGTCCCAAGGGGCCCCAGTGGATGGAGAGCCCTCAGCCT
TTTTCTTGCTCCATTGAAGACCCCACAAAACAAACCAAATTCAAGGGTAT
AAAGACCTACATTTTCGTACCGGGTCACGCCGAGCCACACGGGGCGGCCG
TCTACAGACGTTACAAACACTTCGACTGGCTGTACAATCGCTTGCTGCAC
AAGTTCACTGTGATCTCGGTGCCCCACCTGCCTGAGAAGCAGGCCACTGG
GCGCTTTGAGGAGGACTTCATCGAGAAGCGTAAAAGACGACTGATCCTGT
GGATGAACCACATGACCAGCCACCCGGTCTCTCCAGTATGAGGGATTC
GAACACTTCCTCATGTGTGCCGACGACAAGCAGTGGAAGCTGGGCAAAG
GCGGGCTGAGAAGGACGAGATGATCGGCGCCCACTTCATGCTGACCTTC
AGATTCCCAACGAGCACCAGGACCTCCAGGACGTCGAGGAGAGAGTTGAC
TCCTTCAAGAACTTTGCGAAGAAAATGGACGACAGTGTCTGCAGCTCAC
GCACGTGCTCGGAGCTTGTGCGTAAGCACCTCGGAGGATTCAGGAAGG
AGTTCAGAGACTAGGAAATGCCTTCCAGTCTATCAGCCAGGCATTCATG
CTGGAACCTCCTCACAGCTCAGATGCCCTGAACAACGCCATCTCCACNNNNNNNNNNCG
TTCCCTCAAACCTGACCTCTCTGGGTTTCATTATTGGAGTCGGCGTGGTTCGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGCG
CGCCCTACTACTTCTGCTGGACCTGTGCGCCTCGGACATCCTGCGCTCC
GCCATCTGCTTCCCTTTTGTCTTACCTCGGTCAAGAATGGATCCGCCTG
GACCTACGGCAGCTCACCTGCAAAGTGATCGCCTTCTGGGCGTGTCTT
CCTGTTTCCACACGGCCTTTCATGCTGTTCTGCGTCAGCGTCACCCGTTAC
CTGGCCATCGCGCACCACCGCTTCTACACCAAGAGGCTGACCTTCTGGAC
CTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGTGCGTGGCCATGGCCT
TTCCCCGGTGCTGGACGTAGGCACGTAATCCTTCATCCGGGAGGAGGAC
CAGTGCACATTCAGCACCCTTCTTCCAGGGCCAACGACTCGCTGGGCTT
CATGCTGCTCTTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTCTTCCGTCCACGACCGTCCGAAAGATGAAGCCCGTCCAGTTC
GTGCCGGCCGTCAGCCAGAAGTGGACCTTCCACGGGCCGGGTGCCAGCGG
GCAGGCGGCGCCAACTGGCTGGCCGATTTGGGAGAGGCCCCACCCCTC
CTACCTTGTGGGCATCCGGCAGAACAGCAACCGCGCGGGCCGAGGCGT
CTGCTGGTGTGGATGAGTTCAAACCGGAGAAGAGGATTAGTAGGATGTT
CTACATCATGACGTTCTTCTTCCCTGGCCCTGTGGGGGCCCTACCTGGTAG
CCTGCTACTGGCGGGTGTGTTGCCAGGGGTCCCGTGGTCCCCGGGGTTAC
CTGACGGCAGCCGTGTGGATGAGCTTCGCCCAGGCCGGGTCAATCCCTT
CATCTNNNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCCTGGCGTGGGGACTGGTCTTGGCAGC
GACC---GCAGCGTCCCACTCAGCAACAGCTTGCTCTCCCCGCAACAAAC
CGAAGAGCCCACTGTTG---CCTCCCCGACGATGGTTTGTACCC---
CTGCCAACAACCGACTGGACTTCGCCGCATCGGCATACGATGCCGCT---
-----GATTCGCCCGTAACGCAGCCACGTTACTGTCTACGCAGCGGC
TGGAGTGAAGGCAC-----TTCCCTGCCGACCGCAGGTTGCTCCAACA
GACCGCTTGGCTATTACGCGGACCCGTCGG---GCTGG---GGAGCGCGT
ACGCCGCCGAGTACTGTAGT-----AGTAAATCGAGCTCGGTCTCTC
TTGCTGGCCCACTAATTCGGTCCGTGGCAGAACAGGCA-----CTAACT
ACCTGG-----CCGAGGA---CGGG---GACGC---CATCCCCACG
GAAAGTCCCCG---AT---CGGTGGCGCGGAGGAG---ACGAAACCCAA
AGACTT-----GTCCGA---ATCTAGCTGGATAGAA---ACGCCGTCTT
CGATTAAGTCAATTGATTCAGCGATTCTGGGATCTTTG---AACAAAGCC
AAGCGGAGAAGAATTCGCCTTCTGCCACACCA-----GTTTCAGA
AATTGTGTCCCCGTTAAAATCTGAGNNNNNNNNNNNAGGCGAAGTCACAGATAGAGAAGTA
GCGTTGGCGATAAATCCGTTCCGACAGCGGATGGGCGCCTTCAAGATTAA
CCACAGCTCTACGATATTGGCTCCAG---ACAAACAGCGTTTTCTCC

AGGCG---CCCGGCTAC---GCGGCGGCTGCCCTGGGA---CACCATCA-
-----CCACCCGACTCACGTTAGCTCT---TATTCCACAGCAGCGTTCAA
TTCCACGCGGCACTTCTCTTTAGAAATCGGGGTTCGGAGACGCCACCA
G-----TGCGCAGCACAGTTTGTTCGCCCTCCGC---CGCGGGA
AGTTT---T-----GCAGGACCGCATGGACTCAGATGCCGCGGGACA
CCTGCTCTTCCCAGGGCTACACGAA---CAAGCCGCGAGTCATGCGTCTT
CTAACGTTGTCAACAGCCAGATGCGATTGGGCTTTTCCGGGGACATGTAC
AGTCGGGCCGACCAGTACGGCCACGTTACAAGCCCGAGGT---CCGACCA
CTATGCTTCGACCCAGTTGCACGGCTATGGCCCTATGAACATGAATATGG
CCGCA---CATCACGGAGCAGGGGCCCTTCTTTCGTTACATGAGGCAGCCG
ATCAAACAAGAGCTCATCTGCAAGTGGATCGAACAGAGCAACTGACGAA
TCCCGAAAAGTCATGTAATAAAACTTTCAGTACGATGCATGAGCTAGTGA
CCCATCTGACGGTGGAAACATGTGGGGGGACCCGAACAGTCAAACCACGTT
TGCTTCTGGGAAGACTGTTCTCGAGAAGGAAAACCGTTCAAAGCCAAATA
CAAACCTTGTTAATCATATCAGAGTACACACCCGGAGAAAAGCCGTTCCAT
GTCCATTCCCCGGCTGTGGCAA

>Polymixia loweii

AGTCTCCTCATCCGGGCAGAACTAAGTCAACCCGGGGCCCTGCTAGGGGA
TGATCAAATCTACAACGTCATTGTTACGGCACATGCCTTTTGTAATAATTT
TCTTTATAGTAATAACCAATTATGATTGGTGGATTTGGTAACTGACTCATC
CCACTAATGATCGGAGCACCCGATATAGCATTTCCTCGAATAAAACAACAT
AAGCTTTTACTACTCCCCCTTCATTCCTCCTGCTATTAGCCTCTTCCG
GCGTAGAAGCGGGGGCTGGTACAGGATGAACTGTATACCCACCCCTTGCA
GGTAATTTAGCACACGCTGGTGCCTCAGTTGACTTAACCATTTTCTCCCT
TCATTTAGCAGGTGTCTCCTCAATTCTTGGAGCCATCAACTTTATTACAA
CTATTATTAACATGAAACCCCCAGCTATTTCCCAATACCAAACACCCTTG
TTTGTATGATCAGTTTTAATTACCGCTGTTCTTCTACTGCTCTCCCTACC
TGTCCTTGCAGCTGGCATTACCATGCTATTAACAGACCGAAATCTAAACA
CCACCTTCTTTGACCCTGCTGGGGGAGGAGATCCTATTCTCTACCAACAC
TTGTTCTGATTCTTTGGACACCCCGAAGTATATATTTTAATTTTACCAGG
ATTTGGTATAATCTCCACATTGTTGCATACTATTCCGGCAAAAAAGAAC
CCTTCGGTTATATGGGAATGGTCTGAGCTATAATGGCCATTGGACTACTT
GGATTTATCGTGTGAGCCACCACATGTTTACCGTCGGTATGGACGTGGA
CACACGAGCTTATTTCTGGAGAGGAACCTCCACCCATCCAACCTGCCCTGGG
CATGCTGTTGCTGTCTGATGCCCACAGTGTACCAAATTTATCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAAGAC
TTCTCCAACCTGCCAAAGACATGGTGGTGCAGCTTCTGTCTCACGAGGA
GCTGGAGACAGAAGATGAAAGACTGGTTTATGAGGCTGCTCTTAACTGGG
TCAACTATGACCTGGAAAGGAGGCAC TGCAACCTTCCAGAGCTGTTGAGA
ACAGTTCGCCTGGCACTGCTTCCCTGCCATCTTCCCTTATGGAGAATGTCTC
CACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCCGCTGCAAGCTGAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCTGTGCCCGGCCAAGAAAACCAGCCACGCTCTCTTTCTGCTGGG
AGGGCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGCAAGGTTTACATCACAGGCGGGA--GAGGCTC-
AGAGAATGGCGTGTGCAAAGACGTTGGGTCTATGATACCGTCCACGAGG
AATGGTCCAAGGCGGCGCCCATGCTCATTGCCAGGTTTGGTACGCGGTCT
GCCGAGCTGAAACACTGCCTCTATGTGGTGGGAGGACACACAGCAGCGAC
CGGCTGTCTTCCCTGCCTCTCCCTCCGGATAATTACATTTGTAGTGTTCAGT
CGTTCAACAACAAGGCTGATTCTGAACGAAGTGGAGCTGATCATGTGCT
GGCCAGGAGTTTCAAATGAGAGTAGTCACAGTCTCCCTGGAGGAGCAAT
CTTTCCCCAGCATTGTCCAGCTGATCAGCAGAGCCTCCATGTTAGTGAGC

ATGCATGGAGCTCAGCTTGTACCTCGCTGTTCCCTGCCGAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCGTACGCTGTGAACCCAGAACAGTACACTCCAT
ATAAGACCCTTGCCCTCCCTACCAGGCATGGACCTGCAATATGTTCCCTGG
AGGAACACGATGGAGGAGAACACTGTCACCCACCCAGACAGACCCTGGGA
CCAAGGGGGCATTGCCACCTGGAAAAGCAGGAGCAAGAACGAATACTTG
CCAGCAAAGATATTCGAGGCACCTGTGTTGCCGAAACCCAGAGTGGCTC
TTTCGAATCTACCAGGACACTTTGGTGGACATCCCTTCATTCTGGAAGT
CCTCAA---AGAGGGCTTAAAG---ACCAGGCCAGCTTGAAGAA---GT
CCAAGCCAGCCAGCACAGTTCATCCAGGCCGGGTCAGAGAACCCCAATGC
CAGACTTCAGTCCAAGCCACAAATGAGGCTAAGCTTACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATATCTGAAGGTGAGAGAAGTGAAGTACGAAG
TG-----AAGAAGGATGCCAGCAAAGGAACTGGAGGATCAAATC
ATCCAGGCCAACCCCTGCACTGGAGGCCTTTGGTAATGCCAAAACAGTTAG
GAATGATAACTCCTCCCGTTTTGGAAAATTCATCCGAATTCACTTTGGAA
ACAGTGGCAAGCTGTCTCTGCTGACATTGAGACTTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTTAAATCTGAGAGGAACTAYCACGTCTTCTT
CCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGTTGCTGATCA
CCAACAACCCGTACGATTACTCCTTCATCTCCCAAGGAGAGGTGACAGTA
GCATCCATCAACGACTCAGAGGAGCTGTTAGCCACTGACAGCGCCTTTGA
TGTGCTTGGCTTCACTCAGGAGGAGAAGATGGGAGTGTACAAGTTGATTG
GTGCCATTATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAA
GAGCAGGCTGAACCTGATGGAACCTGAGGCTGCTGATAAGTCAGCTTACCT
GATGGGGCTGAACTCTGCAGACCTTATCAAAGGACTGTGTATCCAGAG
TCAAAGTAGGAAATGAATATGTCACCAAAGGTCAAGGTGTAGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGCAGGAGTGCAGGAAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCTGCCACGG
CGGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTCCTGGAGCACCTGAAGAGCCACTCGGGGAAGTCCACGGGCGGCGC
CAAGGAGAAAAAGCACCCGTGCGATCACTGCGACCGTTCGCTTCTACACCC
GGAAGGATGTGAGGCGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTTGGCCGGAAGGACCACCTGACGCG
CCACGTCAAGAAGAGCCACTCGCAGGAGTTGCTGAAGATCAAGACGGAGC
CTCCGGACATGTTAGGTCTCCTAGGTTCTGGCTCTCCGCCTTGCTCTGTC
AAGGAGGAGCTTAGCCCTATGATGTGCAGCATGGGTCCCAACAAGGACCC
CATGATGGGCAAACCCCTTCCCAGTGGGACCCCTTCCCATGGGCATGT
ACAACCCCAACCAC-----CTCCAGGCCATGTCCAACCTCTGGGGTGGGT
CACCC-----CACCCCTCCCTGATGTCTAGTTTCGCTCTCTGCAGCCAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCTTCTTCTCTCTTCA
TGGGATGTTTACAAATCAGTGACGGATCAAACATCGTGAATTTGCTGGCT
AGTAACTCTCCGAGTGTTCGTACGCGCTGACCCAGCAGAAGTACTTTAG
TAACTACAGTCCCCTGATTGGGTTCTACATTTATGAGCCTATTGAATACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACACTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTATCACTACCTGCGGGTGGTGAAYGT
GAGCGCGTCCACAAAGAATGACTTCATTACCATCCTCAAGGGCTCCTTCT
TACGCAGCCCGGAGTACCAGCACTTACCAGGACATCATCTTCTCCAAG
A---ACCGTGAAAGTG-----ACGAGTATGACATTTATCGCCTCACGGAT
GTACCTGGTGGCGCGGACCACGGAGAAGAAACGCGAGGAGGTGGTGGAGC
TTCTGGAGAAGTTGCGACCACTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACCTTTGTGTTTTCATGGACCGTTATAGCTCCTCGGTAAT
ATCGCCATCCTGACCTCGGGCTTTAGCGTGCTCACTATTCTCATCCTCA
CCTTCTTCTGGTCAATCAACCCCTTGGGGAACCTTCTGGCTCATCCTAACG
GTCACCTCTGTGGAGTTGGGCGTGCTGGGTTTAAATGGGCTATTACCCGTT
CGAGTGGCAGCCGGCCCTCAGAAACGTGTCCGAGTCTGCCACGTGGGCA


```
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----GCCAAATCTCGCTTT  
CACCTGGCGTGGGGACCGGTCTGCGACGACCGACC---GCAGCGTCCCCT  
CAGCAACAGCTTGCTCTCCCCGCAACAACCGAAGAGCCCACTGTCG---  
CCTCCCCGAGCGATGGTTTTGTACCC---CTGCCAACACCGACTGGAC  
TTCGCCGCATCGGGGTACGACGCCGCC-----GACTTCGCCGGTAA  
CGCGGCCACGTTGCTGTCCTACGACGCGGTGGAGTGAAGGCGC-----  
TTCCCCTGGCAGCCGAGGTTGCTCCAACAGACCGCTTGGCTATTACGCG  
GACCCGTCGG---GMTGG---GGAGCGCGTACGCGCCGCGAGTACTGTAG  
C-----AGTAAATCCAGCTCGGTCTCTCTTGCTGGCCCACTAATTCGG  
TCGGCGGCAGAACAGGCA-----CTAACTACCTGG-----CCGAG  
GA---CGGG---GACGC---CATCCCCACGAAAGGTCCCCG---AT---  
CGGCGGCAGGAGGAG---GCGAAACCCAAAGACTT-----GTCCGA--  
-ATCTAGCTGGATAGAA---ACGCCGTCTTCGATTAAGTCGATCGATTCT  
AGCGATTCTGGGATCTTTG---AGCAAGCCAAGCGGAGAAGAATTCGCC  
TTCTGCCACGCCA-----GTTTCAGAAATTGTGTCCCCGNNNNNNNNNNNNNNCACTACT  
CAACAGGCGAAGTACAGAAAGAGAAGTAGCGTTGGGGATAAAATCCGTTTC  
GCAGACGGGATGGCGCCTTTCAAAATTAACACAGCTCTCACGACATTGG  
CTCCCG---ACAAACAGCGTTTTTCTCCAGGCG---CCCGGCTAC---G  
CGGCGGCTGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTT  
AGCTCT---TATTCCACGGCGGCTTTCAATTCCACACGGGACTTTCTCTT  
CAGAAATCGGGGTTTCGGAGACGCCACCGAG-----CGCGCAGC  
ACAGTTTGTTCGCCTCCGC---CGCGGAAGTTT---T-----GCAGGG  
CCACATGGACACTCAGATGCCGCCGACACCTGCTCTTCCCGGGGCTACA  
CGAA---CAAGCGGCGAGTCATGCGTCTTCTAACGTCGTCAACAGCCAGA  
TGGCATTGGGCTTTTCCGGGGACATGTACAGTCGGGCGACCAGTACGGC  
CACGTTACGAGCCCCGAGGT---CCGACCACTACGCCCTGACCCAGTTGCA  
CGGCTATGGCCCTATGAACATGAATATGGCCGCA---CATCACGGAGCAG  
GGCCTTCTTTTCGTTACATGAGGAGCGGATCAAACAAGAGCTCATCTGC  
AAGTGGATCGAACCAGAGCAACTGACGAATCCCAAAAAGTCGTGTAATAA  
AACTTTCAGTACGATGCATGAGCTAGTGACCCACCTGACGGTGGAGCATG  
TGGGGGACCCGAGCAGTCGAACACGTTTGCTTCTGGGAAGACTGTTCT  
CGAGAAGGAAAACCGTTCAAAGCCAAATACAAACTGTAAATCATATCAG  
AGTACACACCCGAGAAAAGCCGTTTCGCTGTCCATCCCCGGCTGTGGCA  
AA
```

>*Porichthys notatus*

```
AGCCTCTTAATCCGAACAGAACTAACGCAGCCCCGGTCTCTACTCGGCAA  
TGACCAAATCTATAACGTAATCGTCACTGCCACGCATTCGTCATAATCT  
TCTTTATAGTAATGCCTATTATAATCGGGGGCTTTGGTAAGCTGGCTTATC  
CCCCAATAATCGGGGCCCCAGATATAGCATTCCCTCGTATAAAATAACAT  
AAGCTTTTACTTCTCCCCCTCTTTCCTTCTTCTTTTACGCTCTTCCG  
TCGTTGAGACCGGAGTTGGAACCGGCTGAACTGTATTATCCCCCTCTAGCT  
GGCAACTTAGCCACGCAGGGGCTTCTGTTGACCTCGCCATTTTTTCTCT  
CCATCTTGACGGCATTTTCCTCTATTTTAGGGGCTATTAACCTTTACTA  
CCATTATTAATAAAAAACCCAGCTTCCACACAATACCAAAACCCCTTA  
TTTTATCTGAGCTACTTTAGTTACCGCTGTCCTTCTTCTATTATCCCTACC  
TGTATTAGCAGCCGCACTACTATGCTACTAACAGACCGTAACCTAAACA
```

CCACCTTTTTTGACCCCGCAGGTGGAGGAGACCTATCCTTTACCAACAC
CTATTCTGATTCTTCGG-----

-----TTCTAGAAAGAAACCTTCATCCGTCCAACCTGCCTCGG
CATGCTTTTTGCTGTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTTCAGTTACCCAAAGATATGGTGGTGCAGCTTTTATCCCACGAGGA
GCTRGAAACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGA
TCAACTATGACCTAGAGAGGAGACACGACCACCTTCCAGAGCTTCTGAGA
ACAGTCCGCCTAGCTCTGTTGCCCGCCATCTTTCTCATGGAGAATGTGTC
GACGGAAGAGCTTATCAATGCCCAGACCAAAGCAAGGAGCTGGTGGACG
AAGCCATCCGTTGTAAGCTGAAGATCCTGCAGAACGATGGYGTGTTAAC
AGTCCGTGTGCCCGGCCGAGAAAAACCAGCCATGCCCTGTTTCTTCTGGG
AGGCCAGACCTTTATGTGTGACAAGTTGTAAGTGGTGGATCAGAAAAGCCA
AAGAAATCATCCCAAAGGCYGACATCCCCAGTCCGAGGAAGGAGTTCAGT
GCCTGYGCCATTGGCTGTAAGGTCTATATCACTGGGGGCA--GAGGYTC-
AGAGAACGGGGTATCGAAAGATGTCTGGGTCTACGACACTGTCCATGAGG
AATGGTCCAAGGCAGCGCCCATGCTCATTGCCCGGTTTGGCCACGGCTCT
GCAGAGTTAAAACACTGCCTCTATGTGGTAGGAGGTCATACTGCAGCAAC
TGGGTGCCCTCCAGCGTCCCGTCCAGATGAATACGTTGTTGTGTTTAGT
CGCTCTACCACCAGACTGATAGTGAATGAAGCTGAGTTCATCATGGCTCT
CGCGCAGGAGCTTCAGATGAGAGTGGTTACGGTGTCCCTGGAGGAACAGC
CTTTCCCAGCATTGTCCAGGTGATCAGCGGTGCATCAATGTTGGTTAGC
ATGCACGGAGCACAGCTCATTACGTCCCTCTTCCCTCCCAGAGGAGCTGC
TGTGGTTGAGTTGTTCCCCTTTGCTGTCAACCCAGAGCAGTATACCCAT
ATAAAACCCTGGCCTCCCTCCCAGGCATGGACCTCCACTACATCTCCTGG
AGGAACACTATGGAGGAGAACACAGTCACCCACCCGAGAGATCCTGGGA
ACAGGGAGGTATCGCTCACCTGGCRAAGGAGGAGCAAGAGCGAATACTGG
CTAGCAAAGATGTTCCGAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTACCAGGACACGCTGGTGGACATTCTTCTTTTCTAGAAAGC
CCTCCG---AGAAGGCTTAAAG---ACGAAGCCCAATCTGAAGAA---GK
CAAAGACAGCCAGTATGGTCCATCCTGGCCGGGTCAGGGAAGCCAGTGT
CAGACGTCGTGCAGACCAGCAGCGAGGCCAAACTCACCGTGTCTGGCA
GATCCCATGGAACCTCAAGTACCTGAAGGTGAGAGAGGTTAAGTACGAGG
TGTGGATCCAGAAAAAGACGCCAGCAAGGAGACGCTGGAAGATCAAATC
ATTCAGGCGAATCCTGCACTCGAAGCCTTTGGTAATGCCAAGACGGCAAG
AAACGATAACTCTTCTCGTTTTCGGAAAATTCATCAGAATTCACTTTGGAA
CCAGTGGTAAACTCTCCTCTGCAGACATCGAGACATACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACCTACCACATCTTCTA
CCAAATCCTGTCCAATCAGAAGCCAGAGCTGCTCGACATGCTACTGATCA
CCAACAACCCATACGACTACATCTACATCTCCCAAGGAGAGGTAACGGTG
GCATCCATTGATGATTCAGAGGAGCTGATGGCCACAGACAACGCCTTCGA
TGTGCTCGGCTTCACTCCAGAGGAGAAGATGGCCGTCTACAAGCTGATTG
GCGCCATCATGCACTACAGTAACATGAAGTTTAAAGCAGAAGCAACGTGAG
GAGCAGGCTGAACCTGATGGGACCGAGGCGGCAGATAAGTCGGCATACTT
AATGGGGCTGAACTCTGCTGACCTCATTAAGGGCTGTGCCATCCCCGGG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGGCAAAGTGTGGACCAGGTC
TACTATCCTAACAAGGAGGCCTTCAAGTGTGAAGAGTGTGGGAAGCACTA
CAATACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCAGCCACAG
CAGGAGATCTCACCTGCAAAGTGTGTATGCAGAGCTATGAGAGTACACCA
GTGCTCCTAGAGCACCTGAAGAGCCACTCGGGGAAATCCTCAGGTGGCAC

CAAGGAGAAAAACACCCGTGTGATCACTGTGATCGCCGTTTTTACACAC
GAAAGGATGTGCGACGACACATGGTGGTGCATACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGCGCTCAGCGCTTCGGAAGGAAGGACCATCTGACACG
TCATGTAAAAAAAAGCCACTCGCAAGAGCTGCTGAAGATCAAGACAGAGC
CACCTGATATGTTAGGTCTTTTAGCTTCGGGCTCACCACCTTGCTCAGTG
AAAGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTGCCAACAAAGACCC
CATGATGGGAAAATCGTTCCCCAGYGGCGCCCTTTTCACATGAGCATGT
ACAACCCTCATCAT-----CTCCAGGCCATGTCTAATTCTGGGGTCAGT
CATTCA-----CATCCATCTTTGATGCCAGTTTCGCTGTCTGCAGCTAT
TGGCATAGGCTGTCACATAGATTACCTCATCTACGCGTCTTTTTCTTTCA
TGGGATGTTTACAGATCAGCGATGGGTCCAACATCGTAAACCTGTTAGCT
AGCAACTCTCCGAGCGTTTTCGTACGCCCTCACCCAGCAGAAGTACTTCAG
CAACTACAGTCCTGTGATTGGATTTTACATTTACGAACCCATTGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACTCTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGTGTAGTGAATGT
GAGCGCGTTCGACCAAGAGCGACTTCATCACCATCCTCAGAGGCTCATTCT
TGCGCAGCCCGGCATACCAGCATTTCACAGAGGACATCATATTTCTCGAAG
A---ATCGGGAGACTG-----ACGAGTATGACATCATCGCCTCGCGCAT
GTACTTGGTAGCTCGGACCACGGAGAAGAAGCGCGAGGAAGTGGTGGAGC
TTCTGGAGAAGCTTCGCCATTGATGCTCATCAACAGCATCAAGTTCATT
GCCTTCAATCCACGTTTGTGTTTCATGGATCGCTACAGTTCTTCAGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGTGTGCTCACCATCCTCATCCTCA
CATTCTTCTGTCATCAACCCATTGGGGAACCTTCTGGCTCATCCTGACA
GTTACGTCCTGAGCTTGGGGTCTTGGGTTTGATGNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNCTTGAATGTTGGC
ATTATTAATGGGCTTCTGTTAGGGCATCCTCCGTGGATGACATCCCAGT
CGACACCATCACTCGAAGATTTTCGATATGATGTGGCACTGGTATCAGCAT
TAAAAGACCTAGAGGAGGACATCATTGAGGGTTGACTGAGTGTGGAATG
GAAGACAGYGCTTGCACCTCAGGCTTCAGCGTCATGATCAAAGAATCCGG
TGACGGCATGGGCGACGTTCAGCGAGAAACACGGAGGAGGACCTGCGGTTT
CTGAGAAGGCGGTACGTTTTTCACTTACTATTATGTCTATCTCCATCCTG
GCAGATGGCGAGGAA-----AAGCC
AGTTACCATCTATACTGAGCCAAAGCCAAACTCCGAACGTGCATGTAAGC
CCCTTGTCTGATGTTTGTGATGAATCAGACCATGAAACACTCACAGCT
GTCCTGGGGCCGATGTCGCCGAGCGTGAAGCAATGAAAGACAGCAGACT
CATTCTGTCAATGGGTGGCTTGCCCTCGCTCCTTTCGCTTCCACTCAGAG
GCACAGGATATGATGAGAAGATGGTACGTGAAGTGGAGGGCCTGGAGGCC
TCAGGTTCCAGTTATATCTGCACGCTGTGTGACTCCACTCGGGCAGAGGC
CTCTCAMAATATGGTACTGCATGCCATTACCCGCGGCCATGAAGAGAACC
TGGAGCGTTACGAAAATATGGAGAACTAATCCCTTTTCAGAGTCTGTGAT
GAGCTGCGGGACCGTGTCAAAGGGTCTCTGCCAAACCCTTTATGGAGAC
CCATGCCACAATGGATGCATTACACTGTGACATTGGCAATGCCACTGAGT
TCTACAAAATTTTTCAAGATGAGATTGGGGAGGTGTACAAAAAGT---C
AAC---CCCACCCGTGAGGAACGGCGTAGCTGGAGAGCAGCCCTAGATAA
ACARCTGAGGAAAAAATCAAGCTAAAACCAGTAATGAGGATGAATGGGA
ACTATGCCCGGAAGCTAATGACCATGGAGGCAATGGAGGCGGTGTGTGAA
CTGGTACCCACCGAGGAGAGGAGAGAAGGCTTGATGGAGCTTATGAGCCT
CTACATCCAGATGAAGCCTGTCTGGCGTTCCTCCTGTCCAGCCAAAGAAT
GCCCTGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTTGCTGAC
CTCCTGTCCTCCACATTTAAATATCGGTACAATGGAAAGATCACCAACTA
CCTTCACAAAACGCTGGCTCAGGTCCCTGAAATCGTCGAACGAAAATGGGT
CTATCGGAGCCTGGGCCANNNNNNNNNNNNNNNNNNNNTCATACTATTGAAATGTGTCCCTT
GGGGCC

AAGATGGAAGGAGAATCCACATCCTTTCTCTTGCTCCATTGAAGATCCTA
CAAAACAGACAAAGTTTAAAGGCATCAAAACGTACATTTTCGTACCGGGTC
ACACCGAGCCACACAGGGCGTCCCGTCTACAGACGCTACAAACACTTTGA
CTGGCTATAACAACCGTTACTGCACAAGTTCACTGTGATCTCTGTGCCTC
ATCTTCCAGAGAAACAGGCCACTGGGCGATTTGAGGAAGACTTCATCGAG
AAGCGGAAGAGGCGATTGGTACTGTGGATGAACCATATGACTACTCACCC
GGTCTTTTCGCAATACGAAGGCTTTGAGCACTTTCTCATGTGTGCTGATG
ATAAGCAATGGAACTGGGCAAGAGACGGGCAGAGAAGGATGAGATGGTG
GGTGCCCATTTTCATGCTAACCCTCCAGATTCCAAAATGAGCACCAAGACCT
TCAGGATGTAGAAGAGCGAGTTGATTCCCTTCAAGACATTTGCTAAGAAAA
TGGATGATAGTGTATGCAGCTCACACATGTTACCTCGGAGCTGGTGCGC
AAGCACCTTGGCGGATTTTCGGAAGGAGTTCCAACGGCTAGGAAATGCCTT
CCAGTCTATCAGCCAGGCATTCATGCTGGACCCTCCCCATTGCTCAGAGC
CTCTCAATCAAGCCATCTCTCATNNNNNNNNNNNNNNNNNCTCAAACGACCTCTCTGGGTTTCATC
ATCGGCGTTCGGCGTGGTTCGGAACCTCCTGATTTCCATCCTKCTGGTTAA
AGACAAGAGCCTGCACCGGGCGCCGTACTACTTCCCTGCTGGACCTGTGCG
CTTCCGACATCCTGCGCTCGGCCATCTGCTTCCCCCTTCGTCTTCACCTCG
GTCAAGAATGGCTCCGCTGGAGTTACGGCACGCTCACCTGCAAAGTGAT
CGCCTTCCCTGGGCGTGTCTCTCTGCTTCCACACGGCGTTCATGCTATTCT
GCGTTAGCGTCACCCGCTACCTAGCCATCGCGCACCCACCGCTTCTACACC
AAGCGCTTGACCTTCTGGACGTGCCTAGCCGTCATCTGCATGGTGTGGAC
GCTGTTCGGTGGCCATGGCKTTCCCGCCGGTGGTGGACGTGGGGACGTACT
CGTTTATCCGCGAGGAGGACCAGTGCACGTTCCAGCACCGCTCGTTCCGG
GCGAACGATTCCTCGGCTTCATGCTCCTGCTGGCGCTAATCCTCCTAGC
CACACAGCTGGTTTACCTCAAGCTTATCTTCTTCGTYCACGACCGTCGAA
AGATGAAGCCCGTCCAGTTTGTGCCTGCCGTCAGCCAGAAGTGGACTTTC
CACGGTCCGGGCGCTAGCGGCCAAGCGGCNGCTAACTGGTTAGCTGGCTTC
GGTAGAGGCCCCACCCCGCTACTTTGCTAGGCATCCGGCAGAACAGCAA
CGCGGCGGGTTCGAGGCGTCTRCTGGTGTGGATGAGTTTAAAACGGAGA
AGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTGCTCTG
TGGGGGCCCTATCTTGTGCGCTGCTACTGGCGGGTTTTTTCGAGGGGCC
CGTGGTCCCCGGAGGGTATCTGACGGCSGCCGTGTGGATGAGCTTTGCC
AAGCCGGGGTCAACCCTTTCATCNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCCTCTGGCGT
G
GGGACTGGCCCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTT
GCTGTCCCCGCACCAAACCGAGGACCCACTGTTGCCTCCCCCCCGCAGC
GATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTCGCGGCCCTCA
GCATACGATGCGGCT-----GATTTCCGCCGTAACGCGGCCACCTT
GCTGTCTACGCAGCGGCTGGAGTGAAAGCTC-----TTCCCATGTCCG
CGGCGGGCTGTCCAGCCGGCCTCTGAGCTACTACGCGGACCCGTCG--
-GCTGG---GGAGGACGCACGCCGCCGAGTACTGCGGCGTCAACAACAA
ATCCAGCTCGGTGTTCCCCTGCTGGCCCCGCTAACTCCATCGGCGGCAGAA
CGAGCG---CC---AACTACCTGA-----GCGAGGA---GGTG---
GACTC---CATCCCCACGGAGAGGTCACCG---AT---CGGCGGCTCCGA
GGAC---GCCAAACCCAAAGACGT-----GTCCGA---GTCCGAGCTGGA
TAGAGACCACGCCCTCCTCCATTAAGTCCATGGACTCCAGCGATTCTGGG
ATCTTTG---AACAAATCCAAGAGGAGACGGATCTCACCGTCGGCCACGCC
C-----GTGTCCAGAGACCGTGTCCCCGCTCAAGTCTGAGCATCACT
CAACAGGCGAAGTCAAGAGAGAGAAGTGGCGTTGGGGATCAATCCGTTT
GCCGATGGGATGGGCGCCTTCAAAAATCAACCACAGCTCCCACGACATCGG
CTCCGG---ACAGACCGCCTTCTCCTCCCAGGCG---CCCGGCTAC---G
CGGCGGCCGCGCTGGGA---CACCATCA-----CCACCCGACCCACGTT
GGCTCC---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTT

CAGAAATCGGGGTTTCGGGGACGCCGCGG-----CGCGCAGC
ACAGTTTGTGTTGCCTC-----TGGGAGTTT---C-----GCAGGG
CCGCATGGACACTCGGATGCAGCGGGGCACCTGCTCTTCCCGGGGCTGCA
CGAG---CAAGCGGCCGGGCACGCGTCCTCCAACGTGGTCAACAGCCAGA
TGCGGCTCGGCTTCTCGGGGGACATGTACGGCCGAGCCGATCAGTACGGC
CACGTTACCAGCCCGCGGT---CAGACCATTATGCATCGACCCAAC TGCA
CGGCTACGGCCCCATGAACATGAACATGGCCGCG---CACCACGGCGCGG
GGGCTTCTTCCGATACATGAGGCAGCCCATCAAACAAGAGCTCATCTGC
AAGTGGGTGAGCCGGAGCAGCTGGCGAACCCCAAAAAGTCGTGCAACAA
AACTTTTAGTACCATGCACGAGTTGGTGACCCATCTGACGGTGGAGCAG
TGGGGGGCGGAGCAGACGAACCACATCTGCGTCTGGGAGGACTGCTCC
AGAGAGGGGAAGCCCTTCAAAGCCAAATACAAACTTGTAATCACATCAG
AGTGACACCCGAGAAAAGCCATTTCCGTGCCCGTNNNNNNNNNNNNNNNNN

>Porichthys plectrodon

-----TTCTAGAAAAGAACCTTCATCCGTCCAAC TGCCCTGG
CATGCTTTTGCTGTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTTCAGTTACCCAAAGATATGGTGGTGCAGCTTTTATCCCACGAGGA
GTTGAAACAGAAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGA
TCAACTTTGACCTAGAGAGGAGACACGACCACCTTCCAGAGCTTCTGAGA
ACAGTCCGTCTAGCTCTGTTGCCCGCCATCTTCTCATGGAGAATGTCTC
GACAGAAGAGCTGATCAATGCCCAGACCAAAGCAAGGAGCTGGTGGACG
AAGCCATCCGTTGTAAGCTGAAGATCCTGCAGAACGATGGCGTCGTTAAC
AGTCCGTGTGCCCGGCCGAGAAAACCAGCCATGCCCTGTTCCCTTCTTGG
AGGCCAGACCTTTATGTGTGACAAGTTGTAAGTGGTGGATCAGAAAGCCA
AAGAAATCATCCCAAAGGCCGACATCCCCAGTCCGAGGAAGGAGTTCAGT
GCCTGCGCCATTGGCTGTAAGGTGTATATCACTGGGGGCA--GAGGCTC-
AGAGAACGGGTATCTAAAGATGTCTGGGTCTACGACACTGTCCATGAGG
AATGGTCCAAGGCAGCGCCCATGCTCATT-----

-----GGACGAATACGTTGTTGTGTTTGTAGT
CGCTCTACAACCAGACTGATAGTGAATGAAGCCGAGCTCATCATGGCTCT
CGCTCAGGAGCTTCAGATGAGAGTGGTTACGGTGTCCCTGGAGGAACAGT
CTTTCCCGAGCATTGTCCAGGTGATCAGTGGTGCATCAATGTTGGTTAGC
ATGCACGGAGCTCAGCTCATTACGTCCCTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTTGAGTTGTTCCCTTTGCTGTCAACCCAGAGCAGTATACACCAT
ATAAAACCCTGGCCTCCCTCCCAGGTATGGACCTCCACTACATCTCCTGG

AGGAACACTATGGAGGAGAACACAGTCACCCACCCAGAGAGATCCTGGGA
ACAGGGAGGCATCGCTCACCTGGCGAAGGAGGAGCAAGAGCGAATACTGG
CTAGCAAAGATGTCCCGAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGAATCTACCAGGACACGCTGGTGGACATTCTTTCTTTCATGGAAGT
CCTCAG---AGAAGGCTTAAAG---ACAAAGCCCAATCTGAAGAA---GA
CAAAGACAGCCAGCATGGTCCATCCTGGCCGGGTCAGGGAAGCCAGTGT
CAGACGTCTGTGCAGACCAGCAGCGAGGCCAAACTCACCGTGTCTGGCA
GATCCCGTGGAACTCAAGTACCTGAAGGTGAGAGAGGTTAAGTACGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGAGACACTGGAAGATCAAATC
ATTAGGCGAATCCTGCACTCGAAGCTTTTGGCAACGCCAAGACGTAAAG
AAACGATAACTCTTCCCGTTTGGAAAATTCATCAGAATTCACTTTGGAA
CCAGCGGTAAACTCTCCTCTGCAGACATCGAGACATACCTGCTGGAGAAG
TCACGTGTACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAAATCCTGTCCAATCAGAAGCCAGAGCTGCTCGACATGCTCCTGATCA
CCAACAACCCATACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTG
GCCTCCATTAATGATTCAGAGGAGCTGATGGCCACAGACAATGCCTTCGA
TGTGCTCGGCTTCACTCCAGAGGAGAAGATGGCCGTCTACAAGCTGATCG
GCGCCATCATGCACTACGGTAACATGAAGTTTAAAGCAGAAGCAACGTGAG
GAGCAGGCTGAACCTGATGGGACCGAGGCGGCCGATAAGTCGGCATACTT
AATGTGGCTGAACTCCGCTGACCTCATTAAGGGCTGTGCCATCCCCGGG
TCAAGGTAGGAAATGAGTATGTCACTAAAGGGCAAAGTGTGGACCAGGTC
TACTAT-----GGGAAGCCTTCAAGTGTGAAGAGTGTGGGAAGCACTA
CAATACCAAGCTGGGATATAAGCGCCATGCGGCCATGCACTCAGCCACAG
CAGGAGATCTCACCTGCAAAGTGTGTATGCAGAGCTATGAGAGTACACCA
GTGCTCCTAGAGCACCTGAAGAGCCACTCGGGGAAATCCTCAGGTGGTGC
CAAGGAGAAAAAACACCCGTGTGATCACTGTGATCGCCGTTTTTACACAC
GAAAGGATGTGCGACGACACATGGTGGTGCATACGGGCCGGAAGGACTTC
CTGTGCCAGTACTGTGCTCAGCGCTTCGGAAGGAAGGACCACCTGACACG
TCATGTGAAAAAAGCCACTCGCAAGAGCTGCTAAAGATCAAGACAGAGC
CACCTGATATGTTAGGTCTTTTAGCTTCGGGCTCACCACCTTGCTCAGTG
AAAGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTGCCAACAAAGACCC
CATGATGGGTAAACCGTTCCCGAGCAGCGCCCTTTTCACATGAGCATGT
ACAACCCTCATCAT-----CTCCAGGCCATGTCTAATTCTGGGGTTGGT
CATCCA-----CACCCCTTTTGATGCCAGTTCGCTGTCTGCAGCTAT
TGGCATAGGCTGTACATAGAT-----

-----TGCAAAGTTGGCA
TTATTAATGGGCTTCTGGTGGGTCATCCTCCGTGGATGACTCCCCAGTC
GACACCATCACTCGAAGATTTCCATATGATGTGGCACTGGTAGCAGCATT
AAAAGACCTAGAAGAAGACATCATGAAGGGCTGACTGAATGTGGAATGG

AAGACAGCGCTTGCACCTCAGGCTTCAGCGTTATGATCAAAGAATCCTGT
GATGGCATGGGCGACGTCAGCGAGAAACACGGAGGAGGACCTGCGGTTCC
TGAGAAGGCGGTACGCTTTTTCATTCACTATTATGTCTATCTCGATCCTGG
CAGATGGCGAGGAA-----AAGCCA
GTTACCATCTATACTGAGCCAAAGCCAAACTCCGAACTGTCATGTAAGCC
CCTTTGTCTGATGTTTGTGATGAATCAGACCATGAAACACTCACAGCTG
TCCTGGGGCCGATTGTTGCTGAGCGTGAAGCGATGAAAGACAGCAGACTC
ATTCTGTCAATGGGTGGCTTGCCTCGCTCCTTTTCGTTTCCACTTCAGAGG
CACAGGATACGATGAGAAGATGGTACGTGAACTGGAGGGCCTGGAGGCCT
CAGGTTCCAGCTATATCTGCACGCTGTGTGACTCCACTCGGGCAGAGGCC
TCTCACAATATGGTACTGCATGCCATTACCCGCAGCCATGAAGAGAACCT
GGAGCGTTACGAAATATGGGAACTAATCCCTTTTCAGAGTCTGTCGATG
AGCTGCGGGACCGTGTCAAAGGGGTCTCTGCCAAACCCTTTATGGAGACC
CATGCAACACTGGATGCATTACACTGTGACATTGGAAATGCCACTGAGTT
CTACAAAATCTTTCAAGATGAGATTGGGGAAGTGTACAAAAAAGT---CA
AC---CCCACCCGTGAGGAACGGCGTAGTTGGAGAGCAGCCCTAGATAAA
CAGCTGAGGAAGAAAATCAAGCTAAAACCAGTAATGAGGATGAATGGGAA
CTATGCCCGGAAGCTAATGACCATGGAGGCAATGGAAGCGGTGTGTGAGC
TGGTACCCACTGAGGAGAGGAGGGAAGGCCTGAGGGAGCTTATGGGCCTC
TACATCCAGATGAAGCCTGTCTGGCGTTCCCTCCTGTCCAGCCAAAAGATG
CCCTGACGAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTTGCTGACC
TCCTGGCCTCCACATCTAAATCTCGTTACAATGGAAAGATCACCAACTAC
CTTCACAAAACGCTGGCTCATGTGCCTGAA-----
-----TCCTACA
CTATTGAAATGTGTCCCTTGGGGCCAAGATGGAAGGAGAATCCACATCCT
TTCTCTTGCTCCATTGAAGATCCTACAAAACAGACAAAGTTTAAAGGCAT
CAAAACGTACATTTTCGTACCGGGTCACACCGAGCCACACAGGGCGTCCTG
TCTACAGACGCTACAAACACTTTGACTGGCTATAACAACCGTTACTGCAC
AAGTTCACTGTGATCTCCGTGCCTCATCTTCCAGAGAAACAGGCCACTGG
GCGATTTGAGGAAGACTTCATCGAGAAGCGTAAGAGGCGATTGATACTGT
GGATGAACCATATGACTACTCACCCGGTTCTCTCGCAATATGAAGCCTTT
GAGCACTTTCTCATGTGTGCTGATGATAAGCAATGGAACTGGGCAAGAG
AAGGGCAGAGAAGGATGAGATGGTGGGTGCCATTTTCATGCTAACCTCC
AGATTCCGAATGAGCACCAAGACCTTCAGGATGTAGAAGAGCGAGTTGAT
TCCTTCAAGACATTTGCTAAGAAAATGGATGATAGTGTTCATGCAGCTCAC
ACATGTTACCTCGGAGCTGGTGCACCAAGCACCTTGGCGGATTTAGAAAGG
AGTTCCAACGGCTAGGAAATGCCTTTCAGTCTATCAGCCAGGCATTCATG
CTGGACCTCCCCATGCTCAGAGCCTCTCAATCAAGCCATCTCTCAT--
-----TTCCCTCAAACCTGACCTCTCTGGGTTCATCATCGGCGTCG
GTGTGGTCCGAAACCTCCTGATTTCCATCCTGCTGGTTAAAGACAAGAGC
CTGCACCGGGCGCCGTAATACTTCCCTGCTGGACCTGTGCGCTTCCGACAT
CCTGCGCTCGGCCATCTGCTTCCCCCTTCGTCTTACCTCGGTCAAGAATG
GGTCCGCCTGGAGTTACGGCACGCTCACCTGCAAAGTGATCGCCTTCCCTG
GGCGTGCTCTCCTGCTTCCACACGGCGTTCATGCTATTCTGCGTTAGCGT
CACCCGCTACCTAGCCATCGCGCACACCGTTTCTACACCAAGCGCTTGA
CCTTCTGGACGTGCCAGCCGTCATCTGCATGGTGTGGACGTTGTGCGGTG
GCCATGGCGTTCCCGCCGGTGTGGACGTGGGGACGTACTCGTTTATCCG
CGAGGAGGACCAGTGCACGTTCCAGCACCGCTCTTCCGGGCGAACGATT
CCCTCGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTAGCCACACAGCTA
GTTTACCTCAAGCTTATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCC
CGTCCAGTTTGTGCTGCCGTCAGCCAGAACTGGACTTTCACGGTCCGG
GCGCTAGCGGCCAAGCGGCGGCTAACTGGTTAGCTGGATTCCGGTAGAGGC
CCCACCCCGCCTACTTTGCTAGGCATCCGGCAGAACAGCAACGCGGCGGG

TCGCAGGCGTCTACTGGTGTGGATGAGTTTAAAACGGAGAAGAGGATTA
GTAGAATGTTCTACATCATGACGTTTTTCTTCTGGCTCTGTGGGGGCC
TATCTTGTCGCCTGCTACTGGCGGGTTTTTGAAGGGGCCCCGTGGTCCC
CGCAGGGTATCTGACGGCGGCCGTGTGGATGAGCTTGGCCAAGCCGGG
TCAACCCTTTCATCTGTATCTTCTCCAACAGGGAGGCCAAATCTCGCTTT
CACTCTGGCGTGGGGACTGGACCTGGCACGGAGC---GCAGCGTCCCACT
CGGCAACAGCTTGCTGTCCCCGCACCAAACCGAGGAGCCCACTGTTGCCT
CCCCCCCCGAGCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGAC
TTCGCGGCCTCAGCATACGATGCGGCT-----GATTTGCGCCGGTAA
CGCGGCCACCTTGCTGTCTACGCAGCGGCTGGAGTGAAAGCTC-----
TTCCCATGTGCGCGGGCGGGCTGCTCCAGCCGGCCTCTGAGCTACTACGCA
GACCCGTCCG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGCGG
CGTCAACAACAAATCCAGCTCGGTGTTCCCCTGCTGGCCGGCCAAC TCCA
TCGGCGGCAGAACGAGCG---CC---AACTACCTGA-----GCGAG
GA---AGTG---GACTC---CATCCCCACGGAGAGGTCACCG---AT---
CGGCGGCTCCGAGGAG---GCCAAACCCAAAGACGT-----GTCGGA--
-GTCGAGCTGGATAGAGACCACACCTCCTCCATTAAGTCCATGGACTCC
AGCGATTCTGGGATCTTTG---ACAATCCAAGAGGAGACGGATCTCACC
GTCGGCCACGCC---GTGTACAGAGACCGTGTCCCCGCTCAAGT
CTGAG-----TCAACAGGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGG
ATCAATCCGTTGCGCGATGGGATGGGCGCCTTCAAATAAACACAGCTC
CCACGACATCGGGTCCGG---ACAGACCGCCTTCTCCTCCAGGCG---C
CCGGCTAC---GCGGCGGCCGCGCTGGGA---CACCATCA-----CCAC
CCGACCCACGTTGGCTCC---TACTCCACGGCGGCTTTCAACTCCACTAG
GGACTTTCTCCTCAGAAATCGGGGTTTCGGGGACGCAGCCGG-----
-----CGCGCAGCACAGTTTTGTTGCTC-----TGGGAGTTT---C
-----GCAGGGCCGCATGGACACTCGGATGCAGCGGGGCACCTGCTCTT
CCCCGGGCTGCATGAG---CAAGCGGCCGACACGCGTCTCCAACGTGG
TCAACAGCCAGATGCGGCTCGGCTTCTCGGGGACATGTACGGCCGAGCC
GATCAGTACGGCCACGTTACCAGCCC GCGGT---CAGACCATTACGCATC
GACCCAAC TACACGGCTACGGCCCCATGAACATGAACATGGCCGCG---C
ACCACGGCGCGGGGCTTCTTCCGATACATGAGGCAGCCCATCAAACAA
GAGCTCATCTGCAAGTGGATCGAGCCGAGCAGCTGACGAACCCCAAAA
GTCGTGCAACAAAAC TTTTAGTACCATGCACGAGTTGGTGACCCATCTGA
CGGTGGAGCACGTGGGGGGACCGGAGCAGACGAACCACGTCTGCTTCTGG
GAGGACTGCTCCAGAGAGGGGAAGCCCTTCAAAGCCAAATACAAACTTGT
AAATCACATCAGAGTGCACACCGGA-----

>Protomyctophum choriodon

AGCCTCCTAATTGAGCTGAACTCAGCCAACCTGGGGCCCTCCTGGGGGA
CGACCAGATTTATAATGTAATCGTAACAGCTCATGCCTTTGTAATAATTT
TCTTTATGGTTATACCTATCATAATTGGAGGATTCGGAAACTGATTAATC
CCCCAATGATCGGAGCCCCGATATAGCATTCCCCGAATAAATAATAT
AAGCTTCTGACTTCTCCCTCCCTCCTTCCTCCTCTTTTAGCCTCCTCCG
GCGTAGAAGCCGGGGCCGGAACCGGCTGAACAGTCTACCCGCCTCTTGCC
GGAAACCTCGCCCACGCCGGAGCATCTGTTGATTTAACAATCTTTCCCT
TCACCTAGCAGGTGCTCCTCAATCTTAGGCGCAATTAATTTTATTACAA
CCATTATTAATAAAGCCTCCTGCAATCTCCCAATACCAAACCCCTTTA
TTTGTATGAGCCGCTCATTACAGCAGTACTTCTCCTCCTGTCAC TCCC
AGTACTAGCTGCCGGCATCAAAATGCTCTAACAGACCGAAATCTAAACA
CCACCTTCTTCGACCCCTCCGGCGGAGGAGACCCAATCCTTTACCAGCAC
TTANNN
NN

-----TATCTCATCTACGCTTCGTTCTCCTTCATGGGATGTT
TACAAATCAGCGACGGGTCAAACGTTGTGAACCTGCTGGCGAGTAACTCT
CCGAGTGTGTCTTTTGCCTCACCCAGCAGAAGTACTTCAGTAACTACAG
CCCCGTTATYGGGTCTACATTTATGAACCCATCGAGTACTGGAATCCA
CGGTGCAGGAGCATCTGAAGACACTGAGTCACGGCTTCAACAAGATCTCC
TGGATCGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTGAGCGCGTC
GACCAAGAACGACTTCATCACCATCCTAAAGGGCTCCTTCCACACAGCC
CGGAGTACCAGCACTTACCAGGACATCATCTTCTCCAAGA---ACCGC
GAGAGCGAGGGCGACGAGTACGACATCATCGCCTCGCGCATGTACCTGGT
GGCGCGCACCACCGAGAAGAAACGCGAGGAGGTGGTGGAGCTGCTGGAGA
AGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATCGCCTTCAAC
CCCACCTTCGTCTTCATGGACCGCTACAGCTCCTCGGTTCATATCGCCCAT
CCTTACCTCGGGCTTCAGCGTGCTCACCATCCTCATCCTCACCTTCTTYC
TCGTCATCAACCCGCTGGGGAACCTTCTGGCTCATCCTGACGGTCACGTTCG
GTGGAGCTGGGCGTGTGGGTCTGATG-----

-----TAATGATCAAAGAGTCTGCGATGGCATG
GGAGATGTCAATGAGAAACATGGCGGGGGCCCGGATCCCTGAGAAAGC
GGTCCGTTTCTCTTTCACCGTTATGTCCATCTCTGTGACGCCGGATGGGA
AAACG-----GAGGCGTTGACCATC
TTCACAGAGCCAAAGCCCAACTCCGAACGTCTCCTGTAAGCCCATGTGCCT
GATGTTTGTGGATGAGTCGGACCAGAGATGCTCACTGCCGTCTTGGGGC
CCGTGGTTCGAGAGCGCACGGCAATGACAGAAAGCCGACTCATCCTGTCC
ATGGGTGGCCTCCCCGCTCGTTCCGCTTCTACTTCAGAGGCTCAGGCTA
TGATGAGAAGATGGTGCAGGAGATGGAGGGCCTGGAGGCATCAGGTTCTA
CCTATGTCCTGACTCTGTGTGACTCCACCCGGGCGAGGCCTCTCGCAAC
ATGGTGCTCCATTCCATCACCAGCAGCCATGGCGAGAACCCTGGAGCGCTA
CGAGATATGGCGGAGCAACCCCTTTGCGGAATCTGTTCGAGGCGTTGCGAG
ATCGGGTGAAGGGGTCTCCGCCAAGCCCTTTATGGAACCCAGCCACT
CTGGATGCATTGCACTGTGACATTGGTAACGCCACTGAGTTCTACAAAAT
CTTCCAAGATGAGATCGGGGAGGTGTTCCAGAAAGC---CAAC---CCCA
GCCGTGAGGAAAGGCGCCTCTGGAGGGCGGCTCTCGACAAGCAGCTGAGG
AAAAAACTCAAGCTCAAGCCCGTGTGCGGATGAATGGGAACTACGCCCG
GAGACTGATGTCCGAGGAGACCGTGGATGTGGTGTGTGAACTGGTGCCCT
CAGAGGAAAGGCGGGAGGCTCTGAGGGAGCTAATGGGGCTTTACATCCAG
ATGAAACCTGTGTGGCGTGCCAGCAGCCAGCCAAAGAATGCCCTGACCA
ACTGTGCCGCTACAGTTTCAACTCCAGCGCTTTGCAGACCTCCTCTCCA
CTACCTTCAAATACAGGTAT-----

-----TCGTACACCATCGAGA
TGGGCCCCAAAGGGCCCCTGTGGAAGGAGAGCCCGCAGCCCTTACCTGT
TCCATCGAGGACCCCACTAAACAGACCAAGTTCAAGGGCATCAAGACGTA
CATCTCCTACCGGGTCACGCCGAGCCACACGGGTACCCCGTGTACAGAC
GCTACAAGCACTTTGACTGGCTGTACAACCGCCTGCTGCACAAGTTCACC
GTGATCTCCGTCCCCACCTGCCGGAGAAGCAGGCGACTGGGCGCTTCGA

-----ACGGCATTTCCTCCCA
AGCT---CCCGGCTAC---GCAGCCGCTGCCCTGGGA---CATCACCA--
----CCATCCGACTCATGTACAGTTCT---TACTCTACGGCGGCTTTCAAT
TCCACCCGGGATTTTCTCTTCAGAAATCGAGGCTTCGGAGACGCCACCAG
-----CGCTCAGCATAGTCTCTTCGCCTCCGC---AGCGGGAA
GTTT---T-----GCAGCCCACATGGACACTCAGATGCAGCGGGACAC
CTGCTCTTCCCAGGACTTCACGAA---CAAGCTGCGAGCCATGCTTCCTC
AAATGTCGTTAATACTCAGATGCGATTGGGCTTTTCGGGGGACATGTACG
GCAGAGCCGACCAGTACGGCCACGTTACCAGCCCGCGGT---CCGACCAC
TATGCATCGACCCAGTTGCATGGCTATGGCCCTATGAACATGAATATGGC
CGCG---CATCATGGAGCAGGGCCCTTCTTCGTTACATGAGGCAGCCGA
TAAACAAGAGTTGATTTGCAAATGGATCGAACCGGAACAACCTGACGAAC
CCAAAAAGTCGTGCAACAAAACCTTTTAGCACAATGCACGAGCTCGTCAC
TCATTTGACAGTGGAGCATGTAGGGGGACCGGAACAGTCAAACCACATTT
GCTTCT-----

>Psenes maculatus

-----NNNNNNNNNGAAACCTTCACCCAACCTAACTGCCTTGGCATGCTGTTG
CTGTCTGACGCCACCAAGCTGTTCAGAGCTTTCTTGGGGCAT
GTGCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGATTTCTTCCAAAC
TGCCCAAAGATATGGTGGTGCAGCTTTGTACATGAGGAGCTGGAGACA
GAAGATGAGAGACTGGTGTATGAAGCTGCCCTGAACCTGGATCAACTATGA

CCTGAAAGGAGGCACTGCCACCTTCCAGAGCTCCTGAGAACGGTCCGCC
TTGCCCTGCTGCCCGCCATCTTTCTAATGGAGAATGTCTCGACAGAAGAG
CTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATGAGGCTATCCG
CTGTAAGCTGAAAATCCTGCAGAATGACGGCGTCGTAAACAGCCCGTGTG
CACGGCCAAGAAAAACCAGCCATGCTCTCTTTCTCCTGGGAGGGCAGACT
TTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGAGATCAT
CCCGAAGGCAGACATTCACAGCCCAAGGAAGGAATTCAGCGCATGTGCCA
TCGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-AGAGAATGGC
GTGTCCAAAGATGTATGGGTCTACGACACCGTCCACGAGGAATGGTCCAA
AGCGGCGCCGATGCTGATTGCCAGGTTTGGTCATGGCTCTGCAGAGCTGA
AACACTGCCTGTACGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
AATACATTGTTGTGTTTCAGTCGTTCAACAA
CAAGGCTGATACTGAACGAAGCCGAGCTAATCATGGCGCTGGCCAGGAG
TTCCAGATGAGAGTGGTACAGTTACCCTAGAGGAACAATCTTTCCCCAG
TATTGTCCAGGTGATCAGTGGTGCATCGATGTTAGTCAGCATGCATGGAG
CTCAGCTTATCACCTCACTCTTCTCCCCAGAGGATCTACTGTGGTGGAG
CTGTTCCCTTTGCTGTGAACTCAGAGCAGTATAACCCATATAAAAACCT
TGCTCCCTTCCAGGCATGGACCTTCATTATATTTCTGGAGGAACACTC
AGGAGGAGAACACTGTCACCCATCCAGACAGACCCGGGAACAAGGAGGC
ATCACTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGACCAGCAAAGA
CGTCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTCTTTTCAATCT
ACCAGGACACTTTGGTAGACATTCTTCTTCTTCTGGAAGTCCTCAA--G
GAGGGAATGAAG---ACCAAGCCCAGCTTGAAGAA---GTCCAAACCAGC
CAGTGTGTCCATCCGGGCCGGGTCAGAGAAGCCCAGTGTGACACCTCAG
TACAAACTACCAATGAGGCTAAACTCACAGTCTCTGGCAGATCCCATGG
AATTTGAAATACCTGAAAGTAAGAGAGGTCAAGTATGAAGTGNNNNNNNNN
TACCAGCAAGGGAACCTCTGGAGGATCAGATCATCCAGGCGAACCCGGCGC
TGGAGCCTTTGGAAACGCCAAAACGCTGAGAAACGACAACCTCGTCCCGT
TTTGGAAAATTCATTGCAATTCACCTCGGAAACAGTGGCAAGTTGTCGTC
TGCTGACATCGAGACGTACCTGCTGGAGAAGTCTCGTGTACCTTTCAGC
TCAAGGCTGAGAGGAACATCACATCTTCTACCAGATCCTGTCCAATCAG
AAGCCAGAGCTGCTGGACATGCTGTTAATCACCAACAACCCGTACGACTA
CTGCTACATCTCCCAAGGAGAGGTAACGGTCGCTCATCAATGACTCGG
AGGAGCTGATGGCCACCGACAGCGCCTTTGATGTGCTCGGCTTCACTCCG
GAGGAGAAGATGGGCGTCTATAAACTGACCGGCGCCATCATGCACCACGG
CAACATGAAGTTCAAGCAGAAGCAGCGTGAGGAGCAGGCCGAGCCCGACG
GGACGGAGGCTGCTGATAAATCAGCTTACTTGTGAGGGCTGAACTCCGCT
GACCTCATCAAAGGCCTGTGCCATCCCAGAGTCAAGGTAGGAAATGAGTA
TGTTACCAAAGGCCAGAGTGTGGACCAAGTCTACTACNNNNNNNNNNNNNN
GGGAAGCACTACA
ACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCA
GGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACACCTGT
TCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCTCGGGCGGAGCCA
AGGAGAAAAAGCACCCATGTGACCACTGCGACCGCGTCTTCTACACACGG
AAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCCT
GTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGATCACCTGACCCGCC
ACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCT
CCTGATATGTTAGGTCTTTTAGCTTCGGGGTCGCCACCTTGCTCTGTGAA
GGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCCA
TGATGGGCAAACCGTTCCCCAGTGGCGCCCTTTTCCGATGGGCATGTAC
AACCCCAACCAC-----CTTCAGGCCATGTCTAATCTGGGGTGGGTCA
TCCA-----CACCCGTCCCTGATGCCAGCTCGCTGTGCGCAGCTATGG
GCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

GCACGAGTTGGTGACCCATCTGACGGTGGAGCATGTCGGTGGACCGGAGC
AGACCAACCACATCTGCTTCTGGGAGGANN
NN

>*Psettodes erumei*

AGCCTGCTAATTCGGGCAGAACTTAGCCAGCCCCGAACCCTCCTGGGAGA
TGACCAAATCTACAATGTCATCGTAACAGCACACGCCTTCGTTATAATTT
TCTTTATAGTAATGCCTATCATGATCGGAGGCTTCGGAAACTGACTTATC
CCCCAATAATCGGCGCCCCAGACATAGCATTCCCCCGTATGAATAACAT
GAGTTTCTGACTCCTTCCCCCTTCTTCTTACTGCTACTTGCCTCTTCAG
GAGTTGAGGCTGGTGCGGGTACTGGATGAACCGTTTATCCGCCTCTGGCC
GGCAACCTAGCCCACGCAGGAGCATCCGTTGACCTGGCTATCTTTTCCCT
CCACCTGGCCGGAATCTCCTCAATTCCTGGGGCCATTAATTTTATCACTA
CGATCATCAACATAAAAACCCCCGACCGTCTCTATGTACCAAATCCCCCTC
TTTGCTGAGCCGTGCTCATTACAGCTGTCTGCTTCTCCTCTCTCTTCC
CGTCTAGCTGCTGGCATTACAATGCTCCTAACAGATCGCAACCTTAACA
CCACATTCCTCGACCCTGCAGGGGGAGGAGACCCCATTCTATATCAACAC
CTATTC-----

-----NNNNNNNNNGAAACCTCACCCAACCTAAGTCTTGCCATGCTGTTG
CTGTCTGACGCCACCAGTGACCAAGCTGTAGAGCTCTCCTGGGGTAT
GTGCCCTCAGCAACTTCCCCGCTATTTGCAAGACAGAGGACTTCCTCCAAC
TGCCCCAAGATATGTTGTGCGACTTTTGTACACATGAGGAGCTAGAGACA
GAAGATGAGAGACTGGTTTATGAAGCTGCTCTTAACTGGATCAACTATGA
CTTGAAAAGAGACACTGCCACCTTCCAGAGCTCCTGAGAACGGTCCGCC
TGGCTTTGCTGCTGCCATCTTCTCATGGAGAACGTGTCTACAGAAGAG
CTGATCAACGCACAGCCCAAGAGCAAGGAGCTGGTGGATGAAGCTATCCG
CTGYAAGCTGAAGATCCTGCARAACGATGGCGTTGTCAACAGCCCATGTG
CTCGACCAGAAAAGACCAGCCATGCCCTATTTCTTCTGGGAGGGCAGACT
TTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAAAGCCAAAGAGATCAT
CCCCAAGGCCGATATCCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCA
TCGGATGCAAGGTGTACATCACTGGTGGGA--GGGGCTC--AGAGAACGGT
GTGTCAAAGATGTGTGGGTCTACGACCCCGTCCAAGAGGAATGGTCCAA
AGCAGCACCGATGCTCATTGCCAGGTTTGGCCATGGCTCTGCAGAGTCGA
AACACTGCCTCTACGTAGNNNGGATG
ATTACATTGTTGTGTTTCAGTCCGTTCAA
CAACAAGGCTGATACTCAATGAAGCTGAGCTAATCATGGCGCTGGCCCAG
GAGTTCAGATGAGAGTGGTACGGTATCCCTGGAGGAACAGTCTTTTCC
CAGTATCATTACAGGTGATCAGCGGTGCGTTCATGTTAGTCAGCATGCACG
GAGCTCAGCTCATCACCTCACTCTTCCTCCCCAGAGGAGCTACTGTGGTG
GAACTGTTCCCCTTTGCAGTGAACCCAGAGCAGTACACCCCTTATAAAAC
CCTTGCCCTCCCTCCAGGCATGGACCTTCACTATATTTCTTGGAGGAACA
CTAATGAGGAAAACACCATCACCCACCCAGACAGGCCATGGGAACAAGGA
GGCATTGCTCACTTGGAGAAGGAGGAGAAGGAGCGAATACTGGCCAGTAA
GGACGTTCCCAGGCACCTGTGTTGCCGCAACCCAGAGTGGCTCTACCGCA
TCTATCAGGACACTTTGGTAGACATCCCTTCCTTCTTGGAAAGTCATCAG--
--AGAGGGCATGAAG---ACCAAGCCAGCTTGAAGAA---GTCAAAGCC
AGCCAGCATGGTACACCCAGGCCGAGTACAGAGAACCCEATGTACAGACCT
CAGTACAAACCTAATGAGGCTAAACTCTCAGTCTCCTGGCAGATCCCA
TGGAATCTGAAATATTTGAGGGTAAGAGAGGTCAAGTACGAGGTGNNNNNNNNNNAAAAA
AGACACCAGCAAGGGGACACTGGAGGATCAAATCATCCAGGCAAACCCTG
CGCTGGAGGCCTTTGGCAACGCCAAAACGTTAAGAAATGACAATTCATCT

CGTTTTGGAAAATTCATTCGTATTCACCTTTGGTACGAGTGGCAAGCTATC
ATCTGCTGACATTGAGACATACCTGCTGGAGAAGTCACGTGTCACCTTTC
AGCTAAAAGCAGAGAGGAAGTATCACATCTTCTACCAGATCCTGTCCAAT
CAGAAGCCGGAGCTGTTGGACATGCTGCTGATCACTAACAATCCATACGA
CTACTCCTACATCTCCCAAGGAGAAGTAACAGTCGCCTCCATCAATGACT
CAGAGGAGCTGATGGCCACCGACAGTGCCTTTGATGTGCTCGGCTTCACT
CCAGAGGAGAAAATGGCCGTCTATAAGCTGACTGGCGCCATCATGCACTA
CGGCAACATGAAGTTCAAACAGAAGCAACGCGAGGAGCAGGCTGAACCTG
ACGGGACAGAGGCTGCTGATAAATCAGCTTACCTAATGGGGCTGAACTCT
GCTGACCTAATAAAAAGGCCTGTGCCACCCAGAGTCAAGGTAGGAAATGA
ATATGTCACCAAAGGCCAAAGTGTGGATCAAGTCTACTACNNNNNNNNNNNN
NNNNGGGAAGCACTA
CAACACCAAGCTTGGATATAAGCGCCATGTGGCCATGCACTCTGCCACCG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTATGAGAGTACACCT
GTTCTCCTGGAGCACCTCAAGAGCCACTCCGGAAGTCTTCGGGTGGCAC
CAAGGAGAAAAAACACCCATGCGACCCTGTGACCGTCGCTTTTACACAA
GGAAGGATGTGAGGCGGCACATGGTGGTCCACACGGGCCGAAAAGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGTAGGAAGGACCACCTGACAAG
GCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCAGATATGTTAGGTCTTTTAGCTTCCGGATCACCTCCTTGCTCTGTG
AAGGAGGAGCTCAGCCCATGATGTGTGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCTTAGTGGGGCTCCTTTTCCGATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCGATGTCTAATACTGGGGTGGGT
CACCCA-----CACCCATCCCTAATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNCGTCAACCTGCTGGCTAGTAACCTCTCCA
AGTGTTCATACGCTCTGACCCAGCAGAAATACTTCAGTAACCTACAGCCC
TGTGATTGGGTTTTATATTTATGAGCCCATCGAGTACTGGAACCTCCACGG
TTCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGG
ATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGTGCCTCAAC
CAAGAGCGACTTCATCAACATCCTTAAAAGCTCCTTCCGCGAGCCCGG
AGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA---ACGCGAG
ACTG-----ATGAGTATGATATTTATCGCATCACGGATGTATTTGGTTGC
ACGGACGACTGAGAAGAAACGCGAGGAGGTGGAGCTTCTGGAAAAGC
TTCGCCC GTT GATGCTTATCAACAGCATCAAGTTCATTGCCTTCAACCC
ACATTTGTGTTTCATGGACCGGTACAGCTCCTCTGT CATATCACCCATCCT
GACCTCAGGCTTCAGTGTACTCACCATCCTCATCTCACTTCTCTCCTGG
TCATCAACCCCTTGGAAGAACTTCTGNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCTTGCAATGTTGGCATT
ATTAATG
GTCTCTCTGGATGGGCTTCTTCGGTAGATGACTCCCCAGCTGACACCATC
GCTCGGCGGTTTTCGCTATGATGTTGCACTGGTGTGCGCATTAAAGGATCT
GGAGGAGGACATCATGGAAGGGCTGAGAGAGAGTGGGCTGGAAGACAGTG
CTTGACCTCAGGTTTTATGTCATGATCAAAGAAATGCTGCGATGGCATG
GGCGATGTCAGCGAGAAGCACGGTGGAGGACCGCTGTTCTGAGAAGGC
TGTGCGTTTCTCTTCCACCATTATGTCTGTCTCTGTCCTGGCAGACGGTG
AGGAG-----AAGGAGGTAACCATC
TTCACAGAGCCCAAGCCAAACTCAGAAGTGTCTGTAAGCCCCTTTCCT
GATGTTTGTAGATGAGTCAGACCATGAGACACTCACAGCTGTCTTAGGGC
CTATAGTTGCAGAGCGTGGAGCAATGAAAGAAAGCAGACTCATCTATCC
ATTGGTGGCCTGCCTCGTTTCCCTTCCGTTTTCCAGTTCAGAGGCACAGGATA
CGATGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGGCCTCTGGATCCA
CATATATCTGCACTCTGTGTGACTCCAGTCGTGCAGAGGCCTCTCAAAC

ATGGTGTGCACTCCATCACCCGCTGTCATGAAGAGAACCTAGAACGTTA
CGAAATATGGAGAACCAACCCCTTCGCGGAGTCAGCAGATGAGCTGCGAG
ACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCCAGCCACT
CTAGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTCTACAAAAT
TTTCCAGGATGAGATTGGGGAGGTATACCAAAGGT---CAGC---CCCA
GTCGGGAAGAGCGGCGCAGTTGGAGGGCAGCCCTAGATAAACAGCTGAGG
AAAAAGATGAAGCTTAAACCGGTAATGAGGATGAAATGGGAACTATGCCCC
CAGGCTAATGACCCTGGAGGCTGTGGAGGTGGTGTGTGAGCTGGTGCCCT
CCGAGGACAGGAGAGAGGCCCTGAGGGAGCTCATGAGGCTCTACCTCCAG
ATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAATGCCCTGACCA
GCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCTGACCTCCTCTCCT
CTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACCTTCACAAA
ACCTTGGCCNN
NNNNNNNNNNNNNTCGTACACCATYGAGATGGGCCCTTGGGGCCCCGGTGGGA
AGGAGAACCCACAGCCTTTCTCCTGCTCAATCGAAGACCCACAAAACAG
ACAAAGTTCAAGGGCATCAAGACCTACATATCGTACCGGGTCACGCCAG
CCACATAGGGCGTCTGTCTACAGGCGTTACAAACACTTTGACTGGCTGT
ACAACCGCCTGCTGCACAAGTTCACTGTGATCTCCGTGCCTCACCTGCCC
GAGAAGCAGGCCACGGGGAGATTTGAGGAAGACTTCATCGAGAAGCGCAA
GAGACGGCTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTCT
CCCAGTATGAAGGCTTTGAGCACTTCTGATGTGTGCCGACGACAAGCAG
TGGAAGCTGGGAAAGCGACGGGCGGAGAAGGACGAGATGGTCGGCGCCCA
TTTCATGTTGACCCTCCAGATCCCCAACGAGCACCAGGACCTGCAGGACG
TGGAGGAGCGGGTGGACTCCTTCAAGGCCTTTGCTAAAAAGATGGACGAC
AGCGTGATGCAGCTCACACATGTTGCCTCGGAGCTGGTGCGCAAACATCT
CGGCGGGTTCAGGAAGGAGTTCAGCGGCTGGGAAATGCCTTCCAGTCCA
TCAGCCAGGCATTCATGCTGGACCCACCCACAGCTCAGAGGCCCTCAAC
AANNNGGTTTCATCATGGGAGTCGGTG
TGGTTGAAATCTGCTGATCTCCATC
CTACTGGTCAAAGACAAGAGCCTGCACCGAGCACCTACTATTTCCCTGCT
GGACCTGTGCGCCTCCGATATCCTGCGCTCTGCCATCTGCTTCCCCTTTG
TCTTACCTCGGTCAAGAATGGATCTGCCTGGACCTACGGCAGCTGACC
TGCAAAGTGATCGCCTTCCCTGGGGTGCTCTCCTGTTTTTACACAGCGTT
CATGCTATTCTGTGTCAGTGTCACTCGCTACCTTGCCATTGCACATCACC
GTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTCACTGC
ATGGTGTGGACGTTGTCAGTGGCTATGGCGTTTCCACCGGTGCTAGACGT
AGGGACGTACTCTTTTATCCGGGAGGAGGACCAGTGCACATTCAGCACC
GCTCCTTTCGGGCGAATGATTTCGCTGGGCTTCATGCTCCTGCTGGCGCTC
ATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTTTTTGTCCA
TGACCGTCGAAAGATGAAGCCTGTGCAGTTTGTGCCTGCTGTGACCCAGA
ACTGGACCTTCCACGGGCCAGGTGCCAGTGGGCAGGCTGCGGCCAACTGG
CTGGCTGGATTTCGGGCGAGGCCCCACCCCGCCTACTTTGCTGGGCATCCG
GCAGAACAGCAACGCAGCAGGTCCGAGGCGTCTACTGGTATTGGATGAAT
TCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTC
TTCTGGCACTGTGGGGGCCCTATCTGGTCGCTGCTACTGGCGGGTGT
TGCACGGGGCCCCGTAGTCCCTGGGGGCTACCTGACAGCAGCCGTGTGGA
TGAGCTTTCNN

NNNTGGGGGTAAATCCGTTCCGCG
GATGGGATGGGCGCCTTCAAATAAACACAGCTCCCACGACATTAGCTC
CGG---ACAGACGGCGTTTTCTCCAGGCG---CCCGGCTAT---GCAG
CGGCCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTGCG
TCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAG
AAATCGGGGTTTTGCGGGGACGCCACCGG-----GGCGCAGCACA
GTTTTGTTCCGCTC-----TGGAAGTTT---C-----GCAGGGCCA
CATGGACTCAGATGCAGCGGGGACCTGCTCTTCCCGGGGCTCCACGA
G---CAGGCGGCGAGCCATGCCTCTTCCAACGTGGTCAACAGCCAGATGC
GGCTGGGCTTCTCGGGGACATGTACGGACGGGCGACCCAGTACGGCCAC
GTTACAAGCCCGCGGT---CCGACCCTATGCTTCCACCCAGCTGCACGG
CTACGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGG
CCTTCTTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAG
TGGATCGAGCCGAGCAGCTGACGAATCCAAAAAGTCGTGCAACAAAAC
TTTTAGCAGATGCAGGAGCTGGTGACCCATCTGACGGTGGAGCATGTGG
GGGGACCGGAGCAGACCAACCACGCTGCTTCTGGGAGGACTGCCCCAGA
GANNN
NN
>Pseudopentaceros pectoralis

AGCCTGCTCATTTCGGGCAGAATTAAGTCAACCAGGCGCCCTTTTAGGGGA
CGACCAAATTTACAACGTAATTGTTACAGCGCATGATTTTGTATAAATTT
TCTTTATAGTAATGCCAATTATGATCGGAGGATTTGAAACTGACTTATT
CCCCTGATGATCGGGGCCAGACATAGCCTTCCTCGAATGAATAATAT
GAGTTTTTGACTTCTCCCCCATCTTTTCTCCTCCTTGCTTCTCTCTG
GGGTAGAGGCTGGTGCCGGTACCGGATGAACAGTCTATCCTCCCCTGGCT
GGCAACTTAGCCCACGCAGGAGCATCCGTTGATCTAACAATTTTCTCTCT
GCACTTAGCGGGCATTTCCCTCAATCCTTGAGCCATCAACTTCATTACAA
CCATCATTAACATAAAACCTCCCGCTATTTCCCAATATCAGACTCCCCTC
TTTGATAGGCTGTATTAATTAAGTCCCGTCTCTCCTCTCTCTCCTTCC
AGTTCTCGCTGCCGTTAATTAATTAAGTCCCGTCTCTCCTCTCTCTCCTTCC
CCACCTTCTTTGACCCTGCAGGAGGAGGAGACCCCTATCCTCTACCAACAC
CTA-----

-----NNNNNNNGAGAAACCTTACCCATCTAACTGCCTTGGCATGCTGT
TGCTGTCTGACGCCACCAGTGCACCAAGCTGTGACAGCTCTCTGGGGC
ATGTGCCCTCAGCAACTTTCCAGCTATTTGCAAGACAGAGGACTTCCCTCCA
ACTGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGAGCTAGAGA
CAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGATCAACTAT
GACCTGGAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGAACGGTCCG
CCTGGCCCTGCTGCCAGCATCTTTCTCATGGAGAAGCTTTCTACAGAAG
ACCTGATCAATGCCAGGCAAGAGCAAGGAGCTGGTGGATGAAGCTATC
CGCTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTTAACAGTCCGTG

AGAGCCTGC

ACCGAGCGCCCTACTATTTTCCTGCTGGACCTGTGCGCCTCTGATATCCTG
CGCTCCGCCATCTGCTTCCCCTTTGTCTTCACCTCGGTCAAGAATGGATC
TGCTGGACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTGGGTG
TGCTCTCCTGTTTCCACACGGCGTTTATGCTATTCTGTGTAAGTGTGACA
CGCTACCTGGCCATCGCACATCACCCTTCTACACCAAGAGGCTGACCTT
CTGGACCTGTCTAGCTGTCTATCTGCATGGTGTGGACGTTGTGAGTGGCTA
TGGCGTTCCCGCCGGTGTAGACGTAGGGACGTACTCTTTTATCCGGGAG
GAGGACCAGTGCACATTCCAGCACCGTTCCCTCAGGGCGAATGATTCGCT
GGGCTTCATGCTCCTGCTGGCGCTCATTCTCCTGGCCACACAGCTGGTTT
ACCTCAAGCTCATTTTCTTTCGTCCACGACCGTGCAGAAAGATGAAGCCTGTC
CAGTTCGTGCCTGCTGTCAGCCAGAAGTGGACCTTCCATGGGCCAGGCGC
CAGCGGGCAGGCGGCGGCAACTGGCTGGCTGGATTTGGTTCGAGGCCCA
CCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAATGCAGCGGGCCGC
AGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAG
GATGTTCTACATCATGACGTTTTTCTTTCCTGGCACTGTGGGGGCCCTATC
TGGTCGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTGGTCCCTGGG
GGCTACCTGACGGCAGCGGTGTGGATGAGCTTTGCNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNGCCAAATCTCGCTTT

CACCTGGCATGGGGACTGGTCTGACGGAGC---GCAGCGTCCCCTACT
CGGCAACAGCTTGCTATCCCGCAGCAAACCGAGGAGCCACTGTTGCCA
CCCCCGCAGCGATGGTTTGTACCC---CTGCCAACACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGCT-----GATTTCCGCCGTAA
CGCGGCCACCTTGCTGTCTTACGACGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCCAACCGGCTCTTGGCTATTACGCA
GACCCGTAG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTAG
TGTAATAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCGCTAATCTA
TCGGTGGCAGAGCAGGCA---CC---AACTACCTGG-----CGGAG
GA---GGGA---GACTC---CATCCCGACAGAGAGGTCACCG---AT---
CGGCGCTCGGAGGAG---ACCAAACCCAAAGACCTGAC---ATCAGA--
-GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAAGTCTATTGATTCA
AGCGATTCTGGTATCTTTG---AACAGGCCAAAAGGAGAAGAATCTACC
TTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTTGAAAT

CGGAGNN
NN---
NNAGACGGCGTTTTTCTCCAGGCG---CCCGGCTAC---GCAG
CAGCCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGC
TCT---TACTCCACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAG
AAATCGGGGTTTTCGGGGACGCCACCGG-----GGCGCAGCACA
GTTTGTTCGCCTC-----CGGAAGTTT---C-----GCAGGGCCA
CATGGACTCAGATGCAGCGGGGCACCTGCTCTTCCAGGGCTCCACGA
G---CAAGCGGCGAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGC
GGCTGGGCTTCTCGGGGACATGTACGGACGGGCCGACCAGTACGGCCAC
GTTACAAGCCCAGGTT---CCGACCACTATGCTTCGACCCAGTTGCACGG
CTATGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGG
CCTTCTTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAG
TGGATCGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCTGTGCAACAAAAC
TTTTAGCACGATGCACGAGCTTGTGACCCACCTGACGGTGGAGCATGTGG
GGGACCGGAGCAGACCAACCACATCTGCTTCTGGGAGGAGTGCGCCAGA
GAAGGAAAACCATTCAAAGCCAAATACAACTTGTAAATCACATCAGAGT
ACACACCGGAGAAAAGCCCTTCCCGTGTGCGGTTNNNNNNNNNNNNNNNN

>*Pseudopleuronectes americanus*
AGTCTGCTCATTTCGAGCAGAACTAAGCCAACCCGGGGCTCTCCTGGGAGA

CGACCAAATTTATAATGTAATCGTCACCGCACACGCCTTTGTAATAATCT
TCTTTATAGTAATAACCAATTATGATCGGAGGGTTCGGAAACTGACTTATT
CCATTAATAATTGGGGCCCCCGATATGGCCTTCCCTCGAATAAATAACAT
GAGTTTCTGACTCCTACCCCATCCTTTCTCCTCCTTCTAGCCTCTTCAG
GCGTCGAAGCTGGGGCAGGGACAGGATGAACCGTGTATCCCCACTAGCT
GGAAATCTAGCACACGCCGGAGCATCAGTAGACCTCACCATTTTCTCCCT
CCACCTTGCCGGAATTTTCATCAATTCAGGGGCAATCAACTTTATTACTA
CTATCATCAACATGAAACCAACAGCAGTCACTATGTACCAAATCCCCTA
TTTGTCTGGGCCGTAATACTACTGCCGTCTTCTTCTTCTTTCCCTACC
CGTCTGGCCGCTGGCATTACAATGCTACTGACAGACCGCAACCTAAACA
CAACCTTCTTTGACCCTGCCGGAGGGGTGACCCCATCCTCTACCAACAC
CTA-----

-----TTCTAGAGAGAAACCTTCATCCGACTAACTGTCCTTGG
CATGTTGTTACTCTCTGATGCCACCAGTGCACCAAGCTGTTCGGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCAGCTATTTGCAAGACAGAGGAC
TTCTCCAATTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGA
GCTAGAGACCGAAGATGAGAAACTTGTATGAAGCTGCTCTAAACTGGA
TCAACTATGATGTGGAAAAGAGGCACCTGCCACCTACCGGAGCTTCTGAAA
ACGGTCCGCCTCGCCCTGCTGCCGGCCATCTTTCTGATGGAGAATGTCTC
TACAGAAGAGTTGATCAATGCCAGGCCAAGAGCAGGGAACCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAAATCCTGCAGAATGATGGTGTGTAAC
AGCCCCGTGTGCACGACCAAGAAAACCAGCCATGCTCTCTTTCTACTCGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTAGACCAGAAGGCCA
AAGAGATCATCCCCAAAGCCGACATCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACCGGTGGGA--GAGGCTC-
AGAGAACGGTGTGTCTAAAGATGTATGGGTCTACGACACTGTCCAAGAGG
AGTGGTCCAAAGCAGCTCCAATGCTCATCGCCAGGTTTGGCCATGGTTCT
GCAGAGTTAAAACATTGCCTCTATGTAGTAGGGGCCACACTGCAGCAAC
TGGCTGCCTCCCGGCTTCTCCCTCCGGATGATTACATTGTTGTGTTTCAGT
CGATCAACAACAAGGCTGATACTTAATGAGGCAGAGCTAATTATGGCACT
GGCCCAGGAGTTCCAAATGAGAGTAGTCACAGTATCCCTGGAGGAACAGT
CATTTCCCTAGTATAATCCAGGTGATCAGTGGTGTCTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATTACCTCACTGTTTCTCCCCAGAGGAGCTGC
TGTGGTGGAACTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACACCTT
ATAAAACCCTTGCCCTCCCTTCCAGGCATGGACCTTCATTATATCTCCTGG
AGGAACACCAAGGAGGAAAACACCATTACCCACCTGACAGACCTTGGGA
GCAAGGAGGTATTGCTCACTTAGAAAAGGAGGAGCAGGAGCGAATATTGG
CCAGTAAGGATGTTCCAGGCACCTCTGCTGTGCGCAACCCAGAGTGGCTT
TTCCGGATCTACCAGGACACTATGGTGGACATCCCATCCTTTCTGGAAGT
CCTCAA---AGAGGGCAGGAAG---ACCAAGCCAGCTTGAAGAA---GT
CAAAGCCGGCTAGCACAGTCCACCCAGGCCGAGTCAGAGAACCCCAATGT
CAGACCACAGTACAAACCACTAATGAGGCTAAACTCACAGTATCCTGGCA
GATCCCATGGAATCTAAAATACCTAAGGTAAGAGAGGTGAAGTATGAGG
TGTGGATCCAGAAGAAAGACACCAGCAAGGGAACACTGGAGGACCAGATC
ATCCAGGCCAATCCTGCCCTGGAGGCCTTCGGCAACGCCAAAACACTGAG
AAACGACAACCTCTCTGTTTTGGAAAATTCATTCGAATTCACTTTGGTA
CGAGYGGCAAACCTGTCATCTGCCGACATCGAGACGTACCTGCTGGAGAAG
TCACGCATCACTTTCCAGCTTAAGGCTGAGAGGAACTATCACATTTTTTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTAACCGTA

GCCTCCATCGACGACTCGGAGGAGCTGATGGCCACCGACAGTGCCTTCGA
TGTGCTGGGCTTCACTCCAGAAGAGAAGATGGGTGTCTATAAACTTACTG
GTGCCATCATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGGTGAACCTGACGGGACGGAAGCTGCTGATAAATCAACCTACCT
GATGGGGCTGAACTCTGCCGACCTCATCAAGGGCTGTGTTCATCCCAGGG
TCAAGGTAGGAAATGAATATGTCACCAAAGGCCAAAGTGTGGACCAAGTC
TACTACCCCAATAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATATGGCCATGCACTCTGCCACGG
CAGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGTACGCCT
ATTCTCCTGGAGCACCTGAAGAGTCACTCCGGGAAGTCGTCAGGTGGCAC
CAAGGAGAAAAAACACCCGTGTGACCCTGTGACCGTCGCTTCTACACAA
GGAAGGATGTGAGACGGCACATGGTGGTCCACACAGGCCGCAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCACCTGACACG
CCATGTGAAGAAGAGCCACTCACAGGAGCTAATGAAGATCAAGACAGAGC
CACCAGACATGTTAGGTCTTTTAGCTTCCGGATCCCCGCCCTGCTCTGTG
AAGGAGGAGCTCAGTCCAATGATGTGCGGCATGGGTCCCAACAAAGATCC
AATGATGGGCAAACCTTTCCCCAGTGGGGCCCTTTTCCAATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCAATGTCTAATACGGGGGTGGGT
CACCCA-----CACCCGTCCCTAATGCCAGTTCCTTGTCTGCAAATAT
GGGCATGGGCTGCCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNTGTTTACAGATCAGT
GATGGATCAAACA
TTGTGAACCTGCTGGCTAGTAACTCTCCAAGTGTTCGTATGCTATGACC
CAGCAGAAATACTTCAGCAACTACAGTCCTGTGATTGGATTTTACATTTA
CGAGCCCATTGAGTACTGGAAGTCCACAGTGCAGGAGCATCTGAAGACTC
TGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAACTTTTTCCACTAC
CTGCGGGTGGTGAATGTGAGTGCATCAACCAAGACCGACTTCATCACCAT
CCTCAAGGGCTCCTTCCCTGCGCAGCCCAGAGTACCAGCACTTCACTGAGG
ACATCATATTCTCCAAGA---ACCGTGAGACTG-----ATGAGTATGAC
ATTATCGCCTCACGSATGTACCTGGTGGCACGGACGACAGAGAAGAAGCG
TGAGGAGGTGGTGGAGCTTCTGGAGAAGCTTCGTCATTGATGCTGATCA
ACAGCATCAAGTTCATTGCCCTTCAATCCACATTTGTGTTTATGGACCGC
TACAGCTCCTCTGTCATCTCGCCCATCCTTACCTCAGGCTTCAGCGTACT
CACCATCCTCATCCTCACTTTCTTCTGGTTCATCAACCCCTTGGNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN
CGCTCTTTCAAATGTGTCCACCTCTTGCAATGTTGGCATTATTAACGGGA
CTTCTGGATGGACTTCTCGGTGGACGACTCCCCGACTGAGACCGTCACT
CGGCGGTTTCGCTATGATGTGTCACTGGTGTGAGCATTAAAGGACCTGGA
GGAGGACATCATGGAGGGGCTGATAGAGGCTGGGATGGAAGACAGTGCTT
GCACCTCAGGCTTTAGTGTGATGATCAAGGAATGCTGTGACGGCATGGGC
GATGTCAGCGAGAAGCACGGCGGAGGACCGGCTGTTCGAGAGAAGGTTGT
GCGTTTCTCCTTACCGTTATGTCTGTCTCTGTCTTGGCCGACGGTGAAG
AC-----AGGGAGGTCAACATCTTC
ACTGAGCCAAAGCCAAACTCAGAGCTGTCTGTAAAGCCCCTTTGCCATGAT
GTTTGTGGATGAGTCCGACCACGAGACCCTCACAGCCGTCCTGAGGCCTA
TCGTCGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCTATCCATC
GGTGGCCTGCCTCGCTTTTTTCCGCTTCCGCTTCCGAGGCACGGGATACGA
TGAGAAGATGGTGCAGAGATGGAGGGCCTGGAGGCCTCGGGCTCTACAT
ACATCTGCACTTTGTGTGACTCAAGTGCAGCCGAGGCTTCTCAAAACATG
GTGCTGCATTCCATCACCCGCTGTGATGAGGAGAACCTTGACCGGTACGA
AATATGGAGAACGAACCCTTTCTCTGAGTCTGTAGACGAGCTGCGGGACC
GAGTCAAAGGCGTCTCGGCCAAGCCCTTCTTGGAGACCCAGCCCACAATG
GATGCGTTACACTGTGACATTGGCAATGCCACTGAGTTTTTACAAAATCTT
CCAGGACGAGATCGGGGAGGTGTACAACAAGGT---CAAG---CCCAGCC

GGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTTGATAAACAGCTGAGGAAG
AAGATGAAGCTCAAACCAGTAATGAGGATGAATGGGAACATATGCCCCGAAA
GCTAATGAGCATGGAGGCTGTGGAGGTGGTGTGTGATCTGGTGCCCTCAG
AGGAGAGGCGGGAGCCCCTCAGGGAGCTGATGAGGCTCTACCTCCAGATG
AAGCCTGTGTGGCGGCCACCTGTCCAGCCAAGGAATGCCCGACCAGCT
GTGCCGCTACAGCTTCAACTCCCAGCGCTTCGCCGACCTCCTGTCTCTA
CCTTCAAATACAGGTACAACGGCAAGATAACCAACTACCTCCACAAGACC
CTGGCCACGTGCCTGAGATCATAGAGAGAGACGGATCCATCGGAGCGTG
GNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCATACTCCATCGACATGGGTCTTCGGGACCCCTGTGG
AAGCAAGCC

CACAGCCTTTTCGCTGCTCAATTGAAGACCCCATAAAACAGTCAAAATTC
AAGGGCATCAAGACCTACATCTCTTACCGGGTCACGCCGAGCCACACAGG
GCGTCCCCTCTACAGACGCTACAAACACTTTGACTGGCTGTACAACCGCT
TACTGCACAAGTTCACTGTGATCTCTGTGCCCCACCTGCCTGAGAAGCAG
GCCACGGGGCGATTTGAGGAGGACTTCATCGAGAAGCGCAAGAGACGACT
GGTACTGTGGATGAACCACATGACCAGTCACCCGGTCTCTCTCAGTATG
AAGGCTTTGAGCACTTTCTAATGTGCGCTGACGACAAACAGTGGAAACTT
GGAAAGAGACGGGCGGAGAAGGACGAGTTGGTGGGCGCACATTTTCATGCT
GACCTCCAGATCCCCAACGAGCACCAGGACCTTCAGGATGTAGAGGAGC
GGGTGGACACCTTCAAGTCTTTGCTAAAAAAATGGAYGACAGTGTGATG
CAGCTCACACATGTTGCCTCGGAGCTGGTGCCTAACACCTGGGTGGGT
CAGGAAGGAGTTCAGCGGCTGGGAAATGCCTTCCAGTCCATCAGCCTGG
CTTTTCATGCTGGACCCTCCCCACAGCTCAGACGCCCTCAACAACGCCATC
TCCCACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGGGTTTCATCATCGGCGTCGGCGTGGTCCGAA
ACCTCCTGATC

TCCATCCTGTGGTCAAAGACAAGAGCCTGCACCGGGCGCCCTACTATTT
CCTGCTGGACCTGTGCGCCTCCGACATCCTGCGCTCCGCCATCTGCTTTC
CCTTCGTCTTCACTTCGGTCAAGAATGGGTGACCTGGACGTACGGCAGC
CTGACCTGCAAGGTGATCGCCTTCTGGGTGTCCTCTCCTGTTTCCACAC
GGCGTTCATGCTGTTCTGCGTCAGCGTCACCCGCTACCTGGCCATCGCTC
ATCACCGTTTTCTACACCAAGAGGCTGACCTTCTGGACCTGCCTCGCCGTC
ATCTGCATGGTGTGGACGTTGTGCGTGGCTATGGCCTTCCCGCCAGTGT
AGATGTAGGGACGTACTCTTTTATCCGGGAGGAGACCAGTGCACATTCC
AGCACCGCTCCTTCAGGGCGAACGATTCACTGGGCTTCATGCTCCTGCTG
GCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGTTCATCTTCTT
CGTACACGACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCCGTCA
GCCAGAACTGGACCTTCCACGGGCCGGGGCCAGCGGGCAGGCGGGCC
AACTGGCTGGCTGGATTTGGCCGAGGCCCCACCCCGCCTACTTTGCTGGG
CATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTGCTGGTGTAG
ATGAGTTCAAAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATGACG
TTTTTCTTCTGGCTTTGTGGGGGCCCTATCTGGTGCCTGCTACTGGCG
GGTGTGTGCAAGGGGCCCGTGGTCCCTGGGGGCTACCTGACGGCAGCCG
TGTGGATGAGCTTTGCCAAGCTGGGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGCCAAATC
TCGCTTTCACCCTGG

CGTGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCACTCGGCAACA
GCTTGCTATCCCCGAGCAAAGCGAGGATCCCACTGTTGCCTCCCACCCG
CAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACTTTGCCGC
CTCGGCATACGACGCCGCC-----GATTTCCGCCGTAACGCGGCCA
CCTTGCTGTCTACGCGGCGGCCGGAGTGAAGGCTC-----TCCCGCTG
CCGACCGCGGGCTGCTCCAACCGGCTCTTGGCTATTACGCAGACCCGTC
GG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTGGGGTGAACA
GCAAGCCCGGCTCGGTGTTCTCCTGCTGGCCCGCAACTCCCTCGGCGGC
AGGGCGGGCG---CC---AACTACCTGG-----CCGAGGA---GGT

G---GACTC---CATCTCGACGGAGAGGTCGTCC---AT---CGGCGTCC
CGGAGGAG---GCCAAACCCAAAGACATGAC---GTCCGA---GTCGAGC
TGGATAGAG---ACGCCGTCTCCATTAAGTCCATCGACTCGAGCGACTC
TGGGATCTTCG---AACAGGCCAAGAGGAGGAGGATCTCCCCGTCTGCCA
CCCCG-----GTGTCAGAGACTGNNNNNNNNNNNNNNNNNNNNNCATCACTCAACAGGCCAAGTCAC
GGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCAGATGGGATGGGCG
CCTTCAAATAAAACCACAGCTCCCACGATCTCGGCTCCGG---ACAGACG
GCGTTCCTCCAGGCG---CCCGGCTAC---GCTGCAGCCGCCCTGGG
A---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCA
CGGCGGCGTACAACCTCCACCAGGGACTTTCTGTTTCAGAAATCGGGGCTTC
GGGGACGCCGCCGG-----GGCGCAGCACAGTTTGTTCGCCTC
-----TGGAAGTTT---C-----GCGGGGCCACATGGACACTCCG
ATGCGGCGGGGACCTGCTCTTCCCGGGGCTCCACGAG---CAGGCGGCG
AGCCATGCGTCTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTC
GGGGGACATGTACGGACGCGCCGACCAGTACGGCCACGTTACGAGCCCGC
GGT---CCGACCACTACGCCTCCACCCAGCTGCACGGCTACGGCCCCATG
AACATGAATATGGCCGCG---CACCACGGAGCCGGGGCCTTCTTTTCGATA
CATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGG
AGCAGCTGGCGAACCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGATG
CACGAGCTGGTGACCCATCTGACCGTGGAGCATGTGGGGGGACCCGAGCA
GACCAACCACATCTGCTTCTGGGAGGACTGCCCCAGAGAGGGGAAGCCGT
TCAAAGCCAAATACAAACTTGTGAATCATATCAGGGTGCACACGGGAGAA
AAGCCTTTCCCTGTCCGTTCCCCGGCTGTGGCAA

>*Pseudoscopelus* sp

AGCCTGCTTATCCGGGTGAACCTAAGCCAACCTGGCGCCCTTCTTGGGGA
CGACCAGATTTATAATGTAATTGTTACGGCACACGCTTTCGTAATGATTT
TCTTTATAGTAATGCCAATTATAATCGGGGGCTTCGAAACTGACTTATC
CCTCTGATGATTGGGGCCCTGACATGGCATTCCCCGAATAAATAACAT
AAGCTTTTGACTTCTCCACCTTCTTTCCTTCTGCTTTTGGCTTCTCTG
GAGTTGAAGCAGGGGCTGGTACCGGGTGAACAGTTTATCCGCCTCTGTCT
GGTAACCTCGCCACGCCGGAGCATCCGTAGACCTAACTATCTTTTCACT
ACATTTGGCGGGGGTCTCCTCTATCTTGGGGCCATCAACTTTATTA
CAATTATTAATATGAAGCCGGCAGCTATCTCACAGTACCAAACACCTCTA
TTTGTGTTGAGCCGTTCTGATTACAGCTGTCTTACTCCTGTTGTCCTGCC
AGTTCTAGCAGCAGGTATTACAATACTACTTACTGACCGGAACCTAAATA
CAACGTTCTTTGACCCTGCAGGCGGTGGAGATCCAATTCTTTACCAGCAC
TTGTCTGGTTTTTTCGGCCACCCAGAAGTCTACATCTTATTCTTCCCGG
ATTCGGAATGATCTCACATATTGTGCGCTACTACTCAGGCAAAAAAGAGC
CTTTTGGGTATATAGGAATGGTGTGAGCTATGATGGCCATCGGACTACTA
GGTTTCATCGTCTGAGCCACCACATGTTCACTGTAGGTATAGACGTTGA
CACCCGAGCATATTCCTGGAGAGAAACCTTACCCGACTAACTGCCTCGG
CATGCTGTTGCTGTCTGATGCCCACCAGTGCACCAAGCTGTCAGAGCTCT
CTTGGGGAATGTGCCCTCAGCAACTTCCCGGCTATTTGTAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAATTGGA
TCAACTATGACCTGGAAAGGAGGCACGTGCACCTTCCAGAGCTCCTGAGA
ACAGTCCGCCTTGCCCTGCTGCCTGCCATCTTTCTCATGGAAAATGTCTC
GACAGAAGAGCTGATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGACG
AGGCTATCCGCTGTAAGCTGAAGATCTTGCAGAATGACGGCGTCGTTAAC
AGCCCATGTGCTCGACCACGAAAAACCAGCCACGCTCTCTTTTGTGTTGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCGAAGGCGGACATTCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTGTACATCACCGGCGGCA--GAGGCTC-

AGAGAATGGTGTGTGCCAAAGATGTGTGGGTCTATGACACCATCCATGAGG
AATGGTCCAAAGCGGCGCCCATGCTCATCGCCAGGTTCCGGTCACGGCTCT
GCTGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTCCCTGCTTCTCCCTCCGGATGAATACATCGTTGTCTTCAGT
CGTTCAACAACGAGACTGATACTGAACGAACCCGAGCTAATCATGGCTCT
GGCCAGGAGTTCCAGATGAGAGTTGTCACAGTTTCCCTAGAGGACCAGT
CTTTCCCTAGCATTGTCCAGGTGATCAGCAGTGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCAAAGGAGCTAC
TGTGGTGAAGTGTCCCTTTGCTGTGAACTCAGAGCAGTACACCCCAT
ATAAAACCCTTGCCCTCCCTTCCAGGAATGGACATTCATTATATTTCCCTGG
AGGAATACTCAGGAGGAAAACACTGTCACCCATCCAGACAGACCCTGGGA
ACAAGGAGGCATCACTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGA
GCAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTA
TTCCGAATCTATCAGGATACATTGGTAGACATTCCCTCCTTCCCTGGAAGT
CCTCAA---TGAGGGAATGAAG---ACCAAGCCAGCTTGAAGAA---GT
CCAAGTCAGCTAGTACAGTCCATCCAGGCCGGGTCCAGAGAAGCCAGTGT
CAGACCTCAGTACAGACCACCAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACTTGAAGTAAGAGAGGTGAAGTACGAGG
TGTGGATCCTGAAAAGAGACACCAGCGAGGGAAGTCTGGAGGATCAGATC
ATCCAGGCGAACCCGGCGCTGGAGGCCCTTCGGGAACGCCAAAACGCTGAG
GAACGACAACCTCGTCCCGTTTTGGAAAGTTCATCCGAATTCACTTTGGAA
ACAGCGGAAAGCTGTGCTCCGCTGACATCGAGACGTACCTGCTGGAGAAG
TCTCGCGTCACCTATCAGCTCAAGGCCGAGAGGGACTACCACATCTTCTA
CCACATCCTGTCCAATCGGAAGCCAGAGCTGCTGGACCTGCTGTTAATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTC
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGA
CGTGCTGGGCTTACGCCGGAAGAGAAGTCCGGCATCTACAAGCTGACCG
GCGCCATCATGCACCACGGCAACATGAAGTTCGAAGCAGAAGCAGCGCGAG
GAGCAGGCGGAGCCGGACGGGACGGAGGCTGCTGATAAATCCGCTTACCT
GATGGGACTGAACTCTGCCGACCTCATCAAAGGACTGTGTCATCCAGAG
TCAAGGTCGGAACGAGTACGTACCAAAGGCCAGAGCGTGGACCAGGTC
CACTAC-----GGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGTTATGAGAGCACCCCT
GTTCTCCTAGAGCACCTCAAGAGCCACTCGGGGAAGTCCCTCGGGTGGAGC
CAAGGAGAAAAAGCATCCGTGTGACCCTGCGACCCGCGTTTCTATACAC
GGAAAGATGTGAGACGGCACATGGTGGTTCACACAGGCCGAAAGGACTTC
TTGTGCCAGTACTGTGCCAGCGCTTTGGAAGGAAGACCACCTGACCCG
CCACGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCCTCGGGGTACCACCCTGCTCTGTG
AAGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAATAAAGACCC
CATGATGGGCAAACCGTTCCCAAGTGGCGCCCTTTTCCGATGGGCATGT
ACAACCCCAACCAC-----CTTCAGGCCATGTCTAATTCTGGGGTGGGT
CATGCA-----CACCCGTCCCTGATGCCAGCTCCCTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCCTCATTCTCATTCA
TGGGATGTTTACAAATCAGTGACGGATCGAACATGTGAACCTGCTGGCT
AGTAACTCTCCGAGTGTTCATACGCTCTGACCCAGCAGAAATACTTCAG
CAACTACAGTCCCCTGATTGGGTTTACATTTACGAGCCCATCGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCACGGCTTCAAC
AAGATTTCCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAATGT
GAGCGCGTCGACCAAGAACGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCAGAGTACCAGCATTTCACTGAGGACATCATATTTTCCAAA
A---ACCGCGAGACTG-----ACGAATATAACATTATCGCCTCACGCTT

GTATTTGGTGGCACGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTTCGCCCCTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCAT
CTCACCAATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCCCTGGTCAGCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACG
GTGACGTCCTGGAGCTGGGCGTCTTGGGTTTGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCTGCATCTTGCAACGTGGGCA
TTATTAATGGGCTCTCTGGATGGACTTCCTCTGTGGATGACTCCCAGCT
GACACCATCACTCGGCGGTTTCGCTATGATGTGGCACTAGTGTGAGCATT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGACAGAGGGATGG
AAGACATTGCTTGCACCTCAGGTTTCAGTGTATGATCAAGGAATCTTGT
GATGGCATGGGCGATGTCAGTGA AAAACACGGTGGAGGACCAGCTGTTCC
TGAAAAGGCTGTACGTTTCTCTATCACTATCATGTCTGTTTC-----G
GAG-----
-----CCAAGCCCAACTCAGA ACTGTCTGTAAAGCC
TCT-TGCTTGATGTTAGTGGATGAATCGGACCATGAGACCCTCACAGCTC
TCATGGGGCCTATAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTC
ATCATTTCAATCGGCGGCCTGCTTCGCTCCTTCCGCTTCCACTTAAGAGG
CACGGGATATGATGAGAAGATGGTGCCTGAGATGGAGGGCTTGGAGGCCT
CAGGGTCCAGCTATGCTCTGCACTCTGTGTGATTCCAGTCGGGCAGAGGCA
TCTCAAAACATGGTGCTACACTCCATCACACGCAGCCATGACGAGAACCT
TGAACGTTATGAAATATGGAGAACCAACCCTTTTTCTGAGTCAGGAGACG
AGGTACGGGACAGAGTCAAAGGGGTCAAAGCC-ACCCCTTCATGGAGACC
CAGCCCACAATGGACGCATTACAATGTGACATGAGCAAGGCCATCGAATT
CTACAAAATTTTCCAGGATGAAAYWGGGAGGTGTACCACAAGGT---CA
AT---CCCAGCAGAGAGGAACGGCGGAGCTGGAGGGCAGCCCTAGATAAA
CAGMTGAGGAAGAAGTTGAAACTTAAACCAATAATGAGGATGAATGGGAA
CTATGCCCGCAGGSTAATGACTCAGGAGGCTGTGGAGGGCGGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGGAGGGAGGTCCTGAGGGAGCTTATGAGACTA
TACATCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCATCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTATAGCTTTAACTCCCAGAGCTTTGCTGACC
TCCTCTCTTCTGCCTTCAAATATAGGTACAATGGAAAGATAAGCAATTAC
CTGCACAAGACTCTGGCCCATGTCCCTGAAATCATAGAGAGAGATGGATC
CATCGGAGCCTGGGCCAGTGAGGGGAACGAATCTGCAAACAAATCATACA
CAATTGAGATGGGCCCCGATGGGCCCCAGTGGAAAGGAGAGCCCACAGCCT
TTTTCTGCTCAGTTGAAGACCCAACAAAACAGACAAAGTTCAAAGGCAT
CAAGACGTACATTTTCGTATCGGGTCATGCCGAGCCACACAGGGCATCCCG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCCTACTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
GCGATTTGAGGAAGACTTTATTGAGAAGCGGAAGAGACGACTGATATTGT
GGATGAATCACATGACTAGTCACCCCTGTCTCTCCAGTATGAAGGCTTT
GAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAAGCTGGGCAAAAG
ACGAGCTGAGAAGGATGAGATGGTGGGCGCCATTTTCATGCTGACTCTCC
AGATCCCTAATGAGCACCAGGACCTTCAGGATGTAGAGGAGAGAGTAGAC
ACCTTCAAGGCCTTTGCTAAGAAAATGGACGACAGCGTCATGCAGCTCAC
ACATGTTGCCTCGGAGCTGGTGCCTAAGCACCTGGGTGGATTTCAGGAAGG
AGTTCCAGCGGCTGGGAAATGCCTTCCAGTCCATTAGCCAGGCATTCATG
CTGGACCCTCCCATAGCTCAGACACCCTCAACAACGCCTTCTCCCAT--
-----CTCAACTGACCTCTCTGGGTTTCATCATTGGAGTCCG
GTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTTCACCGAGCACCTACTATTTCTGCTGGACCTGTGCGCCTCCGATAT
CCTTCGCTCCGCCATCTGCTTCCCTTTGTCTTACCTCGGTCAAAGAAATG
GATCTGCCTGGACGTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTCTG

GGTGTGCTCTCCTGTTTCCACACGGCGTTCATGCTATTCTGCGTGAGCGT
CACCCGCTACCTGGCCATCGCCCACCACCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTGGCTGTCTGCATGGTGTGGACGTTGTCAGTG
GCTATGGCGTTCCACCAGTGCTAGACGTAGGGACATACTCTTTTATCCG
GGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCGAATGATT
CGCTGGGCTTCATGCTCCTGCTGGCGCTCATTCTCTTGGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCC
TGTCAGTTTGTGCTGCTGTGTCAGCCAGAAGTGGACCTTCCACGGGCCAG
GCGCCAGCGGGCAGGCGGGCGGCAACTGGCTGGCCGGATTTGGTAGAGGC
CCCACCCCGCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCAGG
CCGCAGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTA
GTAGGATGTTTACATCATGACTTTTTTTCTTCTGGCACTGTGGGGGCC
TATCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTAGTCCC
TGGAGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTCGCGCAGGCTGGGG
TCAAATCCATTCAT-----GCCAAATCTCGCTTT
CACCTTGGCGTGGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCCT
CGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCCCTGTTGCCA
CCCCCCGCGCAGCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTGCTGCCTCGGCATACGACGCCGT-----GATTTGCGCCGGTAA
CGCAGCCACCTTGCTGTCTTATGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCGCGCCGAGGCTGCTCCAACCGACCTCTTGGCTATTACGCA
GACCTTTCAG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGCGG
CGTAAATAGCAAAACCAGTTCGGTCTTTTCTGCTGGCCCGCTAACTCTA
TCGGCGGCAGAGCAGGCA---CC---AACTACCTGG-----CCGAG
GA---GGGA---GACTC---CATCCCGACGGAGAGGTCGCC---AT---
C---GGCTCCGAGGAG---ACCAAACCCAAAGACATAAC---ATCAGA--
-GTCGAGCTGGATAGAG---ACACCGCCCTCCATTAAGTCCATTGATTCA
AGCGATTCTGGTATCTTTG---AACAGGCCAAGAGGAGAAGAATCTCACC
CTCTGCCACGCCA-----GTTTCAGAGACAGTGTCCAGTTAAAAT
CTGAGCATCACTCAACAGGAAAATCACAGASAGAGAAGYGGCGKTGGGG
ATAAATCCGTTTCGAGATGGGATGGGCGCCTTCAAATAAAMMACAGCTC
CCACGATGTGAGCTCCGG---ACAAACGGYGTTCYTCAGGCA---C
CAGACTAC---GCAGCAGCCGCCCTGGGA---CACCCGA-----CCAC
CCGACCCACGTTGGCTCT---TACTCCACGGCGGCTTTCAACTCCACCAG
GGACTTTCTCTCAGAAATCGGGGGTTCGGGGACGCCACCGG-----
----GGCGCAGCACAGTTTGTTCGCCCTC-----CGGAAGTTT---C
-----GCAGGGCCACATGGACTCAGATGCRGCAGGGCACCTGCTCTT
CCCGGGCTCCACGAG---CAAGCGGCGAGCCATGCGTCTTCCAACGTGG
TCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCT
GACCAGTACGGCCACGTTACGAGCCCGAGGT---CCGACCACTACGCTTC
GACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA---C
ACCACGGAGCAGGGGCCCTTTTCGATACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGCTGACGAATCCCAAAA
GTCGTGCAACAAAACTTTTAGCACGATGCATGAGCTAGTGACCCATCTGA
CGGTGGAGCATGTGGGGGACCGGAGCAGACCAACACATCTGCTTCTGG
GAAGAGTGCTCCAGAGAAGGGAAGCCATTCAAAGCCAAATACAAACTTGT
GAATCATATCAGAGTACACACCGGAGAAAAGCCCTTCCCGTGTCCGTTCC
CCGGCTGTGGCAAA

>*Pseudotrichonotus altivelis*
AGCCTTCTTATCCGAGCAGAACTTAGCCAACCAGGGGCCCTCTTGGGAGA
CGACCAAATCTACAACGTTATTGTTACCGCACATGCTTTTGTAAATAATCT
TCTTTATAGTAATACCAATTATGATTGGTGGATTTCGGAAACTGACTGATC
CCCCTCATGATTGGAGCCCCTGACATAGCCTTCCCTCGTATAAATAACAT

AAGTTTTTGACTTCTTCCCCATCTTCTTATTACTTCTTTCTCCTCCTCAG
CAGTAGAAGCTGGTGCCGGCACC GGCTGAACCGTACCCACCTCTTGCC
AGCAACCTAGCCCACGCCGGGGCTCAGTAGACCTAACAATCTTTCTCT
TCATCTGGCAGGAATCTCCTCAATCTTGGAGCCATCAACTTTATTACAA
CTATTATTAATATAAAAACCACCAGCAATTACCCAATACCAAACCCCTA
TTCGTATGAGCCGTCTTATTACAGCTGTTCTCCTCCTCCTATCCCTCCC
GGTGCTTGCTGCTGGAATTACAATGCTCCTTACAGATCGGAACCTAAACA
CTACCTTTTTTCGACCCGGCAGGAGGGGACCCAATCCTTTACCAACAC
CTATTCTGATTCTTTCGGCCACCCCGAAGTCTACATCCTCATCCTGCCTGG
CTTTGGAATAATTTCCACATCGTAGCCTACTACGCAGGCAAAAAAGAAC
CCTTTGGCTACATAGGAATAGTGTGAGCAATAATAGCAATCGGACTTTTA
GGGTTCAATTGTATGAGCCACCACATATTCAGTGTGGGATAGACGTAGA
CACCCGAGCCTATTCCTCGAGAGGAATCTGCACCCATCCAAGTGCCTCGG
CATGCTGCTGTTATCAGACGCCACCAGTGTACAAAGCTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAATTTTCTGCCATCTGCAAGACAGAGGAC
TTTTCTCCAGTTGCCTAAAGACATGGTAGTGCAGCTTCTGTCCCACGAGGA
ACTAGAAACAGAAGACGAGAGACTGGTTTACGAGGCTGCCCTTAATTGGG
TCAACTATGACCTAGAGAGAAGGCATTGCAACCTGCCAGAAGTGCCTGAGA
ACTGTGCGCCTGGCCTTGCTTCCCTGCCATCTTCTCATGGAGAACGTCTC
CACAGAGGAGTTGATCAATGCCCAGGACAAGAGCAAGGAGTTGGTGGATG
AGGCAATCCGCTGCAAAGTGAAGATCCTGCAAAATGACGGAGTGGTCAAC
AGTCCCTGTGCCCGCCCAAGAAAGACCAGCCATGCCCTCTTCTGCTGGG
GGGGCAGACCTTCATGTGTGATAAGCTGTACTTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAAGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTCTATGTTACGGGTGGGA--GGGCTC-
AGAGAATGGTGTGTCTAAAGACGTGTGGGTTTATGACACTGTTTCATGAGG
AGTGGTCCAAGGCCGCACCAATGCTCATCGCCAGGTTTGGCCATGGCTCT
GCTGAACTCAAACATTGCCTCTATGTGGTGGGAGGGCATAACAGCAGCTAC
TGGCTGCCTCCCAGCCTCTCCCTCTAGATGAGTACATCGTTGTTTTAGT
CGGTCAACAACGAGGTTGATACTGAATGAAGCAGAGCTGATCTTGGCACT
TGCCCAAGAGTTTCAGATGAGGGTCTGTTACGGTGTCCCTGGAGGAACAAG
CTTTCCCAGCATTATCCAGGTGATCAGCAGGGCTTCCATGTTAGTTAGT
ATGCACGGAGCACAACTTGTACCTCTCTTCTTCCCTAGAGGAGCTGC
TGTGGTGGAGCTCTTCCCTATGCTGTGAACCCAGAACAGTATAACCCAT
ACAAAACCTTTAGCCTCCCTGCCAGGCATGGAACCTCAATACATTTCTTGG
AGGAACACTGTTGAGGAGAACACTGTCACACACCCAGACAGACCCCTGGGA
CCAAGGAGGCATTGCCCACTTGGACAAAGAAGAACAGGAGCGAATCCTTG
CCAGCAAGGATGTGCCCAGGCACCTGTGCTGCCGTAACCCAGAGTGGCTC
TTCAGGATCTACCAGGATACTCTAGTGGACATCCCATCCTTCTGATGT
TCTCAA---GGAGGGCTTGAAA---ACGAGACCAAGCTTGAAGAA---GT
CCAAACCGGCAAGCACGGTCCACCCTGGCCGTGTCAGGGAACCCAGTGC
CAGACATCAGTCCAAGCCACCAATGA-GCTAAGCTCACAGTGTCTTGGCA
ATCCTGTTGATACTCAAGTACCTTAAAGTGCAGAGGTTCAAATATGAGT
TATGGATCCAGAAGAAAGATACAAGCAAAGGAACCCCTGGAGGATCAAATC
ATTCAGGCCAACCCTGCGCTGGAGGCTTTTGGCAATGCCAAAACATGAG
GAATGATAACTCCTCCCGTTTTGGTAAATTTATCAGAATTCACCTTGGAA
CCAGTGGTAAGTTGTCTCTGCTGACATTGAGACTTACCTACTGGAGAAA
TCCAGGGTACCTTTCAGCTTAAATCAGAGAGGAACTACCATATTTCTT
TCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAACCCCTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGTGA
GCATCTATCAATGACTCAGAGGAGCTTATGGCAACTGATAGCGCATTTGA
TGTTCTTGGCTTCACTCAAGAGGAGAAGCTAGGTGTTTACAAGTTGACAG
GGGCTATCATGCACTATGGCAACATGAAGTTCAAGCAAAGCAGCGTGAG

GAGCAAGCTGAGCCAGATGGCACAGAGGCTGCTGATAAGTCAGCTTACCT
AATGGGGCTGAATTCAGCGGACCTCATCAAAGGACTCTGCCATCCCAGGG
TTAAGGTTGGAAATGAGTATGTAACCAAAGGTCAAGGTGTAGATCAAGTC
TACTAC-----

-----TATCTTATCTACGCCTCCTTCTCTTTTA
TGGGATGTTTACAAAATCAGCGACGGGTCAAACATTGTGAACCTGCTGGCC
AGTAACTCTCCAGCGTCTCGTTTTCGGGTGACGCAACAAAATACTTCAG
CAACTACAGCCCCGTGATTGGGTTCTACATCTATGAGCCCATCGAGTACT
GGAACTCTACGGTGCAGGAGCACCTGAAGACACTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGT
GAGTGGTTCGACCAARGCCGACTTCGTACCATCCTCAAGGGCTCCTTCC
TGCGGAGCCCCGGAGTACCAGCACTTCACCGAGGACATCATCTTCTCCAAG
A---ACCGCGAGAGTG-----ACGAGTACGACATTATCGCCTCGCGCAT
GTATCTGGTGGCGCGCACCACAGAAAAGAAACGCGAGGAGGTGGTGGAGC
TCCTCGAGAAGCTGCGGCCGTTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACGTTTCGTCTTCATGGACCCTACAGCTCCTCGGTCGT
CTCGCCCATCCTCACCTCCGGCTTTAGCGTGCTCACCATCCTCATCCTGA
CCTTCTTCCCTGGTTATCAACCCGCTGGGAACTTCTGGCTCATCCTGACG
GTCACGTCCGTGGAGCTGGGGGTGCTGGGTCTGATGGGCCACACACATT
CGAGTGGCAGCCGGCCCTGAAGAAGCTGTCCCATCCTGCCATGTGGGCA
TCATCAATGGGCTCTCTGGCTGGTCTGCGTGGTGGATGAGTCTCCAAC
GACACCATCACCGCCGGTTCGCTACGACGTGGCCTTGGTGTCCGGCCCT
GAAAGACCTTGAAGAGGACATAATGAAAGGCCTGAGAGAGCACGGGCTGG
AAGACAGTAACTGCACCATGGGCTTCAACGTTGTGATCAAGGAGTCTGT
GATGGCATGGGAGATGTCAGCGAGAAGCACGGCGGAGGGCTGCAATCCC
AGAGAAGGCAGTTCGTTTCTTCTTCACTGTTCATGTCTGTCTGTCAAGC
CAGATGGAGAGGAG-----GAGGCA
GTGGTTATCTTCAGGGAACCAAAGCCAAACTCTGAACTCTCCTGTAAGCC
ATTATGTCTGATGTTTGTAGACGAGTCTGACCACGAGACGCTAACTGCCG
TCCTGGAGCCTTTGTTAGCGGAAAGGGATGCGATGAAGCACAGCCGACTA
ATCCTTTCAGTGGGTGGCCTCCTGCGCTCTTTCTGCTTCCACTTCAGAGG
CACTGGCTATGACGAGAAGATGGTGCAGAAAATGGAAGGCTTGGAGGCGT
CAGGCTCCACCTATGCTGCACTCTTTGTGACGCCACCCGGGAAGAGGCC
TCCCACAACATGGTGTCCACTCCATCACC CGCAGCCACGAGGAGAACCT
GGAGCGCTACGAGGTGTGGAGGACCAACCCTTCTCTGAGTCTGCTGCCG
AGCTGCGAGACCGGGTCAAAGGGGTCTCCGCCAAACCCTTCATGGAGACC
CAGCCCATGATGGATGCGCTGCATTCGACATAGGCAACGCCACAGAGTT
CTACAAGATCTTCCAGGATGAGATCGGTGAAGTGTTCGGAGCGC---CA
AC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTCGATAAG
CAGCTGAGGAAGAAGCTGAAGCTGAAGCCGGTGTGCGGATGAATGGGAA
CTACGCCCCGAGGCTGATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAAC

-----NCAGGCGAAGTCACGGAGAGAGAAGCGGCTTTGGGGA
TCAACCCGTTTCGCGGACGGCATGGGCGCCTTCAAGATCAACCACAGCTCT
CATGACATCGGCTCCGG---GCAGACGGCGTTCTCCACCCAGGCG---CC
CGGCTAC---GCGGCTGCCGCCCTGGGA---CACCACCA-----CCACC
CGACCCACGTCAGCTCC---TACTCCACGGCGGGGTTCAACTCCACGCGG
GACTTTCTCTTCAGGAACCGAGGCTTCGGGGACGCGACCAG-----
---CGCGCAGCACAGTCTGTTTCGCTCCGCCGCCGCGGGGGGTTT---C-
-----GCGGGGCCACATGGACACTCGGATGCCGCGGGACACCTGCTCTTC
CCGGGGCTCCACGAG---CAGGCGGCGGGCCACGCGTCATCCAACGTGGT
GAACAGCCAGATGCGGCTGGGCTTTTCGGGGGACATGTACGGGCGTGCCG
AGCAGTACGGCCACGTTACCAGCCCGCGGT---CCGACCATTACGCGTCG
ACCCAGTTGCACGGCTACGGGCCCATGAACATGAACATGGCCGCG---CA
CCACGGAGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCCATCAAGCAGG
AGCTCATTTGCAAGTGGATCGAACC GGAGCAGCTGTCGAATCCCAAGAAG
TCGTGCAACAAAACCTTTCAGCACCATGCACGAGTTGGTGACCCACTTGAC
GGTGAGCAGCTGGGCGGTCCGGAGCAGTCGAACCACATCTGCTTCTGGG
AGGACTGCGCGCGGAGGGAAAGCCGTTCAAAGCAAATACAAACCTGGTG
AATCACATCCGAGTTCACACCGGGGAGAAGCCGTTCCCCTGCCCGTTCCC
GGGAT-----

>*Ptychochromis grandidieri*

AGCTTACTAATCCGAGCAGAATAAGCCAACCAGGCTCACTCCTGGGGGA
CGACCAAATCTATAATGTTATTGTTACCGCACATGCATTTGTAATAATTT
TCTTTATAGTAATACCAATTATGATCGGAGGCTTTGGGAACTGACTAGTT
CCATTAATAATTGGTGCCCCGACATGGCCTTTCCTCGTATGAACAACAT
AAGCTTTTACTTCTTCCCTCCATCATTTCTCCTCCTCCTAGCTTCCCTCAG
GGGTGGAAGCCGGGGCTGGCACAGGCTGAACTGTTTACCCTCCTCTGGCA
GGTAATCTCGCACATGCAGGGCCATCCGTCGACTTGACCATCTTTTCTCT
ACATCTGGCGGGTGTCTCCTCTATCTTAGGGGCCATCAACTTTATTACTA
CAATTATTAATAATAAANCCCCCGCTATCTCACAATACCAGACCCCTCTCT
TCGTTTGATCCGTTCTAATTACAGCTGTGCTACTCCTACTCTCCCTCCCA
GTCCTTGCAGCTGGAATTACTATACTACTAACCAGCCGAAACCTAAATAC
TACCTTCTTCGACCCTGCAGGAGGAGACCCTATTCTATAACCAGCAC-

-----TTCTAGAGCGAAACCTCTACCCATCCAACCTGTCTTGGC
ATGCTTCTGTTGTGTCAGATGCCCATCAGTGTACCAAGCTGTCAGAGCTTTC
CTGGGGTATGTGTCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGACT
TCCTCCAACCTGCCCAAAGATATGGTGGTCCAGCTTTTGTACACGAAGAG
CTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGAT
CAACTATGACCTGGAAAGGAGGCACCTGCCATCTTCCAGAGCTCTTGAGAA
CGGTCCGCCTCGCACTGCTGCCTGCCATCTTTTAAATGGAGAACGTTTCA
ACAGAAGAGCTGATTAACCTCTCAGGCCAAGAGCAAGGAGCTGGTGGATGA
AGCTATTCGCTGTAAGCTCAAGATCCTGCAGAATGATGGCGTTGTTAACA
GCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGGT
GGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAA
AGAGATCATAACAAAGGCTGACATCCCCAGTCCCCGGAAGGAGTTCAGCG
CTTGTGCTATTGGCTGTAAAGTGTACATCACTGGTGGGA--GAGGCTC-A
GAGAAATGGTGTGTCCAAAGATGTATGGGTCTATGATACTGTCCACGAGGA
ATGGTCAAAGGCAGCTCCCATGCTCATTGCCAGGTTTGGCCATGGCTCTG
CAGAGCTGAAACACTGTCTCTACGTCGTAGGAGGTCACACTGCAGCAACC

GGCTGCCTTCCAGCTTCTCCGTCAAGATGAATACATTGTTGTGTTTAGTC
GTTCAACAACAAGACTGATACTGAATGAAGCAGAGCTAATCATGGCACTG
GCCCAAGAGTTCAGATGAGAGTGGTCACAGTGTCCTTAGAAGAAGCAGTC
TTTCCCAGTATTGTCCAGGTGATCAGTGGCGCTTCCATGTTAGTTAGTA
TGCATGGAGCTCAGCTTATCACCTCGCTCTTCCCTAGAGGTGCTGCT
GTGGTGGAGCTGTTCCCCTTTGCTGTGAACCCAGAGCAGTACACACCATA
TAAAACCCTTGCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGGA
GGAACACTAAGGAGGAGAACACTGTTACCCACCCAGACAGGCCCTGGGAA
CAAGGAGGCATTGCTCACTTGGAAAAAGAGGAGCAGGAGAGAATCCTGGC
AAGCAAGGATGTTCCAGGCACCTTTGCTGCCGCAACCCAGAGTGGCTCT
TCAGGATATAACCAGGACACTTTGGTGGAATCCCGTCCTTCTTGGAATC
CTCAA---AGAAGGCATGAAG---ACAAGCCCAGCTTTAAAAA---AGC
CAAGGTAGCCAGCATGGTCCATCCGGGCGGGTTCAGAGAACCCAAATGTC
AAACTTCAGTACAAACCCTAATGAGGCTAAACTCACAGTCTCTTGCCAG
ATCCCATGGAATCTGAAATTCCTGAAAGTGAGAGAGGTCAAATACGAAGT
GNNNNNNNNNNAAAAAAGACAGCAGCAAAGGGACTCTGGAGGATCAAATCATCCAGGCGA
ACCCGGCACTGGAGGCCTTTGGCAACGCCAAAAAGTGAAGAAATGACAAC
TCATCTCGTTTTTGGAAAAATTTATTCGAATCCATTTTCGGGACGAGCGGCAA
GCTGTGCTCTGCTGACATCGAAACATACTGCTGGAGAAGTCACGAGTGA
CCTTTCAGCTGAAGGCCGAAAGGAACTACCATATCTTCTATCAGATCCTG
TCCAATCAGAAGCCAGAGCTCTTGGACATGCTGCTGATCACCAACAACCC
GTACGACTACTCTTACATCTCCAAGGAGAGGTAACAGTCACCTCCATCA
ATGACTCAGAGGAGCTGATGGCCACCGATGGCGCCTTTGATGTGCTTGGC
TTCACTCCAGAGGAGAAGATGAGTGTCTACAAGCTGACGGGTGCCATCAT
GCACTATGGCAACATGAAGTTCAAACAGAAGCAGCGGAGGAGCAGGCTG
AACCTGACGGAACCGAGGCTGCTGATAAATCAGCTTACCTAATGGGGCTG
AACTCTGCTGATCTCATCAAAGGGCTGTGCCACCCCGAGTCAAGGTAGG
AAATGAATATGTCACCAAGGGCAGAGTGTGGACCAAGTCTATTATCCCA
ACAAAGAGGCCCTTCAAGTGCGAGGAGTGTGGGAAGCACTACAACACCAAG
CTGGGATAACAAGCGCCATGTGGCCATGCACTCCGCCACAGCGGGGATCT
CACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACGCCTATTCTCCTGG
AGCATCTCAAGAGCCACTCCGGGAAGTCCTCGGGCGGTGCCAAGGAGAAA
AAACACCCGTGCGACCACTGTGACCGCGTTCACACACGGAAGGATGT
GAGACGACATATGGTGGTCCACACGGGCCGAAAGGACTTCCTATGCCAGT
ACTGTGCCAGCGCTTTGGCAGGAAAGACCATCTGACACGTCACGTGAAG
AAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCGGATAT
GCTAGGTTCTTTAGCCACTGGGTCTCCACCCTGCTCTGTGAAGGAGGAGC
TAAGCCCTATGATGTGCAGCATGGGGCCCAACAAAGACCCCATGATGGGC
AAACCATTCCTAGTGGGGCACCTTTCCGATGGGCATGTACAACCCCCA
CCAT-----CTACAGGCCATGTGCAATTCTGGGGTGGGTCACCCA----
--CACCCATCCCTGATGCCAGCTCCTTGTCTGCAGCTATGGGCATGGGC
TGTCACATGGAANN
NNNNNNNNNNNNNNNNNNNAGTAACTCTCCGAGTGTTCGTACGCTCTGACCCAGCA
GAAACTTTTGTAACTACAGTCCGGTTCATTTGGGTTTTATATTTATGAAC
CCATCGACTACTGGAACCTCACGGTGCAGGAGCACCTGAAGACTCTGAGT
CACGGTTTCAACAAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCG
GGTAGTGAATGTGAGCGCATCAACTAAGAATGACTTCATCACCATCCTTA
AGGGTTCCTTCTGCGCAGCCCAGAGTACCAGCACTTCACTGAGGACATC
ATATTTTCCAAGA---ACCGCGAGACTG-----ATGAATATGGCATTAT
TGCTCAAGGATGTACTTGGTAGCACGCACCACTGAGAAGAAGCGCGAGG
AGGTGGTGGAGCTTTTGGAAACCCTTCGTCCCTTGATGCTGATCAACAGC
ATCAAATTCATTGCCTTCAATCCAACGTTTGTGTTTCATGGACCGGTACAG
CTCCTCTGTCTCTCCCCATTCTGACCTCAGGCTTCCAGCGTTCACCA

TCCTCATCCTCACTTTCTTCCTGGTCATCAACCCCTTGGGAANN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGTTTTCA
CCAGTTTGAATGGCAACCAGCTTTCAAGAATGTGTCCCCGTCTTGTAAATG
TTGGCATTATTAATGGGCTTTCTGGATGGTCTTCCACCGTCGATGATGCC
CCAGCTGACACCATCACTTGGCGCTTTCGCTATGATGTGGCACTGGTGT
TGCTTTAAAGGATGTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTG
GGATGGAAGACAGTGCCTGCACATCAGGCTTTAGTGTTCATGATCAAGGAA
TGTTGCGATGGCATGGGTGATGTCAGCGAGAAGCATGGCGGGGGACCGGT
TGTTCTGAGAAGGCTGTTTCGTTTTTCTTTTACAATTATGTCTGTCTCTG
TCCTGGCAGAGGATGAGGAG-----
GAGGAAGTTACCATTTTACCAGGCCAAAGCCAAAATTCAGAACTGTCCTG
TAAGCCTCTTTGCCTGATGTTTGTGGATGAGTCAGATCACGAGACACTCA
CAGCTGTCCTGGGGCCTATTGTTGCGGAGCGTAATGCAATGAAAAGAAAGT
AGGCTTATCCTATCTATAGGTGGCCTGCCTCGCTCTTTTCGCTTCCACTT
CAGGGGACAGGATATGATGAGAAGATGGTGCCTGAGATGGAGGGGCTGG
AGGCTTCTGGGTCCACATACATCTGCACCTCTATGTGACTCGAGTCGTGCA
GAGGCTTCTCAAAACATGGTGTGCCTCCATTACCCGCAATCATGAAGA
GAACCTAGAACGCTATGAAATATGGAGAACCAACCCCTTTTCTGAGTCCG
TAGATGAGCTGCGTGACAGAGTCAAAGGAGTGTCTGCAAAGCCCTTCTTG
GAGACGCAGCCCACGCTAGATGCATTGCACTGTGACATTGGCAATGCTAC
TGAATTCTACAAAATCTTCCAGGACGAGATCGGAGAAGTGTACAAAAGG
C---CAAC---CCTAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTA
GATAAACAGCTGAGGAAGAAGCTGAAGCTTAAACCGGTAATGAGGATGAA
TGGGAACCTACGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGT
GTGAGCTGGTGCCCTCGGAGGACAGAAGGGAAGCCCTGAGGGAGCTTATG
AGGCTGTACATCCAGATGAAGCCTGTGTGGCGTGCTACCTGCCAGCCAA
GGAATGCCCTGACCAGCTATGTCTGCTACAGTTTTAACTCCCAGCGCTTGT
CTGACCTCCTCTCCACTACCTTCAAATATAGGTACAATGGAAAGATAACC
AATTATCTGCACAAGACCCTGGCCCATGTACCTGAAATTATAGAGAGAGA
TGGATCCATAGGAGCCTGGGCCAGTGAGGGGAATGAATCAGCAAACAAT
CTTATACCATTGAGATGGGTCCCCGTTGGGGCCCCGGTGGAAAGGAGACCCG
CAGCCTTTCTCCTGCTCCATTGAGGACCCAACCAAACAGACTAAGTTCAA
GGGCATCAAGACCTACATTTTCATACCAGGCTGACGCCGAGCCACACAGGGC
ATCCCGTCTACAGACGCTACAAGCACTTTGACTGGCTCTACAACCGCTTG
CTGCAAAAGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGC
CACGGGACGATTTGAGGAAGACTTCATTGAGAAGCGCAAGAGGCGACTCA
TACTGTGGATGAACCATATGACCAGTCACCCAGTCTCTCCCAGTATGAA
GGCTTTGAGCACTTCCTGATGTGTGCTGATGACAAGCAGTGGAACCTGGG
CAAGAGACGGGCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGA
CCCTCAAATCCCCAACGAGCACCAGGACCTTTCAGGACGTCGAGGAGCGG
GTAGACAACCTCAAGGCCTTTGCTAAAAGATGGACGACAGCGTGATGCA
GCTGACACACGTTGCCTCGGAGCTTGTGCGGAAACACCTGGGTGGGTTC
GGAAGGAGTTCCAGCGCCTTGAAAATGCCTTCCAGTCTATCAGCCAGGCA
TTCATGTTGGACCCCTCCCTACAGGTGAGATGCACTCAACAACGCCGTCTC
CCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGGGTTTTCATCATCGGAGTTGGTGTGGTTGAAAC
CTCCTGATCTC
CATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGCGCCCTACTATTTCC
TGTTGGACCTGTGCGCCTCTGACATCCTGCGCTCTGCCATCTGCTTCCCC
TTGCTTTCACCTCGGTCAAAGAATGGATCTGCCTGGACCTACGGCACATT
GACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTCTCCTGTTTTACACGG
CATTCATGCTGTTCTGCGTCAGCGTCACCCGTTACTTGGCCATCGCGCAT
CACCGTTTTCTACACCAAGAGGCTGACTTTTCTGGACGTGTTTGGCTGTCAT
CTGCATGGTGTGGACGTTGTCTGTGGCTATGGCCTTCCACCGGTGCTAG

ATGTAGGGACGTACTCGTTTATCCGGGAGGAGGACCAGTGCACATTCAG
CACCGTTCCTTCAGGGCAAACGATTCGCTGGGCTTCATGCTCCTGCTGGC
ACTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTTTTCG
TCCACGACCGTCGAAAGATGAAGCCCGTCCAGTTCGTGCCTGCTGTCAGC
CAGAACTGGACCTTCCACGGCCAGGTGCCAGTGGGAGGCGGCAGCCAA
CTGGCTGGCTGGATTGGTAGAGGCCACCCCGCTACTTTGCTGGGCA
TCCGGCAGAACAGCAATGCAGCGGGCCGAGGCGTCTACTGGTACTGGAT
GAATTCAAACTGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTT
TTTCTTCCTGGCACTGTGGGGGCCCTACCTGGTGCCTGCTACTGGCGGG
TGTTTGCAAGGGGGCCCGTTGTCCCTGGAGGCTACCTGACAGCANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNN--N--NNNCGT

CCCCTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGATGAGCCCAGTG
TTGCCACCCCGGCAGCGATGGTTTGTCAACC---CTGCCAAACAACCGA
CTGGACTTTGCTGCCCTCGGCATAACGACGCCGCT-----GATTTTGC
CGGTAACGCGGCCACCTTACTGTCTACGCAGCGGCCGGAGTGAAGGCTC
-----TTCCCCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTAT
TACGCAGACCCGTCTG---GCTGG---GGAGGACGCACGCCGCCAGTA
TTGTGGTGTAATAAGTAAATCCAGCTCGGTCTTTCTCCTGCTGGCCCCACTA
ACTCCATCGGTGGCAGAACAGGCA---CC---AGCTACCTGT-----
-CCGAGGA---GGGA---GACTC---CATCACGACAGAAAGGTCACCC--
-AT---TGGTGGCTCGGAGGAG---ACCAAACAAAAGACATGAC---AT
CTGA---ATCGAGCTGGATAGAA---ACGCCGTCTCCATTAAATCTATC
GATTCGAGCGATTCTGGTATCTTTG---AGCAGGCAAAGCGGAAAAGAAT
CTCACCTTCTGCAACACCG-----

GTTTCAGAGACAGTGTCCTCCNNNNNNNNNNNNNNNNNNNNNNNNNNNAC
AGGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGG
ATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCACGATATTGGCTCC
GG---ACAGACGGCGTTCCTCCTCCAGGCG---CCCGGCTAC---GCAGC
AGCTGCCCTTGGGA---CACCATCA-----CCACCGACCCACGTTGGCT
CT---TACTCCACGGCGGCTTTCAACTCCACCAGGACTTTCTCTTCAGA
AATCGGGGTTTTGGGATGCCACCGG-----GGCGCAGCACAG
TCTGTTCGCCTC-----CGGAAGTTT---C-----GCAGGGCCAC
ATGGACACTCAGATGCAGCGGGCACCTGCTCTTCCCAGGGCTCCATGAG
---CAAGCAGCAAGCCATGCCTCTCCAACGTGGTCAACAGCCAGATGCG
GCTGGGCTTCTCGGGGACATGTACGGACGGGCCGACAGTATGGCCACG
TTACAAGCCCACGGT---CTGACCACTATGCTTCAACCCAGCTGCACGGC
TATGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGC
CTTCTTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTTATCTGCAAGT
GGATCGAACCGGAGCAGCTGACAAAATCCAAAAAGTCGTGCAACAAACT
TTTAGCACGATGCACGAGCTTGTGACCCATCTAACGGTGGAGCATGTGGG
GGGACCAGAGCAGACCAACCATTTGCTTCTGGGAGGACTGCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNN

>Rachycentron canadum

AGTCTCCTCATTTCGAGCAGAATTAAGCCAACCTGGCTCCCTACTGGGAGA
CGACCAAACCTACAACGTAATCGTAACAGCCCACGCCTTCGTAATAATCT
TCTTTATAGTAATACCAATTATGATCGGAGGCTTTGGGAACTGACTTATT
CCTCTAATGCTAGGCGCCCCGATATGGCTTTTCCCCGTATAAATAATAT
AAGTTTCTGACTACTTCCCCATCATTCCTCCTGCTGCTAGCCTCTTCAG
GTGTTGAAGCTGGAGCAGGGACTGGTTGGACAGTTACCCACCTCTGGCG
GGCAACCTAGCACATGCAGGAGCCTCTGTTGACTTAACTATTTTCTCCCT
TCATCTTGCAGGGGTGTCTTCAATTCTCGGGGCTATTAATTTTATTACAA

CAATTATTAACATAAAAACCACCAACTGTGACTATGTACCAAATTCCTC
TTCGTATGGGCTGTCTAATCACTGCCGTCCTTCTCCTCCTCACTCCC
AGTCCTGGCTGCTGGCATTACTATACTGCTTACAGACCGAAATTTAAATA
CAGCCTTCTTTGACCCTGCAGGAGGGGTGACCCAATTCTATATCAACAC
TTATTC-----

-----TTCTAGAGAGAAAACCTTCACCCCTCTAACTGCCCTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CTTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTTCAACTGCCCAAAGATATGGTGGTCCAGCTTTTATCACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAGAGGAGGCACTGCCATCTTCCAGAGCTTCTGAGA
ACGGTCCGCCTGGCCCTGCTGCCTGCCATCTTTTTGATGGAGAATGTCTC
AACAGAGGAGCTGATCAATGCCAGGCCAAGAGCAAGGAACTGGTGGATG
AAGCTATTTCGCTGTAAGCTGAAAAATCCTGCAGAATGACGGCGTTGTTAAC
AGCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTTGTCTTCTGGG
GGGGCAGACTTTCATGTGTGACAAGTTGTATCTGGTAGACCAGAAGGCCA
AAGAGATCATACCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTATGGGTCTACGATACTGTCCACGAGG
AATGGTCCAAAGCAGCTCCCATGCTCATCGCTCGGTTTGGCCATGGCTCT
GCAGAGCTGAAACATTGCCTCTACGTAGTTGGAGGGCACACAGCAGCCAC
CGGCTGCCTCCCGCTTCTNNNNNNGGACAATTACATTGTTGTGTTTCAGTCGCTCA
ACAACAAGACTGATACTGAATGAAGCGGAGCTCATCATGGCGCTGGCCCA
GGAGTTCAGATGAGAGTGGTCACAGTATCCCTGGAGGAACAGTCGTTCC
CCAGTATCGTCCAGGTGATCAGTGGCGCTTCTATGCTAGTCAGCATGCAC
GGAGCCCAGCTCATCACCTCGCTCTTCCCTCCCCAGAGGTGCTGCTGTGGT
GGAAGTGTTCCTTTGCTGTGAACCCAGAGCAGTACACCCCTTATAAAA
CCCTGGCCTCCCTTCCCGCATGGACCTTCACTACATCTCCTGGAGAAAC
ACCAAGGAGGAAAAACCATCACTCACCCAGACAGACCCTGGGAACAAGG
AGGCATTGTTCACTTGGACAAGGAGGAGCAGGAGCGAATACTGGCCAGTA
AGGATGTTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCCGG
ATCTACCAGGACACATTGGTGGACATCCCTTCCCTCCTGGAAGTCTCAA
---AGAGGGCATGAAG---ACCAAGCCCAGCTTTAAGAA---GTCAAAGC
CAGCCAGCACGGTCCACCCAGGCCGAGTTAGAGAGCCTCAATGTCAGACC
TCAGTCCAAACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCAGATCCC
ATGGAATTTGAAATACCTGAAGGTAAGAGAGGTGAAGTACGAGGTGTGGA
TCCAGAAAAAAGATGCCAACAAGGGGACACTGGAGGATCAAATCATCCAG
GCAAACCTGCACTGGAGGCCTTTGGCAATGCCAAAACATTGAGAAATGA
CAACTCGTCTCGTTTTGGAAAATTCATTCTGAATTCACCTTGGCACAAGCG
GCAAACGTGCATCTGCTGATATCGAGACGTACCTGCTGGAGAAATCACGT
GTCACATTTTCAGCTCAAGGCAGAGAGGAACTACCACATCTTCTACCAGAT
CCTGTCCAATCAGAAACCAGAACTGCTGGACATGCTGCTGATCACCAACA
ACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTGACGGTTGCCTCT
ATCAATGACTTGGAGGAGCTAATGGCCACTGACAGTGCCTTCGATGTGCT
CGGCTTCACTGCAGAGGAGAAGATGGCCGTCTATAAACTGACTGGCGCCA
TCATGCACTATGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAG
GGCGAACCTGATGGGACTGAGGCCGCTGATAAATCAGCTTACCTAATGGG
GCTGAACTCCGCTGACCTCATCAAAGGCCTTTGCCACCCAAGAGTCAAGG
TAGGAAACGAATATGTAACCAAAGGCCAAAGTGTGGACCAAGTCTACTAT
CCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAACACTACAACAC

CAAGCTGGGATATAAGCGTCATGTGGCCATGCATTCTGCCACATCAGGGG
 ATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGTACACCTGTCCTC
 CTGGAGCACCTCAAGAGCCACTCCGGTAAATCTTCGGGTGGCACCAAGGA
 GAAAAAGCACCCGTGCGACCACTGTGACCGTCGCTTCTACACACGGAAGG
 ATGTGCGACGACACATGGTGGTCCACACAGGCCGGAAGGACTTCCTGTGC
 CAGTACTGTGCCAGCGCTTCGGCAGGAAAGACCATCTGACACGCCACGT
 GAAGAAGAGCCACTCACAGGAACTGCTGAAGATCAAGGCGGAGCCTCCAG
 ATATGTTAGGTCTCTTAGCCTCTGGATCACCACCTTGCTCTGTGAAAGAG
 GAACTCAGCCCCATGATGTGTGGCATGGGTCCCAACAAAGACCCCATGAT
 GGGCAAAGCGTTCGCCAGTGGGGCCCCTTTTCCAATGGGCATGTACAACC
 CCCACCAT-----CTCCAGGCAATGTCTAATACTGGGGTGGGTCACCCA
 -----CACCCATCCCTAATGCCAGTTCCTTGTCTGCAGCTATGGGCAT
 GGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTTCATGGGAT
 GTTTACAAATTAGTGATGGGTCAAATATCGTCAACCTGCTGGCAAGTAAC
 TCTCCGAGTGTTCATATGCTCTGACCCAGCAGAAATACTTCAGTAACTA
 CAGCCCTGTGATCGGGTTTTACATTTACGAGCCCATCGAGTACTGGAAC
 CCACGGTGCAGGAGCACCTGAAGACCCCTGAGTCATGGCTTCAACAAGATC
 TCCTGGATGGACAACTTTTTCCACTACCTACGGGTGGTCAACGTGAGTGC
 GTCAACTAAGAGCGACTTCATCACCATCCTCAAAGCTCCTTCCCTGCGCA
 GCCCAGAGTACCAGCATTTCACAGAGGACATCATATTTCTCCAAGA---AC
 CGTGAGACTG-----ACGAGTACGACATCATTGCCTCACGGATGTACCT
 GGTGGCGCGGACGACTGAGAAGAAGCGTGAGGAAGTGGTGAGCTTCTGG
 AAAAGCTTCGTCCGTGATGCTCATCAACAGCATCAAGTTCATTGCCTTC
 AATCCACATTTGTGTTTATGACCCTACAGCTCCTCCGTTCATCTCGCC
 CATCCTGACCTCAGGCTTCAGCGTACTCACTATCCTCATCCTCACTTTCT
 TCCTGGTCATCAACCGTTGGGAAACTTCTGGCTCATCCTCACGGTCACA
 TCTGTGGAGCTGGGCGTCTTGGGTTTGATGNNNNNNNNNNNNNNNNNNNNNNNNNN
 NGTCTACATCTTGCAATGTTG
 GCATTATTAATGGGCTCTCTGGATGGGCTTCCTCGGTGGATGACTCCCA
 GCTGACACCATCACTCGAAGGTTTCGCTATGATGTGGCACTGGTGTGAGC
 ATTAAGGATCTGGAGGAGGACATCATGGAGGGCTGAGAGAGAGTGGGT
 TGGAAAGACAGTGCTTGCACCTCAGGCTTTACTGTCATGATCAAGGAATGT
 TGTGATGGCATGGGCGATGTCAGCGAGAAGCATGGTGAGGACCAGTTAT
 TCCTGAGAAGGCTGTACGTTTCTCTTTCACTGTTATGTCTATCTCTGTCC
 TGGCAGACGATGAGGGG-----AGG
 GAGGTACCATCTTCACCGAACAAGGCCAACTCAGAAGCTGCCTGTAA
 GCCCTTTGCTTGTGATGTTTGTGGATGAGTCAGACCACGAGACTCACAG
 CTCTCTGGGGCCTGTAGTTGCAGAGCGTAATGCAATGAAAGAGAGCAGG
 CTCATCCTAGCCATAGGTGGCCTGCCTCGCTCCTTCCGCTTCCTCAG
 AGGTACGGGATACGATGAGAAGATGGTGCGAGAGATGGAAGGCTGGAGT
 CCTCAGGTCCCTCATATGTCTGCACTCTATGCGACTCCAGTCCGGCAGAG
 GCCTCTCAAACATGGTGTACACTCCATCACCCTGATGCCATGAAGAAA
 CCTAGATCGTTACGAAATATGGAGAACCAACCCCTTCTCTGAGTCTGCAG
 ATGAACTGCGAGACAGAGTCAAAGGGTCTCTGCAAACCTTTCATGGAG
 ACCCAGCCCACACTGGACGCATTACACTGTGACATGGCAATGCCACTGA
 GTTCTACAAAATCTTCCAGGATGAGATTGGAGAAGTGTATCAAAGGT--
 -CAAC---CCCAGCCGGAAGAAAGGCGCAGCTGGAGGGCAGCTCTAGAT
 AAACAGCTGAGGAAGAAGATGAAGCTTAAACCGGTAATGAGGATGAATGG
 GAACTACGCCCGCAGGCTAATGACCCCTGGAGGGTGGTGGTGTGTG
 AACTGGTGCCTCAGAGGAGAGGAGGAGGCCCCCTGAGGGAGCTTATGAGG
 CTCTACCTCCAGATGAGGCCTGTGTGGCGCGCCACCTGCCAGCAAAGGA
 ATGCCCTGACCAGCTGTGCCGTTACAGCTTTAACTCCAGCACTTTGCCG
 ACCTCCTCTCTCCACTTCAAATATAGGTACAATGGAAAGATAACCAAT

TACCTTCACAAGACTCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGG
ATCCATAGGAGCCTGGGCCAGCGAAGGGAATGAGTCAGCAAACAAATCAT
ACACCATCGAGATGGGTCCCCTGGGACCCCGGTGGAAGGAGAACCCACAG
CCTTCTGTTGCTCCATTGAAGACCCACAAAACAGACAAAGTTCAAGGG
CATCAAGACCTATATTTCTTACCGGGTCACACCGAGCCACACGGGGCGTC
CTGTCTACAGGCGTTACAAACACTTTGACTGGCTGTACAACCGCCTACTG
CACAAGTTCACTGTGATCTCTGTGCCCTCACCTGCCCTGAGAAACAGGCTAC
GGGGCGATTTGAGGAAGACTTCATTGAGAAGCGTAAAAGACGACTGATAC
TATGGATGAACCACATGACCAGTCACCCAGTCTCTCCAGTACGAAGGC
TTTGAGCACTTTCTGATGTGTGCTGATGACAAGCAGTGGAACCTGGGAAA
GAGACGGGCGGAGAAGGACGAGATGGTTGGCGCCCATTTTCATGCTGACAC
TCCAAATCCCCAACGAGCACCAGGACCTTCAGGACGTAGAGGAGCGGGTC
GACTCCTTCAAATCCTTTGCTAAAAAAATGGACGACAGCGTGATGCAGCT
CACGCATGTTGCCCTCAGAGCTGGTGCGAAAACATCTGGGTGGTTTCAGGA
AGGAGTTCAGCGGCTGGGAAATGCCCTCCAGTCTATCAGCCAGGCATTC
ATGCTGGACCCTCCCCACAGCTCAGATGCCCTCAACAACGCCATTTTACA
TNTCTCTCGCACGTTCCCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGT
CGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGA
GCCTGCACCGAGCGCCCTACTATTTCCCTGCTGGACCTGTGCGCCTCTGAT
ATCCTGCGCTCCGCCATCTGCTTCCCCTTTGTCTTCACCTCAGTCAAGAA
TGCTCTGCGTGGACCTACGGCATGCTGACCTGCAAAGTGATTGCCTTCC
TGGGTGTGCTCTCCTGTTTTCCACACAGCGTTCATGCTGTTCTGTGTCAGT
GTCACTCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCT
GACCTTCTGGACCTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGTCAG
TAGCTATGGCGTTCCACCAGGCTAGATGTAGGGACGTA CTCTTTTATC
CGGGAGGAGGACCAGTGCACATTCCAGCACCGTTCCTTCCGGGCGAATGA
TTCGTTGGGCTTCATGCTCCTCCTGGCGCTCATCCTCCTGGCCACACAGC
TGGTTTACCTCAAGCTCATCTTTTTTGTCCATGACCGTMGAAAGATGAAG
CCTGTTCAAGTTCGTACCTGCTGTCAGCCAGA ACTGGACCTTCCATGGGCC
AGGTGCCAGTGGGCAGGCGGCGGCCAACTGGCTGGCTGGATTTGGTCGTG
GCCCCACCCACCTACTTTGCTGGGTATCCGGCAGAACAGCAATGCAGCG
GGCCGAGGCGTCTACTGGTATTGGATGAATTCAAACAGAGAAGAGGAT
TAGTAGGATGTTCTACATCATGACGTTTTTTCTTCTTCCAGGACTGTGGGGC
CCTATCTGGTGCCTGCTACTGGCGGGTGTGCAAGGGCCCCGTAGTC
CCTGGGGGCTATCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGG
GGTCAATCCTTTTCATCTGCATCTTCTCCAACAGGAGGCCAAATCTCGCT
TTCACCCTGGCGTGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCCA
CTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTGC
CACCCCCCGCAGCGATGGTTTGTCAACC---CTGCCAACAAACCGACTGG
ACTTTGCTGCCTCGGCATACGACGCCGCT-----GATTTGCGCCGGT
AACCGGCCACCTTGCTGTCTACGCAGCGGCCGGAGTGAAGGCTC----
--TTCCCCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACG
CAGACCCGTCGG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGT
GGCGTAAACAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCCGCAACTC
AATCGGTGGCAGAGCGGGCA---CC---AACTACCTGG-----CCG
AGGA---GGGA---GACTC---CATCCCTACAGAGAGATCCCCG---AT-
--CGGAGGCTCGGAGGAG---ACCAAACCCAAAGACATGAC---GTCTGA
---GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAGTCCATTGATT
CGAGCGATTCTGGGATCTTTG---AACAGGCCAAAAGAAGGAGAATCTCA
CCGTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCCGTAAA
ATCTGAGCATCACTCAACAGGCGAAGTCACAGAGAGAGAAGTGGCGTTGG
GGATAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAACCACAGC
TCCCACGATATTGGCTCCGG---ACAGACGGCGTTTCTCCTCCAGGCA--

-CCCGGCTAC---GCAGCGGCCGCCCTGGGA---CACCATCA-----CC
ACCCGACCCACGTTGGTTCT---TACTCCACGGCGGCTTTCAACTCCACC
AGGGACTTTCTCTTCAGAAATCGGGGTTTCGGGGACGCCACCGG-----
-----GGCGCAGCACAGTTTGTTCGCCTC-----TGGAAGTTT--
-C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGCCACCTGCTC
TTCCAGGGCTCCACGAG---CAAGCGGCGAGCCATGCCTCTTCCAACGT
GGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTACGGACGGG
CCGACCAGTACGGCCACGTTACAAGCCCACGGT---CCGATCACTATGCT
TCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCG--
-CACCACGGAGCAGGGGCCTTCTTTCGCTACATGAGGCAGCCGATCAAAC
AAGAGCTCATCTGCAAGTGGATCGAGCCGAGCAGCTGACAAATCCCAA
AAGTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTTGTGACCCATCT
GACGGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACGTCTGTTTCT
GGGAGGACTGCTCCAGAGAAGGAAAGCCATTCAAAGCCAAATACAAACTT
GTAAATCATATCAGAGTACACACCCGGAGAAAAGCCCTTTCCGTGTCGGT
CCCCGGCTGTGGCAA

>*Ranzania laevis*

AGTCTACTCATCCGAGCAGAATAAGCCAACCCGGGGCTCTCCTTGGAGA
CGACCAAATCTACAATGTCATCGTCACAGCACATGCCTTTGTAAATGATTT
TCTTTATAGTAATACCAATTATGATCGGAGGATTCGGCAACTGACTGATC
CCCCAATGATCGGGGCCCCAGATATGGCCTTCCCTCGAATGAACAACAT
GAGCTTTTACTCCTACCCCCCTCATTCCTTCTTCTTCTTGCCTCATCAG
GCGTTGAAGCTGGAGCCGGGACAGGATGAACTGTCTACCCTCCTTTAGCC
GGAAATTTAGCCCATGCAGGCGCTTCCGTTGACTTAACCATCTTTTCCCT
CCACCTGGCTGGTATTTTCATCAATTCCTGGGGCTATTAATTTTATTACAA
CAATTATTAATATGAAACCCCTGCAATCTCGCAATACCAAACCCCTCTA
TTTGTCTGAGCAGTTCTCATTACAGCTGTTCTTCTTCTCCTATCCCTCCC
AGTTCTTGCAGCAGGATTACAATGCTCCTCACCGACCGAAATCTAAACA
CCACTTTCTTCGACCCGGCTGGAGGAGGAGACCCAATTCTATAACCAACAC
CTC-----

-----NNNNNNNNNNNNNNCCTTACCCATCTAACTGCCTTGGCATGCTGCTGCTAT
CCGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCTGGGGCATGTGC
CTCAGCAACTTCCCCGCCATTTGTAAGACAGAGGACTTCCTCCAAC TGCC
CAAAGATATGGTGGTGCAGCTTTTGTCCCATGAGGAGCTAGAGACTGAAG
ATGAGAGACTGGTGTATGAAGCTGCCCTCAATTGGATCAACTATGACCTA
GAAAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGAACAGTCCGCC TGGC
CCTTCTGCCCCGCATCTTCTCATGGAAAACGTCTCTACAGAAGAGCTGA
TCAACGCCAGGCCAAGAGCAAAGAGCTTGTGGATGAGGCTATCCGCTGC
AAGCTGAAGATCCTGCAGAATGATGGTGTGGTGAACAGCCCATGTGCACG
TCCCAGAAAAACCAGCCATGCCCTCTTTCTTCTTGGCGGGCAAAC TTTCA
TGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCAAAGAGATCATCCCC
AAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCATTGG
CTGCAAGGTGTACATCACAGGTGGGA--GAGGCTC-AGAGAATGGTGTGT
CCAAAGACGTGTGGGTGTACGACACAGTCCACGAGGAATGGTCAAAGGCA
GCGCCCATGCTTATCGCCCCGTTTGGTACGGCTCTGCTGAGCTGAAACA
CTGCCTCTACGTGGTFCGGAGGCCACACTGCGGCAACCGNNNNNNNNNNNNNNNNNNNNNGGACA
ACTA
CA
TTGTTGTGTTTAGTCGTTCCACAACAAGACTGATACTGAATGAAGCAGAG
CTAATTATGGCGCTGGCCCAGGAGTTCAGATGAGAGTGGTACAGTATC
CCTGGAAGAACATTCCTTCCCCAGTATTGTACAGAGTGATAAGCAGTGCTA

CTATGTTAATCAGTATGCATGGAGCTCAGCTTATTACCTCATTGTTCCCTC
CCTCGAGGAGCTGTTGTGGTTGAGCTATTCCCCTTTGCTGTGAACCCAGA
GCAATATACTCCATATAAAACCCTTGCCTTCCTCCAGGCATGGACCTAC
ACTATATCTCATGGAGGAACAATAAAGAAGAGAACCACCATCACCCACCCA
CAGAGACCCTGGGAACAAGGGGGCATCATACTTGGAGAAGGAGGAACA
AAGGCGAATACTTACTAGCAAAGATGTTCCCAGACACCTGTGCTGCCGCA
ACCCAGAGTGGCTATTCGGGATCTACCAGGACACTTTGGTGGATATTCCT
TCCTTCCTGGACATCCTCAA---AGAAGGCTTAAAG---ACAAAGCCTAG
TTTGAAGAA---GTTAAAACCAGCAAGCGCACTTCACCCTGGCCGGGTCA
GAGAACCCTCACTGTCAAACATCAGTACAAACCAGTAATGAGGCTAGACTC
ACAGTCTCCTGGCAGATACCTTGGAACTCTCAAGTACCTGAAGGTCAGAGA
AGTCAANNNNNNNNNNNNNNNNNNNNNAAGAAGGACACCAGCAAGGGGACGCTGGAGGACC
AAATCATCCA
GGCCAAATCCGGCGCTGGAAGCCTTCGGGAACGCCAAAACCCTGAGGAACG
ACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTCGGTACGAGC
GGAAAGCTGTGCTCCGCCGACATCGAGACGTACCTGCTGGAGAAGTCGCG
CGTCACCTTTCAGCTCAAGGCTGAAAGAAATTACCACATCTTCTACCAGA
TTCTGTCCAACCACAAGCCGGAGCTCCTGGACATGTTGCTGATCACCAAC
AACCCGTACGACTACTCCTACATCTCCCAGGGAGAAGTTACCGTGGCCTC
CATCAACGACTCCGAGGAGCTGATGGCCACCGACAGCGCCTTCGACGTGC
TGGGCTTCACCCGCCGAGGAGAAGATGGGCGTCTACAAGCTGACGGGCGCT
ATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGAGAGGAACA
AGCCGAGCCGATGGGACGGAGTCGGCGGATAAAAACCGCTTATCTGATGG
GGCTGAACTCAGCCGACCTCATCAAAGGGCTGTGCCACCCGAGGGTCAAG
GTAGGAAACGAGTACGTGACCAAAGGTCAAAGTGTGGACCAAGTNNNNNNNNNNNNNNNNNNNNNTTCA
AG
TGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGCGGCA
TGTGGCCATGCACTCTGCAACCGCAGGCGATCTAACGTGTAAAGTGTGCA
TGCAGACCTACGAGAGCACACCGGTGCTCTTGGAGCACCTAAAGAGCCAC
TCCGGGAAGTCTCAGGTGGCACCAAGGAGAAAAAACACCCCTGTGACCA
TTGTGATCGTCTGCTTCTACACACGGAAGGACGTGAGACGGCACATGGTGG
TCCACACAGGCCGAAAGGACTTCTGTGTGCTGACTGTGCCCAACGCTTT
GGCAGGAAGGACCATTTGACCGGGCATGTGAAGAAGAGCCACTCACAGGA
GCTTCTGAAAATTAAGACGGAGCCTCCTGACATGTTAGGCCTTTTAGCTT
CTGGGTACACACCTGTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGT
GGCATGGGTCCCAACAAGGACCCCATGATGGGGAACCTTTCCCAGTGG
AGCCCCATTTTCAATGGGCATGTATAACCCCAACCAT-----CTCCAGG
CCATGTCTAATCCTGGGGTGAAGTACCCA-----CATCCTTCCCTGATG
CCCAGTTCCTTGTCTGCAGCTATGGGCATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNTCAGTGATGGATCAAATATCG
TGAACCTATTGGCCAGTAACTCTCCGAGTGTTTCATATGCTTTGACCCAG
CAAAAATACTTCAGCAACTACAGTCCGTGATCGGGTTTTACATTTACGA
GCCCATCGAGTATTGGAACCTAACGGTGCAGGAGCACCTGAAGACTCTGA
GTAATGGCTTCAATAAGATCTCCTGGATGGACAACTTTTTCCACTACCTG
AGAGTAGTGAACGTGAGTGCCTCAACCAAGAATGACTTCATTACCATCCT
TAAAGGCTCCTTCCGTGCGCAGCCCGAGTACCAGCACTTCACTGAGGACA
TCATCTTCTCTAAGA---ATCGTGAGACCG-----ATGAATACGACATC
ATCGCTTCCAGGATGACTTGGTGGCACGTATCACAGAAAAGAAGCGCGA
AGAGGTCGTGGAGCTTCTGGAAAAGCTCCGTCCATTAATGTTGATCAACA
GCATCAAGTTCATTGCCTTCAATCCTACTTTTGTGTTTCATGGACCGCTAC
AGTTCCTCCGTCACTCACCCATCCTGACCTCAGGATTCAGCGTGCCTCAC
AATCCTCATCCTCACTTTTTTCTTGGTCATCAACCCCTTGNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTTCACCAGT
TTGAGTGGCAGCCAGCTCTCAAAAATGTGTCTGCATCTTGCGATGTTGGA

ATCATCAACGGGCTCTCTGGGTGGACTTCCTCAGTGGATGATGCCCCGGC
TGACACCATCACTCGTCGATTTTCGCTACGACGTTGCGCTAGTGTGGCCT
TAAAAGATCTGGAAGAGGACATCATGGAGGGCCTGAGAGAGAATGGGATG
GAGGACAGCACTTGTGCTTCAGGCTTCAGTRTCATGATCAAAGAATCCTG
TGATGGCATGGGTGATGTCAGCGAGAAGCACGGCGGTGGACCCGCTGTT
CTGAGAAGGCAGTGCCTTCTCTTTCACCATCATGTCCGTTTCCGTGCGG
GCAGAAGGCAAGGAC-----GATGA
AGTAACCATCTACAGGGAGCCAAAACCAAACCTCAGAGATGTCCTGTAAGC
CCCTTTCCTGATGTTTGTGGATGAATCCGACCACGAGACGCTCACAGCC
ATCCTGTGGCCATAATTGCAGAGCGTAATGCAATGAAAGAGAGCCGACT
CATCGTATCCATTGGTGGACTGTCTCGCTCCTTCCGCTTTCACTTCCGAG
GCACAGGCTATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCC
TCTGGATCCACCTACATCTGCACACTTTCGCGATTCCAGTCGCGCMGAGGC
CTCTCAAAACATGGTCCCTACACTCCATCACACGCAGTCACGAAGAGAACT
TAGAGCGCTACGAAAATATGGAGAACCAACCCTTTTCTGAGTCTGTAGAG
GTTCTTAGAGACAGAGTCAAAGGGTCTCTGCCAAGCCTTCTTGGAAAC
CCATCCAACAATGGATGCACTCCACTGCGACATAGGCAACGCCACTGAGT
TTTACAAAATTTTCCAGGACGAGATTGGGGAAAGTCTACAAAAGGT---G
AAC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGAGCAGCCCTTGACAA
ACAGCTGAGAAAAAAGATGAAGCTCAGACCCGTGATGAGGATGAATGGGA
ACTACGCCCGCGGTTAATGACCCAGGAAGCCGTGGAGGTAGTGTGTGAG
CTGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTGATGAAGCT
GTACCTCCAGATGAAGCCTGTGTGGCGTGCCACACACCCAGCCAAGGAGT
GTCCTGACCAGCTCTGCCGCTACAGCTACAACCTCTCAGCGTTTTGCCGAC
ATCCTTCTTCCACCTTCAAGTACAGATATAATGGAAAGATAACCAATTA
CCTGCACAAGACCCTGGCCCATGTGCCTGAAATCATTGAGAGGGATGGAT
CCATAGGGGCTGGGCCAGNNNNNNNNNNNNNNNNNNNNNNNNNNNTCTTACACCATCGAGATGGGTTCCTT
GGGGC
CCAGATGGAAGGAGAGTCCAGAGCCTTTCCTCCTGCTCCATCGAAGACCC
ACCAAACAGACAAAGTTTAAGGGCATCAAGACGTACATTTTCGTACCGGGT
GACGCCGAGCCACACGGGCCACCCGTCTACAGGCGTTACAAACACTTTG
ACTGGCTGTACAACCGTTGCTGCACAAGTTCACTGTGATCTCCGTGCC
CACCTGCCCCGAGAAGCAGGCCACAGGGCGATTTGAGGAGGACTTCATCGA
GAAGCGCAAGAGGCGACTGATACTTTGGATGAACCACATGACCAGTCACC
CGGTCTCTCCAGTACGAAGGCTTCGAGCACTTCTGATGTGTGCCGAC
GACAAGCAGTGGAAGCTGGGCAAGAGGCGCGGAGAAAGATGAGATGGT
GGGCGCGCATTTTCATGCTGACCCTTCAGATTCCTCAACGAGCACCAAGACC
TTCAGGACGTAGAGGAGCGGATCGACTCCTTCAAGTCCTTTGCCAAGAAA
ATGGACGACAGCGTGATGCAGCTCACGCACGTGCGCTCTGAGCTGGTGCG
AAAGCACCTGGGTGGTTTCAGGAAGGAGTTCAGCGGCTGGGAAACGCCT
TCCAGTCCATCAGCCAGGCGTTCATGCTGGACCCCTCCCCACAGCTCAGAG
GCCTTGAACAGCGCCATCTCNNNN-----

-----CATCACTCAACAGGCGAAGTCAC
 AGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCAGATGGGATGGGCG
 CCTTCAAATAAACCACAGCTCCCACGACATTGGCTCTGG---ACAGACT
 GCGTTTTTCCTCTCAGGCG---CCCGGCTACGCAGCAGCAGCAGCCCTTGG
 A---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCA
 CGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGATTTC
 GGGGACGCCACGAG-----TGCCCAGCACAGTTTGTTTCGCCTC
 -----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCCG
 ATGCAGCGGGACACCTGCTCTTCCCCGGGCTCCACGAG---CAGGCGGCG
 AGCCACGCGTCTTCCAATGTGGTCAACAGCCAGATGCGGCTGGGCTTCTC
 GGGGACATGTACGGACGGGCGGAGCAGTACGGCCACGTTACGAGCCCC
 GGT---CTGACCACTACGCGTCGACCCAGCTGCACGGCTACGGCCCCATG
 AACATGAACATGGCAGCG---CACCAAGGAGCGGGGCCTTCTTCCGATA
 CATGCGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGG
 AGCAGCTGACGAACCCCAAAAAGTCGTGCAACAAAACCTTTCAGCACGATG
 CACGAGCTGGTACTCATCTGACGGTGGAGCACGTAGGGGGACCAGGAGCA
 GACCAACCATGTGTGCTTCTGGGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
 NNN
 >Rathbunella hypoplecta

AGCCTTCTTATCCGAGCAGAGCTAAGCCAACCCGGCGCCCTCTTGGGGGA
 CGATCAAATTTATAACGTAATTGTTACGGCACACGCCTTCGTAATAATTT
 TCTTTATAGTAATAACCAATTATAATCGGCGGGTTTGAAACTGACTTATT
 CCGTTAATGATCGGTGCCCTGACATAGCATTTCTCGAATAAATAACAT
 GAGCTTTTGACTTCTCCCTCCTTCTTCCTCCTCCTTTTAGCTTCTTCGG
 GAGTAGAGGCAGGGGCGGAACAGGTTGAACAGTCTACCCCCCTCTTTCT
 GGCAATTTAGCCCATGCAGGAGCCTCTGTTGATTTAACAAATTTTCTCTCT
 TCACTTAGCCGGAATTTCTTCAATTTCTTGGAGCAATTAACCTTCAACAA
 CTATTATTAACATGAAACCTCCTGCTATCTCTCAATACCAACACCCCTA
 TTTGTCTGATCAGTCTTATCACTGCAGTACTTCTTCTCCTCCTCCTTCC
 TGTAATTGCAGCTGGTATCAATACTCCTCACAGATCGAAATCTTAATA
 CTACCTTCTTCGATCCTGCTGGAGGAGGAGATCCTATTCTTTATCAACAT

TTA-----

-----TTCTCGAGAGAAACCTTCACCCGTCTAATTGCCTCGG
CATGCTCTTGCTGTCCGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAATTTCCCCGCCATTTGCAAGACGGAAGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTAGAGACCGAAGACGAGAACTGGTTTACGAAGCTGCCCTTAACTGGA
TCAACTACGACCTGGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGG
ACTGTCCGCCTGGCCCTGTTGCCCGCAATCTTTCTCATGGAGAACGTTTC
GACGGAAGAGCTGATCAATTTCCAGCCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGATGTAAGCTGAAGATCCTGCAGAACGATGGCGTCGTC AAC
AGCCCGTGCGCCCGACCAAGAAAAGACCAGCCACGCCCTATTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTTGTGGACCAGAAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGCAAGGTGTACATCACTGGCGGGA--GAGGCTC-
AGAGAACGGCGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AGTGGTGAAGGCGGCACCCATGCTCATCGCCAGGTTTCGGCCACGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCAAC
CGGCTGCCTGCCAGCTTCTCNNNNNGGATGATTACGTGGTTCGTTTCAGTCGCTC
GACAACGAGGCTGATACTGAATGAGGTGGAGCTAATCATGGCGCTGGCCC
AGGAGTTCAGATGCGAGTGGTACGGTGTCACTAGAGGAACAGTCTTTC
CCAAGTATCGTCCAGGTGATCAGCGGCGCTTCCGTGTTGGTCAGTATGCA
TGGCGCTCAGCTCATCACCTCACTTTCCTCCCCAGAGGAGCTGTTGTGG
TGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCTATAAAA
ACCCTCGCCACCCCTCCAGGCATGGATCTTCACTATATCTCCTGGAGGAA
CACTAATGAGGAGAACACCATCACCCATCCAGACAGGCCCTGGGAGCAAG
GGGCATCGTTCACTTGGAGAAGGAGGAGCAGGAGCGTATACTGGCGAGC
AGAGACGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCCG
GATCTACCAGGACACTTTGGTGGACATCCCTTCCCTTCCGGAAGCCCTTA
A---AGAGGGCATGAAG---ACAAAGCCCAGCGTGAAGAG---GTCAAAG
CCGGCCAGCACAGTCCACCCRGGCCGGGTCAGACAACCACAGTGTCCAGAC
CTCGGTACAAACCACCAACGAGGCTAAACTCACAGTCTCCTGGCAGATCC
CGTGGAATCTGAAATACTTGAAGGTGAGAGAGGTGAAGTACNNNNNN-----
AAGAGGGACGCCAGCAAGGGGACGCTGGAGGACCAGATCATCCAGGCCAA
CCCGGCGCTGGAGGCCTTCGGCAACGCCAAAACGCTGAGGAACGACAAC
CGTCTCGCTTCGGGAAGTTCATCCGAATCCACTTTGGCACGAGCGGGAAG
CTGTCTCGGCCGACGTTGGAGACATACCTGCTGGAGAAGTCCCGGTGCAC
CTTTCAGCTGAAGGCGGAGAGGAACTACCACATCTTCTACCAGATCCTGT
CCAATCAGAAGCCGGAGCTGCTGGACATGCTGCTGATCACCAACAACCCC
TACGACTACTCCTACATCTCCCAGGGCGAGGTGACGGTCGCCTCCATCAA
TGACTCGGAGGAGCTGCTGGCCACCGACAGCGCCTTCGACGTGCTGGGCT
TCACGCCGGAGGAGAAGGTGGGCGTCTACAAGCTCACCGGCCCATCATG
CACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGCGAGGAGCAGGCCGA
GCCCCAGGGGACGGAGGCCGCTGACAAGACCGCGTACCTGATGGGGCTGA
ACTCCGCCGACGTCAATCAAGGGGCTGTGCCACCCCAGAGTCAAGGTGGGG
AACGAATTTGTACCAAGGGACAAAAGCGTGGACCAAGTCTACTANCCCAAC
AAGGAGGCCTTCAAGTGTGAGGAGTGCGGGAAGCACTACAACACCAAGCT
GGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGTGAGGGGATCTCA
CCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACACCCGTGCTCTTGGAG
CACCTCAAGACCCACTCGGGGAAGTCTTCGGGCGGCACCAAGGAGAAAA
GCACCCGTGCGACCACTGTGACCGTCGCTTCTACACGCGCAAGGATGTGA

CATTTCTTACCGGGTCACGCCGAGCCACACGGGGCGTCCCGTCTACAGGC
GCTACAAACACTTCGACTGGCTGTACAACCGCTTACTGCACAAGTTCCTACT
GTGATCTCCGTGCCTCACCTGCCCAGAGAAGCAGGCCACGGGGCGATTTGA
GGAGGACTTCATCGAGAAGCGCAAGAGGCGGCTGATACTGTGGATGAACC
ACATGACCAGCCACCCGGTCTCTCCAGTACGAGGGCTTCGAGCACTTT
CTGATGTGCGCCGACGACAAGCAGTGGAAAGCTGGGCAAGAGGCGGGCGGA
GAAGGATGAGATGGTGGGCGCCACTTCATGCTGACCCTGCAGATCCCCA
ACGAGCACCAGGACCTTCAGGATGTGGAGGAGCGCATCGACACCTTCAAG
GCCTTCGCCAAGAAAATGGACGACAGCGTGATGCAGCTCACGCACGTCGC
CTCAGAGCTGGTGCGCAAGCACCTGGGCGGGTTCAGGAAGGAGTTCAGC
GGCTGGGAAATTCTTTCCAGTCCATCAGCCAGGCGTTCATGCTGGACCCT
CCCCACAGCTCGGAGGCCCTCAACAANNNNNNNNNNNNNNN-----

-----GCCAAATCTCGCTTTACCCCTGGCGTGGGGACTGGTC
CTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGCTGTCCCG
CAGCAAACCGACGAACCCACTGTTGCCACCCCCCGCAGCGATGGTTTGT
CACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACG
CCGCT-----GATTTGCGCGGTAACGCGGCCACCTTGCTGTCTAC
GCAGCGGCCGGAGTGAAGGCTC-----TTCCCTGCCGACTGCAGGGTG
CTCCAACCGGCTCTTGCTATTACGCAGACCCGTCGG---GCTGG---G
GAGGACGCTCACCGCCGAGTACTGCGGCGTAAACAGCAAATCCAGCTCG
GTCTTTTCTCTGCTGGCCCGCTAACTCTATCGGTGGCAGAGCGGGCA---C
C---AACTACCTGG-----CCGAGGA---GGGA---GACTC---CA
TCACGACGGAGAGGTCGCCG---AT---CGGCGGCTCGGACGAG---ACC
AAACCCAAAGACATGAC---ATCCGA---GTCGAGCTGGATAGAG---AC
GCCGTCCCTCCATTAAGTCAATTGATTCGAGCGATTCTGGAATCTTTG---
AACAGGCCAAGAGGAGAAGAATCTCACCTTCTGCCACGCCG-----
GTTTCAGAGACAGTGTCTCCGTTAAANNNNNNNNCACTCAACAGGCCGAAGTCACA
GAGAGAGAAGTAGCGTTGGGGATCAATCCGTTTCGCGGATGGGATGGGCGC
CTTCAAATAAACCACAGCTCCACGATATCGGCTCCGG---ACAAACGG
CGTTTTCTCTCCAGGCG---CCCGGTAC---GCGGCAGCCGCCCTGGGA
---CACCATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCAC
GGCGGCTTTCAACTCCACCGGGACTTTCTCTTCAGAAATCGGGGTTTCG
GGGACGCCACCGG-----GGCGCAGCACAGTTTGTTTCGCCTC-
-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCGGA

CCAGCAAGGAAGTCCCCAGACATCTGTGCTGCCGCAACCCTGAATGGCTC
TTCCGAATCTACCAGGATACATTGGTGGATATCCCATCATTTCTGGAGGC
TCTTAA---AGAGGGCCTAAAG---ACCAGACCCAGCTTGAAGAA---GT
CTAAACCTGCCACCGCAGTTACCCGGGCGGGTCAGAGAACCCAGTGC
CAAACCTCAGTTCAAGCCACCAATGAGGCAAAACTCACTGTCTCGTGGCA
GATCCCCTTGAATCTGAAATATCTGAAGGTGAGAGAAGTGAAGTATGAGG
TTTGGATCCAGAAGAGGGGACACTAGCAAGGGGACCCTGGAGGATCAGATC
ATCCAAGCCAACCCTGCGCTGGAGGCCTTCGGGAATGCCAAAACCCTGAG
GAATGACAACCTCCTCTCGTTTCGGGAAATTCATCCGCATACATTTTCGGGA
CGAGTGGGAAGCTCTCCTCTGCGGACATTGAGACCTATCTGCTGGAAAAG
TCCCGAGTACCTTTCAGCTCAAGTCGGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CAAACAACCCGTACGACTACTCCTTCATCTCCCAGGGAGAAGTGACGGTG
GCCTCCATCAACGACTCRGAGGAGCTGATGGCCACCGACAGTGCCTTTGA
CGTGCTCGGCTTCACGCAGGAGGAGAAGATGGGCGTCTACAAGCTGACCG
GGGCCATTATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCGGAGTCTGACGGGACCGAGGCAGCTGACAAGTCCGCCTACTT
GATGGGCTTGAACCTGCTGACCTCATCAAAGGACTCTGCCATCCCAGGG
TCAAAGTAGGGAATGAGTACGTCACCAAAGGCCAGGGCGTAGACCAAGTC
TACTACCCAAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACGG
CAGGGGACCTGACGTGCAAAGTGTGCATGCAGAGCTATGAGAGCACGCCG
GTTCTCCTGGAGCACCTCAAGAGCCACTCGGGCAAGTCCCTCGAGCGGAAC
CAAGGAGAAGAAGCACCCATGTGATCACTGCGACCGCCGCTTCTACACCC
GCAAGGATGTGAGGCGACACATGGTGGTCCACACAGGCCGAAAGGACTTC
TTGTGCCAGTACTGCGCTCAGCGCTTCGGCAGGAAAGACCACCTCACACG
CCACGTAAAGAAGAGTCACTCACAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCCGACATGCTGGGCCTCCTCAGCTCCGGCTCGCCTCCCTGCTCTGTG
AAGGAGGAGCTTAGCCCCATGATGTGCAGCATGGCTCCCAACAAAGATCC
CATGATGGGCAAACCCCTTCCCAGTGGGACCCCGTTCCCATGGGCATGT
ATAACCACCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGC
CATCCC-----CACCCCTCCCTGATGCCCAACACCCTGTCTGCAGCCAT
GGGCATGGGCTGCCACATGGAATATCTCATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAGATCAGTGGATCCAACATTTGTGAACCTGCTGGCC
AGTAACTCCCCCAGCGTCTCGTACGCGCTCACTCAGCAGAAGTACTTCAG
CAACTACAGTCCCGTGATTGGTTTTCTACATCTACGAGCCCATCGAGTACT
GGAACTCCACAGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC
AAGATATCTTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAATGT
GAGTGCGTCGACCAAAACCGACTTCATCAACATCCTCAAGAGCTCCTTCC
TGCGCAGCCCTGAGTACCAGCACTCACTGAGGACATCATCTTCTCCAAG
A---ACCGTGAGAGTG-----ATGAATATGACATCATCGCCTCGCGCAT
GTACCTGGTGGCCCGCACCACGGAGAAGAAGCGGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTGCGTCCGCTGATGCTAATAAACAGCATCAAGTTCATT
GCCTTCAACCCACCTTTGTGTTTCATGGACCGGTACAGCTCCTCTGTGAT
ATCCCCATCTTAACTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTGGGGAACCTTCTGGCTCATCCTTACA
GTCACCTCTGTGGAGCTGGGCGTGCTGGGTCTGATG-----

-----TCGTACG
CCATTGAGATGAGTCCCAAGGGCCCCCTGTGGAAGGACAGCCCTCAGCCC
TTTTTCCTGCTCCATCGAGGACCCCACCAAGCAGACCAAGTTCAAGGGCAT
CAAGACGTACATATCGTACCGCGTCACTCCCAGCCACACGGGGCGCCCCG
TCTACAGACGCTACAAACACTTCGACTGGCTGTACAACCGCCTGCTGCAC
AAGTTCAGTGTTCATCTCCGTGCCCCACCTGCCGGAGAAACAGGCCACGGG
GCGCTTCGAGGAGGACTTCATCGAGAAGCGAAAGCGGCGGCTGATCCTGT
GGATGAACCACATGACCAGCCACCCAGTTCTCTCCCAGTACGAGGGCTTC
GAGCACTTCCTRATGTGCGCTGACGACAAGCAGTGGAAGCTGGGCAAGCG
GCGGGCAGAGAAGGACGAGATGGTGGGCGCACACTTCATGCTCACCTTCC
AGATCCCCAACGAACACCAGGACCTGCAGGACGTGGAGGAGCGGGTCGAC
TCCTTCAAGTCCTTCGCCAAGAAAATGGATGACAGCGTGCTGCAGCTCAC
GCATGTGGCCTCAGAGCTGGTTCGAAAGCACCTGGGGGGGTTCCGGAAGG
AGTTCAGCGGCTGGGGAACGCCTTCCAGTCCATCAGCCAGGCCTTCATG
CTGGACCTCCCCACAGCTCGGAAAACCTCAACAACGCCATCTCCCCTC
CCTTGCCACGTTCCCTCAAACCTGACCTCTCTGGGATTCATCATTGGAGTTG
GCGTGGTTGGAAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
TTGCACCGTGCACCCTACTACTTCCCTGCTGGACCTGTGTGCCTCTGACAT
CCTGCGCTCAGCCATCTGTTTCCCCCTTGTCTTACCTCCGTCAAGAATG
GATCCACCTGGACCTATGGCACCCCTTACGTGCAAAGTGATTGCCTTCCTG
GGCGTGCTCTCCTGCTTCCACACGGCGTTCATGCTGTTCTGTGTGTCAGCGT
CACTCGCTACCTGGCCATCGCGCATCACCGCTTCTACACAAAGAGGCTCA
CCTTCTGGACTTGTCTGGCCGTTCATCTGCATGGTGTGGACGTTGTGCGTA
GCCATGGCCTTCCCCCAGTGCTGGACGTGGGGACGTACTACTTCATCCG
GGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCTAACGACT
CGCTGGGCTTCATGCTCCTGCTGGCACTCATCTCCTCGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTGTTCATGACCGTCGGAAGATGAAACC
TGTCAGTTTGTGCCAGCTGTGAGCCAGAACTGGACCTTCCACGGACCAG
GTGCCAGCGGGCAGGCAGCGGCAAACTGGTGGCCGGATTTGGGAGAGGC
CCCACCCACCGACCTTGCTGGGCATCCGGCAGAAATAGCAACGCGGGCGGG
CCGCAGACGTCTGCTGGTGTGGACGAGTTCAAAAACAGAGAAGAGGATTA
GTAGGATGTTCTACATCATGACCTTTTCTTTCTCGTCTATGGGGGCC

-----TACCTGATCTACGCCTCCTTCTCCTTCA
TGGGATGTTTACAAATCAGTGACGGATCCAACGTGGTCAACCTGTTAGCC
AGCAACTCCCCAGCGTGTCTACGCAGTGAAGTACTTTCAG
TAACTACAGCCCGGTGATTGGGTTCTACATATACGAGCCCATCGAGTACT
GGAACTCCACAGTGCAGGAGCACCTCAAACGCTGGGCCACGGTTTCAAC
AAGATCTCTTGATGGACAATACTTCCACTACCTAAAGGTGGTGAACGT
GAGCGCTCGACCAAGAGTGAAGTTCATCAGCATCCTCAAAGGCTCCTTCC
TGCGGAGCCCGGAGTACCAGCATTTACGAGGACATCATCTTCTCCAAG
A--ACGGCG-----AGGAGTATGACATCATCGCGTCCAGGAT
GTACCTGGTGGCACGAACCACCGAGAAAACACGGGAGGAAGTGGTGGAGC
TGTTGGAGAGGCTCCGCCCTCTCGCTCATCAACAGCATCAAGTTCATC
GTCTTTAACCCACCTTTGTTTTTCATGGACCGCTACAGCTCCTCAGTCAT
CTCGCCATCCTCACCTCGGGCTTCAGCGTCTCACCATCCTCGTCTCA
CCTTCTTCTGGTTCATCAACCCCTGGGGAACCTTCTGGTTGATCCTGACA
GTCACCTCAGTGGAGCTGGGAGTCTGGGCCTCATGGGTTTTCAACAGTT
TGAGTGGCAGCCGGCCCTTAAGAACGTGTCCCAGCATGTCAGGTGGGCA
TCATCGATGGCTTGTGAGGTTGGGCAGCTTCCGTAGATGACATGCCATTG
GACACCATCTCACGGAGGTTCCGCTATGATGTGGCGCTGGCGTCTGCTCT
GAAGGACCTGGAGGAGACATCATTGAGGGGATGAGGGAGCATGGCCTGG
ACGACAGCACCTGCACCTCCGGCTTCACTGTGATGATCAAGGAGTCATGT
GACGGCATGGGAGACGTGAGCGAGAAGCATGGTGGGGGACCAGCCATACC
TGAGAAGGCTGTCCGTTTCTCATTACAGTCATGTCTGTCTCCATCCAGG
CTGAAGGGCAGGAG-----GAAACT
CTCACCATATTCAGGGAGCCAAAACCCAACTCTGAGCTGTCTGCAAACC
CCTCTGTTTTGATGTTTGTGGATGAGTCTGACCACGAGACTCTGACGGCCA
TCCTGGGGCCTGTGGTGGCTGAGAGGAATGCCATGAAAAATAGTCGCCTC
ATCCTGTCCCTGGGTGGTCTTCCCTCGGTTCTTCCGCTTCCATTTAGGGG
CACAGGCTACGATGAGAAGATGGTACGTGAGATGGAGGGCATGGAGGCCT
CGGGCTCCACTTATGTCTGCACACTGTGTGACTCCACCAGAGCTGAGGCC
TCCAAGAACATGGTGTCTCCACTCCATCACACGATGCCATGATGAGAACCT
GGACCGTTATGAGACCTGGAGAACCAACCCCTACTCTGAGTCTGCAGAGG
AGCTGAGAGACCGGGTCAAAGGTGTCTCTGCCAAGCCCTTCATGGAGACC
CAGCCCCTCTGGACGCTCTGCACTGCGACATCGGGAACGCTACAGAGTT
TTACAAGATCTTCCAGGATGAGATCGGGGAGGTGCACTGCAAACC---CG
AT---CCCAGCAAGGAGGAGCGGCGGAGCTGGAGGGCAGCTCTGGATAAG
CTATTGAGGAAGAAAATGAAGCTTAAGCCTGTGATGAGGATGAACGGGAA
CTATGGCCGGCGGCTGATGACCATGGAGGCGGTGGAGGTGGTGTGTGAGC
TGGTGCCATCAGAGGAGCGGAGGGAGGCCCTCCGGGAGCTGATGGGTCTC
TACCTCCAGATGAAGCCAGTCTGGCGATCCACATGCCAGCCAAAAGAGTG
CCCTGACCAGCTTTGCCGTTACAGCTACAACCTCCAGCGCTTTGCAGATA
TTCTCTTCTACCTTCAAGTATAGGTATGACGGTAAGATCACCATTAC
CTGCACAAGACTCTAGTCTACGTTCCGGAGATCGTGGAGAGGGACGGTTC
CATCGGAGCCTGGGCCAGCGAG-----

ATCATGGAGCAGGGGCCTTCTTCCGTTACATGAGGCAGCCGATAAAACAA
GAGTTAATCTGCAAAATGGATCGAACCGGAGCAACTAACGAATCCGAAAAA
GTCGTGCAACAAAACTTTTAGCACAATGCACGAGCTAGTGACCCATTTGC
CGGTGGAGCATGTGGGA-----

>Rheocles wrightae

AGTCTGCTTATTCGAGCAGAACTAAGCCAGCCAGGCTCCCTCCTAGGAGA
TGACCAAATTTATAACGTCATCGTCACGGCACATGCCTTCGTAATAATTT
TCTTTATAGTAATACCCGTTATGATTGGAGGCTTCGGAAACTGACTTGTC
CCTCTCATAATTGGAGCCCCTGACATAGCATTTCCCCGAATAAAACAACAT
AAGTTTTTGGACTCCTCCCCCCTTCATTTCTCCTTCTCCTCTCATCTTCTG
GAGTCGAAGCAGGAGCTGGAACAGGATGAACCGTCTATCCCCCTTGGCC
GGAAATTTAGCCCACGCAGGTGCATCAGTTGATCTAACCATCTTTTCCCT
TCATTTAGCAGGAATTTCCCTCAATTCAGGGGCTATTAATTTTATCACAA
CTATTATCAACATAAAAACCCCTGCGATTTTACAATACCAAACCCCTTA
TTCGTCTGAGCAGTCTAATCACCGCTGTCCTCCTTCTCCTTTCCCTTCC
TGTTTTAGCTGCAGGAATCACCATGCTTTTAAACAGACCGAAACCTAAACA
CCACTTTCTTTGATCCTGCAGGAGGAGGAGACCCCATTTCTTTACCAACAT
CTCTTC-----

-----NNNNNNNNNNNAACCTTCAACCGTCCAACGTCTAGGCATGCTGTTGCT

GTCTGATGCCACCAGTGCACCAAGCTGTGAGAGCTCTCCTGGGGCATGT
GTCTAAGCAACTTCCCTGCTATTTGCAAGACAGAGGACTTCCCTCCAACCTA
CCCAAAGACATGGTAGTGCAGCTTTTGTACACAGGAGTTTGGAGACAGA
AGATGAGAGACTGGTTTTATGAAGCTGCCCTTAACTGGATCAACTACGACC
TGAAAGGAGGACTGTCTATCTCCAGAGCTCTTGAGAACAGTCCGCCTT
GCCCTGCTGCCTGCCATCTTTTTAATGGAGAACGTCTCTACAGAAGAGTT
GATCAATGCCCAGGCAAAGAGCAAGGAAGTGGTAGATGAAGCTATCCGCT
GTAAGCTGAAGATCCTGCAGAAATGATGGCGTTGTCAACAGCCCTTGTGCT
AGACCAAGAAAACTAGCCATGCCCTTTTTCTTCTGGGTGGGCAGACTTT
TATGTGTGATAAGTTGTACTTGGTGGACCAGAAGGCCAAAGAGATCATCC
CGAAAGCTGACATCCCAGCCCCAGGAAGGAGTTTCAAGTGCCTGCGCCATT
GGCTGTAAGGTGTACATCACTGGTGGGA--GAGGATC-TGAAAATGGTGT
GTCCAAAGATGTATGGGTCTACGACACTGTCCACGAAGAATGGTCAAAGG
CGGCGCCCATGCTCATCGCCAGGTTTGGTCTATGGCTCTGCAGAGCTCAA
CACTGCCTTTACGTGCTAGGAGGACACACTGCAGCAACTGGCTGCCCTCC
AGCNNNNNNNNNNNAGACGAGTACATTTGTCGTGTTTCAAGTCAACGACGAGGCTGATAC
TAAATGAAGCTGAATTGATCATGGCGCTGGCCCAGGAATTCAGTTGAGG
GTGGTCACAGTATCCCTGGAGGAGCAGTCTTTTCCAGTATCATCCAGGT
GATCAGCGGGGCGTCCATGTTGGTCAAGTATGCATGGAGCTCAGCTCATCA
CCTCGCTGTTCCCTCCCAGAGGTGCTGCCATCGTAGAGCTCTTCCCCTTT
GCTGTGAACCCAGAGCAATACACCCCATATAAAAACCTCGCCTCCCTTCC
TGGCATGGACCTTCACTACGTCTCCTGGAAAACTCTAAGGAAGAAAACA
CCATCACCCATCCAGAAAGACCCCTGGGAACAAGGAGGTATTGCCCACTTG
GAAAAAGCTGAACAGGAGCGAATCCTGGTGAAGTAAAGGACGTCCCCCGGCA
TCTTTGCTGCCGAAGCCCAGAGTGGCTTTTCCGGATCTACCAGGACACAC
TGGTAGACATCCCATCTTTCCCTGGATGTCCTCAA--GGATGGCATGAAG
---ACCACGTATAACTTGAAGAA---GGCTAAGGCAGCCAGCACCGTCCA
CCCTGGCAGGGTCAAGAAAGCCAGTGTGACACCTCCATACAAACCTCTA

AGGAGGCCAAACTCACAGTCTCCTGGCAGATCCCCTGGAATCTGAAATAC
CTGAAGGTGAGAGAGGTGAAGTATGAGGTGTGGATCCAGAAAAGGGACAG
CAGCAAGGGAACGCTGGAGGATCAAATCATCCAGGCCAACCCAGCACTCG
AGGCCTTTGGTAACGCCAAAACCTTTGAGAAAACGACAACTCATCTCGTTTT
GGGAAATTTATCCGAATTCATTTTGGCACGAGCGGAAAACCTTTCGTCTGC
TGACATCGAGACGTACCTGTGGAGAAGTCACGCGTCACCTTTCAGCTCA
AGGCTGAGAGAAAACCTACCACATCTTCTACCAGATCCTGTCTAATCATAAA
CCAGAGCTGCTGGACCTGCTACTGATTACCAATAACCCCTATGACTACTC
TTACATCTCCCAAGGAGAGGTAACAGTTGCCTCCATCAATGACTCCGAGG
AGCTCATGGCCACMGACAGYGCCTTTGATGTGCTCGGCTTACTCCAGAT
GAGAAGATGGGCGTTTACAAACTGACTGGTGCCATCATGCACTATGGCAA
CATGAAGTTCAAACAGAAGCAGCGTGAGGAGCAGGCCGAACCTGATGGGA
CCGAGGCTGCCGATAAATCAGCTTACCTAATGGGGTTGAACTCTGCAGAC
CTTATCAAAGGGCTGTGCCATCCCAGAGTCAAGGTGGGAAATGAATATGT
CACTAAGGGCCAAAGTGTGGACCAAGTCTACTACCCCAACAAGGAGGCCT
TCAAATGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATACAAG
CGCCACATGGCCATGCACTCTGCAACTGCAGGGGATTTAACCTGTAAAGT
GTGCATGCAGAGTTATGAGAGCACGCCATTCTCTGGAGCACCTCAAGA
GCCACTCTGGGAAGTCCCTCGGGTGGCGCAAGGAGAAAAAACACCCTTGC
GACCACTGTGACCGACGTTTTCTACACGCGGAAAAGATGTGAGACGGCATAT
GGTGGTCCATACAGGCCGAAAGGACTTCCTGTGCCAGTACTGTGCCCAGC
GCTTTGGCAGGAAAGATCACCTGACGCGCCATGTGAAGAAGAGCCACTCG
CAGGAGCTGCTGAAGATTAAGACAGAGCCTCCGGATATGTTAGGTCTTTT
AGCTACGGGGTCTCCACCCTGCTCTGTAAAGGAGGAGCTTACCCCATGA
TGTGCGGCATGGGGGCCAACAAAGACCCCATGATGGGCAAATCGTCCCC
AGTGGAGCACCTTTTCCGATGAGCATGTACAACCCCTACCCAT-----CT
CCAGGCCATGTCTAATTCTGGGGTGGGTACCCA-----CACCCGTCCC
TGATGCCAAGTACCTTGTCTGCAGCTATGGGCATGGGCTGTCACATGGAA
TATCTCATCTACGCTTCTTTCTCATTTCATGGGATGTTTACAAATAAGTGA
TGGATCAAATATTGTGAACTTGCTGGCTAGTAACTCTCCAAGCGTTTCTT
ATGCACTTACCCAGCAGAAATACTTCAGTAATTATAGTCTGTGATTGGG
TTTTATATTTATGAGCCCATTGAGTACTGGAACCTCACTGTGCAGGAGCA
CCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAAC
TTTTCCACTACCTGCGGGTTGTGAATGTGAGTGCATCAACCAAGAGCGAC
TTCATCACTATTCTAAAGGGTTCCTTCCGCGCAGCCCGGAGTACCAGCA
CTTACAGAGGACATCATTTTCTCCAAGA---ACCGTGAAACTG-----
ATGAATATGACATCATTTGCTTACGGATGTACTTGGTAGCACGGACCACA
GAGAAGAAGCGGGAGGAGGTGGTGGAACTTTTGGAGAAGCTTCGGCCTTT
GATGCTGATCAACAGCATCAAATTCATTGCCTTCAACCCAACGTTTGT
TCATGGACCGCTACAGTCTCTGTGCTCTACCCATCCTGACCTCAGGC
TTCAGCGTACTTACCATACTCATCCTCACTTTCTTCCCTGGTTCATCAACCC
CTTGGGAAACTTCTGGCTAATTCTCACGGTTACATCCGTGGAGCTAGGCG
TCTTGGGATTGATGNNNNNNNNNCAGTTTGAATGGCAGCCAGCTCTCCAGAATGTGTCT
GCATCTTGCAATCTTGGCATAATTAATGGGCTCTCTGGATGGGCGTCCTC
CGTGGATGACTCCAGAGCTGACACCATCACTCGACGCTTTCGCTATGATG
TGGCACTGGTGTGAGCATTAAAGGATCTGGAGGAGGACATCATGGAGGGG
CTGAGAGAGAGTGGGATGGAAGACAGTGCATGCACCTCGGGCTTTAGTGT
CATGATTAAGGAATGCTGTGATGGCATGGGTGATGTCAGCGAGAAACAG
GTGGAGGACCTGTTGTTCCCTGAGAAGGCTGTCCGTTTCTCTTTTACCATT
ATGCTGTGTTTCTGTCCAGGCAGAAGGTGAAGCG-----
-----GAGGAGGTTACCATTTTTCAGAGAGCCAAAGCCAAACT
CAGAAGTGTCTGTAAGCCCCTTTGCCTGATGTTTGTGGATGAGTCAGAC
CATGAGATGCTCACAGCCATCCTGGGGCCTATTGTTGCAGAGCGTAACGC

AATGAAAGAAAGCAGGCTCATCCTATCCATGGGAGGCCTGCTGCGCTCGT
TTCGCTTCCACTTCAGGGGCACGGGTTACGATGAAAAGATGGTACGAGAG
ATGGAGGGCCTCGAAGCTTCTGGATCCACATATATCTGCACTCTGTGTGA
TTCCAGTCGTGCAGAGGCTGCTCAAAACATGGTGTACTACTCCATCACCC
GCAGTCACGATGAGAACCTAGAGCGTTATGAAATATGGAGAACCAACCCC
TTTTCTGAGTCTGTGGATGAGCTGCGAGACAGAGTCAAAGGAGTCTCTGC
CAAGCCCTTCCCTGGAGACACAGCCGACATTAGATGCATTACACTGTGACA
TCGGCAATGCCACTGAATTCTACAAAATCTTCCAGGATGAGATCGGAGAA
GTGTACAAAAGGGT---AAAT---CCCAGTCGAGAGGAACGGCGCAGCTG
GAGGGCAGCCTTAGATAAACAGCTGAGGAAGAAGTTGAAGCTGAAACCAA
TAATGAGGATGAATGGGAACCTATGCCCGCAAGCTAATGACCCTGGAGGCT
ATGGAGGTGGTGTGTGAACTAGTGCCCTCAGATGAGAGGAAAGAGGCCCT
GAGGGAGCTTATGAGGCTCTACATCCAGATGAAGCCTGTGTGGCGCGCCA
CCTGCCAGCCAAGGAGTGCCCTGACCAGCTATGCCGCTACAGTTTTAAC
TCCCAGCGCTTTGCTGACCTCCTCTCCTCTACCTTTAAATATAGGTACAA
TGGAAAAGATAACCAATTACCTGCACAAGACCCTGGCTCATGTGCCTGAAA
TCATAGAGAGAGAGGGGTCCATAGGAGCCTGGGCCAGCGANNNNNNNNNNNNNNNNNNNNNNNNTCCTACAC
TA

TTGAGATGGGTCTCTGGGGCCAGGTGGAAGGAGAACCCGCAGCCTTTC
ACCTGTTCCATTGAAGAACCACCAAACAGACAAAAGTTCAAGGGTATCAA
GACCTACATTTTCGTACCGGGTGACTCCAAGCCACACAGGGCATCCTGTGT
ACAGACGATACAAACACTTTTGACTGGCTGTACAACCGCTTACTGCATAAG
TTCACTGTGATCTCTGTGCCTCACCTCCCTGAGAAGCAGGCCACAGGGCG
GTTTGAGGAAGACTTCATCGAGAAGCGTAAGAGGCGACTGGTACTGTGGA
TGAATCATATGACCAGTCACCCAGTCCTCTCCCAGTATGAAGGCTTTGAG
CACTTCTGATGTGTGCGGATGATAAACAGTGGAACCTGGGCAAGAGGGCG
GGCGGAGAAAGACGAAATGGTGGGCGCCCATTTTCATGCTGACCCCTCAGA
TCCCCACCGAGCACCAGGACCTTCAGGACGTTGAGGAGAGGGTCGACAAC
TTCAAGGCTTTTGCCAAGAAAATGGACGACAGTGTGATGCAGCTCACGCA
TGTTGCGTCGGAGCTGGTACGTAAACACCTTGGTGGTTTTAGGAAGGAGT
TCCAGAGGCTGGGAAATGCCTTCCAGTCTATTAGCCAGGCATTCATGCTG
GACCTTCCCTATAGATCAGACACCCCTCAACAATGCCATNNNNNNNNNNNNNNNNNNCGTTTCTCAAAC
TGACCTCTTTGGGTTTCATCATTGGAGTCGGTGTGGTAGGGAACCTTCTG
ATCTCCATCCTGCTGGTCAAAGACAAGAGCCTCCACCGAGCACCCCTACTA
TTTTCTGCTGGACCTGTGCGCTTCTGATATTCTGCGTTCTGCTATCTGCT
TTCCCTTTGTCTTACCTCAGTAAAGAATGGATCTGCCTGGACCTATGGT
ACGCTAACCTGCAAAGTGATTGCCTTCCCTGGGTGTGCTCTCCTGTTCCA
CACAGCATTCATGCTGTTTTGTGTGTCAGTGTACCCGCTACCTGGCCATTG
CACATCACCGTTTTCTACACCAAGAGGCTGACTTCTGGACGTGTTTGGCT
GTCATCTGCATGGTATGGACGTTGTCAGTGGCAATGGCGTTCCCAGCAGT
TCTAGATGTAGGGACATACTCTTTTATCCGAGAGGAGGACCAATGCACAT
TTCAGCACCGTTCCCTCAGGGCAAATGATTCACTGGGCTTCATGCTCCTG
CTGGCGCTTATCCTCCTGGCCACACAGCTGGTTTACCTCAAACCTCATTTT
CTTTGTCCACGACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCTG
TCAGCCAGAACTGGACCTTCCATGGGCCAGGTGCCAGCGGGCAGGCGGCA
GCCAACTGGCTAGCAGGATTTGGTTCGAGGCCCCACCCCGCCTACTTTGCT
GGGCATCCGACAAAACAGCAACGCAGCAGGCGCAGGCGTCTACTAGTAT
TGGATGAATTCAAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACGTTTTTATTCTGCTGCTGTGGGGGCCCTACCTAGTCGCTGCTATTG
GCGGGTCTTTGCAAGGGGCCCTGTAGTACCTGGAGGCTACCTGACAGCAG
CTGTATGGATGAGCTTTGCCAAGCTGGGGTCAATCCTTTTATTTGCATC
TTCTCCAACAGGGAGGCCAAATCTCGCTTTCACCTGGCATGGGGACTGG
TCCTGGCACGGAGC---GCAGCGTCCCACTCGGCAACAGCTTGTATCCC

CGCAGCAAACCGAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTT
GTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGA
CGCCGCC-----GATTTCCGCGGTAACGCGGCCACCTTGCTGTCCT
ACGCAGCGGCCGGAGTGAAAGCTC-----TTCCCTGCCGACGGCGGGC
TGCTCCAACCGGTCTCTTGGCTATTACGCAGACCCGTCTG---GTTGG--
-GGAGGACGTACGCCCGCCGAGTACTGTGCCGTAATAGCAAATCCAGTT
CGGTCTTTTCTGCTGGCCCTCTAACTCCATCGGTGGCAGAGCAGGCA--
-CC---AATTACCTGT-----CCGAGGA---GGGA---GAATC---
CATCACCGAGAGGTCACCA---AT---CGGTGGCTCGGAGGAA---A
CCAAAGCCAAAGACATGAC---GTCCGA---GTCGAGCTGGATAGAG---
ACGCCATCCTCTATTAAATCCATTGATTCAAGCGATTCTGGCATCTTTG-
--AACAGGCCAAACGGAGAAGGATCTCACCGTCTGCAACACCG-----
--GTACCAGAGACAGTGTCCCGTTAAAATCTGAGNNNNNNNCAACAGGCGAAGTCA
CAGAGAGAGAAGTGGCGCTGGGGATAAACCCGTTTCGCGGATGGGATGGGC
GCCTTTAAAATAAACACAGCTCCACGATATTGGCTCCGG---ACAGAC
GGCGTTTTCTCTCAGGCG---CCCGGTAC---GCAGCAGCCGCTTGG
GA---CACCATCA-----CCACCAACCCACGTTGGTTCA---TACTCC
ACGGCGGCTTTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGTTT
CGGGGATGCCGCCG-----GGCACAGCACAGTCTGTTTCGCCT
C-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCA
GATGCAGCGGGCACCTGCTCTTCCAGGGCTCCACGAG--CAGGCAGC
GAGCCACGCTCTTTCGAACGTGGTCAACAGCCAGATGCGGCTGGGTTTCT
CGGGGACATGTACGGCCGGCCGATCAGTATGGCCACGTTACGAGCCCC
AGAT---CCGACCACTATGCCTCGACTCAGCTGCACGGCTATGGCCCTAT
GAACATGAATATGGCCGA---CACCACGGAGCAGGGGCTTCTTCAGAT
ACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAACCA
GAGCAGTTGTCAAATCCCAAAAAGTCGTGCAACAAAACTTTTAGCACGAT
GCATGAGCTTGTGACCCATCTGACGGTGGAGCATGTGGGGGACCAGAGC
AGACCAACCACATTTGCTTCTGGGAGGAGTGCTCCAGAGAAGGAAAGCCA
TTCAAAGCCAAATACAACTTGTAATCATATCAGGGTACACACCGGAGA
AAAACCTTCCCGTGTCCGTTCCCTGGCTGTGGCAA

>*Rhynchohyalus natelnsis*

AGCCTGCTAATTCGGGCCGAATTAAGTCAACCAGGGGCCCTTTTGGGAGA
CGACCAAATTTATAATGTAATCGTAACAGCACATGCTTTTGTATAATCT
TCTTTATAGTAATGCCTATCATAATCGGCGGATTTGGAAATTGATTAATT
CCCTTAATGATTGGAGCTCCAGATATAGCATTCCCCGAATAAATAATAT
AAGCTTTTGACTCCTCCCCCCTCCTTCCTCCTCCTTAGCCTCTTCCG
GAGTTGAGGCTGGAGCTGGTACAGGCTGAACAGTATATCCCCCTTGGCA
GGAAACCTTGCCCATGCAGGAGCCTCCGTAGACCTAACTATCTTCTCTCT
CCACCTCGCTGGTATTTCCCTCAATTCCTGGCTCAATTAACCTTCAATCAA
CTATTATTAATATAAAACCCCCGCCATCTCCCAATATCAAACCCCTCTT
TTTGTCTGAGCCTTACTTATCACTACAGTCCTTCTACTCCTCTCACTCCC
CGTCTAGCTGCAGGAATCACTATAATGCTTACGGACCGAAATTTAAACA
CCACTTTCCTCGACCCCGCAGGAGGGGGGACCTATCCTTTACCAACAT
CTATTCTGATTCTTTGGCCACCCAGAAGTCTATATTTTAATTCTTCCCG
TTTCGGGATAATCTCCCATATTGTAGCCTACTACTCTGGTAAAAAAGAGC
CTTTCGGCTATATAGGTATAGTATGAGCAATGATGGCTATTGGACTCCTG
GGTTTCATTGTTTGGAGCTCACCATATATTTACAGTAGGAATAGATGTAGA
CACCCGCGCCTA-----CTGCATCCGTCCAACCTGCCCTGGG
CATGCTGCTGCTGTCCGATGCCACACGTGCACCAAGCTCTCAGAGCTCT
CCTGGGGCATGTGTCTCAGCAACTTCCCTGCAATCTGCAAGACGGAGGAC
TTCTGCAGCTGCCAAGGACATGGTGGTTTACAGTCTCCTGTCCCATGAGGA
GCTGGAGACTGAGGACGAAAGGCTGGTCTACGAGGCCGCTCTCAACTGGG

GAAGAGTGTGCGGAGAAGGAAAACCATTCAAAGCTAAATACAAACTTGT
AAATCATATCAGAGTACACACCGGAGAAAAACCGTTCCTCATGTCCATTCC
CCGGCTGTGGCAAG

>*Rondeletia loricata*

AGTCTTCTCATCCGGCGGAACTAAGCCAACCGGGGCCCTCCTAGGAGA
TGATCAAATTTATAACGTCATTGTTACGGCACACGCCTTTGTAATAATTT
TCTTTATAGTAATACCAATTATAATTGGAGGATTCGGAAATTGACTGGTT
CCCCTGATGATCGGGGCCCCAGACATAGCATTTCCTCCGAATAAATAATAT
GAGTTTCTGACTTCTCCCCCATCCTTCCTACTACTCCTAGCCTCTTCTG
GGGTAGAGGCAGGCGCTGGAACAGGGTGAACAGTTTATCCACCCCTTGCA
GGAAACCTCGCACACGCAGGAGCCTCCGTAGACCTTACCATTTTCTCCCT
TCATTTAGCAGGGTCTCCTCAATTCTGGGGGCCATTAACTTTATCACAA
CCATTATTAATATGAAACCCCTGCAATTTACAGTACCAAACCTCCCTC
TTTGTATGATCCGTTTGTAGTTACAGCCGTTTCTACTCCTCCTCCTACC
CGTTCCTTGACAGCCGGTATTACCATACTACTAACCAGCCGTAACCTAAACA
CCACTTCTTTGACCCGTCAGGAGGGGAGACCCCATCCTATAACCAACAC
CTG-----

-----TTTCTAGAGCGGAATCTTCACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGTACCAAGCTATCAGAGCTCT
CCTGGGCGATGTGCCCTCAGCAACTTTCCTGCTATTTGCAAGACAGAGGAC
TTTCTCCAACCTGCCAAAGACATGGTGGTGCAGCTTCTGTCCCATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACGGG
TCAACTATGACCTGGAAAGGAGGCACCTGCCACCTGCCAGAGCTGCTGAGA
ACAGTCCGCCTGGCCCTGCTTCCCGCTATATTCTCATGGAGAATGTCTC
CACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCCATCTGCTGCAAGCTGAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCATGTGCTCGACCGAGAAAACCAGCCATGCCCTCTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTATCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCAAGGCTGACATCCCAGTCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTCTACATCACAGGTGGGA--GAGGCTC--
AGAGAATGGTGTGTCAAAGATGTATGGGTCTATGACACTGTCCAGGAGG
AATGGTCCAAGGCAGCACCATGCTCATTGCCAGGTTTGGTTCATGGCTCT
GCTGAGCTGAAACACTGCCTCTACGTGGTAGGAGGNCACACAGCAGCAACT
GGCTGTCTCCCAGCCTCTCCCTCCGGATGAATACATTTGTCGTGTTTCAGTC
GTTCAACAACAAGGCTAATTTCTGAACGAAGCGGAGCTGATCATGACGCTG
GCCAGGAATTTGAGATGAGAGTGGTTACAGTATCCCTGGAGGAACAAAC
TTTTGCCAGCATTATCCAGGTGATCAGTGGGGCCTCCATGTAGTCAGTA
TGCATGGAGCTCAGCTTGTACCTCACTCTTCTCCCTCCAGAGGAGCTGCT
GTGGTGGAGCTGTTCCCTATGCTGTGAACCCAGAACAGTACACCCATA
TAAAACCCTTGCCCTCCCTACCAGGCATGGACCTCAATACGTTTCTGGA
GGAACACTATGGAGGAGAACACCATCACCCACCCAGACCGACCTGGGAA
CAAGGAGGTATTGTCCATTTGGAAAAGGACGAGCAAGAGCGAATACTGGC
CAGCAAGGACGTCCCCAGGCACCTGTGCTGTTCGCGACCCAGAGTGGCTCT
TCCGAATCTACCAGGACACTTTGGTGGACATCCCTTCATTCCTGGAAGTC
CTCAA--AGAGGGCCTGAGG---GCTAGGCCAGCTTGAGGAA---GGC
CAAGCCGGCCAGCACGGTTCATCCAGGCCGGGTCAGAGAACCCAGTGCC
ACACCTCAGTCCAAGCCACCAATGAGGCTAAACTCACGGTTTCTGGCAG
ATCCCGTGGAATCTGAAATACCTGAAGGTGAGAGAAGTGAAGTATGAGGT
GTGGATCCAGAAGAAGGATACCAGCAAGGGAACACTGGAGGATCAAATCA
TCCAGGCAAACCTGCACTGGAAGCCTTTGGTAAACGCCAAAACACTGAGG

AATGACAACATCATCCCGTTTTGGAAAATTCATCCGAATTCACTTCGGAAC
CAGTGGCAAGCTGTCTGCTGACATTGAGACTTACCTGCTGGAGAAGT
CGCGTGTACCTTCCAGCTCAAGTCTGAGAGGAACTACCACATCTTCTTC
CAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGAAATGCTGTTGATTAC
CAACAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTAC
AATCCATCAACGACTCAGAGGAACTGATGGCCACTGACAACGCCTTCAAC
GTGCTTGGCTTCACTCAAGAGGAGAAGAATGGAGTCTATAAGCTGACCGG
TGCCATTATGACTATGGCAACATGAAGTTTAAAGCAGAAGCAGCGTGAGG
AGCAGGCTGAGCCTGACGGAACGGAGGCTGCTGATAAGTCAGCTTACCTA
ATGGGGCTGAACTCTGCAGACCTCATCAAAGGGCTGTGCCATCCCAGAGT
CAAGGTAGGAAATGAATATGTCACCAAAGGCCAAGGTGTAGACCAAGTCT
ACTACCCCAACAAGGAGGCCTTCAAGTGCAGAGGAGTGTGGCAAGCACTAC
AACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCTGCCACGGC
AGGGGACCTTACCTGTAAGTGTGCATGCAGAGCTACGAGAGCACGCCGG
TGCTCCTGGAGCACCTCAAGAGCCACTCAGGGAAGTCTCGGGTGGCGCC
AAGGAGAAAAAACACCCATGCGACCACTGCGACCGTCGCTTCTANACTCGG
AAGGATGTAAGACGGCACATGGTGGTCCACACGGGGCCGAAAGGACTTCCT
GTGCCAGTACTGTGCCCAGCGCTTTGGCAGGAAGGACCACCTGACACGGC
ACGTAAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACAGAGCCT
CCGGATATGTTAGGTCTTTTAGGTCTGCTCGCCGCCTTGCTCCGTCAA
GGAGGAGCTTANCCCCATGATGTGCAGCATGGGTCCCAACAAAGACCCCAT
GATGGGCAAACCGTTCCCCAGCGGAACCCCTTCCCGATGGGCATGTACA
ACCCACCAC-----CTCCAGGCCATGTCCAATTCGAGGTTGGTTCAC
CCC-----CACCCCTCCCTGATGCCTAGTTCCCTGTCTGCAGCTATGGG
CATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCATGG
GATGTTTACAAATCAGTGATGGATCAAACATCGTGAACCTTGCTGGCTAGT
AACTCTCCAAGCGTTTCATACGCTCTGACCCAGCAGAAATACTTCAGTAA
CTACAGTCCCGTGATTGGGTTTTACATTTACGAGCCATTGAGTACTGGA
ACTCCACGGTGCAGGAGCATCTGAAGACACTGAGTCACGGCTTCAACAAG
ATCTCCTGGATGGACAACCTTCTTCCAYTACCTGCGGGTGGTGAACGTGAG
CGCGTCGACCAAGAGCGAATTCATCACCGTCCCTCAGGGGCTCCTTCCTGC
GCAGCCCGGAGTACCAGCACTTCACTGAGGACATMATCTTCTCCAAGA--
-ACCGTGAGAGTG-----ATGAGTATGACATTATGTCCTCACGCATGTA
CCTGGTGGCGCGGACCACGGAGAAAAAGCGCGAGGAGGTGGTGGAGCTTC
TGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATCGCC
TTCAACCCACCTTTGTTTATATGGACCCTACAGCTCCTCTGTCTATCTC
ACCCATCCTGACCTCAGGCTTACGCTGCTCACCATCCTCATCCTCACTT
TTTTCTGCTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTGATGGTT
ACTTCTGTGGAGCTGGGCGTCTTGGGTTAATG-
NN
NN
NNNNNNNNNNNNNNNNNNNNNCTAAAGATTCGGAGG
AGGACATCATGAAGAACTGAGAGAGTGTGGGCTTGAAGACAGTGCTTGC
ACCTCAGGCTTCAGTTGTATGATCAAGGAATTCTGTGACCGCATGGAAGG
TGTCAGCGAGAAGCATGGCGGAGGCC---ATGTCCCTGAGAAGCCTGTGC
GTTTCTCTTTTACTATTATGTCTGTCTGTCTTGGCAGATAGAGCGGAG
-----GAAGCGGTGACCATCTTCAG
GGAGCCAAAGCCCAACTCGGAGCTGTCCTGTAAGCCCCTATGCCTGATGT
TTGTGGATGAGTCAGACCACGAGACACTCACTGCTGTCTGGGGCCTGTA
GTTGCAGAGCGTAATGCAATGAAGCAGAGTCGACTCATCCTATCTATGGG
TGGGCTGCCTCGCTCCTTCCGCTTCCAATTCAGAGGCACAGGATATGATG
AGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCTCAGGTTCCACCTAC
ATCTGCACTCTGTGTGACTCCAGTCGGGACAGAGGCTCTCGCAACATGGT

CAGGCA---CC---AACTACCTGG-----CCGAGGA---TGGA---
GACGC---CATCCCTACGGAGAGGTCCCCG---AT---CGGCGGCTCGGA
GGAG---ACCAAACCCAAAGACCT-----GTCAGA---GTCGAGCTGGA
TAGAG---ACGCCGTCTCCATTAAGTCAATTGATTCAGCGATTCTGGT
ATCTTTG---AACAAAGCCAAAAGGAGAAGGATCTCGCCGTCTGCCACGCC
G-----GTTTCAGACACTGTGTCCCCGTAAAATCTGAGCATCACT
CAACAGGAGAAGTACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTC
GCGGAAGGGATGGGCGCCTTCAAAAATAACCACAGCTCCCACGACATTGG
CTCCGG---ACAGACGGCGTTTTCTCCAGGCG---CCCGGCTAC---G
CGGCGGCCCGCCTGGGA---CACCATCA-----CCACCCGACCCACGTT
GGCTCT---TACTCCACGGCGGCTTTCAACTCCACCCGGGACTTTCTCTT
CAGAAATCGGGTTTCGGAGACGCCACCGG-----GGCGCAGC
ACAGTTTGTTCGCCTC-----CGGAAGTTT---C-----GCAGGG
CCACATGGACACTCAGATGCGGCGGGGCACCTGCTCTTCCCGGGGCTCCA
CGAG---CAGGCGGCGAGCCACGCGTCTTCCAACGTGGTCAACAGCCAAA
TGCGACTGGGCTTCTCGGGGGACATGTACGGTTCGGGCCGATCAGTACGGA
CACGTTACGAGCCCGAGGT---CCGACCACTATGCGTTCGACCCAGTTGCA
CGGCTACGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAG
GGCCTTCTTTTCGATACATGAGGCAGCCGATCAAAACAAGAGCTCATCTGC
AAGTGGATCGAGCCGGAGCAGCTGACAAATCCYAAAAAGTCGTGCAACAA
AACTTTTAGTACGATGCACGAGCTGGTGACCCATCTGACGGTGGAGCATG
TGGGGGGCCAGAGCAGTCCAACCACATCTGCTTCTGGGAAGACTGCGCC
AGAGAAGGGAAGCCATTCAAAGCCAAATACAAACTTGTGAATCATATCAG
AGTACACACCGGAGAGAAACCCTTTCCTGTCGCCGTTCCCGGCTGTGGCA
AA

>*Rosenblattia robusta*

AGCTTGCTCATTTCGAGCAGAGCTCAGCCAACCCGGCGCTCTCCTCGGAGA
CGACCAGATTTATAACGTAATTGTTACAGCACATGCATTTGTAATAATTT
TCTTTATAGTAATACCAATTATGATCGGAGGGTTCGAAACTGACTTATC
CCCTTAATAATCGGCGCCCCGACATGGCTTTTCCACGAATAAATAATAT
GAGCTTCTGACTTCTTCCCCCTTCTTCTTACTACTTCTCTCTTCTTCTG
GGGTAGAGGCAGGGGCGGCACCGGATGAACGGTACCCCCCTCTTGCT
GGTAATTTAGCCACGCAGGAGCCTCCGTCGATCTAACAATCTTTTCTCT
ACATCTAGCAGGCATCTCCTCAATCTTGGGGCAATTAATTTTATTACAA
CAATTATTAACATGAAACCCCTGCTATTTCCCAATACCAAACACCCCTA
TTTGTGTGATCCGTAATAACACGGCCGTCCTTCTCCTTCTTTCCCTCCC
CGTCTTGCTGCTGGCATTACTATGCTTCTTACAGACCGAAATCTTAATA
CCACCTTCTTTGACCCGGCAGGAGGAGACCCCATCCTTTACCAACAT
CTCTTTTGATTCTTCGGCCATCCAGAGGTCTATATTTAATTTCTCCAGG
ATTTGGTATAATTTCCCATATCGTTGCCTACTACGCCGGCAAAAAAGAAC
CTTTCGGCTATATAGGAATAGTATGAGCTATGATGGCTATTGGCCTCCTA
GGCTTTATTGTATGAGCCCATCATATGTTTACAGTCGGAATGGACGTAGA
CACTCGTGCATATTCCTAGAGAGAAACCTTACCCATCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCCACAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTACGAAGCTGCCCTCAACTGGA
TCAACTATGACCTGGAAAAGAGGCAC TGCAACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCAATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAACGTCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAGATCCTGCAGAAYGATGGCGTCGTTAAC
AGCCCGTGCCTCGACCGCGAAAAACCAGCCATGCCCTCTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGATCAGAAAGCCA

AAGAGATCATCCCCAAGCTGACATTCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTCAAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCGGAGCTGAAACGCTGCCTCTATGTGGTAGGAGGTCACACCGCAGCAAC
T-----GGATGAATACATTGTTGTGTTTCAGT
CGTTCAACAACGAGGCTGATACTGAATGAAGCGGAGCTAATCATGGTGCT
GGCTCAGGAGTTCAGATGAGAGTGGTCACGGTATCCCTGGAGGAACAGT
CTTTGCCAGTATCGTCCAGGTTATCAGCGGTGCTTCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGC
TGTGGTGGAGCTGTTCCCCTTTGCCGTGAACCCAGAGCAGTACACCCCAT
ATAAAAACCTTGCCCTTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGG
AGGAACACTAAGGAGGAGAACACTATCACCCACCCAGACAGACCCTGGGA
ACAAGGGGGCATTGCTCATTTGGAGAAGGAGGACCAAGAGCGAAATACTGG
CGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAATGGCTC
TTCCGGATCTACCAGGACACTTTGGTGGACATTCCCTCCTTCTTGGGAAGC
CCTCAA---AGAGGGCATGAAG---ACAAAGCCAGCTTGAAGAA---GT
CAAAGCCGGCCAGTACAGTCCACCCGGGCGGGTCAGGGAACCCAGTGT
CAGACCTCAGTACAAACACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGA-----
-----AAAAAGACACCAGCAAAGGGACACTGGAGGATCAAATC
ATCCAGGCGAACCTGCGCTGGAGGCCTTCGGCAACGCCAAAACATTGAG
AAACGACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTCGGTA
TGAGCGGCAAGCTGTCTGCTGCTGACGTCGAGACGTACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCAGAGAGGAACTACCATGTCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTCCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCTTACATCTCCCAAGGAGAGGTAACGGTT
GCCTCCATCAACGACTCGGAGGAGCTGATGGCCACCGACAGTGCCTTCGA
TGTGCTTGGCTTCACTGCAGACGAGAAGATAGGCGTCTATAAACTGACCG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCGGAGCCGGACGGGACGGAGTCTGCTGATAAAACAGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAATACGTACCAAAGGCCAAAGCGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACGCCC
GTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCAC
CAAGGAGAAAAAGCACCCGTGCGATCACTGTGACCGTCTGTTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCGGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCCGGAAGGACCATCTGACACG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCGTCGGGGTCAACCACCCTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCCCAGTGGGGCCCTTCCCCGATGGGCATGT
ACAACCCTCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTTATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAAATCAGTGATGGATCAAATATCGTGAACCTGCTGGCT
AGTAACTCTCCGAGTGTTCATACGCTCTGACCCAACAGAAATACTTCAG
TAACTACAGTCCCCTAATTGGGTTTACATTTACGAGCCCATAGAGTACT
GGAACTCCACGGTGCAGGAACACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTGCCTCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC

TGCACAGCCCAGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCGCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGAT
GTACTTGGTGGCACGGACGACAGAGAAGAAGCGTGAAGAGGTGGTAGAGC
TTCTAGAGAAGCTTCGTCCGTTGATGCTCATCAACAGCATCAAGTTCATT
GCCTTCAATCCTACATTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCTGCTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACT
GTAACGTCAATGGAGCTGGGCGTCTTGGGTTTGGATGGGCTTTCACCAGTT
TGAATGGCAGCCGGCTCTCAGGAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGGCTCTCTGGATGGACTTCCTCGGTGGATGACTCCCAACT
GACACCGTCACTCGGCGGTTTTCGCTATGATGTGGCGCTGGCGTCAGCAAT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGTGTGTGCACCTCAGGCTTCAGTGTTCATGATCAAGGAATCTTGT
GATGGCATGGGCGATGTCAGCGAGAAACACGGTGGAGGACCACTTGTTC
TGAGAAGGCTGTACGTTTCTCTTTCCTGTTATGTCTGTCTCTGTCCTGG
CAGACGAAGAGGAG-----AAAGAG
GTCACCATCTTACCAGGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCC
CCTTTGCCTGACGTTTGTGGATGAGTCAGACCWTGAGACACTCACAGCTG
TCCTGGCGCCTCTAGTTGCAGAGCGTARTGCAATGAAAGAGAGCAGGCTC
ATCCTATCCATGGGTGGACTAGCTCGCTCCTTCCGCTTTCCTTTCAGAGG
CACGGGATACGATGAAAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CAGGGTCTCTACATCTGCACTCTTGTGACTCCGGTCGAGCAGAAGCC
TCTCAAACATGGTGCTACACTCCGTCACCCGCAGTCATGAAGAGAACCT
AGAACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATG
AGCTGCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACC
CATCCCACGCTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CA
AC---CCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAA
GAGCTGAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAA
CTATGCCCGCAGGCTAATGACCCAGGAGTCTGTGGAGGTGGTGTGTGAGC
TGGTGCCCTCAGAAGGGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTC

-----TCGTACA
CCATCGAGATGTGCCCTCGGGCCCCGGTGGAAAGGAGAGCCCACAGCCG
TTCTCCTGCTCCATCGAAGACCCACAAAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATCTCGTACCGGGTCACGCCGAGCCACACGGGGCACCCCG
TCTACAGGCGCTACAAACACTTCKACTGGCTGTACAACCGCCTGCTGCAC
AAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGG
CCGATTCGAGGAAGACTTCATCGAGAAGCGCAAGAGGGCGACTGATACTGT
GGATGAACCACATGACCAGTCAACCGTCTCTCCAGTACGAAGGCTTC
GAGCACTTCTGATGTGCGCCGACGACAAGCAGTGGAAAGCTGGGCAAGAG
GCGGGCGGAGAAGGACGAGATGGTGGGCGCCACTTCATGCTGACCCTCC
AGATCCCCAACGAGCACCAGGACCTTCAGGACGTGGAGGAGCGGGTCGAC
ACCTTCAAGGCCTTCGCTAAGAAAATGGACGACAGCGTGATGCAGCTCAC
GCACGTCGCCTCGGAGCTGGTGCCTAAGCACCTGGGCGGGTTCAGGAAGG
AGTTCAGCGGCTGGGAAACGCCTTCCAGTCTATCAGCCAGGCGTTCATG
CTGGACCCCCCACAGCTCAGACACCTTCAACAACGCCATCTCCCAC--

TGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACGG
GTGCCATTATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAA
GAGCAGGCAGAGCCTGATGGCACAGAGGCAGCTGACAAGTCAGCCTACCT
GATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCAGGG
TCAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTC
TATTAC-----

-----TACCTGATTTACGCTTCCTTCTCGTTCA
TGGGATGTTTACAAATCACAGACGGATCCAACATAGTCAACCTTTTGGCC
AGCGACTCGCCGAGCGTGTTCGTATGCTCTGACTCAGCAGAAGTATTCAG
CAACTACAGCCCAGTGATCGGGTTCATATCTACGAGCCCATTGACTACT
GGAACTCCACTGTGCAGGAGCACCTCAAGACACTGGGCCAGGGATTCAAC
ACGATATCGTGGATCGATAATTACTTTCAGTATCTGAAGGTGACGAACGT
CAGCGCGTCGACCAAGAGCGACTTCATCGCCGTCCCAAGACCTCGTTCC
TGAGGAGTCCCGAGTATCAGCACTTCACGGACGACATCATCTTTTCCAAA
A---CGGGGG-----ACGACTTCGACATCATCGCGTCCAGGAT
GTACCTGGTGGCGCGGACCACGGAGAAGACCCGGGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTACGCCCGCTCTCGCTCATCAACAGCATCAAGTTCATC
GTGTTCAACCCACCTTCGTGTTTCATGGACCGCTACAGCTCCTCGGTCGT
CTCCCCATCATGACGTCCGGATTACAGCGTCTGACCATTCTCGTGCTCA
CGTTCTCCTCGTTCGTCGAACCCGCTGGGAAACTTCTGGCTGATCCTGACC
GTCACCTCCGTGGAGCTGGGCGTTCTGGGCCTGATG-----

-----TCCTACA
CCATAGAGATGGGCCCCAGAGGCCCTGAGTGGAAGGAGAGCCCCAGCCT
TTTGCTTGCTCCATTGAGGACCCCACCTAAGCAAACCAAGTTCAAGGGGAT
AAAGACTTACATATCCTATCGCGTGACCCCCAGCCACATTGGCCGGCCTG
TGTACCGTTCGCTACAAGCACTTTGACTGGCTGTATAACAGGCTGCTGCAC
AAATTCACCGTCATCTCTGTGCCGCATCTGCCTGAGAAGCAGGCAACTGG
GCGTTTCGAGGAGGACTTTATTGAAAAGCGCAAGAGGGCGGCTCATCCTCT
GGATGGACCACATGACCAGTACCCGGTCTCTCGCAGTATGAGGGCTTC
GAGCACTTCTTCATGTGCGGTGATGATAAACAGTGGAAGCTGGGCAAGCG
GAGGGCGGAGAAGGATGAGATGGTGGGAGCCCACTTCATGCTCACCTTC
AGATCCCCAATGAGCACCAGGACCTGCAGGATGTGGAGGAGCGGGTGGAC
TCCTTCAAGGCCTTTGCCAAGAAGATGGACGACAGCGTCATGCAGTTAAC
ACATGTGGCCTCCGAGCTGGTACGCAAACACCTGGGAGGGTTCCGCAAAG
AATTCCAAAGGCTGGGGAACCTCCTCCAGTCCATCAGCCAGGCTTTCATG
CTGGACCCTCCCTACAGCTCTGATGCCCTGAATAATGCCATCTCCAC--

-----GCCAAATCCCGCTTT
CACCATGGCGTCCGGCACGGGGCCTGGCACGGACC--GCAGCGTCCCCT
C---AACAGCTTGCTATCCCGCAACAAACCGATGAGACCGCAGTGG---
CCTCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGAC
TTTGCCGCCTCGGCATACGATGCCGCCGCTGCAGCTGATTTCCGCCGGTAA
CGCGGCCACCCTTCTGTCTGTACGCAGCTGCCGGAGTGAAAGCGC-----
TCCCACTGCCCACTGCAGGCTGCTCCAACAGAGCCCTAGGCTATTACGCA
GAGCCGCCAG---GGTGG---GGCACACGCACTCCACCGCAGTACTGT--
-----AGTAAATCAAGCGCGGTTCTCTCATGCTGGCCCGCCAATTCCG
TCGGGAGCAGAACATCCA---CCTCCAATTACCTGG---TTGGATTGGAC
GA---GGGG---GACGC---TATCGCACCTGAGAGGTCACCT---CT---
CGGGGGGGCAGACGAA---GCCAAGCCAAAAGACCT-----GTTGGA--

-ATCAAGCTGGATAGAG---ACCCCGTCTTCAATTAAGTCCATCGACTCA
AGTGATTCTGGGATCTTTG---AACAGGCCAAGCGGAGGAGAATTCGCC
ATCTGCTACACCG-----GTTTCAGAGACGTCGTCCCCATTAAAAT
CAGAACATCACTCAACAGGCCAAGTCACAGACAGAGAAGTGGCTTTGGGG
ATAAATCCGTTCCGCCACGGGATGGGCGCTTTCAAATCAACCACAGCTC
CCACGATCTTGGCTCGGG---GCAAACCTGCGTTTGCCTCGCAGGCG---C
CCGGCTAC---GCAGCCGCTGCCCTGGGA---CACCATCA-----CCAC
CCAACCCATGTCACTCC---TACTCCACCGCGGCGTTCAATTCCACCCG
GGACTTTCTCTTTTCGGAATCGGGGATTCGGAGACGCCACTAG-----
----CGCGCAGCACAGTCTCTTCGCCCTCAGC---TGCGGGAAGTTT---C
-----GCAGGGCCACATGGACACACCGATGCCACGGGACACCTGCTCTT
CTCGGGACTGCACGAG---CAAGCGGCGACCCACGCGTCTTCGAACGTGG
TGAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACATGTACGGCAGAGCC
GAGCAGTACGGTCATGTAACGAGCCCCGGT---CCGAGCACTACGCTTC
GACTCAGTTGCACGGCTATGGCCCCATGAACATGAATATGGCTGCC---C
ACCACGGGGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTGCAACCAGAGCAGCTGTGCAATCCGAAAA
GTCTTGAACAAAACCTTTCAGCACGATGCACGAGCTCGTGACCCACCTCA
CGGTGGAACACGTCGGGGGACCGGAACAATCGAATCACATTTGTTTTTGG
GAAGAGTGTCCGCGAGAAGGGAAACCATTTAAAGCCAAGTACAAACTTGT
AAATCATATCAGAGTGCACACCGGAGAGAAGCCGTTTCCATGTCCATTCC
CCGGCTGTGGCAAA

>Ruvettus pretiosus

-----TTCTAGAGAGAAACCTTACCCGACTAACTGCCTTGG
CATGCTGTTGCTGTCCGACGCCCACAGTGCACCAAGCTGTCAGAGCTCT
CTTGGGGCATGTGCCTCAGCAACTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTGAACTGGA
TCAACTATGACCTGGAAAGGAGGCACGTGCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTTGCCCTGCTGCCCGCATCTTTCTGATGGAGAACGTCTC
GACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AGGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGACGGCGTTGTTAAC
AGCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCTCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCAAAGGCAGACATCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTGTACATCACAGGTGGGA--GAGGCTC-
AGAGAATGGCGTATCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG

AATGGTCCAAAGCGGCGCCCATGCTCATCGCCAGGTTTGGTCATGGCTCT
GCTGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTCCCTGCTTCTCCATCCGGATGAATACATCGTTGTGTTCACT
CGTTCAACAACAAGGCTGATACTGAACGAAGCAGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACAGTTTCCCTAGAGGAACAGT
CTTTCCCCAGCATTGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGGGCTGT
GGTGGTGGAGTTGTTCCCCTTTGCTGTGAACTCAGAGCAGTACACTCCAT
ATAAAAACCTTGCCTCCCTTCCAGGCATGGACCTTCATTATGTTTCCCTGG
AGGAACACTCAGGAGGAGAACACTGTCACCCATCCAGACAGATCCTGGGA
ACAAGGAGGCATCGCTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGA
CCAGCAAAGACGTCCCCAGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTAGACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---GGAGGGAATGAAG---ACCAAGCCAGCTTGAAGAA---GT
CCAAACCAGCCAGTACAGTCCATCCAGGCCGGGTCCAGAGAAGCCAGTGT
CAGACCTCAGTACAAACCACCAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCCTGGAATCTGAAATACCTGAAAGTAAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAGAGACACCAGCAAGGGAACCTCTGGAGGATCAAATC
ATCCAGGCGAACCCGGCGCTGGAGGCCCTTCGGAATGCCAAAACGCTGAG
AAACGACAACCTCGTCCCCTTTTGGAAAATTCATCCGAATTCACTTCGGAA
ACAGCGGCAAGCTGTGCTCTGCTGACATCGAGACGTACCTGCTGGAGAAG
TCTCGTGTACCTTTCAGCTAAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGATATGCTGTTAGTCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACCGTC
GCCTCCATCAATGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTTGA
TGTGCTCGGCTTCACTCTGGAGGAGAAGATGGGCGTCTATAAACTGACCG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCCGAGCCTGATGGGACTGAGGCTGCTGATAAATCAGCTTACCT
GATGGGGCTGAACTCCGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTATGTCACCAAAGGCCAGAGTGTGGACCAGGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGCACACCT
GTCTCCTGGAGCACCTCAAGAGCCACTCGGGGAAGTCCTCTGGCGGAGC
CAAGGAGAAAAAGCACCCGTGCGACCCTGCGACCGCCGTTTCTACACGC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGGACCATCTGACCCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCGGGGTCAACCACCTTGCTCTGTG
AAGGAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGGAAACCGTTCCCCAGTGGCGCCCTTTTCCGATGGGCATGT
ACAACCCCAACCAC-----CTTCAGGCCATGTCTAATTCTGGGGTGGGT
CATCCA-----CACCCGTCCCTGATGCCAGCTCCCTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCA
TGGGATGTTTACAAATCAGTGATGGATCAAACATGTGAATCTGCTGGCT
AGTAACTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTCA
CAACTACAGTCCCCTGATTGGGTTTACATTTACGAGCCCATTGAATACT
GGAACTCCACGGTGCAGGAGCACCTGAGGACTCTAAGTCACGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTGGCTCGACCAAGAACGACTTTATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCAGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCGTGAGACTG-----ACGAATACGACATTATCGCCTCACGCAT
GTATTTGGTGGCACGGACCACAGAGAAGAAGCGCGAGGAGGTGGTGGAGC

TTCTGGAGAAGCTTCGCCCGTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCCACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACG
GTTACATCCGTGGAGCTGGGCGTCTTGGGTTTGGATGGGCTTTCACCAGTT
TGAATGGCAGCCAGCTCTCAAGAATGTGTCTCCATCTTGCAATGTTGGCA
TTATTAATGGGCTCTCTGGATGGACTTCCCTCGGTGGATGACTCCCCACCT
GACACCATCACTCGGCGGTTTTCGCTATGATGTGGCACTAGTGTGAGCATT
AAAGGATCTGGAGGAGGACATCATGGAGGGGCTGAGAGATAGTGGGATGG
AAGACAGTGCTTGACCCACAGGCTTCACTGTTATGATCAAGGAATCTTGT
GATGGCATGGGTGATGTCAGCGAAAAGCACGGTGGAGGACCAGTTGTTCC
TGAGAAGGCTGTACGTTTCTCTATCACTATTATGTCTGTCTCTGTCTGG
CAGAGGATGAGGAG-----GAGGCG
GTTACTATCTTACAGAGCCAAAGCCAAACTCAGAACTGTCCTGTAAGCC
CCTTTGCCTGATGTTTGTGGATGAATCAGACCATGAGACACTCACAGCTC
TCCTGGGGCCTATAGTTGCAGAGCGTGATGCAATGAAAGAGAGCAGGCTC
ATCCTTTCCATTGGCGGCCTGCCTCGCTCCTTCCGCTTCCACTTCAGAGG
CACGGGATACGATGAGAAGATGGTGCAGAGAGATGGAGGGCCTGGAAGCCT
CAGGGTCCAGCTACGCTCTGCACTCTGTGTGATTCAAGTCGGGCAGAGGCA
TCTGAAAACATGGTGCTACACTCCATCACC CGCAGCCATGAAGAGAACCT
TGAACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGGAGAAG
AGCTGCGGGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACC
CATTCTGCTCGCTGGATGCATTACATTGTGACATTGGCAATGCCACTGAGTT
CTACAAAATCTTCCAGGATGAAATTGGGGAGGTGTACAAAAGG----CA
AT---CCAGCCGGGAGGAACGGCGGAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGTTGAAGCTTAAACCGGTAATGAGGATGAATGGGAA
CTATGCCCGCAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGC
TGGTGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTA
TACCTCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCAGCCAAGGAGTG
CCCTGACCAGCTGTGCCGCTATAGCTTTAACTCCCAGAGCTTTGCCGACA
TCCTCTCCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTAC
CTGCACAAGACTCTGGCCCATGTCCCTGAAATCATAGAGAGAGATGGATC
CATCGGAGCCTGGGCCAGTGAGGGGAACGAGTCGGCAAACAAATCATACA
CCATCGACATGGGTCTCTGGGGCCCCAGTGGAAGGAGAGCCCACAGCCT
TTCTCCTGCTCCGTTGAAGACCCACAAAACAGACAAAGTTCAAAGGCAT
CAAGACGTACATTTTCGTACCGGGTCACGCCGAGCCACACAGGGCATCCCG
TCTACAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCCTACTGCAC
AAGTTCACTGTGATCTCCGTGCCCCACCTGCCTGAGAAACAGGCCACGGG
GCGATTTGAGGAAGACTTTATTGAGAAGCGGAAGAGACGACTGATACTGT
GGATGAACCACATGACCAGTCACCCCTGTCTCTCCAGTATGAAGGCTTT
GAGCACTTCTGATGTGTGCTGACGACAAGCAATGGAAGCTGGGCAAGAG
ACGAGCTGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCCTCC
AGATCCCTAACGAGCACCAGGACCTTCAGGATGTAGAGGAGAGAGTCGAC
ACCTTCAAGGCCTTTGCTAAGAAAATGGACGACAGCGTCATGCAGCTCAC
GCATGTCGCCTCGGAGCTGGTGCCTAAGCACCTGGGTGGATTCAGAAAGG
AGTTCAGCGGCTGGGATATGCCTTCCAATCTATTAGCCAGGCATTCATG
CTGGACCCTCCCCATGCTCAGACACCCTCAACAACGCCATCTCCCATCC
TCTCGCCACGTTCCCTCAAACCTGACCTCTCTGGGTTCATCATTGGAGTCG
GTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTGCACCGAGCGCCCTATTATTTCTTGCTGGACCTGTGCGCCTCCGATAT
CCTTCGCTCTGCCATCTGCTTCCCCCTTTGTCTTCCACTCGGTCAAGAATG
GCTCTGCCTGGACCTACGGCACGCTGACCTGCAAAGTGATCGCCTTCCTG
GGTGTGCTCTCCTGTTCCACACGGCGTTCATGCTATTCTGCGTGAGCGT

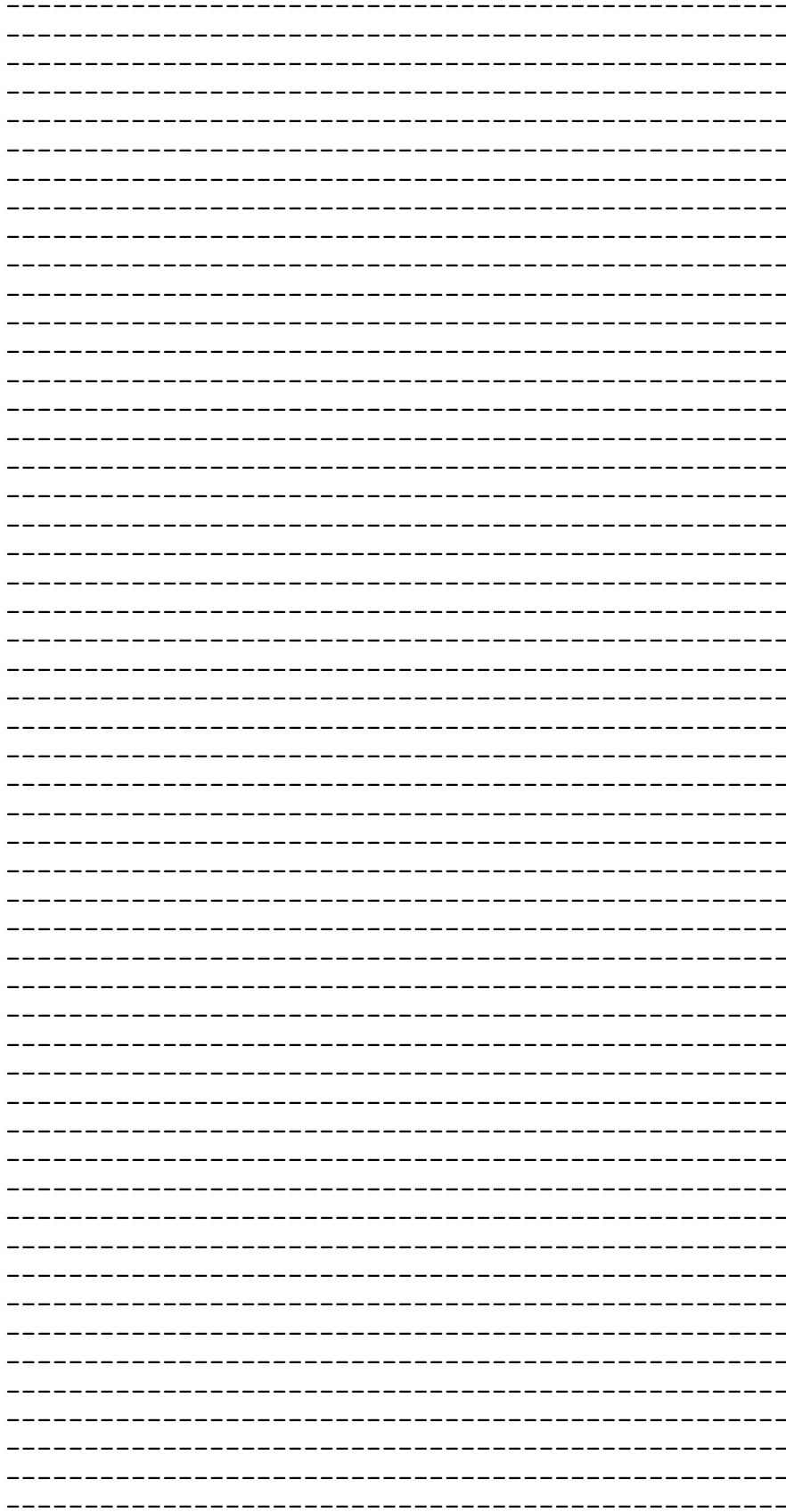
CACCCGCTACCTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGA
CCTTCTGGACCTGTCTGGCTGTCATCTGCATGGTGTGGACGTTGTCAGTG
GCTATGGCGTTCCCGCCGGTGTAGACGTAGGGACGTACTCTTTTATCCG
AGAGGAGGACCAGTGCACATTCCAGCACCGCTCCTTCAGGGCGAATGATT
CGCTGGGCTTCATGCTCCTGCTGGCGCTCATTCTCCTGGCCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCC
TGTCAGTTCGTGCTGCTGTCAGCCAGAACTGGACCTTCCACGGGCCAG
GCGCCAGCGGGCAGGCGGGCGCCAAC TGGCTGGCCGGATTTGGTAGAGGC
CCCACCCCGCCTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGG
CCGCAGGCGTCTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTA
GTAGGATGTTTACATCATGACGTTTTTCTTCTGACTGTGGGGGCC
TATCTGGTAGCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGTAGTCCC
CGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGG
TCAATCCTTTTCATCTGTATCTTCTCCAACAGGGAGGCCAAATCTCGCTTT
CACCTGGCGTGGGGACTGGTCTTGGCACGGAGC---GCAGCGTCCCCT
CGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCCCTGTTGCCA
CCCCCCGCGAGCGATGGTTTTGTACCC---CTGCCAACAACCGACTGGAC
TTTTGCTGCCTCGGCATACGACGCCGT-----GATTTGCGCCGGTAA
CGCGGCCACCTTGCTGTCTTACGCAGCGGCCGGAGTGAAGGCTC-----
TTCCCTGCCGACTGCAGGCTGCTCCAACCGCCCTCTTGGCTATTACGCA
GACCCGTGAG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGCGG
CGTAAATAGCAAATCCAGCTCGGTCTTTTCTGCTGGCCCGCTAACTCTA
TCGGCGGCAGAGCAGGCA---CC---AACTACCTGG-----CCGAG
GA---GGGA---GACTC---CATCCCGACGGAGAGGTCACCC---AT---
C---GGCTCTGAGGAG---ACCAAACCCAAAGACATGAC---ATCAGA--
-GTCGAGCTGGATAGAG---ACGCCGTCCTCCATTAAGTCCATTGATTCA
AGCGATTCTGGTATCTTTG---AACAGGCCAAGAGGAGAAGAATCTCACC
TTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCGTTAAAT
CTGAGCATCACTCAACAGGCGAAGTCACAGAGAGAGAAGTGGCGTTGGGG
ATAAATCCGTTTCGCGGATGGGATGGGCGCCTTCAAATAAACCACAGCTC
CCACGATATTGGCTCCGG--ACAAACGGCGTTTTCTCCAGGCA---C
CCGGCTAC---GCAGCAGCCGCCCTGGGA---CATACCA-----CCAC
CCGACCCACGTTGGCTCT--TACTCCACGGCGGCTTTCAACTCCACCAG
GGACTTTCTCTCAGAAATCGGGGTTTCGGGGACGCCACCGG-----
----GGCGCAGCACAGTTTTGTTGCTC--------CGGAAGTTT---C
-----GCAGGGCCACATGGACTCAGATGCAGCAGGACACCTGCTCTT
CCCAGGGCTCCACGAG---CAAGCGGCGAGCCATGCGTCTTCCAACGTGG
TCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACATGTACGGACGGGCC
GACCAGTACGGCCACGTTACAAGCCC GCGGT---CCGACCACTATGCTTC
GACCCAGTTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA---C
ACCACGGAGCAGGGGCCCTTTCTTTCGATACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAGCTGACGAATCCCAAAA
GTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTAGTGACCCATCTGA
CGGTGGAGCATGTGGGGGGACCAGAGCAGACCAACCACATCTGCTTCTGG
GAAGAGTGCTCCAGAGAAGGAAAGCCATTCAAAGCCAAATACAAACTTGT
AAATCATATCAGAGTACACACCGGAGAAAAGCCCTTCCCGTGTCCGTTCC
CCGGCTGTGGCAAA

>*Saccopharynx ampullaceus*

AGCCTACTTATTCGCACTGAAC TAAGTCAACCAGGAACAATACTAGAAGA
TGACCAAATCTATAATGTAATTGTCACAGCACATGCATTCGTGATAATCT
TCTTCATGGTTATAACAGTAATAATTGGGGGATTTGGAAACTGATTAGTC
CCATTAATAATTGGAGCCCCAGACATGGCATTCCCTCGAATAAATAATAT
AAGCTTCTGACTTTTACCCCCCTCGCTTCTTCTTTACTAGCATCCTCTG

GCATCGAAGCCGGGCTGGAACAGGTTGAACTGTTTATCCCCCTTAGCT
GGAAACTTAGCTCATGCAGGAGCATCTGTAGACCTTACAATCTTTCTCT
TCATCTAGCAGGCATTTTCCTCAATTCGGGGGCCATTAATTTTATTACAA
CTATTATTAACATAAAAACCCCCGCCATCTCACAATACCAAACCCACTT
TTTATCTGATCCGTCCTAGTAACCGCTGTACTTCTGCTACTCTCCCTACC
AGTTTTAGCGGGTATTACAATACTCCTTACTGACCGAAACCTTAACA
CAACCTTTTTTGACCCGGCTGGTGGGGGGACCCAATCCTCTATCAACAT
CTA-----

-----GAACGAGTACATTGTGGTATTCAGC
CGCTCTCTTAACCGGCTTATCCTGAACGAGGCAGAGCTGATCCTGGCACT
AGCRCAGGAGTTCCAGATGAAGGTCGTTACCGTTTCCTGGAGGAGCAGT
CCTTTACGGACATCGTCCGAGTCCCTCGGCAGGGCATCCATGCTGGTCAGT
ATGCATGGTGCCAGCTCGTCACCTCTCTCTTCCTTCCTCGTGGAGCCGC
TGTTGGTGGAGCTGTACCCGTATGCGGTCAACCCAGAGCATTATGCTCCCT
ACAGAACACTGGCCTCGCTGCCGGCATGGACCTGCAGTACGTGGCTTGG
AGGAACACCATGGAGGAGAACTCGGTGACCTTCCTGAGCGTGCCTGGGA
CCAGGGTGGCATTGCACACTTGGAGAAGGAGGAACAGGAACGTATCGTGA
ACAGCAAAGAGGTGCCGCGACACCTGTGCTGTGCGAACCCGGAGTGGCTC
TTCCGCATCTACCAGGACACCAAGGTGGACATTGCGTCCCTTCTGGATGC
TCTGCG---CCAGGGACTGACA---TCCAGGCCATGGCCCAAGAG---GG
CTAGGCCCGCCAGCACAGTCCACCCAGGCAGGGTGAGGGAGCCCAAGTGC
CAGACCTCCGTCACAGGCGACTAACGAGGCCAAGCTGATGGTTTCTTGCA
GATCCCCTGGAACCTCAAGTACCTGAAGGTGAAGGAGGTGAAGTATGAGG
TATGGATTCAAAAGAAGGATACCAGCAAGGGAACCCTGGAGGATCAAATT
ATCCAGGCAAACCCAGCGCTGGAGGCTTTTGGCAATGCCAAGACTGCGAG
GAATGACAACCTTTCACGTTTTTGGGAAATTCATTTCGATTTCATTTGGAG
TAAGTGGCAAGTTGTCTCTGCTGACATAGAAACCTACTACTTGGAGAA
TCTCGCGTACCTTTCAGCTCAAATCTGAGAGGAACTATCATATTTTCTA
CCAGATCACATCCAACAAAAGCCTGAATTGCTGGACATGTTGTTGATCA
CCAACAACCCATATGATTATGCTTATGTCTCCCAAGGAGAAGTGACTGTT
GCATCCATCGATGACTCAGAGGAACTGATCGCCACAGACAGTGCCTTTGA
TGTGCTGGGATTACGGCCGAGGAGAAGATGGGTGTCTATAAGCTAACAG
GTGCCATCATGCATTATGGAAACATGAAATTC AAGCAGAAGCAGCGTGAG
GAACAGGCCGAGCCTGATGGCACTGAGTCTGCTGACAAGTCAGCTTACTT



-----ACGGCATTTCCTCCCAAGCT---CCCGGTAC---GC
AGCCGCTGCCCTGGGA---CATCACCA-----CCATCCGACTCATGTCA
GTTCT---TACTCTACGGCGGCTTTC AATTCCACCCGGGATTTTCTCTTC
AGAAATCGAGGCTTCGGAGACGCCACCAG-----CGCTCAGCA

CTCAGCCCCATGATGTGCAGCATGGCTTCCAACAAAGACCACATGCTGGC
CAAGCCGTTCCCCAGCGGCACCTCCTTCCCCATGGGCATGTACAACCCCC
ACCAC-----CTCCAGGCCATGTCCAACCCTGAGGTGGGCCAC-----
---CACCCTCTCTGATGCCTGGCTCCCTGTCCGCTGCCATGGGGATGGG
CTGCCACATGGAGTACCTGATCTACGCCTCCTTCTCCTTCATGGGATGTT
TACAAATCAGTGATGGATCCAACATCGTCAATCTCCTAGCCAGCAACACG
CCCAGTGTGTCTACGCCACGACCAGCAGAAGTACTTCAGTAACTACAG
CCCCGTGATCGGCTTCTACATCTATGARCCCATCGAGTACTGGAACCCA
CGGTGCAGGAGCACCTCACAACGCTGAGCCAYGGCTTCAACAAGATCTCC
TGGATGGATAACTACTTTCAGTATCTGAAGGTGGTGAATGTGAGCGCCTC
GACCAAAAGTGATTTTCATCACCATCCTGCAGGGCTCCTTCCCTGCGCAGCC
CGGAGTATCAGCACTTCATGGAGGACATCATTCTGTCCAAGACAGATGGR
G-----ATGAAATGGAGATCATCGCTTCCAGGATGTACCTGGT
GGCRMGGACCACGGAGAAGACCCGGGAGGARGTGGTGGARCTGCTKGAGA
GGCTCCGCCCMCTYTCGCTCATCAACAACATCAAGTTCATCGTCTTCAAC
CCCACCTTCGTCTWCATGGACCGTTACAGCTCCTCCGTRGTSTCACCCAT
CCTCACMTRGCTTCAGCGTGCTCACCATCCTCATCCTCACCTTCTTCC
TRGTCATMAACCCCTCTGGGGAACCTTCTGGTTGATCCTGACCGTCACCTCC
GTAGAGCTGGGGGTCTGGGGCTCATGGGCTACCACCCCTTTGAGTGGCA
GCCGGCCCTCAAGAGTGTGTCCACATCCTGCCATGTGGGGATCATTAAAG
GGCTATCAGGGTGGGTCGCTTCGGTGGACGACTCCCAGCAGATACAGTC
ACGCGTTCGGTTTCGCTACGACGTGGCCCTGGTGTGGCCCTGAAGGACCT
GGAGGAGGACATCATGGAGGGGCTGAGAGAGCGAGGCCTGGAGGACAGTG
CTTGCACCTCGGGCTTCAGCGTTATGATCAAGGAGTCTGCGATGGCATG
GGGGACGTCAAGTGAAGCATGGCGGAGGGCCGGCCGTCCCGAAAAGGC
TGTGCGTTTCTCCTTCACCATCATGTCCGTCTCTATTCAAGCTGAGGGAG
AAGAT-----GAGGCGATCACCATT
TTCCGGGAGCCCAAGCCCAACTCAGAGATGTCTGCAAGCCGCTCTGCCT
GATGTTTGTGGACGAGTCGGACCACGAGACTCTCACAGGTGTCTGGGGC
CTGTGGTGGCCGAAAGGAACGCTATGAAGCACAGCCGTCTCATCCTGTCT
GTGGGCGGCCTTCTCGCTCCTCCGCTTCCACTTCCGGGGCACGGGCTA
TGATGAGAAGATGGTGCAGAGATGGAGGGTTTGGAGGCCTCTGGCTCCG
CTTACATCTGCACACTGTGTGACTCCACTCGGGCAGAGGCCTCCCAAAC
ATGACTCTCCACTCTGTACCCCGCAGCCACGACGAGAACCTGGAGCGCTA
CGAACTTTGGAGGACCAACCCCTCATCTGAGTCAGCTGAAGAGCTGCGAG
ACCGAGTCAAAGGCGTCTCTGCCAAGCCCTTCATGGAGACCCAGCCACA
CTGGACGCCCTGCATTGTGATATCGGCAATGCCACTGAGTTCTACAAGAT
CTTCCAGGATGAGATAGGGGAGGTCTATCACAAGGC---AAAC---CCCA
GCCGGGAGCAGCGTCGGAGCTGGCGGGCCGCCCTGGACAAGCAGCTGAGG
AAGAAGATGAAGCTGAAGCCTGTGATGAGGATGAATGGGAACATGCACG
GAAGCTGATGACCCGGGAGGCAGTGGAGGCAGTGTGTGAGCTGGTGGCT
CAGAGGAGCGTCAGGAAGCCCTGAGGGAGCTGATGGGGCTCTACATCCAG
ATGAAGCCTGTGTGGCGCTCCACCTGCCCGGCGAAGGAGTGCCAGACCA
GCTCTGCCGGTATAGCTTCAACTCCCAACGCTTCGCAGAGCTGTCTCCA
CCGTCTTCAAGTACAGGTATGACGGAAAGATCACCAACTACCTGCACAAG
ACCTTGGCCCATGTGCCAGAGATTGTGGAGAGGGATGGCTCCATCGGGGC
CTGGGCCAGCGAGGGGAATGAGTCTGGGAACAAGTCGTACACCATTGAGA
TGGGCCCCAAAGGGCCTCAATGGAAAAGACAGCCCCACACCTTCTCTTGC
TCCATCGAGGACCCTACCAAGCAGACCAAGTTCAAAGGCATCAAGACCTA
CATATCGTACCGAGTGACCCCAAGCCACAATGCGAGGCCTGTGTACCGGC
GTTACAAGCACTTCGACTGGTTGTACAACCGTCTACTGCACAAGTTCACC
GTCATCTCCGTGCCCCACCTGCCCCGAGAAACAGGCAACAGGGCGCTTCGA
AGAGGACTTCATCGAGAAGCGCAAGAGGGCGGCTGATCCTCTGGATGGACC

ACATGACCAGCCACCCGGTCTTGTCGCAATACGAGGGCTTCGAGCACTTC
CTCATGTGCGCTGACGACAAGCAGTGGAAGCTGGGCAAGCGGCGGCAGAG
GAAGGACGAGATGATGGGCGCCAACTTCATGCTTACCTTCCAGATCCCAA
ATGAGCACCAGGACCTGCAGGACGTGGAGGAACGTGTGGACTCCTTCAAG
TCCTTCGCCAAGAAAATGGATGACAGCGTCATGCAGCTTACGCATGTGGC
CTCAGAACTGGTGCGGAAGCACCTTGGAGGCTTCCGGAAGGAATTCAGC
GGCTGGGGAACGCCTTCCAGAACGTCAGTCAGGCGTTCATGCTGGACCCT
CCCCACTGCTCGGACGCCCTCAACACCNNTCCC
TGGGTTTTATCATTGGAGT
CGGCGTCGTTGGCAACCTCCTGATCTCCATCCTACTGGTCAAAGACAAGA
GCCTGCACCGTGCACCGTACTACTTCCCTGCTGGACCTGTGCGCCTCGGAC
ATTCTGCGCTCCGCCATCTGCTTCCCCTTTGTTTTACCTCCGTCAAGAA
TGGTTCACCTGGACGTACGGCACGCTTACCTGCAAAGTGATAGCCTTCC
TGGGGGTGCTGTCTGCTTTTACACAGCGTTCATGCTCTTCTGTGTGAGT
GTGACACGCTACCTGGCCATAGCCACCACCCTTCTACACCAAGAGGCT
CACCTTCTGGACGTGTCTGGCAGTTATCTGCATGGTGTGGACGTTGTGCG
TGGCCATGGCCTTTCCCCCGGTGCTGGACGTGGGGACGTACTCCTTCATA
AGGGAGGAGGACCAGTGTACGTTCCAGCACCGCTCGTTCAGAGCCAACGA
CTCCCTGGGCTTCATGCTGCTCCTCGCCCTGATCCTTCTGGCCACCAGC
TTGTCTACCTCAAGCTAATCTTCTTCGTCCATGACCGACGGAAGATGAAA
CCGGTCCAGTTCGTGCCTGCCGTCAGCCAGAAGTGGACCTTCCATGGCC
CGGGGCCAGCGCCAAGCAGCGGCTAAGTGGCTGGCGGGGTTCCGGCAGGG
GCCCCACCCCGCCACCCTGCTGGGGATCAGGCAGAACAGCAATGCAGTG
GGCCGCGACGCCTGCTGGTGTGACGAGTTTAAGACTGAAAAGAGGAT
AAGTAGGATGTACTTCATCATGACCTTCTTCTTCTCACGCTCTGGGGCC
CCTACCTAGTGGCCTGCTATTGGAGGGTGTGTTGCCAGGGGCCCCGCGGTA
CCAGGGGGGTACCTGACCGCGGCGGTGTGGATGAGCTTCGCCCAGGCGGG
AGTCAACCCCTTATCTGCATCTTCTCCAACAGGGAGGCCAAATCTCGCT
TTCACCCTGGCGTAGGGACTGGTCTGGCACGGACC---GCAGCGTCCCA
CTTTGTAACAGCTTGTATCCCCGCAACCAACCGAAGAGCCCACAGTTG-
--CATCCCCGACGATGGTTTTGTCACCC---CTGCCAATAACCGACTGG
ACTTTGCCGCTCGGCATACGATGCCGCCGCGGCTGCTGATTTTGCCGGT
AACGCGGCCACCCTGCTGTATATGCAGCCGCTGGAGTAAAGGCC---
--TTCCCCTGCCACTGCAGGGTGTCAAGCAGACCTCTCGTTACTATG
CCGACCCATCCG---GCTGG---GGCACACGCACACCACCCAGTACTGC
-----AGTAAGTCTAGCCCTGTTCTATCCTGCTGGCCACAAATTC
TGTTGGTGGCAGATCAGGCA---CCTCTTACTACCTGG-----TTG
ATGA---AGCC---GACAC---CATCCCAACAGAAAGGTCACCC---AT-
--CGGAGGGTCTGATGAG---GCAAAAACCAAAAGACTT-----ATCCGA
---ATCCTGCTGGATAGAG---ACGCCGTCTTCAATCAAGTCGATTGATT
CAAGTGATTCTGGTATTTTTG---AGCAAGCTAAACGGAGAAGAATTTCA
CCGTCTGCCACACCG-----GTTTCGGAAA-----CCCAGTTGAA
ATCTGAG-----ACAGGCGAAGTCACAGAAAGAGAAGTGGCTTTGG
GGATAAATCCGTTTCGACAGCGGGATGGGAGCTTTTAAAATCAACCACAGC
TCCCACGACCTGGGCTCCGG---CCAGACGGCGTTCCTTCCCAGGCT--
-CCCGGCTAC---GCTGCTGCCGCCCTGGGT---CACCACCA-----CC
ACCCGACGCACGTGAGTCC---TACTCCACCGCAGCCTTCAACTCCACC
CGGGACTTTCTCTTCCAGAAACCGGGGCTTCGGGGATGCCACCAG-----
-----CGCGCAGCACAGCCTGTTYGCCTCSGC---AGCGGGAAGTTT--
-T-----GCAGGGCCACATGGACACTCYGATGCCGCGGGGCACCTGCTC
TTCCCGGGACTCCACGAG---CAAGCCGCAAGTCATGCATCATCTAATGT
CGTCAACAGCCAGATGCGCCTTGGCTTTACCGGGGACATGTACGGCCGGG
CTGACCAGTATGGCCACGTTACGAGCCCCGAT---CCGACCACTACGCC

TCTTCCCAGCTGCATGGATATGGTCCCATGAACATGAACATGGCGGCT--
-CACCACGGGGCAGGGGCCTTCTTCCGATACATGAGGCAGCCCATCAAAC
AGGAGCTCATCTGTAAGTGGGTCGAGCCCCGAACAGTTGTGCAACCCAAA
AAGGCTTGCAACAAAACGTTTCCAGCAGATGCACGAGCTTGTGACCCACCT
GACCGTGGAGCATGTGGGGGGACCGGAGCAGTCGAACCATATTTGCTTTT
GGAAAGAGTGCCTCCGAGAAGGAAAACCATTCAAAGCCAAATACAAACTG
GTAAATCATATCAGAGTACACACCCGGAGAGAAACCATTCCCA-----

>Samariscus latus

-----NNNNNNNNNGAAACCTTACCCAACTAACTGCCTTGGCATGCTGTTG
CTGTCTGATGCCCACCAGTGCACCAAGCTGTGAGAGCTCTCCTGGGGTAT
GTGCCTCAGCAACTTCCCGCTATTTGCAAGACAGAGGACTTCCTCCAAC
TGCCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGAGCTAGAGACA
GAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGATCAACTATGA
CCTGGAAAAGAGACACTGCCACCTTCCAGAGCTCCTGAGAACGGTCCGCC
TGGCCTTGCTGCCTGCCATCTTTCTCATGGAGAACGTGTCTACAGAAGAG
CTGATCAACGCAAAGCCCAAGAGCAAGGAGCTTGTGGATGAAGCTATCCG
CTGTAAGCTGAAGATCCTGCAAAACGATGGTGTGCTTAAACAGCCCATGTG
CTCGACCAAGAAAGACCAGCCATGCCTTATTTCTTCTGGGAGGGCAGACT
TTCATGTGCGACAAGTTGTACTTGGTGGACCAGAAAGCCAAAGAGATCAT
CCCCAAGGCCGACATTTCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCA
TCGGATGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAATGGT
GTGTCAAAGATGTGTGGGTCTATGACACAGTCCAAGAGGAATGGTCAA
GGCAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTGCAGAGCTGA
AACACTGCCTCTACGTAGNNNGGAGG
ATTATATTGTTCTCTTCAGTCGCTTGA
CCACGAGGTTAATTGTAACGAAGCCGAGCTGATCCTGGCCCTGGCACAG
GAGCTTCAAATGAGAGTCGTCACCGTGTGCGCTGGAGGAACAGTCTTTCTC
AAGTATTGTTCAAGGTGATTAGTGGCGCTTCCATGTTAGTCAGCATGCATG
GAGCGCAGCTCATTGCCCTCACTTTTCTACCCAGAGGCGGACTGTGGTA
GAACTGTTCCCCTTGTGTGAATCCAGAGCAGTACACACCCTACAAAAC
CCTGGCCTCCATTCCAGGAATGGAAC T TCACTACATTTTTCATGGAGGAACA
TCAAAGAGGAAAACACCGTCAACCACCCAGACCGGCCCTGGAATCAAGGC
GGTATCGCTCATTAGAGAAGGAGGAGCAGGAGCGGATTCTGGCCAGTAA
AGAAGTCCAGAGACACCTCTGCTGTCGCAACCAGAGTGGCTGTTCAGGA
TCTATCAGGACACTTTAGTGGACATTCCTGCTTTTCCCTCAAAGTCTTGAG--
--AGAAGGCAAGAAC--GCTAAGCCAGCTTTAGGAA--ATCAAACC

TGCGAGCACAGTTCACCCCGGCCGAGTAAGAGGACCCAGTGTCAGTCCT
CTGTTCAAACCACCAATGAGGCCAACTTCAAGTATTCTGGCAGATGCC
TGGAATCTAAAGTTCTGAAGGTGAGAGAGGTCAAATACGAAGTGNNNNNNNNN-----

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGAAGCACT
ACAACACCAAGCTGGGCTATAAACGCCACATGGCCATGCACTCAGCCACA
GCAGGGGACCTCACCTGTAAAGTTTGCATGCAAAGCTACGAGAGTACACC
TGTTCTCCTGGAGCACCTCAAGAGCCACTCTGGAAAGTCCTCAGGTGGTG
CCAAGGAGAAAAAACACCCATGTGACCCTGTGACCGCCGCTTCTACACG
CGGAAGGATGTGAGAAGGCACATGGTGGTCCATACAGGTAGAAAGGACTT
CCTGTGCCAGTACTGTGCCAGCGCTTTGGTAGGAAGGACCACCTGACAC
GTCATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACCGAG
CCACCTGATATGTTAGGTCTGTTAGCCTCTGGATCATCACCCTGCTCCGT
GAAGGAGGAGCTCAGCCCATGATGTGTGGCATGGGTCCCAACAAAGATC
CCATGATGGGCAAATCTTTCTCCAGCGGGGCCCTTTTCCAATGGGTATG
TACAACCCACCACAT-----CTCCAGACAATGTCTAATCCCAGCGTGGG
TCACCCA-----CACCCGTCACTTATGCCAGCTCCTTGTCTGCAGCTA
TGCCCATGGGCTGCCANNNNNNN-----

NNNGTCTTGCAATGTCGGCATCA
TCGACGGACTCTCCGGATGGGACTCCTCATTGGACGACGCCCCAGCCAAT
ACCATCACTCGGAGATTTTCGCTACGATGTGGCACTGGTGTCCGCATTTAA
AGATGTTGAAGAGGACGTGATGGAGGGGCTGAGAGAGAGTGGGATGGAGG
ACAGCACTTGACATCTGGTTTTAGAGTCCTCATCAAAGAGTGCTGCGAT
GGCATGGGCGATGTCAGCGAGAAGCACGGCGGAGGACCGGCCGTCCCGGA
GAAGGCCGTGCGCTTCTCGTTACCATCATGTCCGTCTCCGTCTGGCAG
ATGGGCAAGAG-----GAGGAGGTG
ACCATCTTACAGAACCAAAGCCAAACTCAGAACTGTCCTGTAAGCCCCT

GCTGGAGACAGAAGATGAGAGACTGGTTTATGAAGCCGCCCTGAACTGGA
TCAACTATGAYCTGGAAAGGAGGCACTGCCACCTTCCAGAGCTCCTGAGA
ACAGTTCGTCTTGCCCTGCTGCCC GCCATCTTTYTAATGGAGAATGTCTC
AACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAAGAGTTGGTGGATG
AGGCTATCCGCTGTAAGCTGAAGATCCTGCAGAATGACGGTGTCTTAAC
AGCCCGTGTGCTCGACCAAGAAAAACCAGCCATGCTCTCTTTCTCCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCGAAGGCAGACATTCAGCCCAAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTATATATCACAGGTGGGA--GAGGCTC-
AGAGAATGGCGTGTCCAAAGATGTATGGGTCTATGACACCGTCCATGAGG
AATGGTCCAAAGCGGCACCCATGCTGATTGCCAGGTTTGGTCATGGCTCT
GCCGAGCTGAAACACTGCCTGTACGTGGTAGGAGGTCACACCGCAGCAAC
TGGCTGCCTACCTGCTTCTCCATCCGGATGATTACATTGTTGTGTTTCA
CGTTCAACAACAAGGCTGATACTGAATGAAGCCGAGCTAATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTTGTACAGTTTCTCTAGAGGAACAGT
CTTTCCCCAGCATTGTCCAGGTGATCAGTGGTGGCTTCCATGTTAGTCAGC
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTAC
TGTGGTGGAGCTGTTCCCTTTGCTGTGAACTCAGAGCAGTACACCCCAT
ATAAAACCTTGCCTCCCTTCCAGGCATGGATCTTCATTATGTTTCCCTGG
AGAAACACTCAGGAGGAGAATACTATCACCCATCCAGACAGACCCCTGGGA
ACAAGGAGGCATCACTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGA
CCAGCAAAGACGTCCCCAGGCACCTGTGCTGCCGGAATCCGGAGTGGCTC
TTCCGAATCTACCAGGACACTTTGGTAGACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---GGAGGGAATGAAG---ACCAAACCCAACCTTAAAGAA---GT
CCAAACCAGCCAGTACAGTCCATCCCGGCCGGGTCAGAGAAGCCCAATGT
CAGACTTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCGTGGAAATCTGAAATACCTAAAAGTAAGAGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAAAGAGAC
ACCA

GCAAGGGAACCTCTGGAGGATCAAATCATCCAGGCAAACCCGGCGCTGGAG
GCCTTTGGAAACGCCAAAACGCTGAGAAATGACAACCTCGTCCCGTTTTGG
AAAATTCATCCGAATTCACCTCGGAAACAGTGGCAAGCTGTCATCCGCTG
ACATCGAGACGTATCTGCTGGAGAAGTCTCGTGTACCTTTTCACTCAAG
GCTGAGAGGAACTACCACATCTTCTACCAGATCCTGTCCAATCAGAAGCC
AGAGCTGCTTGACATGCTGTTGATCACGAACAACCCATACGACTACTCCT
ACATCTCCCAAGGAGAGGTAACGGTCCGCTCCATCAATGACTCGGAGGAG
CTGATGGCCACCGACAGCGCCTTCGATGTGCTCGGCTTCACTCCGGAGGA
GAAGATGGGCGTCTATAAACTGACCGGCCATCATGCACCACGGCAACA
TGAAGTTCAAGCAGAAGCAGCGTGAGGAGCAGGCCGAGCCTGATGGGACA
GAGGCTGCTGACAAAATCCGCCTACCTGATGGGGCTGAACTCTGCTGACCT
CATCAAAGGGCTGTGCCATCCCCAGTCAAGGTAGGAAATGATTATGTCA
CCAAAGGCCAGAGTGTGGACCAAGTCTACTACCCCAACAAGGAGGCCTTC
AAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATATAAGCG
CCATGTGGCCATGCACTCTGCCACAGCAGGGGATCTTACCTGTAAAGTGT
GCATGCAAAGCTATGAGAGCACACCTGTTCTCCTGGAGCACCTCAAGAGC
CACTCAGGAAAGTCTCTGGTGGAGCCAAGGAGAAAAACACCCGTGCGA
CCACTGTGACCGCCGTTTCTACACACGGAAGGATGTGAGACGGCACATGG
TGGTCCACACGGGCCGAAAGGACTTCCCTGTGCCAGTACTGTGCCACGCGC
TTTGGCAGGAAGGACACTTGACCCGCCACGTGAAGAAGAGCCACTCGCA
GGAGCTGCTGAAGATCAAGACGGAGCCTCCTGATATGTTAGGTCTTCTGG
CTTCGGCATCACACCTTGTCTGTAAAGGAGGAGCTTAGCCCCCTTGATG
TGTGGCATGGGTCCCAACAAGACCCCATGATGGGCAAACCGTTCCCCAG
TGGTGGCCCTTTTCCAATGGGCATGTACAACCCCAACAC-----CTTC
AGGCCATGTCTAATCTGGGGTGGGTTCATCCA-----CACTCGTCCCTG

ATGCCAGCTCCCTGTCTGCAGCTATGGGCATGGGCTGTCATATGGAATA
TCTCATCTACGCCTCTTTTTTCATTCATGGGATGTTTACAAATCAGTGATG
GATCAAACATTGTGAACCTGCTGGCGAGTAACTCTCCAAGTGTTTCATAC
GCTCTGACCCAGCAGAAATACTTCAGYAACTACAGTCCTGTGATTGGGTT
TTACATTTACGAGCCATTGAGTACTGGAACCTCACAGTGCAGGAGCACC
TGAAGACTCTGAGTCACGGCTTCAACAAGATCTCCTGGATGGACAACCTTT
TTCCACTACCTGAGGGTTGTGAATGTGAGTGCCTGACCAAGAGCGACTT
CATCACTATCCTCAAGGGCTCCTTCCCTGCGCAGCCAGAGTACCAGCACT
TCACTGAGGACATCATATTCTCCAAGA---ACCGTGACACAG-----AC
GAATACGAAATTATCGCCTCACGCATGTATTTGGTGGCACGGACCACAGA
GAAGAAACGTGAGGAGGTGGTGGAGCTTCTGGAGAAGCTTCGCCCGTTGA
TGCTGATCAACAGCATCAAGTTCATTGCCTTCAATCCTACGTTTGTGTTT
ATGGACCGCTACAGTTCCTCTGTCTCTCTCCCATCCTTACCTCAGGCTT
CAGCGTGCTCACCATCCTCATCCTCACTTTTCTTCTGGTCATCAACCCCT
TGGGGAACCTTCTGGCTCANCTCACGGTTACGTCCGTGGAGCTGGGCGTCT
TGGGTTTGNNGGTTTTCACCATTTTGAATGGCAGCCAGCTCTCAAGAATGTG
TCTACATCTTGCAATGTTGGCATTATTAATGGGCTCTCTGGATGGGCTTC
CTCAGTGGATGACTCCCCAACTGACACCATCTGTTCGGCGGTTTCGCTATG
ATGTGGCATTAGTGTGAGCGTTAAAGGATCTGGAGGAGGACATCATGGAG
GGGCTGAGAGAAAAGTGGGATGGAGGACAGTGTGCTGCACCTCAGGCTTCAG
TGTTATGATCAAGGAATCTTGTGATGGCATGGGCGATGTCAGTGAAAAGC
ACGGTGGAGGACCAGCTGTTCTGAGAAGGCTGTACGTTTCTCTATTACT
ATTATGAGTGTGTCTGTCTGGCAGATGATGAGGAG-----
-----GAGGAGGTTACTATCTTCACGGAGCCAAAGCCAA
ACTCAGAAGTGTCTGTAAAGCCCCCTTGCCTGATGTTTGTGGATGAATCA
GACCATGAGACACTCACAGCTCTCCTGGGGCCGATAGTAGCAGAGCGTAA
TGCAATGAAAGAGAGCAGGCTCATCCTTTCCATCGGCGGGCTGCCTCGCT
CCTTCCGCTTCCACTTCAGAGGCACGGGATACGATGAGAAGATGGTGAGA
GAGATGGAGGGCCTGGAAGCCTCAGGGTCCAGCTATGTCTGCACTCTGTG
TGATTCAGCCGGCAGAGGCATCTCAAACATGGTGCTACACTCCATCA
CCCGCAACCATGATGAGAACCTTGAACGTTATGAAATATGGAGAACCAAC
CCCTTTTCTGAGTCTGGAGAAGAGCTGCGGGACAGAGTCAAAGGGGTCTC
TGCCAAGCCCTTCATGGAGACCCACCCACGCTGGATGCATTACATTGTG
ACATTGGCAATGCCACTGAGTCTACAAAATCTTCCAGGATGAAATGGG
GAGGTGTTCCAAAAGGT---CAAT---CCCAGCCGGGAGGAACGGCGCAG
CTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGTTGAAGCTTAAAC
CGGTAATGAGGATGAATGGTAACTACGCCCCGAGGCTAATGACCCAGGAG
GCTGCAGAGGTGGTGTGTGAGCTGGTGCCTCAGAGGAGAGGAGGGAGGC
CCTGAGGGAGCTTATGAGGCTATACCTACAGATGAAGCCTGTGTGGCGTG
CCACCTGCCCAGCCAAGGAGTGCCCTGACCAGCTGTGCCGCTATAGCTTT
AACTCCAGAGCTTTGCTGACCTCCTCTCCTCTACCTTCAAATATAGGTA
CAATGGAAAGATAACCTAATTACATGCACAAGACCCCTGGCCCATGTCCCTG
AAATCATAGAGAGAGATGGATCCATCGGAGCCTGGGCCAGTGAAGGGAAC
GAGTCGGCAAACAAATCATAACCATCGAGATGGGTGCCGTGGGCCCCCA
GTGGAAGGAGAGCCCACAACCTTTCTCCTGCTCCGTAGAAGACCCACAA
AACAGACAAAGTTCAAAGGCATCAAGACGTACATTTTCGTACCGGGTCA
CCGAGCCACACAGGGCGTCCCGTCTACAGGCGCTACAAACACTTTGACTG
GCTGTACAACCGCCTACTGCACAAGTTCCTGTGATCTCCGTGCCCTCACC
TGCTGAGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTTATTGAGAAG
CGGAAGAGACGACTGATACTGTGGATGAACCACATGACCAGTCAACCCTGT
CCTCTCCCAGTATGAAGGCTTTGAGCACTTTCTGATGTGTGCTGACGACA
AGCAATGGAAAGCTGGGCAAGAGACGAGCTGAGAAGGACGAGATGGTGGGC
GCCCATTTTCATGCTGACCCTCCAGATCCCTAACGAGCACCAGGACCTTCA

GGATGTAGAGGAGAGAGTCGACACCTTCAAGGCCTTTGCTAAGAAAATGG
ACGACAGCGTCATGCAGCTCACACACGTTGCCTCGGAGCTGGTGCCTAAG
CACCTGGGTGGATTTCAGGAAGGAGTTCCAGCGGCTGGGAAATGCCTTCCA
GTCGATTAGCCAGGCATTCATGCTGGACCCTCCCATAGCTCAGATGCC
TCAACAACGCCATCTCCCATNNNNNNNNNNNGTTCCCAAACCTGACCTCTCTGGGTTTCAT
CATTGGAGTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTGGTCA
AAGACAAGAGCCTGCACCGAGCACCTACTATTTCCCTGCTGGACCTTTGC
GCCTCCGATATCCTCCGCTCCGCCATCTGCTTCCCCTTTGTCTTCACCTC
GGTCAAGAATGGATCTGCCTGGACCTATGGCACGYTGACCTGCAAAGTGA
TCGCCTTCCCTGGGTGTGCTCTCCTGTTTCCACACGGCGTTCATGCTATTC
TGCGTGAGCGTCAACCGCTACCTGGCCATCGCACATCACCGTTTCTACAC
CAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTCTGCATGGTGTGGA
CGTTGTCACTGGCTATGGCGTTCCCGCCGGTGTAGACGTAGGGACATAC
TCTTTTATCCGGGAGGAGGACCAGTGCACATTCAGCACCGCTCCTTCAG
GGCGAATGATTCGCTGGGCTTCATGCTCCTGCTGGCTCTCATTCTCCTGG
CCACACAGCTGGTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGCCGA
AAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTGTCAGCCAGAAGTGGACCTT
CCACGGGCCAGGCGCCAGCGGGCAGGCGGGCCAACTGGCTGGCTGGAT
TTGGTAGAGGCCCCACCCCGCTACTTTGCTGGGAATCCGGCAGAACAGC
AACGCAGCGGGCCGAGGCGTCTACTGGTATTGGATGAATTCAAAACAGA
GAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCTGGCAC
TGTGGGGGCCCTATCTGGTAGCCTGCTACTGGCGGGTGTGTTGCAAGGGGC
CCTGTAGTCCCTGGGGGCTACCTGACGGCAGCTGTGTGGATGAGCTTTGC
CCAGGCTGGGGTCAATCCTTTTCATCTNNNNNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGC
GTGGGGACTGGTCCCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAG
CTTGCTATCCCCGAGCAAACCGAGGAGCCAGTGTGCCACCCCCCGC
AGCGATGGTTTTGTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCC
TCGGCATAACGACGCCGCT-----GATTTCCCGGTAACGCGGCCAC
CTTGCTGTCTTACGCAGCGGCCGGAGTGAAAGCTC-----TTCCCCTGC
CGACTGCAGGCTGCTCCAACCGCCTCTTGCTATTACGCAGACCCGTCA
G---GCTGG---GGAGGACGCACGCCCGCCGAGTACTGTGGCGTGAATAG
CAAATCCAGCTCGGTGTTTTCTGCTGGCCCGCTAACTCTATCAGCGGCA
GAGCGGGGA---GC---AACTACCTGG-----CCGAGGA---GGGA
---GACTC---CATCACGACGGAGAGGTCACCC---AT---C---GGCTC
TGAGGAG---ACCAAACCAAAGACATGAC---ATCAGA---GTCGAGCT
GGATAGAG---ACGCCGTCTCCATTAAGTCCATCGATTTCGAGCGATTCT
GGTATCTTTG---AACAGGCCAAGAGGAGAAGGATCTCACCTTCTGCCAC
GCCG-----GTTTCAGAGACAGTGTCCCCGTAAAATNNNNNCATCACTCA
ACAGGCCAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGC
GGATGGGATGGGCGCCTTCAAATAAACCACAGCTCCCACGATATTGGCT
CCGG---ACAGACGGCGTTTTCTCCAGGCA---CCCGGCTAC---GCA
GCAGCCGCCCTGGGA---CACCACCA-----CCACCCGACCCACGTTGG
CTCT---TACTCCACGGCGGCTTTCAACTCCACAAGGGACTTTCTCTTCA
GAAATCGGGGTTTTCGGGGACGCCACCGG-----GGCTCAGCAC
AGTTTGTTCGCCTC-----CGGAAGTTT---C-----GCAGGGCC
ACATGGACACTCAGATGCAGCGGGGCACCTGCTCTCCCAGGGCTCCACG
AG---CAAGCGGCAGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATG
CGGTTGGGCTTCTCGGGGACATGTACGGACGGGCCGACCAGTACGGTCA
CGTTACAAGCCCGCGGT---CCGACCACTATGCCTCGACCCAGCTGCACG
GCTACGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGG
GCCTTCTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAA
GTGGGTCGAGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAA
CTTTTAGCACGATGCACGAGCTAGTGACCCATCTGACGGTGGAGCATGTG

GGGGGACCAGAGCAGACCAACCACATCTGCTTTTGGGAAGACTGTTCCAG
AGAAGGAAAGCCATTCAAAGCCAAATACAAACTCGTAAATCATATCAGAG
TACACACCGGTGAAAAACCCCTTTCGGTGTCCGTTCCCGGCTGTGGCAA

>Saurida tumbil

AGCCTCTTAATTTCGTGCCGAACCTCAGCCAACCGGGGGCTCTTCTCGGAGA
CGATCAGATCTACAATGTAATCGTCACCGCACATGCCTTCGTTATAATTT
TCTTTATAGTAATGCCAATCATGATCGGTGGGTTTGGAAACTGACTTATC
CCCCTTATAATTGGCGCCCCGATATGGCATTTCCTCGCATGAATAATAT
AAGCTTCTGACTTCTCCCCCTCTTTCCTCCTGCTTCTCGCCTCCTCTG
GGGTAGAGGCTGGGGCTGGAACCTGGGTGGACAGTTTACCCTCCCCTGGCA
GGTAATCTCGCCCATGCCGGCGCATCCGTTGACTTAACCATCTTCTCTCT
ACACTTAGCAGGGATCTCTTCTATCCTGGGGGCTATTAATTTTATTACTA
CAATTATTAATATAAAAACCCCCGCCATCTCACAATATCAAACCCCCCTA
TTTGTATGAGCAGTCCCTTATTACTGCCGTTCTTCTCCTCCTTTCCCTTCC
TGTTCTTGCGGCCCGGAATTACTATACTCCTCACGGATCGAAATCTCAACA
CCACCTTCTTCGACCCCGCAGGAGGGGGGACCCAATTCTTTATCAACAT
CTATTTTGATTCTTCGGCCACCCCGAAGTCTACATTCTCATCCTCCCGGG
GTTTCGGAATAATCTCTCACATTGTTGCCATTATATGCAGGTAAGAAAGAAC
CTTTTCGGATACATGGGGATGGTCTGAGCTATGATGGCAATTGGTCTCTTA
GGTTTCATTGTCTGAGCTCACCACATGTTTACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCCTAGA
GAGGAACCTG

CACCCCTCCAACCTGYCTCGGCATGTTGCTGCTGTCRGACGCYCAACAGTG
CACAAAGCTGTGAGAGCTGTCMTGGGTATGTGCCCTCAGCAATTTTCCCG
CCATCTGCAAGACGGAGGACTTCCCTCAGCTGCCCAAAGACATGGTCGTG
CAGCTTCTGTCTCACGAAGAGCTRGAGACGGAAGATGAGAGGCTGGTTTA
TGAGGCCGCCCTCAGCTGGGTCAACTATGACCTGGAGAGGAGACACTGCC
ACCTGCCAGAACTGCTGAGAACCGTGCCTTAGCCTTGCTCCCTGCCATC
TTCCCTCATGGAGAACGTCTCCACAGAGGAGCTGATCAACGCCAGGCCAA
GAGCAAGGAGCTGGTAGACGAGGCCATCCGCTGCAAGCTGAAGATCCTGC
AGAACGATGGAGTGGTCAACAGCCCCGTGCCCCGGCCTAGAAAAACCAGC
CACGCCCTCTTCTGCTGGGAGGGCAGACCTTCATGTGTGACAAGCTGTA
CTTGGTGGACCAAAGGCCAAAGAGATCATCCCCAAGGCCGACATCCCCA
GCCCCAGGAAGGAGTTCAGTGTGTTGTCATCGGCTGTAAGGTGTACGTG
ACAGGTGGGC--CGGCTC-AGAGAACGGGGTGTCTAAAGAYGTGTGGGT
CTACGACACCGTCCATGAGGAGTGGTCCAAGGCAGCACCYATGCTGATCG
CCAGGTTTGGCCACGGCTCTGCCGAGCTCAAACACTGCCTYTACGTGGTG
GGAGGGCACACAGCGGCCACTGGCTGCCCTCCAGCCTCGCCCTCTGGATG
AGTACATTGTTGTGTTTAGTCGTTCTACCACAAGGCTGATTCTAAACGAA
GCAGAGGTGATCCTTGGCTGGCTCAAGAGTTTCAAATGAGAGTGGTTAC
GGTGTCTTGGAGGAGCAAGCCTTCCCAGCATTATCCAGGTGATCAGTG
GTGCCCTCCATGTTAGTTAGTATGCATGGAGCTCAGCTCGTCACATCTCTC
TTTCTCCCTAGAGGAGCTGCTGTGGTGGAGCTTTTCCCTATGCTGTGAA
CCCAGAACAGTACACCCATAAAAACCCCTCGCCTCCCTGCCAGGCATGG
ACCTTCAGTACGTTTCTGGAGGAACATGGTTGAAGAGAACACTGTGGCC
CACCCCGAAAGACCGTGGGACCAAGGAGGCATTGCCCACTTAGACAAGGA
AGAACAAGAGCGAATCCTAGCCAGCAAGGATGTCCCAGGCACCTGTGCT
GCCGCAACCCCGAGTGGCTTTTTAGGATTTACCAGGATACTCTGGTGGAC
ATCCCGTCTTTCATGGAAGTCTTAA---GGAGGGTCTGAAA---ACAAG
ACCGAGCTTGAAGAA---GTCCAAGCCGGCCAGCACAGTTCACCCGGGAC
GCGTTAGAGAACCTCAGTGCCAGACATCAGTCCAAGCCACTATCGAGGCT
AAGCTCACAGTGTCTGGCAGATCCCATGGAACCTTAAGTACCTAAAGGT
GCGAGA-----AAAAAGGATCCCAGCAAGG

GAACCCTGGAGGATCAAATCATTCAGGCAAACCCTGCACTGGAAGCTTTT
GGTAATGCCAAAACAGTGAGGAATGATAATTCCTCCCCTTTGGGAAATT
CATTCGAATTCACCTTGGAACGAGTGGGAAGCTGTCCTCTGCAGACATTG
AAACGTACCTGTTGGAGAAATCCCGGGTCACCTTTCAGCTTAAGGCAGAG
CGGAATTATCATATCTTCTTCCAGATCTTATCCAACCATAAGCCAGAGCT
GTTGGACATGCTGTTGATCACCAACAACCCTTATGACTACTCATTCATCT
CCCAAGGAGAGGTGACAGTAGCATCCATCAACGATTCGGAGGAGCTGATG
GCCACTGACAGTGCATTCGATGTGCTCGGCTTCACTCTAGAAGAGAAGCT
GGGAGTCTACAAGCTGACAGGGGCTATCATGCACTATGGGAACATGAAGT
TCAAGCAAAGCAACGCGAGGAACAGGCTGAGCCTGATGGTACAGAGGCT
GCTGATAAGTCAGCTTACCTAATGGGGCTGAACTCAGCTGACCTCATTA
AGGACTCTGTCATCCGAGAGTAAAGGTAGGAAATGAGTATGTAACTAAAG
GTCAGGGTGTTCGATCAAGTCTACTAC-----

-----TATCTCAT
CTACGCCTCCTTCTCCTTCATGGGATGTTTACAGATCAGCGACGGGTCGA
ACATTGTCAACCTGCTGGCCAGCAACTCCCCGAGCGTCTCGTATGCGCTC
ACGCAGCAGAAGTACTTCAGCAACTACAGCCCCGTATCGGGTTCATACAT
CTACGAGCCCATCGAGTACTGGAACCTCGACGGTGCAGGAGCACCTGAAGA
CGCTGAGCCACGGCTTCAACAAGATCTCATGGATGGACAACCTTCTCCAG
TACCTGCGGGTGGCGAACGTGAGCGCGGCCACCAAGGCCGACTTCGTCAC
CATCCTCCGGGGCTCCTTCTCGGGAGCCCTGAGTACCAGCACTTCACCG
AGGACATCATCTTCTCCAAGA---ACCGCGAGAGCG----ACGAGTAT
GACGTCATCGCCTCGCGCATGTACCTGGTGGCGCGACCACGGAGAAAAA
ACGCGAGGAGGTGGTGGAGCTCCTGGAGAAGCTGCGGCCGTTGATGCTCA
TCAACAGCATCAAGTTCATCGCCTCAACCCACCTTCGTCTTCATGGAC
CGTTACAGCTCCTCCGTGCTCTCGCCATCCTCACCTCCGGCTTCAGCGT
GCTCACCGTCTCATCCTCACCTTCTCCTCGTCATCAACCCGCTGGGGA
ACTTCTGGCTCATCCTGACGGTCACGTCGTGGAGCTGGGCGTCTGGGC
CTGATGNN

NNNNNNNTGGGCTCTCTGGATGGGCTACATCTGTGGAGGACTCTCCGGCCG
ACACCATAAACCCTGCTTTCGCTATGATGTGGCCCTGGTCTCAGCCCTG
AAAGACTTAGAGGAGGACATCATGACAGGGCTGAAAGAGCGTGAGCTGGA
AGACAGTGCATGCACCTTGGGCTTCAATGTTATGATCAAGGAATCCTGTG
ATGGCATGGGAGATGTCAGCGAGAAGCATGGTGGAGGGCCAGTGATCCCT
GAGAAGGCTGTTTCGTTTCTTTCACCGTCATGTTCGATCTCTGTCCAGCC
AGAGGGAGAGAAC-----GAAGAAG
TCGTTATCTTACGGGAGACAAAGCCCAACTCTGAGCTGTCCTGTAAGCCG
CTATGCCTGATATTTGTGGATGAGTCTGACCATGAGACTGACTGCTGT
GTTAGGGCCTGTGGTAGCAGAGAGGGATGCAATGAAGGACAGCCGGCTCA
TCCTCTCGCTGGGCGGCCTCCCCGCTCTTCCGGTTCAGCTTCAGAGGG
ACAGGCTACGACGAAAAGAAGGTGCGGAAGATGGAGGGCCGGGAGGCCTC

AAGCTATCCGTTGTAAGCTGAAGATCCTACAGAACGATGGTGTGCTTAAAC
AGCCCATGTGCTCGTCCAAGAAAAACCAGCCATGCCCTCTTTCTTCTGGG
CGGGCAAACCTTTCATGTGTGATAAATTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGY
GCCTGTGCCATCGGCTGTAAGGTGTACATCACTGGCGGGA--GAGGCTC-
AKAAAAATGGYGTGTCCAAAGATGTTTGGGTCTATGACACCGTCCACGAGG
AATGGTGAAGGCAGCACCCATGCTTATTGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACATGGTAGGAGGTCACACCGCATCGAC
TGGCTGCCTTCCGGCCTCTCCATCTGGAGGAATACATTTGTTGTGTTTAGC
CGCTCAACAACGAGGCTGATACTGAATGAAGCTGAGCTAATCATGACACT
GGCCAGGAGTTCCAGATGAAAGTAGTCACAGTATCCCTTGAGGAACAGT
CTTTCCCCAGTATTGTGCAGGTAATCAGTGGTGTGCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCATTGTTCCCTCCCCAGAGGAGCCAC
TGTGGTGGAGCTGTTCCCTTTTGTGTGAACCCAGAGCAGTACACCCCAT
ACAAAACCCTTGCTTCCCTTCCAGGCATGGACCTTCACTATATCTCTTGG
AGGAACACTAAGGAGGAAAAACACCATCATTACCCAGACAGACCCCTGGGA
ACAAGGGGGTATCGCTCACTTGGATAAGGAGGAGCAAGAGCGAATACTGG
CAAGCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTT
TTCCGTATCTACCAGGATACTTTGGTAGACATCCCTTCCTTTTTGGAAAGT
CATCAA---AGAGGGCATGAAG---ACAAAGCCAGCTTGAAGAA---GT
CAAAGCCGGCCAGCACACTACACCCGGGCCGAGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACCACAAATGAGGCTAAACTTACAGTCTCCTGGCA
GATCCCGTGGAATCTGAAATACCTGAAGGTGAGAGGTCAAATACGANNNNNNNNNNNAA
AAAGGACACCAGCAAGGGTACATTGGAGGATCAAATCATCCAGGCAAACC
CAGCGTTGGAAGCCTTCGGCAACGCCAAAACACTGAGAAATGACAATTCA
TCGCGTTTTTGGAAAAATTCATCCGAATTCACCTTTGGCACAAGTGGCAAGCT
GTCATCTGCTGACATTGAGACATACTGCTGGAGAAGTCACGCGTCACCT
TTCAGCTCAAGGCTGAGAGAAATTACCACATCTTCTATCAGATCCTGTCC
AACCAGAAGCCAGAACTGTTGGACATGCTGCTGATCACTAACAACCCATA
CGACTACTCCTACATCTCCCAAGGAGAGGTATCAGTCGCCTCCATCAATG
ACTCAGAGGAGCTGATAGCCACTGACAGTGTCTTTGATGTGCTCGGCTTC
ACTCCAGAAGAGAAGATGGGAGTCTATAAACTGACGGGGGCCATCATGCA
CTATGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAACAGGCTGAGC
CGGATGGGACTGAGGCTGCTGATAAATCAGCATACTAATGGGGCTAAAC
TCTGCTGACCTCATCAAAGGGCTATGCCATCCCAGAGTCAAAGTAGGAAA
TGAATATGTCACGAAAGGCCAAAGTGTGGACCAAGTCTACTACCCCAACA
AGGAGGCCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTA
GGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCAGGTGATCTCAC
CTGCAAAGTCTGCATGCAGACCTACGAAAGCACGCCCGTGTCTTAGAGC
ACCTGAAGAGCCACTCCGGAAAGTCTTCAGGTGGTACCAAGGAGAAAAA
CACCCGTGCGATCACTGTGACCGGCGTTTCTACACACGGAAGGATGTGAG
ACGGCACATGGTGGTCCACACTGGCCGAAAGGACTTCCTGTGCCAGTACT
GTGCTCAGCGTTTTTGGCAGGAAGGACCATCTGACACGTCATGTGAAGAAG
AGCCACTCACAGGAGCTGCTGAAAATCAAGACGGAGCCTCCTGATATGTT
AGGCTTTTTAGCTTCCGGGTACCACCTTGTCTGTGAAGGAGGAGCTCA
GCCCCATGATGTGTGGCATGGGTCCCAACAAAGACCCCATGATGGGCAA
CCGTCCCCAGTGGGGCACCTTTTCCAATGAGCATGTACAACCCCCACCA
T-----CTCCAGGCCATGTCTAATCTGGTGTGGGCCACCCA-----C
ACCCATCCCTGATGCCAGTTCCCTTGTCTGCAGCTATGGGAATGGGCTGT
CACATGGAATATCTCATCTATGCCCTTTTCTCATTCATGGGATGTTTACA
AATTAGTGATGGATCAAATATCGTGAACCTGCTGGCTAGTAACTCTCCAA
GTGTTTCRTATGCTTTGACACAGCAAAAATACTTACAGTAACTACAGTCTCCT
GTGATTGGGTTTTACATCTATGAGCCATTGAATACTGGAACCAACGGT

GCAGGAACACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGA
TGGACAACCTTTTTCCACTACCTGCGAGTGGTGAATGTGAGTGGTCAACC
AAGAGTGACTTCATCACCATACTCAAGAGCTCCTTCCTACGCAGCCCGGA
GTAYCAGCACTTCACTGAGGACATCATATTCTCAAAA---ACCGTGAGA
CTG-----ACGAGTACGACATTATTGCATCGCGGATGTACCTGGTGGCA
CGGACAACAGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCTGGAAAAGCT
GCGTCCGTTGATGCTGATYAACAGCATCAAATTCATTGCCTTCAATCCTA
CATTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCATCTCTCCCATCCTG
ACCTCAGGATTCAGCGTACTCACAATCCTCATCCTCACTTTCTTCCCTGGT
CATCAACCCCTTGGGTAACCTTCTGGCTCATCCTCACTGTTACATCTGTGG
AGCTGGGTGTCTTGGGTTTGGATGGGGTTTACCAGTTTGAATGGCAGCCA
GCTCTTAAGAATGTTTCTACATCTTGCAATGTTGGCATTATTAATGGGCT
CTCTGGATGGGCTTCTCAGTGGATGACTCCCCAGCTGACACCATCACTC
GGCGGTTTTCGCTATGATGTGGCACTGGTGTGAGCATTAAGGATCTGGAG
GAGGACATCATGGAGGGGCTGAGAGAGAGAGGGATGGAAGACAGTACTTG
CACCTCAGGCTTCACTGTCATGATCAAGGAATCTTGTGATGGCATGGGCG
ATGTCAGCGAGAAGCATGGTGGAGGACCAGCTGTTCCCTGAGAAGGCTGTA
CGTTTCTCTGTACCATTATGTCTATCTCTGTCTTGGCGACCGATAGGGA
G-----GAAGAGGTTACCATCTTCA
GAGAGCCAAAGCCAAACTCAGAACTGTCTTGTAAAGCCTCTTTGCCTGATG
TTTGTGGATGAGTCAGACCATGAGACACTCACAGCCATCCTGTGGCCTAT
AATTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCTATCCATTG
GTGGACTACCTCGCTCCTTCCGTTTCACTTCAGAGGCACAGGATATGAT
GAGAAGATGGTGCCTGAGATGGAGGGCCTTGAAGCTTCAGGATCCACCTA
TATCTGCACTCTTTGTGATTCCAGTCGGGCAGAGGCCTCTGAAAACATGG
TCCTTCACGCAGTTACCCGCAGCCATGAAGAGAACCTAGAACGTTATGAA
ATATGGAGAACCAACCCCTTTTCTGAGTCAGTAGATGAGCTGCGAGACAG
AGTCAAAGGGGTCTCTGCCAAGCCCTTTATGGAGACCATCCCACCCTGG
ATGCATTGCACTGTGACATAGGCAATGCCACTGAGTTCTACAAAATTTTC
CAGGATGAGATTGGGGAGATGTACCAGAAGGT---CAAT---CCGAGTCG
AGAGGAGCGGCGCAGCTGGAGAGCAGCCCTAGATAAACAGCTGAGGAAGA
AGATGAAGCTCAAACCCATAATGAGGATGAATGGGAACATGCCCCGCAAG
CTAATGACCATGGAGGCTGTGGAGGTGGTGTGTGAGTTGGTGCCCTCAGA
GGAGAGGAGGGAGGCTCTGAGGGAGCTTATGAGACTCTACCTCCAGATGA
AGCCTGTGTGGCGAGCCACTTGCCAGCCAAGGAGTGCCCTGACGAGCTA
TGTCGCTACAGTTTAAATCCCAGCGCTTTGCTGACATCCTCTCCTCTAC
CTTCAAATATAGGTACAATGGAAAAATAACAAATTACCTGCACAAGACCC
TGGCCCATGTGCCTGAAATCATAGAGAGAGATGGATCGATAGGAGCATGG
GCTAGCGAGGGAAACGAGTCGGCAAACAATCTTACACCATCGAGATGGG
TCCCTTGGGGCCTCGATGGAAGGAGAGCCACAGCCTTTCACCTGCTCCA
TTGAAGACCCACAAAACAGACAAAAGTTCAAGGGCATCAAGACGTACATT
TCGTACCGAGTCACGCCGAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGT
ACAACCGCATACTGCACAAGTTCATG
TGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTTGAG
GAAGACTTCATTGAGAAGCGCAAGAGGCCACTAATACTGTGGATGAACCA
CATGACCAGTCACCCGTCCTCTCCAGTATGAAGGCTTCGAGCACTTTC
TGATGTGTGCTGATGACAAGCAGTGGAACTGGGCAAGAGGCGGGCGGAG
AAGGACGAGATGGTGGGTGCCATTTTCATGCTGACCCTCCAGATCCCTAA
CGAGCACCAGGACCTCAGGATGTTGAGGAGCGCATTGACTCCTTCAAGG
CTTTTGCTAAGAAAATGGATGACAGTGTGATGCAGCTCACACATGTCGCC
TCGGAGCTGGTGCCTAAGCACCTGGGTGGGTTTCAAGGAGGTTCCAGCG
GCTGGGAAACTCCTTCCAGTCCATTAGTCAGGCATTCATGCTGGACCCTC
CCCACAGCTCAGAGACCTTCAACAACGCCATCNNNNNNCCTTGGCCAGGTTCCCT

AAACTGACCTCTCTGGGTTTCATCATTTGGAGTCGGTGTGGTTGGAAACCT
CCTGATCTCCATTCTGCTGGTCAAAGACAAGAGCCTCCACCGAGCGCCCT
ACTATTTCCCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCTGCCATC
TGCTTCCCTTTTGTCTTTACCTCGGTCAAGAATGGATCTGCCTGGACCTA
TGGCAGCTGACCTGCAAAGTATCGCCTTCTGGGTGTACTCTCTGT
TTCACACAGCGTTTATGCTATTCTGTGTGTCAGTGTACGCGCTACCTGGCC
ATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCT
AGCTGTCATCTGCATGGTGTGGACGTTGTGTCAGTGGCTATGGCGTTCCTGC
CTGTGCTAGACGTAGGGACGTAATCTTTTATCCGTGAGGAGGACCAGTGC
ACATTCAGCACCCTCCTTTCAGGGCGAATGATTCAGTGGGCTTCATGCT
CCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAACCTCA
TCTTCTTTGTCCACGACCGTTCGAAAGATGAAGCCTGTCCAGTTTCGTGCCT
GCTGTCAGCCAGAATGGACCTTCCACGGGCCAGGTGCCAGTGGKCAGGC
GGCGCAAATTGGTTGGCCGGATTTCGGACGAGGCCACCCACCTACTT
TGTTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTCTACTT
GTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACAT
CATGACGTTTTTCTTCCCTGGCACTGTGGGGGCCCTATCTGGTTGCCGTGCT
ACTGGCGGGTGTGTTGCAAGGGGCCCTGTGGTCCCTGAGGGCTACCTGACA
GCAGCCGTATGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTTCATCGC
TCTTNNNNNNNNNNNNNNNGCCAAATCTCGCTTTCACCCTGGCATGGGGACTGGTCCTGGCACGG
AGC---GCAGCGTCCCACTCGGCAACAGCTTGTATCCCCGCAGCAAAGC
GAGGAGCCCCTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---C
TGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCGCT----
-----GATTTGCGCCGTAACCGGCCACCTTGTGTCTTACGCAGCGGCC
GGAGTGAAGGCTC-----TTCCCTGCCGACTGCAGGCTGCTCCAACCG
GCCTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GGAGGACGCA
CGCCCGCGCAGTACTGTGGTGTGAATAGCAAATCGAGCTCGGTCTTTTCC
TGCTGGCCCGCTAACTCTATCGGTGGCAGAGCGGGCA---CC---ACTA
CCTGT-----CTGAGGA---GGGA---GACTC---CATCCCGACAG
AGAGGTCACCC---AT---CGGCGGCTCGGAGGAG---ACCAAACCCAAA
GACATAAC---ATCAGA---GTCGAACTGGATAGAG---ACCCCGTCCTC
CATTAAGTCCATCGATTTCGAGCGATCTGTTATCTTTG---AACARGCCA
AAAGGAGAAGGATCTCACCTTCTGCCACGCCG-----GTGTCAGAG
ACAGTGTCCCGCTAAAGTCTGAGCATCACTCAACAGGCGAAGTACAGA
GAGAGAAGTGGCGTTGGGGATAAAATCCGTTTCGCGGATGGGATGGGCGCAT
TTAAAATAAACCACAGCTCCACGATATTGGCTCCGG---ACAGACGGCG
TTTTCTCCAGGCG---CCCGCTAC---GCAGCAGCCGCCCTGGGA--
-CACCATCA-----TCACCCGACCCACGTTGGCTCT---TACTCCACGG
CGGCTTTCAACTCCACCAGGGACTTCTCTTCAGAAATCGGGGATTCGGG
GACGCCACAGG-----CGCGCAGCACAGTTTGTTCGCCTC---
-----CGGAAGTTT---T-----GCAGGGCCACATGGACACTCAGATG
CAGCGGGGCACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCGGCGAGC
CATGCGACTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGG
GGACATGTACGGACGGGCCGACCAGTACGGCCACGTTACAAGCCCGCGGT
---CCGACCATTATGCTTCGACCCAGCTGCACGGCTACGGCCCCATGAAC
ATGAATATGGCCGCA---CACCACGGAGCAGGGGCCCTTCTTTTCGATACAT
GAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCGAGCCGGAGC
AGCTGACGAATCCCAAAAAGTTCGTGCAACAAAATTTTAGCACGATGCAC
GAGCTCGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCGGAGCAGAC
CAACCACATCTGCTTCTGGGAGGAATGTTTCGAGAGAAGGAAAGCCATTCA
AAGCCAAATACAACTTGTAAATCATATCAGAGTACACACCGGAGAAAAG
CCCTTCCCGTGTCCGTTTCCCGGCTGTGGCAA

>Scopelarchus michaelarsi

NNNAGATGACCAGATTTATAATGTCA
TCGTCACCGCCACGCTTTCGTAATGA
TTTTCTTTATAGTTATGCCTGTTATAATCGGCGGATTCGGGAACTGACTG
ATCCCCTTAATGATCGGAGCCCCGATATAGCATTCACGAATAAATAA
CATAAGCTTCTGACTGCTCCCTCCCTCTTTCTCCTCCTGGCTTCCT
CTGCCGTAGAAGCAGGTGCCGGTACAGGATGGACTGTCTACCCGCTCTC
TCTAGCAACCTAGCACACGCAGGGCCTCCGTTGACCTAACTATTTTTTC
ACTTCATCTAGCGGAATTTCTTCAATTCTGGGGCAATCAACTTTATTA
CAACAATCATTAACATAAAACCCCCGGCTATTACTCAGTACCAAACACCT
CTGTTTCGTTTGGAGCTGTTTAAATTACAGCCGTGCTTCTCCTACTCTCCCT
GCCTGTCCTAGCGGTGGAATTACAATACTGCTAACCGACCGAAACCTAA
ATACAACCTTCTTCGACCCAGCAGGAGGGGGTGACCAATTCTGTACCAA
CATCTCTTCTGATTTTTTCGGCCACCCAGAGGTCTACATTCTTATTCTCCC
CGGCTTCGGAATGATTTCTCACATCGTCGCTTATTATTCTGGTAAAAAAG
AACCTTTTGGTTATATGGGCATGGTCTGAGCAATGATAGCAATTGGCCTT
CTCGGATTTATCGTTTGGAGCCCATCACATGTTTACAGTTGGGATAGACGT
AGACACCCGTGCCTATTCCTGGAGAGGAACCTGCACCCGTCCAAGTGCCT
CGGCATGCTGCTGCTGTCGGACGCCACCAGTGCACCAAGCTGTCGGAGC
TGTCTGGGGTATGTGTCTCAGCAACTTCCCCGCCATCTGCAAGACGGAG
GACTTCTCCAGCTGCCCAAAGACAKGGCGGTGCAACTCCTGTCCCACGA
AGAGCTGGAGACGGAAGACGAGAGGCTGGTTTATGAGGCTGCCCTGAACT
GGGTCAACTATGACCTGGAGAGGAGACTGCCACCTGCCAGAGCTGCTG
AGAACCCTACGCTCGCCTTGCTTCCCGCCATCTTTCTCATGGAGAACGT
GTCCACGGAGGAGCTGATCAACGCCCCAGGCGAAGAGCAAGGAGCTGGTGG
ACGAGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTC
AACAGTCCCTGTGCCCGGCCAGAAAGACCAGCCACGCCCTCTTCTGCT
GGGAGGGCAGACCTTCATGTGCGACAAGCTGTACCTGGTGGACCAGAAGG
CCAAAGAGATCATCCTCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTC
AGCGCCTGCGCCATCGCTGCAAGGTCTACGTCACGGCGGTG--GCGG
TC-CGAGAACC GCGAGTCTAAAGAC-TTCAAGTCCCCGCCACCGTCCCCG
AGGAGTGGTCCCAGGCCCCCCCCCTACTCATCGCCCGGTTTCGGGCACCAA
TCCGCCGAGCTCAAACACTGCCTTTACGTCGTCGCGGGACACACCGCCGC
CCCA-----

-----TAGTAGAGCTCTTCCCCTACGCTGTGAACCCAGAACAGTACACCC
CATAAAAACCCTAGCCTCCCTACCGGGCATGGACCTTCAATATGTTTCC
TGGAGGAACACCATTGAGGAGAACACTGTCGCCACCCGGACAGACCCTG
GGACCAAGGGGGCATTGCCCATTTGGAGAAAGAAGAGCAGGAGAGAATCC
TAGCCAGCAAGGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGG
CTCTCAGGATTTACCAGGACACTCTGGTAGACATCCCCTCCTTCTGGA
AATCCTCAA--GGAGGGCCTGAAG--ATGAGGCCACCCTGAAGAA--
-GTCTAAGCCGTCCAGCACGGTGCACCCAGGCCGGTTCAGAGAACCCAG
TGCCAGACTTCGGTCCAAGCCACCAACGAGGCTAAACTCACAGTATCCTG
GCAGATCCCCTGGAACCTTAAGTACCTGAAGGTGCGAGAGGGAAGT----
-----AAAAGGATGCAAGCAAGGGAACCCTGGAGGATCAA
ATCATCCAGGCAAACCTGCGCTGGAGGCTTTTGGTAATGCTAAAACATT
GAGGAACGATAACTCCTCCCCTTTGGTAAATTCATCCGAATTCACTTTG
GAACCAGTGGTAAACTGTCTCTGCGGACATTGAGACCTACCTGCTGGAG
AAGTCACGGTGCACCTTTCAGCTTAAGGCAGAGAGGAACTACCACATCTT
CTTCCAGATCCTGTCCAATGAAAAGCCAGAGCTGCTGGACATGCTGTTGA

-----AAAGAGAGGTGGCTTTG
GGGATAAATCCGTTTCGCGGACGGGATGGGCGCCTTCAAATAAACCCACAG
CTCTCATGACGTTGGCTCCGG---GCAAACGGCGTTTTCCTCCCAGGCG--
--CCCGGCTAC---GCGGCGGCTGCCCTGGGA---CACCATCA-----C
CACCCGACCCACGTTAGCTCC---TATTCCACCGCAGCTTTCAATTCCAC
CCGGGACTTTTCTTTCAGAAACCGCGGCTTCGGAGACGCCACCAG-----
-----CGCGCAGCACAGTTTGTTCGCCTCCGC---CGCGGGAAGTTT-
--C-----GCAGGGCCACATGGACACTCAGATGCCGCGGGCCACCTGCT
CTTCCCTGGGCTGCACGAG---CAAGCCGCGAGCCATGCCTCGTCTAACG
TTGTAAACAGCCAGATGCGACTGGGCTTTTCTGGGGACATGTACGGGCGG
GCCGACCAGTATGGCCACGTTACAAGCCCACGGT---CCGACCACTACGC
TTGACCCAATTGCATGGCTATGGCCCTATGAACATGAATATGGCGGCT-
--CACCACGGAGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATTAAA
CAAGAGCTCATCTGCAAGTGGATCGAACCAGCAACTGACGAATCCCAA
AAAGTCGTGCAACAGAACTTTTTCAGCACGATGCACGAGCTGGTGACCCATC
TGACGGTGGAG-----

>Scopelengys tristis

AGCCTTCTCATTCGGGCCGAACCTCAGTCAACCAGGCGCCCTCTTAGGGGA
CGACCAGATCTACAATGTAATCGTAACGGCCATGCCTTTGTAATAATTT
TCTTTATAGTAATACCCATTATGATTGGGGGGTTTGGGAATTGACTAATT
CCTCTCATGATCGGAGCCCCGACATAGCATTCCCCGAATAAATAACAT
GAGCTTCTGGCTTCTCCCTCCCTCCTTCCTCCTGCTCCTAGCGTCCCTCCG
GCGTAGAAGCCGGGGCCGGAACCGGCTGAACAGTCTATCCTCCCCTTGCA
GGCAACCTCGCCCACGCTGGGGCCTCTGTTGACTTAACAATTTTTTCCCT
GCATCTAGCAGGTATTTCTTCAATTTTAGGCGCAATCAACTTTATTACAA
CTATCATTAAATATGAAGCCCCCGCAATTTCCCAATATCAAACCCCCTA
TTTGTGTTGAGCCGTCCTAATTACAGCAGTCCCTTCTCCTTCTTCCCTGCC
CGTCTGGCCGCCGGAATTACCATGCTCTTAACAGACCGAAACCTAAATA
CCACCTTCTTCGACCCGGCTGGGGGAGGCGACCCCATCCTCTACCAACAC
CTCTCTGATTTTTTGGTCAACCCTGAAGTTTNNNNNNNNNNNNNNNNNNNNNN
NN
NN
NNTTCTAGAGAGGAATCTTC
ACCCGTCCAACCTGCTTGGGCATGCTGTTGCTCTCGGATGCTCACCAATGT
ACTAAGTTATCAGAGCTTCTTGGGGCATGTGCCTCAGCAACTTCCCCGC
CATCTGCAAGACGGAGGACTTCCCTCAACTTCCGAAAGACATGGTGGTGC
AGCTCTTGTCCCACGAAGAAGCTGGAAACGGAAGATGAGAGACTGGTTTAC
GAAGCCGCCCTTAACTGGGTGAACTACGACCTGGAAAGGAGGCACTGTCA
TCTGCCAGAGCTGCTGAGAACAGTCCGTCTGGCTCTGCTTCCCTGCCATCT
TCCTCATGGAGAACGTTTCCACAGAGGAGTTGATCAATGCCCAGGCCAAA
AGCAAAGAGCTTGTGGATGAGGCCATCCGCTGCAAACCTGAAGATCTTACA
GAACGATGGTGTGGTTAACAGCCTTTGTGCCCGGCCAGGAAGACCAGCC
ATGCTCTCTTCCCTGCTAGGAGGGCAAACCTTCATGTGTGACAAGTTGTAC
CTGGTGGACCAGAAGGCCAAAGAGATAATCCCCAAGGCAGACATCCCCAG
CCCCAGGAAGGAGTTCAGCGCCTGTGCCATCGGTTGTAAGGTTTACATCA

CCGGCGGGA--GGGGCTC-AGAGAACGGTGTGTCTAAAGACGTATGGGTC
TACGACACCGTCCATGAGGAGTGGTCTAAGGCAGCGCCCATGCTTATTGC
TAGGTTTGGCCACGGCTCAGCTGAATTGAAACACTGCCTCTACGTGGTGG
GAGGTCACACTGCAGCTACNNNNNNNNNNNNNNNNNNNNNNNNNGGACGAGTACATTGTGGTGTTCAGTC
GTTCG

ACGACGAGACTCATCTCAACGAAGCGGAACTGATTATGGCGCTGTACCA
GGAGTTTCAGATGAGGGTGGTCACCGTGTCCCTTGAAGAGCAATCTTTCC
CCAGTATAGTCCAGCTTATCAGTGGTGCCTCTATGCTGGTCAGTATGCAT
GGGGCTCAGCTTGTACCTCACTTTTCCTCCCCAGAGGAGCTGTGGTGGT
GGAGCTCTTTCCCTATGCCGTGAACCCGGAACAGTACACCCCATATAAAA
CCCTCGCCTCCCTACCAGGGATGGACCTGCAGTATGTTTCCTGGAAGAAT
ACGATGGAGGAAAACACTGTCAACCACCCAGATAGACCCTGGGACCAAGG
AGGCATCGCCACCTGGAAAAGGACGAGCAAGAGCGAATCCTCACCAGCA
AGGATGTCCTCGGCACCTGTGCTGCCACAACCCAGAATGGTTTTTCCGA
ATCTACCAGGACACTCTGGTGGACATCCCTTCATTCCTGGAAGTTCTCAA
---AGATGGCCTGAAG---ACCAGACCTAGCTTAAAAA---GGCCAAGC
CAGCCAGCACAGTACATCCAGGCCGGGTCAGGGAAGCACAGTGTCAAACC
TCGGTCCAAGCCACCAACGAAGCTAAACTCACGGTCTCCTGGCAGATCCC
ATGGAACCTGAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGGTGTGGA
TCCAGAAGAAGGACACCAGTAAGGGAACCTTGGAGGATCAAATCATCCAG
GCCAACCTGCGCTGGAGGCCTTTGGGAACGCCAAAACCATCAGGAATGA
CAACTCATCCCGTTTTGGAAAATTCATCCGGATCCACTTCGGGACGAGCG
GTAAGCTGTCTATCTGCTGACATCGAGACCTACCTGCTGGAGAAGTCACGT
GTCACCTTTCAGCTCAAGTCCGAGAGGAACTACCACATCTTCTTCCAGAT
TTTGTCCAATCATAAGCCGGAGCTGTTGGACATGCTGCTCATCACTAACA
ACCCATACGACTACTCTACATCTCCCAAGGAGAGGTGACGGTAGCCTCC
ATCAACGACTCAGAGGAGCTGATGGCCACAGACAGTGCCTTTGATGTGCT
TGGTTTTCACTCAGGAGGAGAAGATGGGAGTCTATAAGCTGACTGGTGCCA
TTATGCACTACGGCAACATGAAGTTTAAGCAGAAGCAGCGTGAGGAGCAG
GCAGAGCCCCGACGGCAGCTGAGGCTGCTGATAAGTCAGCTTACCTAATGGG
GCTGAACTCTGCTGACCTCATCAAAGGACTTTGCCATCCCAGAGTCAAGG
TAGGAAATGAGTATGTCACCAAAGGCCAGGGTGTAGATTACATCTAGTAC

-----TATCTCATCTACGCTTCCCTTCTCCTTCATGGGAT
GTTTACAAATCAGCGACGGGTGAACGTCGTGAACCTGCTGGCGAGTAAC
TCTCCGAGCGTGTGCTTCGCGCTCACCCAGCAGAAGTACTTCAGCAACTA
CAGCCCTGTGATTGGGTTCTACATTTACGAACCCATCGAGTACTGGAACG
CCACGGTGCAGGAGCACCTGAAGACACTGAGTCACGGCTTCAACAAGATC
TCCTGGATGGACAACCTTCTTCCACTACCTGCGGGTGGTGAATGTGAGCGC
GTCGACCAAGAACGACTTCATCACCATCCTCAAGGGCTCCTTCTTACACA
GCCCCGAGTACCAGCACTTACCAGGACATCATCTTCTCCAAGA---AC

-----GCCAAAT
CCCGCTTTCACCTGGCGTGGGACTGCTCCTGGCACGGACC---GCAGC
GTCCCACTCAGCAACAGCTTGCTCTCTCCGCAACAACCGAAGAACCAC
TGTAAG---CCTCCCCGCAGCGATGGTTTGTACCC---CTGCCAACACC
GACTGGACTTTGCAGCCTCGGCATACGATGCCGCT-----GATTT
GCCGGTAAACGCAGCCACATTGCTGTCCTACGCAGCGGCTGGAGTGAAGGC
TC-----TTCCCCTGCCGACCGCAGGTTGCTCCAACAGATCTCTTGGGT
ATTACGCGGACCCGTCAG---GCTGG---GGCGCACGCACGCCACCTCAG
TACTGT-----AGCAAATCCAGCTCGGTCCCTTTCTTGCTGGCCCAC
GAATTCAGTTGGAGGCCGAACAGGCA-----CTAACTACCTAG-----
---CGGAGGA---TGGA---GACGC---CATCCCAACAGAGAGATCCCCA
---AT---TAATGGCTCTGAGGAA---ACGAAAGCCAAGACTT-----
GTCCGA---GTCTAGCTGGATAGAG---ACGCCATCTTCGATAAAGTCAA
TTGATTCAAGTGATTCTGGAATCTTTG---AGCAAGCAAAGCGGAGAAGA
ATTTACCGTCTGCCACACCA-----GTTACAGAAACTGTGTCCCC
GTNNNNNNNNNNN-----ACAGGCGAAGTCAAGAAAGAGAAGTGGCGTTGGGGATA
AATCCGTTTCAGACGGGATGGGCGCCTTCAAAAATAACCACAGCTCTCA
CGACATCGGCTCCGG---ACAGCGGCCTTTCTCCAGGGC---CCCG
GCTAC---GCAGCGGCCGCTCTGGGG---CACCATCA-----CCACCCG
ACCCACGTTAGCTCG---TATTCCACGGCAGCGTTCAACTCCACCAGGGA
CTTTCTGTTTCAGAAATCGGGGTTTCGGAGACGCCACCAG-----
-CGCCAGCACAGTGTGTGCCTCCGC---CGCGGAAGTTT---T---
---GCAGGGCCACATGGACACTCAGATGCCCGCGGCACCTGCTCTTCCC
CGGGCTTCATGAA---CAAGCCGCAAGCCACGCGTCTCTAATGTTGTCA
ACAGCCAGATGCGACTGGGCTTTTCGGGGGACATGTACGGACGGGCCGAC
CAGTATGGCCACGTTACAAGCCCGAGGT---CCGACCACTATGCATCGAC
CCAGTTGCATGGCTATGGCCCTATGAACATGAATATGGCCGCA---CATC
ACGGAGCAGGGGCTTCTTTTCGATACATGAGGCAGCCGATCAAACAAGAG
CTCATCTGCAAGTGGATCGAACCGGAGCAACTAACGAATCCCCAAAAGTC
GTGCAACAAAACCTTTACGCACGATGCAKAGAGCTMGTCAACCCATCTGACCG
AGGAGCATGTGGGGGGGCCAGAACAGTCAACCACATTTGCTTCTGGGAG
GACTGCTCTCGAGAAGGGAAACCGTTCAAAGCCAAAATACAACTTGTGAA
TCATATCAGAGTACACACCGGAGAAAACCGTTCCGTGTCCCTTCCCCG
GCTGTGGCAA

>Scopelosaurus harryi

AGCCTTCTCATCCGGGCGGAGCTAAGCCAACCCGGAGCCCTTCTAGGAGA
CGACCAGATCTATAATGTTATCGTACTGCCACGCTTTCGTAATAATCT
TCTTTATAGTAATACCAATTATGATCGGTGGTTTCGGAACTGACTTATC

CCTCTAATGATCGGGGCCCCGACATAGCGTTCCCTCGAATGAATAACAT
AAGCTTTTGACTACTACCCCTTCTTTCCTCTTACTTCTAGCCTCCTCTG
CCGTAGAAGCGGGTGCTGGGACAGGATGAACTGTCTACCCCTCTTGCC
AGCAACCTGGCACATGCCGGAGCTTCTGTAGACTTAACCATTTTCTCGCT
CCACCTGGCTGGGATCTCCTCTATTTCTAGGGCCATCAACTTTATCACAA
CAATTATTAATATGAAACCCCGCTATCACCCAGTATCAGACCCCTC
TTCGTATGGGCGTCTTATTACTGCCGTCTTCTCTTACTCTCCCTCCC
CGTCTGGGCGCAGGTATTACGATGCTTCTCACTGACCGAAACCTAAACA
CTACCTTCTTTGACCAGCAGGAGGTGGAGACCCCATCCTTTACCAACAC
CTATTTCTGATTCTTTGGCCACCCAGAAGTTTACATTTTAATTCTCCCGG
CTTTGGCATGATTTCCCATATCGTAGCCTACTATTCAGGTAAAAAGAAC
CCTTCGGCTACATGGGCATGGTCTGAGCCATGATAGCAATCGGCCTCCTC
GGGTTTATCGTCTGAGCCACCACATGTTTACAGTCGGAATGGACGTAGA
CACACGTGCTTATTCCCTTGAGAGGAACCTGCACCCATCCAAGTGCCTTGG
TATGCTGCTACTGTCAGATGCCACCAGTGCACCAAGCTGTCAGAGCTGT
CCTGGGGTATGTGCCCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGAC
TTCTCCAGCTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCATGAAGA
GCTGGAGACGGAAGATGAGCGACTGGTTTATGAGGCTGCCCTTAACTGGG
TCAACTATGACCTGGAGAGGAGACACTGCCACCTATCAGAGCTGCTGAGA
ACCGTACGCCTGGCCTTGCTTCCCGCCATCTTCCCTCATGGAGAACGTCTC
CACAGAGGAGCTGATCAATGCCAGGCAAAGAGCAAGGAGTTGGTGGACG
AGGCCATCCGCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAAC
AGTCCCTGTGCGCGGCCAGAAAGACCAGCCACGCCCTTTTCTGCTGGG
AGGGCAGACCTTCATGTGTGACAAGCTGTACTTGGTAGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCAGACATCCCAGTCCCAGGAAGGAGTTCAGC
GCCTGTGCCATTGGCTGTAAGGTCTACGTACAGGCGGGA--GAGGCTC-
AGAGAACGGCGTATCTAAAGACGTGTGGGTCTATGACACCGTCCACGAGG
AGTGGTCCAAGGCAGCACCCATGCTCATTGCCAGTTTGGCCATGGCTCT
GCTGAGCTCAAACACTGCCTCTATGTGGTTGGAGGACACACAGCAGCCAC
TGGCTGCCTCCAGCCTCTCCGTCTGGATGAGTGCATTGTTGTGTTTCACT
CGTTCAACAACAAGGCTGATTCTGAACGAAGCAGAGCTGATACTGGCACT
GGCCCAAGAGTTTTCAGATGAGGGTGGTTACAGTGTCCCTGGAGGAACAGT
CTTTCCCCAGCATAGTACAGGCCATCAGTGGGGCCTCCATGTTGGTTAGT
ATGCATGGAGCTCAGCTCGTCACCTCACTCTTCCCTCCCTAGAGGAGCTGC
TGTAAGTAGAGCTCTTCCCTATGCTGTGAATCCGGAACAGTACACCCCAT
ACAAAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCCTGG
AGGAACACTATTGAGGAGAACACTGTCGCCACCCAGACAGACCCCTGGGA
CCAAGGAGGCATTACCCATTTGGAGAAAGAAGAGCAGGAAAGAATCCTAG
CCAGCAAGGATGTCCCTAGGCACCTATGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTATGGTAGACATCCCCTCCTTGCTGGAAGT
CCTCAA---GGAGGGCCTGAAG---ACCAGGCCGAGCTTGAAGAA---GT
CCAAGCCGGCCAGCACGGTTCACCCGGGCGGGTCCGAGAACCCAGTGC
CAGACTTCAGTCCAAGCCACCAAAGAGCCTAAACTCACAGTATCCTGGCA
GATCCCATGGAACCTTAAGTACCTGAAGGTGCGAGAGG-----
-----AAAAAGGACACAAGCAAGGGAACCTTGGAGGATCAAATC
ATTCAGGCAAACCCTGCACTGGAGGCTTTTGGTAATGCCAAAACAATAAG
GAACGATAATTCTCCCGTTTTGGAAAATTCATCCGAATCCACTTTGGAA
CCAGTGGTAAACTGTCTCTGCGGACATTGAGACCTACCTGCTGGAGAAG
TCACGGGTACCTTTCAGCTTAAGCAAGAGAGGAACTACCACGTCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGTTGGACATGCTGTTGATCA
CCAACAACCCCTATGACTACTCCTACATCTCCCAAGGAGAAGTAACCGTG
ACGTCCATCAATGATTCAGAGGAGCTGATGGCCACCGACAGTGCCTTTGA
TGTGCTTGGCTTACGCAAGAGGAAAAGATGGGAATCTACAAGATGATAG

GGGCCATTATGCACTATGGCAACATGAGGTTCAAGCAAAGCAGCGTGAG
GAACAGGCTGAGCCTGATGGTACAGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAATTCAGCAGACCTAATCAAAGGACTCTGCCATCCCAGAG
TCAAGGTAGGAAATGAGTACGTACCAAAGGCCAGGGTGTAGATCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGATGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCCGCTACCG
CCGGGGATTTAACCTGCAAGGTGTGCATGCAGAGTTACGAGAGCACGCCG
GTTCTCTTGGAGCACCTCAAGAGCCACTCGGGAAAAGTCTTCGGGTGGTGC
CAAAGAGAAAAAGCACCCCTTGTGACCACTGCGACCGACGTTTCTACACTC
GGAAGGATGTGAGACGGCATATGGTGGTCCATACAGGCCGCAAGGACTTT
CTCTGCCAGTACTGTGCCAACGGTTTGGCAGGAAGACCACCTGACACG
GCATGTGAAGAAGAGCCACTCGCAGGAGCTCCTAAAGATCAAGACAGAGC
CTCCAGATATGTTGGGCTTGCTAGCGTCAGGGTCCCCGCCATGCCCTGTC
AAGGAAGAGCTCAGCCCCATGATGTGTGGCATGGGGCCCAACAAAGACCC
GATGATGGGTAAGTCTTCCCCAGCGGTGCACCATTTCCCATGAGCATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCCAATTCTGGGGTGGCT
CACCCG-----CACCCCTCCCTGATGCCCAGTTCCCTGTCTGCAGCTAT
GGGCATGGGCTGCCACATGGAATATCTCATCTACGCGTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGCGACGGGTGCAACGTGGTGAACCTGCTGGCG
AGTAACTCTCCGAGCGCCTCGTACGCCCTGACGCAGCAGAAGTACTTCAG
CAACTACAGCCCCGTGATCGGGTCTACATCTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACGCTCAGCCACGGCTTCAAC
AAGATCTCCTGGGTGGACAACCTTCGTCCACTACCTGCGGGCGGTGAACGT
GAGCGCGTCGACCAAGGCCGACTTCATCGCCGTCTCAAGGGCTCCTTCC
TGCGGAGCCCGGCGTACCAGCACTTACGGAGGACATCATCTTCTCCAAG
A---CCCACGAGAACA-----ACGAGTACGACATCATCGCCTCGCGCAT
GTACCTGGTGGCGCGCACCCACGGAGAAGCGGGCGGAGGACGTGGTGGAGC
TGCTGGAGAAGCTCCGGCCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCCTTCAACCCACGTTTCGTCTTCATGGACCCTACAGCTCCTCGGTCAT
CTCGCCCATCCTCACCTCGGGCTTCAGCGTGCTCACCATCCTCATCCTCA
CCTTCTTCTGGTTCATCAACCCGCTGGGGAACCTGTGGCTCATCATGACG
GTCACGTCCGTGGAGCTGGGCGTGCTGGGCCTGATGGGGTACCACACATT
CGAGTGGCAGCCAGCCCTCAAGAAATGTGTCCCCATCCTGCCATGTGGGTA
TCATTGATGGGCTTTCGGGTGGGCCCTCGGTGGATGACGTCCCTGCT
GACACCATCACCCGTCGGTTCGGCTATGACGTGGCCCTTGTATCAGCCCT
GAAGGACCTAGAGGAGGACATCATCGAAGGGCTGAGGGAGTGTGGGCTGG
AAGACAGTGTTCACCTCAGGCTCAGTGTATGATCAAGGAATCCTGT
GATGGCATGGGAGATGTCAGCGAGAAGCATGGTGGAGGGCCAATGATGCC
TGAGAAGGCTGTGCGTTTCTCTATCACCATCATGTCTGTCTCTGTCCAGG
CCGATGGAGATGAG-----GAGGTA
GTTGTCATCTTCAGGGAGCCAAAGCCCAACTCTGAACTGTCCTGTAAGCC
CCTGTGCCTGATGTTTGTGGATGAGTCTGACCACGAGACACTCACTGCTG
TCCTGGGGCCTTTGGTAGCAGAGAGGAATGCGATGAAGCAGAGCCGACTC
ATCCTCTCAGTGGGTGGCCTCCCCGCTCTTTCGGCTTCCACTTCAGAGG
CACAGGCTATGATGAGAAGATGGTGCAGAGATGGAAGGCCTGGAGGCCT
CAGGCTCCACCTATATCTGCACTCTTGTGACACCACTCGGGCAGAAGCC
TCTCACAACATGGTGTCCACTCGGTACACGCAGCCACGATGAGAACCT
GGAGCGCTACGAGATATGGAGGACCAACCCCTTCTCTGAGTCTGCCATGG
AACTGCGAGATCGGGTCAAAGGGGTCTCTGCCAAACCATTTATTGAGACC
CATCCGACTATGGATGCATTACATTTGTGACATAGGTAATGCCACTGAATT
CTACAAAATCTTTCAGGATGAGATTTGGGGAGGTGTTCCGGAAGGC---CA
AC---CCTAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTTGATAAA
CAGCTGAGGAAGAAGTTGAAGCTGAAACCAGTAATGCGGATGAATGGGAA

-----ACAGGCGAAGTCACGGAGCGAGAGGTGGCGTTGGGG
ATAAACCCGTTTCGCGGACGGGATGGGCGCCTTCAAATAAACACAGCTC
CCACGACATTGGCTCCGG--GCAGACGGCGTTCCTCCCAGGCG---C
CCGGCTAC---GCGGCGGCCGCCCTGGGA---CACCACCA-----CCAC
CCGACGCACGTACAGTCC---TACTCCACGGCGGCGTCAACTCCACGCG
GGACTTCTCTTCCGCAACCGGGGCTTCGGGGACGCCACCAG-----
----CGCGCAGCACAGTCTGTTCGCGTCCGC---CGCGGGAAGTTT---C
-----GCGGGGCCACATGGGCACTCCGATGCCGCGGGCCACCTGCTCTT
CCCCGGGCTGCACGAG--CAGGCGCGAGCCACGCGTTCGTCCAACGTCG
TCAACAGCCAGATGCGACTGGGCTTTTCCGGGGACATGTACGGGCGGGCC
GACCAGTATGGCCACGTACGAGCCCCCGGT---CCGACCACTACGCGTC
GACCAGTTGCACGGCTACGGCCCTATGAACATGAATATGGCCGCT---C
ACCACGGCGCGGGGGCCTTCTTTCGGTACATGCGGCAGCCGATCAAGCAG
GAGCTGATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAACCCCAAGAA
GTCGTGCAACAAAACTTTCAGCACCATGCACGAACCTCGTACCCACCTGA
CGGTGGAGCATGTGGGAGGACCCGAGCAGTCGAACCACATTTTGTCTTG
GAGGACTGTGCCCGGAGGGGAAAACCGTTCAAAGCCAAATACAACTTGT
GAATCACATCAGGGTTCACACGGGGGAGAAACCGTTCCCGTGTCCGTTCC
CCGCT-----

>*Searsia koefoedi*

AGCCTCCTAATTTCGAGCTGAACTAAGCCAGCCCCGGGGCCCTACTAGGCGA
CGACCAAATTTATAATGTTATCGTCACGGCACATGCCTTCGTAATGATCT
TCTTTATAGTAATACCGATCATGATCGGGGGCTTTGAAACTGGCTGCTC
CCCTGATACTGGGGGCCCCCGACATAGCATTCCCCGAATAAATAACAT
GAGCTTCTGACTCCTCCCTCCCTCCCTCCTCCTGTTGTGCTCCTCCG
GGGTTGAAGCCGGGGCCGGAACAGGATGAACCGTTTATCCCCACTTGCC
GGCAACCTTGCCACGTTCGGTGCCTCCTGTGGACCTGGCTATTTTCTCCCT
CCACCTGGCGGGTGTCTCCTCAATCCTGGGGTCAATTAATTTTATTACCA
CAATTATTAACATGAAGCCCCCGCCATCTCACAGTACCAAACACCTTTA
TTTATCTGATCGGTCCTAGTCAACAACAGTCCTCCTCCTCTGTCACTCC
GGTCTGGCCGCGAGGTATTACCATGCTCCTCACAGACCGAAACCTTAACA
CAACATTTTTTGACCCGGCCGGAGGAGACCCCATCCTATAACCAACAC
CTA-----

-----GGATGAGTACATCGTGGTTTTTCAGC
CGCTCCGTCAACCGGCTCATCCTCAACGAGGCCGAGTTGATCCTGGCTCT
GGCGCAAGAGTTCCAGATGAGGGCCGTCACGGTGTCCCTGGAGGAGCAGT
CGTTCGCCAGCATCGTTCAGGCGATCAGCGGGGCGTCCATGCTGGTCAGC
GTCCACGGAGCCCAGCTGATCAGCTCCCTGTTCCCTGCCGCGTGGCGCTGC
CGTGGTGGAGCTCTTCCCCTACGCCATCAACCCGGAGCAGTACACTCCCT
ACAAAACCCTGGCTCTGTTACCAGGCATGGACCTCCAGTACGTGGCTTGG
AGGAACACCATGGAGCAGAACTCGGTGGCCTACCCCGAGCGTGCCTGGGA
CCAGGGTGGCATCGCCACCTGGAGAAGGAGGAACAGGAGCGCATCCTGG
CGAGCGACGAGGTGCCGCGGCACCTGTGCTGCCGCAACCCGGAGTGGCTC
TTCCGGATTTACCAGGACACCCAGGTGGACGTCCCTCCTTGCTGGAGGT
CCTCCG---AGAAAATCTGAAG---GCCAAGCCTAACCTGAGAAA---GG
CCAAGGCAGCTAGTACAGTACACCCCGGTAGAGTCAGGGAGCCCAAGTGC
CAGACCTCGGTCCAGGCCACCAACGAGGCCAAGCTGACAGTGTCTGGCA
GATCCCCTGGAACCTCAAATACCTGAAGGTGAGGGAGGTCAAATATGAAG
TATGGATACGGAAGAAGGATGCCAGCAAAGGGACCTTGGAGGATCAAATC
ATTCAAGCTAACCCAGCACTGGAGGCTTTTGGCAATGCCAAAACAGTGAG
AAATGACAACCTCCTCACGCTTTGGGAAGTTCATTCGTATTCATTTTGGAA
CGAGCGGCAAACCTCCTCTGCTGACATAGAAACTTACTTGCTTGAGAAA
TCCCCTGTGACCTTTCAGCTCAAATCGGAGAGGAACTACCACATCTTCTT
TCAGATATTGTCCAATGAAAAGCCAGAGCTGCTGGACATGCTGTTGATTA
CCAACAACCCTTATGATTATTGCTTCATCTCCCAAGGAGAAGTAACAGTT
AAATCTATCAATGACAGTGAGGAGTTGCTTGCCACTGACAGTGCCTTTGA
TGTGCTTGGCTTCACTCCAGAGGAGAAGATGGGGATCTATAAGTTGACAG
GTGCCATTATGCACTATGGCAACATGAAGTTCAAGCAGAAGCAGCGTGAG
GAGCAGGCAGAGCCTGATGGTACTGAGGCAGCTGACAAGTCAGCCTACCT
GATGGGGCTTAACTCTGCTGATCTTGTGAAGGGACTCTGCCATCCCAGGG
TCAAAGTCGGCAATGAGTATGTAACAAAGGGACAAGGTGTAGATCAAGTC
TATTAC-----

-----TACCTGATTTACGCTTCCTTCTCGTTCA
TGGGATGTTTACAAAATCAGCGACGGATCCAACATAGTCAACCTTTTGGCC
AGCGACTCGCCGAGCGTGTGCTACGCTCTGACCCAGCAGAAGTATTTTCAG
CAACTACAGCCCAGTGATAGGGTCTACATCTATGAGCCCATTGACTACT
GGAACGCCACTGTGCAGGAGCACCTCAAGACACTGGGCCAGGGGTCAAT
ACGATATCGTGGATCGATAATTACTTTCAGTATCTGAAGGTGACGAACGT
CAGCGCGTGCACAAAAGCGACTTCATCGCCGTCCCTCAAGACCTCGTTCC
TGAGGAGTCCCAGATATCAGCACTTCACGGACGACATCATCTTTTCCAAA
A---CGGGGG-----ACGACTTCAACATCATCGCGTCCAGGAT
GTACCTGGTGGCGCGGACCACGGAGAAGACCCGGGAGGAGGTGGTGGAGC
TGCTGGAGAGGCTCCGCCCTCTCTCGCTCATCAACAGCATCAAGTTCATC

-----TTCTAGAGAGAAACCTTCACCCGTCTAACTGCCTTGG
CATGCTGTTGCTGCTGACGCCACCAATGCACCAAGCTGTCAGAGCTCT
CCTGGGGTATGTGCCCTCAGCAACTTCCCCGCCATTTGCAAGACTGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACTGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAAGAGGCACTGCCATCTTCCAGAGCTCCTGAGG
ACGGTCCGTCTGGCCCTGCTGCCCGCCATCTTTCTCATGGAGAACGTTTC
GACAGAAGAGCTGATCAACGCCAGCCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAACGATGGCGTCGTCAAC
AGCCCGTGTGCTCGACCGAGAAAGACCAGCCATGCCCTATTTCTTCTGGG
AGGGCAGACTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCGAAGGCTGACATAACCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTACGACACCGTCCAAGAGG
AATGGTGAAGGCGGCGCCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTGGGAGGTCACACGGCAGCAAC
CGGCTGCCTCCCGCTTCTCCGTCTGGAGGAATACGTTGTTGTGTTTAGT
CGCTCGACAACAAGGCTGATACTGAATGAAGCGGAGCTAATCATGACGCT
GGCCAGGAGTACCAGATGCGAGTGGTACAGTAAACCTAGAGGACCAGA
CTCTCCCCAGTATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGC
ATGCACGGAGCTCAGCTCATCACCTCGCTCTTCCCTCCCCAGAGGAGCTGT
CGTGGTGGAGCTGTTCCCCTTCGCTGTGAACCCAGAGCAGTACACCCCAT
ATAAAACCTTAGCCACCCTTCCGGGCATGGACCTCCACTACGTCTCCTGG
AGGAACACCAAGGAGGAGAACACCATCACCCACCCAGACCCGACCCTGGGA
ACAAGGGGGCATCGTTCACCTGGAGAAGGAGGAGCAAGAGCGAATACTGG
CGAGCAAAGACGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTATCAGGACACTTTGGTGGACATCCCTTCCTTCCCTGGAAGT
CCTTAA---AGAGGGCATGAAG---ACAAAGCCCAGCGTGAAGAA---GT
CAAAGCCGGCCAGCACAGTCCACCCGGGCGGGTCAGGGAGCCCCAGTGT
CAGACCTCGGTACAAACCACCAATGAGGCTAAACTCACAGTGTCTTGGCA
GATCCCCTGGAACCTCAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAGAGACACCAGCAAGGGGACACTGGAGGATCAAATC
ATCCAGGCGAACCTGCGCTGGAGGCTTTCGGCAACGCCAAAACGTTGAG
AAACGACAACTCGTCTCGTTTTGGAAAATTCATCCGCATTCACCTTTGGTA
CGAGCGGCAAGCTGTGCTGCGGACATCGAGACGTACCTGCTGGAGAAG
TCACGGTGCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTC
GCCTCCATCGACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGA
TGTGCTCGGCTTCACTGCAGAGGAGAAGATGGGCGTCTATAAACTAACCG
GTTCCATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGTCAGACGGGACGGAGGCTGTTGATAAAACGGCTTACCT
AATGGGGCTGAACTCTGCTGACGTCATCAAAGGGCTGTGCCATCCCAGAG

TCAAGGTAGGAAATGAATACGTACCAAAGGCCAAAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CAGGGGATCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACCCCC
GTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCGC
CAAGGAGAAAAAACACCCCGTGCACCCTGTGACCGTCGATTCTACACAC
GGAAGGATGTGAGACGGCACATGGTGGTCCACACAGGCCGAAAGGACTTC
CTATGCCAGTACTGTGCCAGCGCTTGGCAGGAAGGACCATCTGACACG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAGGATCAAGACGGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCTGGGTACCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCTCAAGTGGGGCCCTTTTCCGATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCTAGTCCCTTGTCTGCTGCTAT
CGGCATGGGCTGTACATGGAATATCTCATTACGCCTCTTTCTCGTTCA
TGGGATGTTTACAAATCAGTGATGGATCAAATGTCGTGAACCTGCTGTCT
AGCAACTCTCCGAGTGTTCGTACGCGCTGACCCAGCAGAAATACTTCAG
CAACTACAGTCCCGTGATTGGGTTTACATTTACGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCTTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAACGT
GAGCGCATCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCC
TGCGCAGCCCGGAGTACCAGCACTTCACCGAGGACATCATATTCTCCAAG
A---ACCGCAGACCG-----ATGAATACGACATCATCGCCTCACGGAT
GTACCTGGTGGCACGGACGACGGAGAAGAAGCGAGAGGAGGTGGTGGAGC
TTCTGAAAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAACCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCAT
CTCGCCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGAAACTTCTGGCTCATCCTCACG
GTGACGTCCCGTGGAGCTAGGCGTCTTGGGTTTGATGGGCTTTCACAGTT
TGAATGGCAGCCAGCTCTCAAGAACGTGTCTACATCTTGCAGCGTTGGCA
TTATTAAGGGGCTCTCTGGATGGGCTTCCTCGGTGGATGACATCCCGGCT
GACACCATCACTCGGCGCTTTCGCTATGATGTGGCGCTGGTGTGCGCTTT
AAAGGATCTGGAGGAGACATCGTGGAGGGGCTGAGAGAGAGCGGGATGG
AAGACAGCGCTTGCACCTCGGGCTTCAGTGTGATGATCAAGGAGTCCTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGCGGAGGACCAGCTCTTCC
CGAGAAGGCTGTGCGCTTTTCTTTCACTGTTATGTCTGTCTCTGTCTGG
CAGACGAGGGGGAG-----GAAGAG
GTTACCATCTTCACTGAGCCAAAGCCAAACTCAGAAGTGTCTGTGTAAGCC
CCTCTGCCTGATGTTTGTGGATGAGTCAGACCACGAGACGCTCACAGCCG
TCCTCGGGCCTGTTATCGCGGAGCGCCACGCCATGAAAGAGAGCAGGCTC
ATCCTGTCTTGGCGGGATTGCCTTGCTCCTTCCGCTTCCACTTCAAAGG
CACGGGATACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTCGAGGCCT
CGGGGTCCACCTACGTTTGCACGCTTTGTGACTCCACGCGGGCGCAGGCC
TCTGAAAACATGGTGTGCACTCCGTCCTGCTGTCACGAGGAGAACCT
AGATCGTTACGAGATATGGAGAACCAACCCCTTTTCTGAGTCTGTGGACG
AGCTGCGGGACAGAGTCAAAGGGGTCTCCGCCAAGCCCTTCATGGAGACC
CAGCCCACGATGGACGCGTTACTGCGACATCGGCAACGCCACCGAGTT
CTACAAAATCTTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CA
AC---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGACGATGAAGCTGAGACCGGTGATGAGGATGAATGGGAA
CTACGCGCGCAAGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGCGAGC
TGGTGCCCTCGGAGGAGAGGAGGGAGGCCCTGAGGGAGCTGATCAGGATC
TACCTCCAGATGAAGCCCGTGTGGCGCGCCACCTGCCCCGCCAAGGAGTG

CCCCGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTCGCCGACC
TCCTCTCCTCTGCCTTCAAATACAGGTACAACGGCAAGATAACCAATTAC
CTGCACAAGACCCTGGCCACGTGCCCGAGATCATAGAGAGAGACGGATC
CATCGGAGCCTGGGCCAGCGAAGNNNNNNNNNNNNNNNNNNNNNTCGTACACCATCGAGATGGGTCCCCTG
GGGCCCTGTGGAAGGAGAGCCCAATGCCGTTCTCCTGCTCCATCGAAGA
CCCAACAAAACAGACAAAGTTCAAGGGCATCAAGACGTACATTTTCGTACC
GGGTGACGCCTAGCGACACGGGGCGCCCCGTCTACAGGCGCTACAAACAC
TTTGACTGGCTGTACAACCGCTTGCTGCACAAGTTCACTGTGATCTCCGT
GCCCCACCTGCCCCGAGAAGCAGGCCACGGGGCGCTTCGAGGAAGACTTCA
TCGAGAAGCGCAAGAGGGCGACTGATACTGTGGATGAACCACATGACCAGT
CACCCGGTCTCTCCAGTACGAAGGCTTCGAGCACTTTCTGATGTGTGC
CGACGACAAGCAGTGGAAACTCGGCAAGAGGGCGGGCTGAAAAGGACGAGA
TGGTGGGCGCCATTTTCATGCTGACCCTCCAGATCCCCAACGAGCACCAG
GACCTCCAGGATGTAGAGGAGCGCATCGACACCTTCAAGGCCTTCGCTAA
GAAAATGGACGACAGCGTGTTCAGCTCACTCACGTCGCCTCGGAGCTGG
TGCGTAAGCACCTGGGTGGGTTTCAGGAAGGAGTTCAGCGGCTGGGAAAT
TCTTTCCAGTCCGTCAGCCAGGCGTTCATGCTGGACCCTCCCCAACAGCTC
AGAGGCCCTCAACAAGGCCATCTCCCAT-----

-----NNNNNNNTCGCTTTCACCCTGGCGTGGTGAATGGTCCC GGCA
CGGAGC---GCAGCGTCCC ACTCGGCAACAGCTTG---CCTTGCGACGA
GCCCAACA--CGGTGGTTGCCACCCCCCGCAGCGATGGTTTGTACAC--
--CTAGCAACAACCGACTGGACTTTGCAGCCTCGGCATACGACGCGGCT--
-----GATTTGCGCCGTAACGCGGCCACCTTGCTGTCTACGCGGCG
GCCGGAGTGAAGGCTC-----TTCCGCTGCCGACTGCAGGCTGCTCCAA
CCGGCTCTTGCTATTACGCAGACGCGTCCGGCTGCTGGGGCGGAGGAC
GCACGCCGCCGAGTAC-----AACAAAGTCAAGCTCGGTTTTTT
TCATGCTGGCCT---AACTCTATCAGTGGCCGAGCAGGTA---CC---AA
CTACCTGG-----TAACGGAGGA---GGGA---GACTCCTCCATCCCTA
CCGAGAGGTCACCG---AT---CACCGGCTCCGAGGAG---GCCAAACCC
AAAGACATGACGTCACTGAGTCGTCGAGCTGGTTAATAGAGACGCCGTC
CTCCATCAAGTCCATCGACTCGAGCGACTCTGGGATCTTCGAGCAGCAGG
CCAAGAGGAGGAGAGTCTCACCTTCTGCCACGCCGGTTGTTTCCGTTTCT
GAGACTGTGTCCCCGTTAAAGTCTGAGCATCACTCAACAGGCGAAGTCAC
AGAGAGAGAAGTGGCGTTGGGGATAAATCCCTTCGCGGATGGGATGGGCG

CCTTCAAATAAAACCACACATCCCACGACATCGGCTCCGG---ACAAACG
GCGTTTTCTCCAGGCG---CCCGTTACGCAGCAGCAGCCGCGCTCGG
A---CACCACCA-----CCATCCGACGCA-----CTCT---TACTCCA
CGGCGGCTTTCAACTCCACCAGGGACTTTCTCTCAGAAATCGGGGTTTC
GGAGACGCCACTGG-----AGCTCAGCACAGCTTATTCGCGTC
-----TGGAAGTTT---C-----GCAGGACCACATGGACACTCGG
ATGCTGCTGGGCACCTGCTCTTCCAGGGCTGCACGAG---CAAGCCGCG
AGCCATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGCCTGGGCTTCTC
TGGGGACATGTACGGACGGGCTGATCAGTACGGCCACGTTACGAGCCCGA
GGT---CCGACCACTATGCGTCGACCCAGCTGCACGGCTACGGCCCCATG
AACATGAATATGGCCGCG---CATCACGGTGCTGGGGCCTTCTTTCGATA
CATGAGGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCCG
AGCAGCTGACGAACCCGAAAAAGTCGTGCAACAAAACTTTTAGCACCATG
CACGAGTTGGTGACCCATCTGACGGTGGAGCACGTTGGAGGACCCGAGCA
GACCAACCACATCTGCTTCTGGGAGGAGTGCGCCAGAGAAGGGAAACCAT
TCAAAGCCAAATACAACTTGTGAATCATATCAGAGTACACACCCGGAGAG
AAGCCCTTCCCGTGTCTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

>Sebastolobus alascanus

AGCCTACTCATTTCGGGCAGAACTTAGCCAGCCCCGGCGCTCTCCTTGGAGA
CGACCAGATTTACAATGTAATTGTTACGGCCATGCCTTCGTAATGATTT
TCTTTATAGTAATACCAATTATGATTGGAGGTTTTGGAAACTGGCTTATT
CCCCTAATGATTGGGGCCCCGGACATAGCATTCCCTCGTATGAACAACAT
AAGCTTCTGACTTCTTCCACCTTCTTTCTCCTACTCCTTGCCCTTTCAG
GAGTAGAAGCGGGGGCCGGAACCGGGTGAACAGTATATCCTCCCCTTGCT
GGTAATTTAGCCCACGCTGGGGCCTCCGTCGACCTAACGATCTTTTCCCT
ACATCTGGCAGGGATTTCCCTCAATCCTCGGCGCAATTAACCTCATCACCA
CAATTATTAATATAAAACCCCCAGCTATTTCTCAATACCAGACACCCCTG
TTTATTTGGTCCGTCCTAATTACCGCCGTACTTCTTCTCCTCTCCCTCCC
AGTACTAGCTGCGGGCATTACAATGCTTCTTACAGACCGAAATCTTAACA
CCACTTTCTTTGATCCCGCTGGAGGAGGGGATCCAATCCTCTACCAGCAC
TTGTTCTGATTCTTC-----

-----TTCCTAGAGAGAAACCTCCACCCGTCTAACTGCCTTGG
CATGCTGTTGCTGTCTGACGCCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGTATGTGCCTCAGCAACTTCCCACCATTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACTGAAGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGA
TCAACTATGACCTGGAAAAGAGGCACGTACCTTCCAGAGCTCCTGAGG
ACGGTCCGTCTGGCCCTGCTGCCCGCCATCTTTCTGATGGAGAACGTTTC
TACAGAAGAGCTGATCAACGCCCAGCCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAACGAAGGCGTCGTTAAC
AGCCCGTGTGCTCGACCGAGAAAGACCAGCCATGCCCTATTTCTCTGCGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCGAAGGCTGACATACCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGCTC-
AGAGAACGGTGTGTCCAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTCAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCTGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCAAC
CGTCTGCCTCCCGGCTTCTCNNNNNGGATGAATACGTTGTTGTGTTTCAGTCGCTC
GACAACGAGGCTGATACTGAATGAAGCGGAGCTAATCATGGTGTGGCC
AGGAGTTCAGATGAGAGTGGTACAGTGTCCCTAGAGGACCAGTCTCTC

CCCAGCATCGTCCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGTATGCA
CGGAGCTCAGCTCATCACCTCGCTCTTCCTCCCCAGAGGAGCTGTCCTGG
TGGAGCTGTTCCCTTCGCTGTGAACCCAGAGCAGTACACCCCGTATAAA
ACCTCGCCACCCTTCCGGGCATGGACCTCCACTACGTCTCCTGGAGGAA
CACCAAGGAGGAGAACCACATCACCCACCCAGACCGACCCTGGGAACAAG
GGGGCATCGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCGAGC
AAAGACGTCCCAGGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCCG
GATCTACCAGGACACTCTGGTGGACATCCCTTCCTTCCTGGAAGTCCTTA
A---AGAGGGCATGAAG---ACAAAGCCCAGCGTAAAGAA---GTCGAAG
CCGGCTAGCACAGTCCACCCGGGCCGGGTGAGGGAACCCAGTGTGAGAC
CTCGGTACAAACCACYAATGAGGCTAAACTCACAGTGTGCTGGCAGATCC
CGTGGAACCTCAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGGTGTGG
ATCCAGAAAAGAGACACCAGCAAGGGGACACTGGAGGATCAAATCATCCA
GGCGAACCTGCGCTGGAGGCTTTCGGCAACGCCAAAACGTTGAGAAAACG
ACAACCTCGTCTCGTTTTGGAAAATTCATCCGAATTCACCTTGGTACAAGC
GGCAAGCTGTGCTGTGCTGACATCGAGACGTACCTGCTGGAGAAGTCACG
GTGCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTACCAGA
TCCTGTCCAATAAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACCAAC
AACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTGACAGTCGCCTC
CATCAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGATGTGC
TCGGCTTCACTGCAGACGAGAAGATGGGCGTCTATAAACTAACCGGTTCC
ATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGCA
GGCTGAGTCAGACGGGACGGAGGCTGCTGATAAAAACGGCTTACCTAATGG
GGCTGAACTCTGCTGACGTCATCAAAGGGCTGTGCCATCCAGAGTCAAG
GTAGGAAATGAATACGTCACCAAAGGCCAAACTGTGGACCAAGTCTACTA
CCCCAACAAGGAGGCCCTTCAAGTGTGAAGAGTGTGGGAAGCACTACAACA
CCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCTACAGCAGGG
GATCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACACCCGTGCT
CTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCGCCAAGG
AGAAAAAACACCCGTGCGACCACTGTGACCGTTCGTTTCTACACACGGAAG
GATGTGAGACGGCACATGGTGGTCCACACAGGCCGAAAGGACTTCCGTGTG
CCAGTACTGTGCCAGCGCTTGGCAGGAAGGACCATCTGACCGGCCACG
TGAAGAAGAGCCACTCGCAGGAGCTGCTGAGGATCAAGACGGAGCCTCCT
GATATGTTAGGTCTTTTAGCTTCTGGGTACCACCTTGCTCTGTGAAGGA
GGAGCTCAGCCGATGATGTGCGGCATGGGTCCCAACAAGACCCCATGA
TGGGCAAACCGTTCCCAGTGGGGCCCTTTTCCGATGGGCATGTACAAC
CCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTACCC
A-----CACCCGTCCCTGATGCCCGGTCCCTTGTCTGCAGCTATGGGCA
TGGGCTGTACATGGAATATCTCATCTACGCCTCTTCTCATTTCATGGGA
TGTTTACAAATCAGTGACGGATCAAATATCGTGAACCTGCTGGCTAGCAA
CTCTCCGAGTGTTCGTATGCTCTGACCCAGCAGAAATACTTCAGTAACT
ACAGTCCCCTGATTGGGTTTTACATTTACGAGCCATTGAGTACTGGAAC
TCCACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAACAAGAT
CTCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGAATGTGAGCG
CGTCAACCAAGAGCGACTTCATCACCATCCTAAAGGGCTCCTTCTGCGC
AGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA---A
CCGCGAGACTG-----ATGAGTACGACATTATCGCCTCACGGATGTACC
TGGTAGCACGGACGACAGAGAAGAAGCGAGAGGAGGTGGTGGAGCTTCTG
GAAAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCTT
CAATCCTACGTTTGTGTTTCATGGACCGTACAGCTCCTCTGTATCTCGC
CCATCCTGACCTCAGGCTTACAGGTAATCACAATCCTCATCCTCACTTTC
TTCTGGTTCATCAACCCCTTGGGAACTTCTGGCTCATCCTCACGGTAAC
GTCTGTGGAGCTGGGCGTCTTGGGTTGATGGGCTTTCACCAGTTTGAAT

-----NNNNNNNNNNNNNNNNNNCCTGGCGTGGGGACCGGTCC
TGGCACGGAGC---GCAGCGTCCCACCTCGGCAACAGCTTGCTGTCCCGC
AGCAAACCGACGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTC
ACCC---CTGCCAACACCGACTGGACTTTGCCCGCTCGGCATACGACGC
CGCC-----GATTCGCGCGTAACGCGGCCACCTTGCTGTCCACG
CAGCGGCCGAGTGAAGGCTC-----TTCCCCTGCCGACCGCGGGCTGC
TCCAACCGGCCTCTTGGCTATTACGCGGACCCGTCGG---GCTGG---GG
AGGACGCACGCCCGCGCAGTACTGCGGCGTGAGCGGCAAATCCAGCTCGG
TCTTTTCCTGCTGGCCCCGCAACTCGATCGGCGGAAGAGCGGGCA---CC
---AACTACCTGG-----CGGAGGA---GGGA---GACTCCATCAT
CCCGACGGAGAGGTCTCCG---AT---CGGCGGCTCGGAGGAG---ACCA
AACCCAAAGACATGAC---CTCGGA---GTCGAGCTGGATAGAG---ACG
CCGTCTCCATCAAGTCCATCGATTGAGCGATTCTGGTATCTTCG---A
GCAGGCCAAAAGGAGAAGAATCTCACCTTCTGCCACGCCG-----G
TTTCAGAGACTGTGTCCCCNNNNNNNNNNNNNNNNNNCATCACTCAACAGGCGAAGTACAGAGAGAG
AAGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGGATGGGGCGCCTTCAA
ATAAACACAGCTCCCACGACATCGGCTCCGG---ACAACGGCGTTTTTC
CTCCCAGGCG---CCGGGTAC---GCWGCAGCCGCTCTGGGA---CACC
AYCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACGGCGGCT
TTCAACTCCACCAGGACTTTCTCTTCAGAAATCGGGGTTTCGGGGACGC
CACCG-----GGCTCAGCACAGTTTGTTCGCCTC-----
-CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATGCAGCG
GGGCACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCGGCGAGCCATGC
RTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACA
TGTACGGACGGGCCGACCAGTACGGCCACGTTACGAGCCCACGGT---CC
GACCACTATGCTTCGACCCAGCTGCACGGCTACGGCCCCATGAACATGAA
TATGGCCGCG---CACCACGGAGCCGGGCTTCTTTCGATAACATGAGGC
AGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTG
ACGAACCCCAAAAAGTCGTGCAACAAAATTTTAGCACGATGCACGAGCT
GGTGACCCATCTGACGGTGGAGCATGTTGGGGGACCGGAGCAGACCAACC
ACATCTGCTTCTGGGAGGAATGCGCCAGAGAAGGAAAGCCATTCAAAGCC
AAATACAAACTTGTAATCATATCCGAGTACACACCGGAGAGAAGCCCTT
TCCGTGTCCGTTCCCCGGCTGTGGCAA

>Selenotoca multifasciata
AGCCTCCTCATCCGTGCTGAACTAAGTCAACCAGGGGCTCTCCTTGAGGA
CGACCAAATCTATAATGTAATCGTAACGGCACATGCCTTTGTAATAATTT
TCTTTATAGTCATGCCAGTAATAATTGGAGGCTTTGGGAAGTACTACTAATC
CCTCTAATAATTGGGGCACCCGATATGGCCTTCCCCGAATAAAACAATAT
AAGCTTCTGACTCCTGCCCCCTCCTTCCTTCTTCCTAGCTTCCCTCCG
GAGTAGAGGCTGGTGCCGGGACAGGATGAACCGTCTACCCTCCCCTCGCT
GGAAATCTAGCTCACGCAGGGGCTCCGTAGACCTAACTATCTTCTACT
TACTTAGCAGGTATTTCTTCCATCCTTGGGGCTATTAACCTTTATTACTA
CTATTATTAACATAAAATCACCTGCCGCCTCCCAATACCAGACCCCTCTC
TTCGCTGAGCCGTAATAATCACCGCAGTACTTCTTCTTCTATCGCTCCC
AGTTCTCGCTGCCGGCATTACTATGCTTCTCACAGATCGAAACCTGAACA

CTTCTTTCTTCGACCCCGCAGGAGGAGACCCAATCCTATAACCAACAT
CTA-----

-----NNNCTAGAGAGAAACCTTCACCCATCCAACCTGCCTTGGCAT

GCTGTTACTGTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCT
GGGGCATGTGCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGACTTC
CTCCAACCTGCCYAAAAGATATGGTGGTGCAGCTTTTGTCCCACGAGGAGCT
AGAGACTGAAGATGAGAGACTGGTTTATGAAGCCGCCCTCAACTGGATCA
ACTATGACCTGGAAAAGAGGCACTGCCACCTTCCGGAGCTCCTGAGAACG
GTCCGTCTCGCCCTCCTGCCTGCCATCTTTCTCATGGAAAATGTTTCTAC
AGAAGAGCTGATCAACGCCCAGGCCAAGAGCAAAGAGCTGGTGGATGAAG
CTATCCGCTGTAAGCTGAAGATCCTACAGAATGATGGTGTCTGTTAACAGC
CCGTGTGCTCGTCCAAGAAAACCAGCCATGCACTCTTTCTTCTGGGTGG
GCAAACCTTTCATGTGTGATAAATTGTACCTGGTGGACCAGAAAAGCCAAAG
AGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGCGCC
TGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGTA--GAGGTTC--AGA
GAATGGTGTGTCCAAAGATGTTTGGGTCTACGACACCGTCCACGAGGAAT
GGTCGAAGGCAGCACCAATGCTTATTGCCAGGTTTGGCCACGGCTCTGCG
GAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACCGCAGCAACTGG
GTGCCTTCCGGCCTCTCCATCTGGATGAATACATTGTTGTGTTTAGCCGT
TCAACAACGAGGCTGATACTGAATGAAGCTGAGCTAATCATGGCACTGGC
CCAGGAATTTTCAGATGAAAGTAGTCACAGTGTCCCTTGAGGAACAGTCTT
TCCCTAGTATTGTCCAGGTAATCAGTGGTGTACCATGTTAGTCAGTATG
CATGGAGCCCAGCTTATCACTTCATTGTTTCTCCCGAGAGGAGCCACTGT
GGTGGAGCTGTTCCCTTTTGGTGTGAACCCAGAGCAGTACACCCCATACA
AAACGCTTGCTTCCCTACCAGGCATGGACCTTCACTATATCTCTTGGAGG
AACACTCAGGAGGAAAACACCATCACCCACCCAGACAGACCCTGGGAACA
AGGGGGTATTGCTCACTTGGATAAGGAGGAGCAAGAGCGAATACTGGCAA
GCAAAGATGTCCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTTTTC
CGTATCTACCAGGATACCTTGTAGTACATCCCTTCATTTTTTGGAAAGTCAT
CAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTCAAGAA---GTCAA
AGCCAGCCAGCACATTCACCCGGGGCAGAGAAACCCAGTGTGTCAG
ACCTCAGTACAAACCACTAATGAGGCTAAACTTACAGTCTCCTGGCAGAT
CCCCTGGAATCTGAAATACNNAAAAAGGACACC
AGCAAGGGTACATTGGAGG
ATCAAATCATCCAGGCGAACCCAGCACTGGAGGCCTTCGGCAACGCCAAA
ACACTGAGAAATGACAACTCATCTCGTTTTGGAAAATTCATCCGAATTCA
CTTTGGCACAAAGTGGCAAGCTGTACATCCGCTGACATTCAGACGTACCTGC
TGGAGAAGTCACGCGTCACCTTTCAGCTCAAGGCTGAGAGAAATTACCAC
ATCTTCTACCAGATCCTGTCCAACCAGAAACCAGAGCTGCTGGACATGCT
GCTGATCACTAATAACCCATATGACTACTCCTACATCTCCCAAGGAGAGG
TAACAGTCGCCTCCATCAATGACTCAGAGGAGCTGATGGCCACTGACAGC
GCCTTTGACGTGCTCGGCTTCACTCCAGAAGAGAAGATGGGCGTCTACAA
ACTGACGGGGGCCATCATGCACTATGGCAACATGAAGTTCAAACAGAAGC
AGCGTGAGGAACAGGCTGAGCCAGATGGGACTGAGGCTGCTGATAAATCA
GCTTACCTAATGGGGCTAAACTCTGCTGACCTCATCAAGGGGCTGTGCCA
TCCCAGAGTCAAAGTAGGAAATGAATACGTCACCAAAGGCCAAAAGTGTGG
ACCAAGTCTACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGG
AAGCACTACAACACCAAGCTAGGATATAAGCGCCATGTGGCCATGCACTC
TGCCACAGCAGGTGATCTCACCTGTAAAGTCTGCATGCAGACCTACGAGA
GCACGCCTGTGCTCTTAGAGCACCTGAAGAGCCACTCCGGAAAATCTTCA

GGTGGTACCAAGGAGAAAAACACCCATGCGATCACTGTGACCGGCGTTT
CTACACACGGAAAGATGTGAGACGGCACATGGTGGTCCACACTGGCCGAA
AGGACTTCCTGTGCCAGTACTGTGCTCAGCGTTTTGGCAGGAAGGACCAT
CTGACACGTCTATGTGAAGAAGAGCCACTCACAGGAGCTGCTGAAAATCAA
GACAGAGCCTCCTGATATGTTTGGTCTTTTAGCTTCCGGGTACCACCTT
GCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGTGGCATGGGTCCCAAC
AAAGACCCCATGATGGGCAAACCGTTCCCCAGTGGGGCACCTTTTCCAAT
GGGCATGTACAACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTG
GTGTGGGCCACCCA-----CACCCATCCCTGATGCCAGTTCCCTGTCT
GCAGCTATGGGAATGGGCTGTCACATGGAANNATGTTTAC
AGATCAGTGATG
GATCCAATATCGTGAACCTGCTGGCTAGTAACTCTCCAAGTGTTCGTAT
GCTTTGACACAGCAAAAATACTTCAGTAACTACAGTCCCTGTGATTGGGTT
TTACATCTATGAGCCATTGAATACTGGAACCTAACGGTGCAGGAACACC
TGAAGACTCTGAGTCACTGGCTTCAACAAGATCTCTGGATGGACAACCTTT
TTCCACTACCTGCGAGTGGTGAATGTGAGTGCCTCAACCAAGAGCGACTT
CATCTCCATACTCAAGAGCTCCTTCCCTGCGCAGCCCGGAGTACCAGCACT
TCACTGAGGACATCATATTTCTCGAAAA---ACCGCGAGACTG-----AC
GAGTACGACATTATTGCATCGCGGATGTACCTGGTGGCACGGACGACGGA
GAAGAAGCGGAGGAGGTGGTGGAGCTTCTGGAAAAGCTGCGTCCGTTGA
TGCTGATCAACAGCATCAAATTCATTCCTCAATCCTACATTTGTGTTT
ATGGACCGCTACAGTCCCTCTGTCTATCTCTCCATCCTGACCTCAGGATT
CAGCGTCCCTCACAATCCTCATCGTCACTTNN
NNNGGGTTCACCAGTTTGAATGG
CAGCCAGCTCTTAAGAATGTTTCTACATCTTGAATGTTGGCATTATTA
TGGGCTCTCTGGATGGGCTTCCCTCAGTGGATGACTCCCCAGCTGACACCA
TCACTCGGGCGTTTCGCTATGATGTGACACTGGTGTCAGCATTAAAGGAT
CTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGAGGGATGGAAGACAG
TACTTGACCTCAGGCTTCAGTGCATGATCAAGGAATCTTGATGGCA
TGGGCGATGTGAGCAGAAAGCATGGTGGAGGACCAGCTGTTCCCTGAGAAG
GCTGTACGTTTCTCTGTCTACCATTATGTCTATCTCTGTCTTGGCGACCGA
TAGGGAG-----GAAGAGGTTACCA
TCTTCAGAGAGCCAAAGCCAAACTCAGAACTGTCTTGTAAGCCTCTTTGC
CTGATGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCCATCCTGTG
GCCATAATTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTCATCCTAT
CCATTGGTGGACTACCTCGCTCCTTCCGTTTTCTCAGAGGCACAGGA
TATGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGAAGCTTCAGGATC
CACGTATATCTGCACTCTTTGTGATTCAGTCCGGGCAGAGGCCTCTGAAA
ACATGGTCCCTCAGCGAGTTACCCGCAGCCATGAAGAGAACCTAGAACGT
TATGAAATATGGAGAACCAACCCCTTTTCTGAGTCACTAGATGAGCTGCG
AGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTATGGAGACCCATCCCA
CCCTGGATGCATTGCACTGTGACATAGGCAATGCCACTGAGTTCTACAAA
ATTTTCCAGGATGAGATTGGGAGATGTACCAGAAGGT---CAAT---CC
GAGTCGAGAGGAGCGCGCAGCTGGAGAGCAGCCCTAGATAAACAGCTGA
GGAAGAAGATGAAGCTCAAACCCATAATGAGGATGAATGGGAACTATGCC
CGCAAGCTAATGACCATGGAGGCTGTGGAGGTGGTGTGTGAGTTGGTGCC
CTCAGAGGAGAGGAGGAGGCTCTGAGGGAGCTTATGAGACTCTACCTCC
AGATGAAGCCTGTGTGGCGAGCCACTTGCCAGCCAAGGAGTGCCCTGAC
GAGCTATGTCGCTACAGTTTTAATFCCCAGCGCTTTGCTGACATCCTCTC
CTCTACCTTCAAATA TAGGTACAATGGAATAATAAATAATTACCTGCACA
AGACCCCTGGCCATGTGCCTGAAATCATAGAGAGAGATGGATCGATAGGA
GCATGGGCTAGCGAGGAAACGAGTCCGGCAAACAATCTTACACCATCGA
AATGGGTCCCTTGGGGCCTCGATGGAAGGAGAGCCACAGCCTTTCACCT

CGCCTC-----CGGAAGTTT---C-----GCAGGGCCACATGGAC
ACTCAGATGGAGCGGGGCACCTGCTCTTCCCGGGGCTCCACGAG---CAA
GCGGCGAGCCATGCGACTTCCAACGTGGTCAACAGCCAGATGCGGCTGGG
CTTCTCGGGGACATGTACGGACGGGCCGAGCAGTACGGCCACGTTACAA
GCCCCGAGGT---CCGACCATTATGCTTCGACCCAGCTGCACGGCTACGGC
CCCATGAACATGAATATGGCCGCA---CACCACGGAGCAGGGGCTTCTT
TCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCG
AGCCGGAGCAGCTGACGAATCCCAAAAAGTCGTGCAACAAAACCTTTTAGC
ACGATGCACGAGCTCGTGACCCATCTGACGGTGGAGCATGTGGGGGGACC
GGAGCAGACCAACCACATCTGCTTCTGGGAGGAATGTTTCGAGAGAAGGGA
AGCCATTCAAAGCCAAATACAAACTTGTAAATCATATCAGAGTACACACC
GGAGAAAAGCCCTTCCCGTGCCGTTTCCCGGCTGTGGCAA

>Seriola dumerili

AGTTTACTCATCCGAGCAGAATAAGCCAACCCGGGGCTCTCCTGGGAGA
CGATCAAATTTACAACGTAATCGTTACAGCACACGCGTTTGTAAATAATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGATTTGGGAACTGACTCATC
CCTTTAATGATCGGAGCTCCCGATATAGCATTCCCTCGAATGAATAATAT
GAGCTTCTGACTCCTCCCTCCTTCATTCCTTCTACTCCTAGCCTCTTCGG
GTGTTGAAGCCGGAGCCGGGACAGGTTGGACAGTTTACCCGCCTCTGGCC
GGCAACCTCGCCCACGCAGGAGCATCCGTAGACTTAACAATTTTCTCCCT
TCACTTAGCTGGGATCTCCTCAATTCCTAGGAGCTATTAACCTTCATCACA
CCATCGTCAATATGAAACCCACGCCGTTTCCATGTACCAAATTCCCCTG
TTTGTCTGAGCTGTCCTTATCACGGCTGTACTCCTACTCCTATCACTTCC
AGTCCTAGCCGCCGTATTACAATGCTTCTTACAGACCGAAACTTAAACA
CTGCCCTCTTTGACCCAGCTGGAGGAGGGATCCCATCCTTTACCAACAC

-----NNNNTAGAGAGAAACCTTACCCTTCTAACTGTCTTGGCATG
TTGTTGCTGTCTGACGCCACCAGTGTACCAAGCTGTCAGAGCTTTCCTG
GGGCATGTGCCTCAGCAACTTCCCTGCTATCTGCAAGACAGAGGACTTCC
TCCAAC TGCCCAAAGACATGGTGGTCCAGCTTTTATCGCACGAGGAGCTA
GAGACAGAAGATGAGAGACTGGTTTACGAAGCTGCCCTTAACTGGATCAA
CTATGACCTGGAGAGGAGGACTGCCACCTTCCAGAGCTTCTGAGAACGG
TCCGCTCGCCCTGCTGCCTGCCATCTTCTGATGGAGAATGTCTCGACA
GAGGAGCTGATCAACGCCACAGGCCAAGAGCAAGGAGCTGGTGGATGAAGC
TATCCGCTGTAAGCTGAAAATCCTGCAAAATGACGGCGTCGTCAACAGCC
CGTGTGCCCGACCAAGAAAACAGCCATGCCCTGTTTCTTCTGGGAGGG
CAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGA
GATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCGCCT
GCGCCATCGGCTGTAAGGTGTACATCACTGGAGGGA--GAGGCTC-AGAG
AACGGCGTGTCTAAAGATGTATGGGTGTACGACACCGTCCACGAGGAATG
GTCCAAAGCTGCTCCCATGCTCATCGCCAGGTTTCGGCCATGGCTCGGCGG
AGCTGAAACACTGCCTCTACGTGGTAGGAGGTCATACTGCAGCAACTGGC
TGCTCCAGCTTCTCCGTCGGGATGATTACATTGTTGTGTTTCAGTCGCT
CAACAACAAGGCTGATACTTAATGAGGCGGAGCTAATCATGGCGCTGGCC
CAGGAGTTCAGATGAGAGTGGTYACAGTGTCCCTGGAGGAACAGTCATT
CCCCAGCATCGTCCAGGTGATCAGCGGCGCGCCATGCTAGTCAGCATGC
AYGGAGCTCAGCTCATCACCTCACTCTTCCCTCCCCAGAGGAGCTGCTGTG
ATGGAAGTGTTYCCCTTTGCTGTGAACCCAGAGCAGTACACCCCGTACAG
AACCTTGGCCTCCCTTCCAGGCATGGACCTTCACTATATCTCCTGGAGGA
ACACTAAGGAGGAAAACACCATCACCCACCCAGACAGACCCTGGGAACAA

GGAGGCATTGTTACCTGGAGAAGGAGGAGCAGCAGCGGATACTGGCCAG
TAAGGACGTTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCC
GGATCTACCAGGACACTTTAGTGGACATCCCCTCCTTCTGGAAGTCCTC
AA---AGAGGGCATGAAG---ACCAAGCCCAACTGAAGAA---GTCAA
ACCGGCCAGCTCGGTCCACCCGGGCGAGTCAGAGAACCTCAGTGTGAGA
CCTCAGTACAAAACACTAACGAGGCCAAACTCACAGTCTCCTGGCAGATC
CCGTGGAATCTGAAGTACCTGAAGGTAAGAGAGGTGAAGTACGAGGTGTG
GATCCAGAAAAAGACACCAGCAAGGGGACGCTGGAGGATCAGATCATCC
AGGCGAACCTGCACTCGAAGCCTTCGGCAACGCCAAAACACTAAGAAAC
GACAACTCATCTCGTTTTGGAAAATTCATTCGAATTCACTTCGGGACGAG
CGGCAAACCTGTCGTCTGCTGACATCGAGACGTACCTGCTGGAGAAGTCTC
GTGTCACCTTTTACGCTCAAGGCTGAGAGGAACTACCACATCTTCTACCAG
ATCCTGTCCAATCAGAAGCCAGAGCTACTGGACATGCTGCTGATCACCAA
CAACCCGTACGACTACTCCTACATCTCCAAGGAGAGGTGACAGTCGCCT
CCATCAACGACTCTGAGGAACTGATGGCCACCGACAGCGCCTTCGATGTG
CTCGGCTTCACTCCAGAGGAGAAGATGGCCGTCTACAAACTGACCGGCGC
CATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAAC
AGGCTGAACCTGATGGGACTGAGGCTGCTGATAAAATCAGCTTACCTAATG
GGGCTGAACTCCGCTGACCTCATCAAAGGCCTGTGCCACCCCAGAGTCAA
GGTAGGAAATGAATATGTCACCAAAGGCCAAAGCGTGGATCAGGTCTACT
ATCCCAACAAGGAGGCCCTTCAAGTGTGAAGAGTGTGGGAAGCACTACAAC
ACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCAGG
GGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGTACGCCTATTC
TCCTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCACCAAG
GAGAAAAAGCACCCGTGCGACCACTGTGACCGTCGCTTCTACACACGGAA
GGATGTGAGGCGACACATGGTGGTCCACACGGGTCGGAAGGACTTCCTGT
GCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACACGCCAC
GTAAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCC
AGATATGTTAGGTCTTTTAGCCTCGGGATCACCACCTTGCTCTGTGAAGG
AGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAGACCCCATG
ATGGGCAAACCGTTCCCAAGTGGGGCCCTTTTCCAATGGGCATGTACAA
CCCCACCAT-----CTCCAGGCAATGTCTAATACTGGGGTGGGTACC
CA-----CACCCGTCCCTAATGCCAGTTTCTTGTCTGCAGCTATGGGC
ATGGGCTGTCACATGGAATATCTCATCTACGCCTCCTTCTCATTCATGGG
ATGTTTACAAATCAGTGATGGGTGCAATATCGTCAACCTGCTGGCCAGTA
ACTCTCCGAGTGTTCGTATGCTCTGACCCAGCAGAAATACTTCAGTAAC
TACAGTCTGTGATCGGGTTTTACATTTACGAGCCATCGAGTACTGGAA
CTCCACGGTGCAGGAGCACCTGAAGACCCTGAGTCATGGCTTTAACAAGA
TCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTCAACGTCAGT
GCGTCAACAAAGAGCGACTTCATCTCCATCCTGAAAGGCTCCTTCTGCG
CAGCCCGGAGTACCAGCACTTACCAGGACATCATATTCTCCAAGA---
ACCGTGAGACTG-----ACGAGTACGATATCATCGCCTCGCGGATGTAC
TTGGTGGCGCGGACGACCGAGAAGAAGCGCGAGGAGGTGGTGGAGCTTCT
AGAGAAGCTTCGACCGTTGATGCTAATCAACAGCATCAAGTTCATTGCCT
TCAATCCCACATTCGTGTTTATGGACCGCTACAGCTCCTCCGTCATCTCG
CCCATCCTGACCTCAGGCTTCAGTGTGCTCACTATCCTCATCCTCACTTT
CTTCTGGTCATCAACCCCTTGGGGAACCTTCTGGCTCATCCTCACGGTCA
CATCCGTGGAGCTGGGTGTCTTGGGTTTGTGAGGGCTTTCACCAGTTGAG
TGGCAGCCAGCTCTCAAGAATGTGTCCACATCTTGCAATGTTGGCATTAT
TAATGGGCTCTCTGGATGGGCTTCTCGGTGGATGACACCCCGGCTGACA
CCATCACTCGGCGGTTTCGCTATGATGTGGCGCTGGTGTGAGCATTAAG
GATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGCGGGATGGAAGA
CAGTGCTTGACCTCAGGCTTTACTGTCATGATCAAGGAATGCTGTGATG

GCATGGGCGATGTCAGCGAGAAGCACGGCGGAGGACCAGCCATTCCCGAG
AAGGCTGTACGTTTCTCTTTTACTGTTATGTCTGTCTCTGTCCGGGCAGA
GGAGGAGGAG-----GAGGACGTTA
CCATCTTCACCGAGCCAAGGCCGAACTCGGAGCTGTCCTGTAAGCCCCTT
TGCTTGATGTTTGTGGATGAGTCAGACCACGAGACACTCACAGCCCTCCT
GGGGCCTGTAGTTGCAGAGCGTCATGCAATGAAAGAGAGCAGGCTCATCC
TCTCCATCGGCGGCCCTTCCCTCGCTCCTTCCGCTTCCACTTCAGGGGCACG
GGATACGATGAGAAGATGGTGCGGGAGATGGAAGGCCTGGAGTCCTCGGG
GTCCACGTATGTCTGCACTCTGTGTGACTCCAGCCGGGCGAACGCCCTCAC
AAAACATGGTGCTACACTCCATCACCCGCGGCCATGAAGAGAACC TAGAA
CGTTATGAAATATGGAGAACCAACCCCTTCTCTGAGTCTGTGGACGAACT
GCGAGACAGAGTCAAAGGTGTCTCTGCAAAGCCCTTCATGGAGACCACC
CCACGCTAGATGCGTTGCACTGCGACATTGGCAATGCCACTGAGTTCTAC
AAAACTTCCAGGACGAGATCGGGGAGGTGTATCAAAAGGT---CAAC--
-CCCAGCCGGGAGGAAAGACGCAGCTGGAGGGCCGCCCTAGATAAACAGC
TGAGGAAGAAGATGAAGCTTAAACCGGTAATGAGGATGAATGGGAACTAC
GCCCCGAGGCTAATGACCCTGGAGACTGTGGAGGTGGTGTGTGAACTGGT
GCCCTCAGAGGAGAGGAGAGAGGCCCTGAGGGAGCTCATGAGGCTCTACC
TCCAGATGAGGCCTGTGTGGCGCGCCACCTGCCCAGCCAAGGAATGCCCA
GACCAGCTGTGCCGCTACAGCTTTAACTCGCAGCACTTTGCCGACCTCCT
CTCCTCTACCTTCAAATACAGGTACAACGAAAAGATCACCAATTACCTGC
ACAAGACTCTGGCCCATGTGCCTGAAATCATAGAGAGAGATGGATCCATA
GGAGCCTGGGCCAGTGAGGGGAACGAGTCGGCAAACAAATCGTACACCAT
TGAGATGGGTCCCTTGGGGCCCCGGTGGAAAGGAGAACCCACAGCCTTTCT
CCTGCTCCATTGAAGACCCCAAAAACAGACAAAGTTCAAGGGCATCAAG
ACCTACATTTTCGTACCGGGTACACCCGAGCCACACAGGACGTCTGTCTA
CAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGT
TCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAGGCTACGGGGCGA
TTTGAGGAAGACTTCATCGAGAAGCGTAAGAGACGACTGATACTGTGGAT
GAACCACATGACCAGTCAACCAGTCTCTCCAGTACGAAGGCTTTGAGC
ACTTCTGATGTGCGCTGACGACAAGCAGTGGAACCTGGGAAAGAGGCGG
GCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACACTCCAGAT
CCCTAACGAGCACCAGGACCTACAGGATGTAGAGGAGCGGGTCGACTCCT
TCAAGGCCTTTGCTAAAAAATGGATGACAGCGTGATGCAGCTCACACAT
GTTGCCTCAGAGCTGGTGCCTAAACACCTGGGTGGGTTTCAGGAAGGAGTT
CCAGCGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCATTTCATGCTGG
ACCTCCGCACAGCTCGGACGCCCTCAACAACGCCATCTCCCATNNNNNNGCCACG
TTCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGG
AAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAG
CACCTACTATTTCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCC
GCCATCTGCTTCCCCTTTGTCTTACCTCAGTCAAGAATGGATCTGCCTG
GACCTATGGCACGCTGACCTGCAAAGTGATCGCCTTCTGGGTGTGCTCT
CCTGTTCCACACGGCGTTCATGCTATTCTGCGTGAGCGTCACTCGCTAC
CTGGCCATCGCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGAC
CTGTCTGGCTGTCTGTCATGGTGTGGACGTTGTGAGTGGCTATGGCGT
TCCC GCCGGTGCTAGACGTAGGGACATACTCTTTTATCCGAGAGGAGGAC
CAGTGCACATTCAGCACCGYTCCTTCAGGGCGAATGATTCGCTGGGCTT
CATGCTCCTGCTGGCGCTCATYCTCTGGCCACACAGCTGGTTTACCTCA
AGCTCATCTTYTTYGTCCACGACCGCCGAAAGATGAAGCCTGTCCAGTTC
GTGCCTGCTGTGACCCAGAACTGGACCTTCCATGGGCCAGGTGCCAGCGG
GCAGGCAGCGGCCAACTGGCTGGCYGGATTTGGTAGAGGCCCAACCCCGC
CTACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGACGGCGT
CTACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTT

-----TTCTAGAGAGAAACCTTCATCCACTAACTGCCTTGG
CATGCTGCTGCTGTCCGATGCTCACCAGTGCACCAAGCTCTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCTGCAATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTACGAAGCTGCCCTGAACTGGA
TCAACTATGACCTGGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGA
ACGGTGCCTTGGCCCTGCTGCCGGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAACGCAAAGCCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAACGATGGCGTTGTAAAC
AGCCCATGTGCTCGACCAAGAAAGACCAGCCATGCACTGTTCTCTGGG
AGGGCAAACCTTTTATGTGTGACAAGTTGTACCTGGTAGACCAGAAAGCCA
AAGAGATTATCCCCAAGGCAGACATTCCCAGCCCCAGGAAGGAGTTCAGT
GCCTGCGCAATTGGCTGTAAGGTGTACATCACAGGTGGAA--GAGGCTC-
GGAGAACGGTGTCTCCAAAGATGTGTGGGTCTACGACACCGTCCACGAGG
AATGGTCCAAGGCAGCACCCATGCTCATTGCCAGGTTTGGGCACGGCTCT
GCTGAGCTGAAACACTGCCTGTACGTGGTTCGGAGGTCACACGGCAGCGAC
TGGCTGCCTCCCAGCTTCTCCGTCTGGATGAATACATTGTTTTGTTTAGT
CGTTCAACAACAAGGCTGATACTGAATGAAGCGGAGCTAATCATGGCTCT
GGCCAGGAGTTCCAGATGAGAGTAGTACAGTGTCTCTGGAGGAACAGT
CTTTCCCCAGTATCATCCAGGTGATCAGTGGTTCGCTCCATGTTAGTCAGT
ATGCATGGGGCCCAACTTATCACTTCACTTTTTTCTCCCTAGAGGAGCTGC
TGTGGTTCGAGCTGTTCCCTTTTGTGTGAACCCAGAGCAGTACACTCCTT
ACAAAACCTTGGCACCTTCCAGGCATGGACCTCCACTATGTCTCCTGG
AGGAACACGAAGGAGGAGAACACCATCACCTACCCAGATAGACCCTGGGA
ACAAGGAGGCATCATTCACCTTGGAGAAGGAGGAGCGGGAGCGAATACTGG
CGAGCAAAGATGTCCCGAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCCCGATCTACCAGGACACTTTGGTTCGACATCCCTTTCCTTCCCTGGAAGT
CCTCAA---AGAGGGAATGAAG---ACAAAGCCAGTGTGAAGAA---GT
CAAAGCCGTCCAGCACAGTCCATCCAGGCCGCGTCAGAGAACCCCAAGTGT
CAGACCTCAGTACAAACCACTAATGAGGCCAAACTCACAGTGTCTGGCA
GATCCCCTGGAATCTCAAATACCTCAAGGTGCGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAGAAGGACGCCAGTAAGGGGACGCTGGAGGATCAAATC
ATCCAGGCGAACCCAGCGCTGGAGGCCTTCGGCAACGCCAAAACCTGAG
GAATGACAACCTCGTCCCCTTTTGGAAAATTCATCCGAATTCACTTCGGCA
CGAGCGGCAAGCTGTCTGTCTGTGACATCGAGACGTACCTCCTGGAGAAG
TCCCCTGCTCACCTTTCAGCTGAAGGCGGAGAGGAAC TACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CCAACAACCCATACGACTACTCCTACATCTCCCAGGGAGAGGTTACGGTC
GCCTCCATCAACGACTCCGAGGAGCTGATGGCCACCGACAGCGCCTTTGA
CGTCTCGGCTTACCTCGGACGAGAAGATGGGCGTCTATAAACTAACCG
GCGCCATCATGCACTACGGCAACATGAAGTTCAAAACAGAAGCAACGGGAG
GAGCAGGCAGAGCCAGACGGCACGGAGGCCCGCCGATAAGTCGGCTTATCT
GATGGGACTGAACTCTGCCGACCTCATCAAGGGTTGTGCCATCCCCGGG
TCAAGGTCGGCAACGAGTACGTACCAAAGGCCAAAGTGTGGACCAGGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTA
TAACACCAAGCTGGGATATAAGCGCCATGTGGCTATGCACTCTGCCACTG
CAGGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACACCC
GTGCTTTTGGAGCACCTAAAGAGCCACTCCGGGAAGTCTTCGGGTGGCAC
CAAGGAGAAAAACACCCGTGCGACCCTGTGACCGTCTGTTTCTACACAC
GGAAGGATGTGAGGCGGCACATGGTGGTCCACACAGGGCGAAAGGACTTC
CTCTGCCAGTATTGTGCCAGCGCTTCGGCAGGAAGGATCATCTGACGCG
CCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCAGATATGTTAGGTCTTCTAGCCTCTGGATCACCACCCTGCTCTGTG

AAGGAGGAGCTCAGCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCGTTCCCCAGTGGGGCCCCTTTCCGATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCTGCCCTCATGCCAGCCCCTTGTCTGCAGCTAT
GGGCATGGGCTGTCACATGGAANNNNNNNNNNNNNNCCTCTTTCTCATTCATGGGATGTTTACA
AATCAGTGATGGATCAAATATCGTAAACCTGCTGGCTAGTAACTCTCCAA
GTGTTTCGTACGCACTGACCCAGCAGAAATACTTACAGTAATTACAGTCCT
GTGATTGGGTTTTATATTTACGAGCCCATTGAGTACTGGAATCCACGGT
GCAAGAGCACCTGAAGACTCTGAGTCATGGCTTCAATAAGATCTCTTGG
TGGACAACTTTTTCCACTATCTTCGAGTTGTGAATGTGAGTGCATCAACC
AAGAACGACTTTCATCACCATCCTCAAGGGCTCCTTCCGCGCAGTCCAGA
GTACCAGCACTTCACTGAGGACATCATATTCTCCAGGA---ACCGGGAGA
CCG-----ATGAGTATGAGATTATTGCTTACGGATGTACTTGGTTGCA
CGGACGACAGAGAAGAAGCGAGAAGAGGTGGTGGAGCTTTTAGAAAAGCT
TCGTCCATTGATGCTGATCAACAGCATCAAGTTCATTCCTTCAATCCCA
CGTTTGTGTTTTATGGACCGCTACAGCTCCTCTGTCATTTGCGCAAATCCTG
ACCTCAGGCTTCAGCGTACTCACAAATCCTCATCCTCACTTTTTCGTCTTGT
CATCAACCCTTTGGGGAACCTTGTGGCTCATCCTCANNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNGGCTTTACCAGTTT

GAATGGCAGCCAGCTCTCAAGAATGTGTCAACATCTTGCAGTGTGGCAT
TATTAATGGGCTCTCTGGATGGGCTTCTCTGTGATGACGTTCCAGCTG
ACACCATCACTCGGGGTTTTGCTATGATGTGGCACTGGTGTGAGCATT
AAGGATCTGGAGGAGGACATCATGGATGGGCTGAGAGAGAGTGGGATGGA
AGACAGTGTGACCTCAGGCTTCAGTGTTATGATCAAGGAGTCTGTG
ACGGTATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCT
GAGAAGGCTGTACGTTTCTCTTTCAGTGTATGTCATCTCTGTCTGGC
GGATGAAGAGGAG-----AAAGAGG
TTACTGTCTTCACTGAGCCGAAAGCCAACTCAGAAGTGTCTGTAAAGCC
CTTTGCTGATGTTTGTGATGAGTCAGACCATGAGACACTCACAGCCGT
CCTGGGCGCTATAGTTGCAGAGCGAGATGCTATGAAAGAGAGCAGGCTCA
TCCTCTCTGTGGGCGGACTCCCTCGCTCCTTCCGCTTCCACTTCAGAGG
ACAGGATATGATGAGAAGATGGTGCGTGAGATGGAAGGCCTCGAGGCCT
GGGCTCCACCTATGCTGCACTCTTGTGACTCCACTCGGGCGGAGGCCT
CTCAAACATGGTGTGCTGCACTCGGTTCACACGTCATGAAGAGAACCTA
GATCGCTACGAAATATGGAGAACCAACCGTTTTTCTGAGTCTGCGGATGA
GCTGCGAGACAGAGTCAAAGGGATCTCAGCCAAGCCCTTCTGGAGACCC
ACCCACGCTGGATGCATTGCACTGCGACATTGGCAACGCAATTGAGTTC
TACAAAATCTTCCAGGATGAGATTGGCGAGATGTACAAAAAGGT---CAG
C---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAAC
AGCTGAGGAAGAAGATGAAGCTAAAACAGTGTGAGAAATGAATGGGAAC
TATGCCCGCAGGCTAATGACCCAGGAGACTGTGGAGGTGGTGTGTGAGCT
GGTACCCACAGAGGACAGAAGGGAGGCCCCTGAGGGAGCTCATGAGGATCT
ACCTCCAGATGAAACCTGTGTGGCGTGGCACCTGCCCCGCAAGGAGTGC
CCCGACAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTCCGCGACCT
CCTCGCCTCTACCTTCAAATACCGCTACAATGGAAAGATAACCAATTACC
TGACAAGACCCTGGCACACGTCCTGAAATCATGAGAAAGATGGATCC
ATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCAGCAAACAAG-----

-----NNNNNNNNNNNGTT

CCTCAAACCTGACCTCTTTGGGTTTTATCATATCGGAGTCGGTGTGGTTGGAA
ACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGGGCG
CCCTACTATTTCTGCTGGACCTGTGCGCCTCCGACATCCTGCGCTCCGC
CATCTGCTTCCCTTTGTCTTACCTCGGTCAAGAATGGATCTGCCGGA
CCTACGGCACGCTGACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTCTCC
TGTTTCCACACGGCGTTTATGCTCTTCTGTGTACAGCGTCACGCGCTACCT
AGCCATCGCACACCACGTTTTTCTACACAAAAGGCTGACCTTCTGGACCT
GTCTAGCCGTACATCTGCATGGTGTGGACGTTGTCCGTGGCGATGGCGTTC
CCGCCGGTGTAGACGTAGGGACGTA CTCTTTTATCCGGGAGGAGGACCA
GTGCACGTTCCAGCACCGTTCTTTTACAGGGCGAATGATTCGCTGGGCTTCA
TGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAG
CTCATCTTCTTCTGTCACGACCGCTCGAAAGATGAAGCCTGTCCAGTTCGT
GCCTGCTGTACGCCAGA ACTGGACCTTCCACGGGCCAGNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNTGGCCGCCGCC
TGCCCTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGTAGGCGTC
TACTGGTATTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTT
TACATCATGACGTTTTTCTTCTGCGGCTGTGGGGCCCTATCTGGTTGC
CTGCTACTGGCGGGGTGTTTTGCCAGGGACCACAGGGCCCCTGGGGGTACC
TGACGGCAGCCGTGTGGATGAGCTTGCCCAAGCTGGGGTCAATCCTTTNNNNNNNNNNNNNNNNNN
NNNG
CCAAATCTCGCTTTCACCCCTGGCGTGGGGACTGGTCCTGGCACGGAGC--
-GCAGCGTCCCACCTCGGCAACAGCTTGCTGTCCCCGACGCAAAGCGACGA
GCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCA
ACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT-----
GATTCGCCCGTAACCGCGCCACCTTGCTGTCTACGCAGCGCCGGAGT
GAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCAACCGGCTC
TTGGCTATTACGCAGACCCTTCGG--GCTGG---GGAGGACGCACGCCG
CCGCAGTACTGTGGCGTTAACAGCAAATCCAGCTCGGTCTTTTCTGCTG
GCCCCTA ACTCTCTGGGTGGCAGAGCGAGCA---CC---A ACTACCTGG
-----CTGAAGA---GGGG---GACTC---CATCCCGACGGAGAGG
TCCCC---AT---CGGAGGCTCGGAGGAG---ACCAAACCAAAGACAT
GAC---TTCAGA---GTCGAGCTGGATAGAG---ACGCCGTCTCCATTA
AGTCCATCGACTCGAGCGATTCTGGGATCTTTG---AACAGGCCAAGAGG
AGGAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGAGACAGT
GTCCCCGTAAAATCCGAGCATCACTCAACAGGCGAAGTACAGAGAGAG
AAGTGGCGTTGGGGATAAATCCGTTCGCGGATGGGATGGGCGCCTTCAA
ATAAACCACAGCTCCACGATATTGGCTCCGG---ACAGACAGCGTTTTTC
CTCCAGGCG---CCCGGTAC---GCAGCTGCCGCCCTGGGA---CACC
ATCA-----CCACCCGACCCACGTTGGCTCT---TACTCCACAGCGGCT
TTCAACTCCACAGGGACTTTCTGTTCAGAAATCGGGGTTTTGGAGACGC
CACCGG-----GGCGCAGCACAGTTTGTTCGCCTC-----
-CGGAAGTTT---C-----GCAGGGCCACATGGACTCAGATGCAGCG
GGGCACCTGCTCTTCCAGGGCTCCACGAG---CAAGCGCGAGCCATGC
GTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGGACA
TGTAACGGACGCGCCGACCAGTACGGCCACGTTACGAGCCCGCGGT---CC

GACCACTACGCTTCGACCCAGCTGCACGGCTACGGCCCCATGAACATGAA
TATGGCCGCG---CACCACGGAGCTGGGGCCTTCTTTCGATACATGAGGC
AGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTG
ACGAACCCCAAAAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAGCT
CGTGACCCATCTGACKGTGGAGCATGTGGGGGGACCGGAGCAGACCAACC
ACATCTGCTTCTGGGAGGACTGCGCCAGAGAAGGAAAGCCATTCAAAGCC
AAATACAAACTTGTAATCATATCAGAGTACACACCGGAGAAAAGCCCTT
TCCGTGTCCGTTCCCCGGCTGTGGCAAA

>*Siganus spinus*

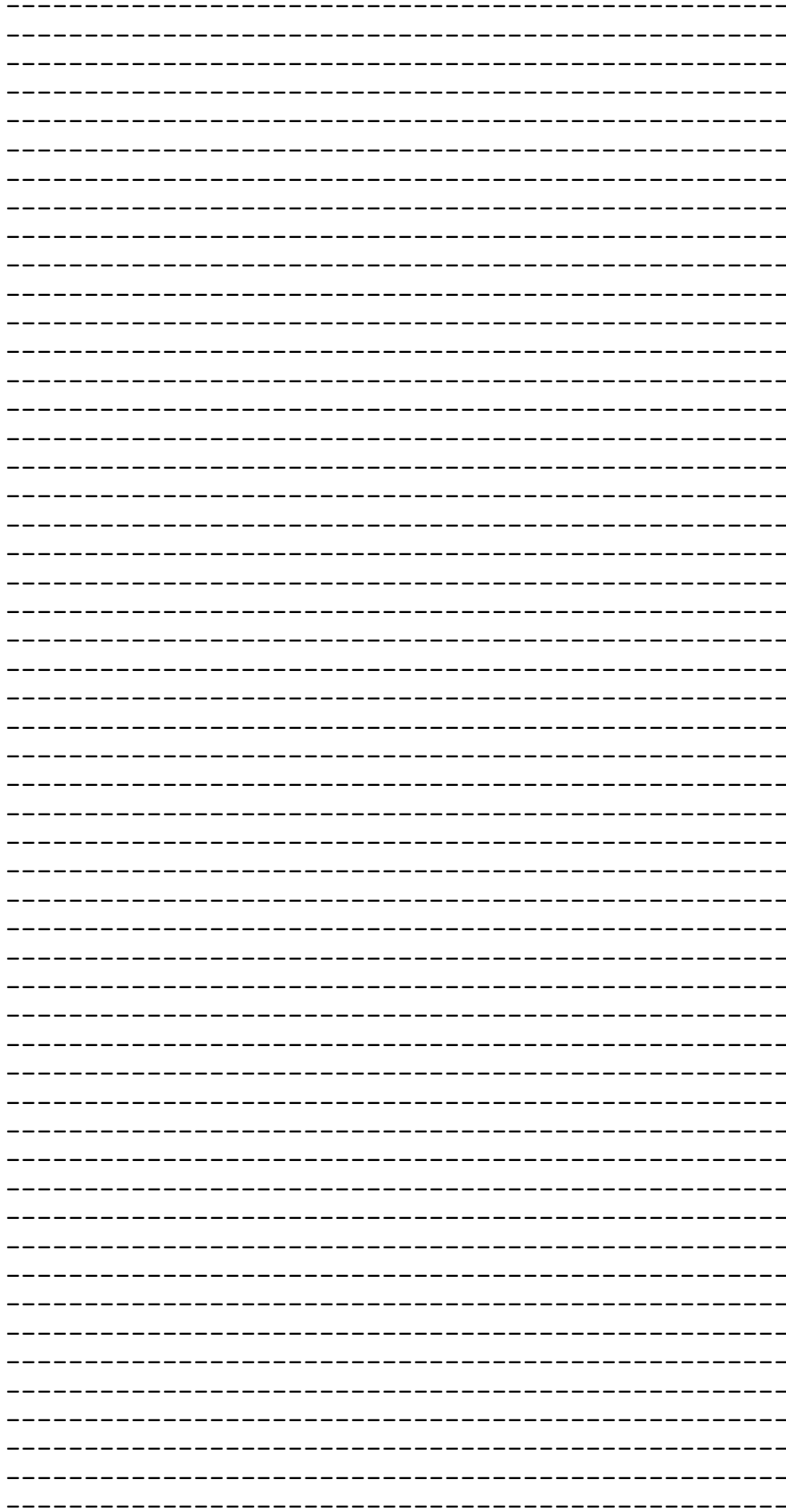
AGCCTACTGATTTCGAGCAGAACTTAGCCAACCAGGCGCTCTTCTTGGAGA
CGACCAAATTTATAATGTTATTGTTACCGCCCATGCATTTCGTAATGATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGGTTTGGAACTGACTAATC
CCGCTAATGATCGGAGCCCTGACATGGCATTCCCCCGAATGAACAACAT
GAGCTTCTGACTCCTTCCCCCATCCTTCCTGCTTCTCCTGGCCTCCTCTG
GAGTAGAAGCTGGGGCGGGTACTGGTTGAACTGTCTACCCCCCTCTAGCC
GGAAACCTAGCACACGCTGGTGCATCCGTTGACCTAACTATTTTCTCCCT
TCACTTAGCTGGTATTTCCCTCAATTCAGGGGCCATCAATTTTATTACAA
CCATTATTAACATGAAACCTCCCGCTATTTCCCAATATCAGACCCCTCTG
TTTGTATGGGCCGTCCTAATTACAGCTGTCCTGCTACTTCTCTCCCTGCC
TGTAAGTAGCCGCTGGAATTACAATGCTCCTAACAGACCGAAATTTAAATA
CTACCTTCTTTGACCCCGCAGGAGGAGGTGACCCAATCCTGTACCAACAC
CTG-----

-----NNNCTCGAGAGAAACCTTCATCCATCCAACCTGTCTTGGCAT
GCTGCTGCTGTGCGGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCT
GGGGCATGTGCCTCAGCAACTTTCTGCCATTTGCAAGACAGAGGACTTC
CTCCAACCTGCCAAAGACATGGTGGTGCAACTCTTGTGCGATGAGGAGCT
AGAGACTGAAGACGAAAGACTAGTTTATGAAGCTGCACTCAACTGGATCA
ACTATGACTTGGAAAAGAGGCATTGCCACCTTCCCTGAACTCCTAAGAACA
GTCCGCTTGGCCTTGCTCCCCGCCATCTTTCTCATGGAGAATGTGTCCAC
AGAAGAGCTGATCAATGCTCAGGCCAAAAGCAAGGAGCTGGTGGATGAAG
CTATYCACTGTAAGCTGAAGATCCTGCAGAATGATGGCGTCGTCAACAGC
CCGTGTGCCCCGTCCCAGAAAACCAGTCATGCTCTCTTTCTCCTTGGTGG
GCAGACTTTCATGTGTGACAAGTTGTACCTGGTCGACCAGAAAAGCCAAAG
AGATCATCCCCAAGGCGGACATTCCAGCCCGAGGAAGGAGTTCAGCGCC
TGTGCCATCGGCTGTAAAGTATACATCACTGGTGGAA--GAGGCTC-GGA
GAATGGGGTGTCCAAAGATGTGTGGGTCTATGACACCGTCCACGAGGAAT
GGTCAAAGGCGGCACCTATGCTCATGTCAGGTTCCGGTCACGGTTCGCA
GAACTCAAACACTGTCTGTACGTGGTAGGCGGTCACTGTCAGCTACTGG
CTGCCTTCCAGCCTCTCCATCGGGATGAGTACATGTTGGTTTTTTAGTCGT
TCAACAACAAGGCTAATACTGAATGAACCAGAGCTCATCATGGCACTGGC
ACAGGAGTTCAGATGAAAGTGCATCACAGTGTCCCTTGAGGACCAAACCTC
TCCCCAGCATTGTCCAGGTGATCAGTGGTGGCACCATGTTGGTCAGTATG
CATGGAGCTCAGCTCATCACCTCACTCTTCTCCTCCCCAGAGGAGCGGTTGT
GGTGGAGCTGTTCCCTTTTGTGCTGTAAACCCTGAGCAGTACACTCCATATA
AAACACTTGCTTCCCTACCAGGCATGGACCTGCACTATATCTCCTGGAGG
AACAAAAGGAGGAGAACACCATCACACACCCAGACAGAACCTGGCAACA
AGGAGGGATCAGTCACCTGGGGAAGGATGAGCAAGAGCGAATACTGGCAA
GCAAGGATGTCCCCAGGCATCTGTGCTGCCGCAACCCGGAGTGGCTCTTC
CGCATTTACCAGGACACTTTAGTGGACATCCCTTCATTGCTGGAGGTTCT
TAA---AGAGGGCATGAAG---GCAAAGCCCAATTTAAAAA---GTCCA

AACTTGCAAGCACACTCCACCCAGGCCGTGTCAGGGAACCTCAGTGTCAA
ACGTCAGTACACGCAACGAATGAGGCTAAACTCACAGTCTCCTGGCAGAT
CCCCTGGAATCTGAAATACCTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGAAAGACAAC
AGCAAGGGGACCCTGG
AGGACCAGATCATCCAGGCCAACCCGGCACTCGAGGCTTTCGGCAACGCC
AAAACCCTCAGGAACGACAACCTCGTCGCGCTTCGGAAAGTTCATCCGAAT
CCACTTCGGCACGAGCGGCAAGCTCTCGTCTGCTGACATCGAGACCTACC
TGCTGGAGAAGTCTCGAGTCACCTTTCAGCTCAAGGCTGAGAGAACTAC
CACATCTTCTACCAGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACAT
GCTGCTGATCACCAACAACCCCTACGACTACTCCTACATCTCCCAGGGGG
AGGTGACCGTGGCGTCCATCAACGATGCCGAGGAGCTGATGGCCACGGAC
AGCGCCTTCGACGTGCTCGGCTTCACCCCGATGAGAAGATGGGCGTCTA
CAAGCTGACCGGCGCCATCATGCACTACGGCAACATGAAGTTC AAGCAGA
AGCAGCGGAGGAGCAAGCCGAGCCGGACGGCACCCGAGGCGGCCGACAAA
TCGGCCTACCTGATGGGCCTGAACTCTGCCGACCTCATCAAGGGACTGTG
CCATCCCAGGGTCAAGGTGGGCAACGAGTACGTACCAAAGGCCAGAGCG
TGGACCAGGTCTACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGC
GGCAAGCACTACAACACCAAGTTGGGCTATAAGCGCCATGTGGCCATGCA
CTCTGCCACAGCAGGGGACCTCACCTGTAAAGTGTGCATGCAGACCTATG
AGAGCAGCCTGTGCTCCTGGAGCATCTCAAGAGCCACTCTGGGAAGTCC
TCCGGCGGCACCAAGGAGAAGAAACACCCGTGCGACCATTGCGACCGTCCG
TTTTCTACACACGCAAGGATGTGAGGCGTCACATGGTGGTCCACACTGGCC
GGAAGGACTTCTGTGCCAGTACTGTGCCAGCGCTTGGCAGGAAAGAC
CACCTGACGCGCCACGTGAAGAAAAGCCACTCACAGGAGCTGCTCAAAT
CAAGACGGAGCCTCCAGACATGCTCGGCCTGTTAGCTTCAGGATCACCGC
CTTGCTCTGTGAAAGAAGAGCTCAGCCCTATGATGTGTGGCATGGGTTCC
AACAAGGACCCCATGATGGGCAAACCGTTCGCCAGCGGGCCGCTTTCC
CATGGGCATGTACAACCCCAACCAT-----CTTCAGGCCATGTCCAATT
CCAGCGTGGGCCACCCCT-----CATCCCTCCCTGATGCCCACTTCCTTG
TCTGCAGCTATGGGCATGGGCTGTCACATGGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATGTT
TACAGATCAGTG
ATGGATCAAATATCGTCAACCTGCTGGCGAGTAACTCTCCGAGTGTTC
TATGCTTTGACTCAGCAAAAGTACTTCAGCAACTACAGTCTCCTGTGATTGG
GTTTTACATTTATGAGCCCATAGAGTACTGGAACCTCACGGTGCAGGAGC
ACCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACAAC
TTTTTCCACTACCTGCGGGTGGTGAATGTGAGCGCATCAACCAAGAGCGA
CTTCATCACCATCCTGAAGGGCTCCTTCCTACGCAGCCCGGAGTACCAGC
ACTTCACCGAGGACATCATCTTCACCAAGA---ACCGCGAGACCG-----
-ACGAGTACGACATCATCGCCTCGCGAATGTATTTGGTGGCGCGGACCAC
AGAGAAGAAACGCGAGGAGGTGGTGGAACTTCTGGAAAAGCTTCGTCCTT
TGATGCTCATCAACAGCATCAAGTTCATTGCCTTCAATCCTACGTTTCGTG
TTCATGGACCGCTACAGCTCCTCTGTTATCTCGCCATCCTGACCTCAGG
ATTCAGCGTCTCACATCCTCATCTCACTNN
NNNGGCTTTCACCAGTTTGAAT
GGCAGCCAGCTCTTAAGAATGTGTCTACATCTTGAACGTTGGCATTTATT
AATGGGCTCTCTGGATGGACTTCTCGCTGGATGACGCCCCTTCTGACAC
CATCACTCGGCGGTTCGCTATGATGTGGCACTGGTGGCAGCAATAAAGG
ATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAACGGGATGGAAGAC
AGTGCTTGCACCTCCGGCTTCAGTGTGTCATGATCAAGGAGTCTTGTGACGG
CATGGGCGATGTGAGTGAAGCATGGTGGAGGACCGGCTGTTCCCTGAGA
AAGCTGTGCGTTTCTCTTTCAGTGTGTCATGTCTGTCTCCATTGTGACAGAT
AGTGCAGAG-----AAAGAGGTTAC
TATTTTCAGGGAGGCTAAACCAAACCTCAGAAGTGTCTGTAAGCCCCTTA

GCCTCATGTTTGTGGATGAGTCCGACCATGAGACACTCACAGCCATCCTG
TGGCCTGTTGTGCGCAGAGCGTAATCAATAAAAAGAGAGCCGCCTCATCAT
ATCCATAGGTGGCCTGGCGCGGTCTTCCGCTTTCACCTCAGAGGTACAG
GATATGATGAGAAAATGGTCAGAGAGATGGAAGGCCTTGAGGCCTCTGGG
TCCACATATGTGTGCACTCTTTGCGACTCCAGTCGGGCAGAAGCTGCTCA
AAACATGGTGTGCTGCACTCGATCACACGCAGTCACGAAGAGAACCTGGAGC
GTTACGAAATATGGAGAACGAACCCCTTTTCTGAACTGTCAGACGAACTG
CGAGACAGAGTCAAAGGGGTTTCTGCCAAGCCCTTTTGGAAACCCACCC
AACTCTTGATGCTTTACACTGTGACATTGGCAATGCCACAGAGTCTACA
AAATCTTCCAGGATGAGATCGGGGAGGTGTATCAAAAGGT---CAGT---
CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGCT
GAGGAAGAAGATGAAGCTCAAACCAGTAATGAGGATGAATGGGAACATG
CACGGCGGCTAATGACCCAGGAGACAGTGGAGGTGGTGTGTGAGCTGGTG
CCCTCAGAGGAGAGGGAGGGAGGCCCTTGAGGGAGCTTATGAGGCTTTATCT
CCAGATGAAGCCTGTGTGGCGTGCCACCTGCCAGCCAAGGAATGCCCCG
ACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTTGCTGACCTCCTC
GCCTCTACCTTCAAAATATAGGTACAATGGAAAGATAACCAATTACCTGCA
CAAGACCCTGGCTCATGTGCCTGAAATCATAGAGAGGGATGGATCCATAG
GAGCATGGGCCAGCGAGGGGAACGAGTCGGCAAACAAATCCTACACCATT
GAGATGGGTCCCTTGGGACCTAAATGGAAGCAGAGCCACAACCTTTCTC
CTGCTCCATTGAAGACCCAACAAAACAGACCAAGTTCAAAGGTATCAAGA
CGTACATTTTCATACCGGCTCACGCCAAGTCACACCGCCACGCTGTCTAT
CGACGCTACAAACACTTCGACTGGCTGTACAACCGCTTACTGCACAAGTT
CACTGTTATCTCCGTGCCTCACCTGCCGAGAAGCAGGCCACTGGGCGCT
TTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATACTGTGGATG
AACCACATGACCAGTCACCCCGTCTCTCCAGTATGAAGGCTTCGAGCA
CTTTTTGATGTGTGCTGATGACAAGCAGTGAAGCTAGGCAAGAGACGGG
CAGAGAAGGACGAGATGGTCGGCGCCCATTTTATGCTGACACTGCAGATC
CCTAACGAGCACCAGGATCTTCAGGACGTCGAGGAGCGGATCGACTCCTT
CAAATCATTTGCCAAGAAAATGGATGACAGTGTGATGCAGCTCACACATG
TTGCCCTCGGAGCTGGTGCCTAAGCACCTGGGTGGATTTCAGGAAGGAGTTC
CAGCGACTAGGTAAATTCATTCCAGTCCATCAGCCAGGCTTTCATGCTGGA
CCCTCCCCACAGCTCAGAGGCCCTNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNTGGGTTTCATTATTGGAGTTGGGGTGG
TCGGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCAT
CGAGCACCCTACTATTTCTACTGGACCTGTGCGCCTCTGACATCCTGCG
CTCAGCCATTTGCTTCCCCTTTGTCTTACCTCAGTCAAGAATGGCTCTG
CCTGGACCTATGGCACGTTGACCTGTAAAGTGATCGCCTTCTGCGGTGTG
CTCTCCTGTTTCCACACGGCGTTTATGCTCTTCTGTGTTAGCGTCACGCG
CTACCTGGCCATCGCTCACCACCGTTTCTACACCAAGAGGCTGACCTTCT
GGACCTGTCTCGCTGTCATTTGCATGGTGTGGACGTTGTGCGGTGGCCATG
GCGTTCGCCAGTGCTAGACGTAGGGACGTACTCTTTTATCCGGGAGGA
GGACCAGTGCACGTTCCAGCACCCTTCCCTCAGGGCCAATGATTCATTGG
GCTTCATGCTCTTGTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTAC
CTCAAGCTCATCTTCTTTCGTCCACGACCGCCGAAAGATGAAGCCAGTCCA
GTTTCGTGCCTGCCGTCAGCCAGAACTGGACCTTCCACGGACCAGGTGCCA
GCGGGCAGGCGGCGGCTAACTGGCTGGCTGGATTTCGGTCGAGGCCCCACC
CCACCTACTCTGCTGGGCATCCGGCAGAATAGCAACGCAGCGGGCCGCAG
GCGTCTATTGGTGTGGATGAATTCAAAACGGAGAAGAGGATTAGTAGGA
TGTTCTACATCATGACGTTTTTCTTCCCTGGCATTGTGGGGGCCCTATCTG
GTGGCCTGCTACTGGCGGGTGTTCGCAAGGGGCCAGTGGTCCCTGGGGG
TTACNN
NNNNNNNNNNNNNNNNNNNTTTCACCCTGGCATGGGGACTGGTCCCTGGCACGGAGC---GCAGCC

TGGAGAGGCGCCACTGCCACCTGGCCGAGCTGCTGAGGACGGTCCGCCTG
GCGCTGCTGCCCGCCATCTTCCTGATGGAGAACGTGTCGACGGAGGAGCT
GATCAACGCCCAGGTCAAGAGCAAGGAGCTGGTGGACGAGGCCATCCGCT
GCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAACAGCCCGTGCGCC
CGCCCCGCAAGACCAGCCACGCCCTCTTCCTGCTGGGCGGACAGACCTT
CATGTGCGACAAGCTGTACCTGGTGGACCAGAAGGCCAAAGAGATCATCC
CCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCATC
GGCTGCAAGGTCTACGTACCGGGGGGC--GGGGCTC-GGAGAACGGCGT
GTCCAAAGACGTGTGGGTGTACGACACCGTCCAGGAGGAGTGGTCCAAGG
CGGCGCCCATGCTCATCGCCCGGTCGGCCACGGCTCGGCCGAGCTGAAA
CACTGCCTCTACGTGGTGGGAGGGCATA CGGCCGCCACCGGCTGCCTCNNNNNNNNNNNNNNN--
-----CCAGGCTGATCCTCAAC
GAGGCCGAGTTGATCTTGGCGTTGGCGCAGGAGTTCAGATGAGGGTGGT
GACGGTGTCTCTGGAGGACCAGACCTTCTCCAGCATCGTGCAGGTGGTCA
GCGGCGCCGCCATGCTGGTGTAGTATGCACGGAGCACAGCTGGTACCTCT
CTCTTCCTCCCCAGAGGAGCGGCTGTGGTAGAACTCTTCCCCTACGCGGT
CAACCCCGAACAGTACACCCCTTACAAGACCTTGGCCACCTTGCCGGGCA
TGGACCTCCAGTACGCTGCCTGGAGGAACACCATGGAGAAAACCACTGTG
GCCTACACTAAAAGACCCTGGGACCAAGGGGGTATCGCCCATCTCGACCA
GGACGAGCAGGAGCGCATCCTGGCCAGCAGCGAGGTTCCCAGGCACCTGT
GCTGCCGAAACCCCGAGTGGCTCTTCCGCATTTACCAGGACACCACAGTG
GACGTCCCCTCCCTACTGGAGGTGCTGAG---GCAGAGTCTGAAG---AG
CACGCCAGCTTGAAGAA---GAGCAAGGCTGCCAGCACCGTCCATCCGG
GGAGGGTCAGGGAGCCCCATTGCCAGACCTCGGTCCAGGCCACTAACGAA
GCCAAGCTCACAGTGCCT-----
-----AAGAGGGATGCCAGCA
AGGGAACCTTGGAGGATCAAATCATCCAGGCCAACCTGCCCTGGAGGCT
TTTGGTAATGCCAAAACACTGAGAAATGACAACATCATCACGCTTTGGCAA
ATTCATCCGGATTCACTTTTGAACCAGCGGCAAGCTGTCCTCTGCAGACG
TAGAGACTTACCTTCTGGAAGAGTGCCTGTACCTTTTCAGCTCAAAGCA
GAGAGGAACTACCACATCTTCTTCCAGATCTTGTCCAATCACAAGCCAGA
GCTGTTGGACATGCTTTTGTATACCAACAATCCATACGACTACTCCTACA
TCTCCCAAGGAGAGGTAACAGTAGCATCCATCAATGATTCTGAGGAGTTG
ATAGCCACCGACAGTGCNTTCGATGTGCTTGGCTTTACTCAGGAGGAGAAA
ATGGGGGTCTACAAGTTGACAGGTGCAATCATGCAYTACGGCAACATGAG
GTTCAAGCAAAGCAGCGTGAGGAGCAGGCTGAGCCTGACGGCACTGAGG
CTGCTGACAAGTCAGCTTATCTAATGGGGCTGAACTCTGCAGATCTCGTG
AAAGGACTCTGCCATCCCAGGGTTAAGGTTGGCAATGAGTATGTCACTAA
AGGTCAGGGTGTAGACCAAGTCTACTACCCCAACAAGGAGGCCTTCAAGT
GCGAGGAGTGTGGCAAGCACTACAACACCAAGCTGGGCTACAAGCGCCAT
GTGGCCATGCACTCGGCCACGGCAGGTGACCTCACCTGCAAGGTGTGCCT
GCAGAGCTACGAGAGCACGCCGGCCCTCCTGGAGCACCTGAAGAGCCACT
CCGGGAAGTCTCGGGCGGCGCCAAGGAGAAGAAGCACCCGTGCGACCAC
TGCGACCGCCGCTTCTACACGCGCAAGGACGTCAGACGCCACATGGTGGT
GCACACCGGCCGCAAGGACTTCCCTGTGCCAGTACTGCGCCAGCGCTTTG
GCAGGAAGGACCATCTGACACGGCACGTGAAGAAGAGCCACTCGCAGGAG
CTGCTGAAGATCAAGGCGGAGCCTCCGGACATGCTGGGGCTGCTGGGGTC
CGGCTCGCCGCCCTGCTCTGTCAAAGAGGAGCTCAGCCCCATGATGTGCA
GCATGGGTCCCTCCAAGGACCCCTGATGGCCAAGCCTTTCCCAGCGGG
ACCCCTTCCCCTATGGGCATGTACAACCCCAACCAC-----TTGCAGGC
CATGTCCGGCCCTGGGGGGGCCAC-----CACCCCTCCCTGATGC
CCGGCTCCCTGTCTGCGGCTATGGGCATGGGCTGCCACATGGAC-----



TACGAGCGGCAAACCTTTCATCTGCTGACATCGAGACATACCTGCTGGAGA
AGTCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTATCACATCTTC
TACCAGATCTTGTCCAATCAGAAGCCAGAGCTGTTGGACATGCTGCTGAT
CACCAACAACCCGTATGACTACTCCTACATCTCCCAAGGAGAGGTAACAG
TCGCCTCTATCAATGACTCAGAGGAGCTGATGGCCACCGACAGTGCCTTC
GATGTACTTGGCTTCACTCCAGAGGAGAAAATGGCCGTCTATAAACTGAC
CGGTGCCATCATGCACTACGGCAACTTGAAATTCAAACAGAAGCAGCGTG
AGGAGCAGGCGGAGCCTGACGGGACGGAGGCTGCTGATAAATCAGCCTAC
CTAATGGGGCTGAACTCTGCTGACCTCATCAAAGGTCTGTGCCACCCAG
AGTCAAGGTAGGAAAATGAATATGTCACCAAAGGCCAAAGTGTGGACCAGG
TCTACTATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAAGCACTACAACACCAAGCTGGGATA
TAAGCGCCATGTGG
CCATGCACTCTGCCACGGCAGGGGATCTCACCTGTAAAGTTTGCATGCAG
AGCTACGAGAGTACACCTGTTCTCCTCGAGCACCTCAAGAGCCACTCCGG
GAAGTCTTCGGGTGGCGCCAAGGAAAAAAAACACCCATGCGACCACTGTG
ACCGTCGTTTCTACACGCGGAAGGATGTGAGAAGGCACATGGTGGTCCAC
ACGGGCCGAAAGGACTTTCCTGTGCCAGTACTGTGCCAGCGCTTTGGCAG
GAAGGACCACCTGACACGCCATGTGAAGAAGAGCCACTCGCAGGAGCTGC
TGAAGATCAAGACGGAGCCTCCGGACATGTTAGGTCTTTTAGCTTCTGGA
TCGCCACCTTGCTCTGTGAAGGAGGAGCTCAGCCCCATGATGTGTGGCAT
GGGTCCCAACAAAGACCCCATGATGGGCAAACCGTTCCCCAGTGGGGCC
CTTTTCCAATGGGCATGTACAACCCCCACCAT-----CTCCAGGCGATG
TCTAACACTGGGGTGGGTACCCA-----CACCCGTCCCTAATGCCAG
TTCCCTGTCTGCAGCTATGGGCATGNNNNNNNNNNNNNNNTATCTCATCTACGCCTCTTTCTCA
TTCATGGGATGTTTACAAATCAGTGATGGATCAAATATTGTCAACCTGCT
GGCTAGTAATTCTCCAAGTGTTCGTATGCTCTGACCCAGCAGAAATACT
TCAGTAACTACAGTCTGTAAATGGGTTTTACATTTACGAGCCCATTGAA
TACTGGAACCTCACAGTGCAGGAGCATCTGAAAACCTCTGAGTCATGGCTT
CAACAAGATCTCCTGGATGGACAACCTTTTTCCACTACCTGCGGGTGGTGA
ATGTGAGTGCATCAACCAAGAGCGACTTCATTACCATCCTCAAAGGCTCC
TTCCCTACGCAGCCAGAGTACCAGCACTTCACTGAGGACATCATATTCTC
CAAGA---ACCGCGAGACTG-----ACGAGTATGATATTATTGCCTCAC
GGATGTACTTGGTGGCACGGACGACTGAGAAGAAACGTGAGGAGGTGGTG
GAGCTTCTGGAAAAGCTTCGTCCATTGATGCTAATCAACAGCATCAAGTT
CATTGCCTTCAATCCACATTTGTGTTTCATGGACCGCTACAGCTCCTCCG
TCATCTACCCATCCTGACCTCAGGCTTCAGTGTACTCACTATCCTCATC
CTCACTTTCTTCTGGTCAATCAACCCCTTGGGGAACCTTCTGGCTCATCCT
CACGGTTACATCTGTGGAGCTGGGTGTTTTGGGTTTGATGNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNTCTTGCAACG
TTGGCATTATTAATGGGCTCTCTGGATGGGCTTCCCTCGGTGGATGACGCC
CCGGCTGACACCATCACTCGGCGGTTTCGCTATGATGTGGCACTGGTGTG
AGCATTAAGGATCTGGAGGAGGACATTATGGAGGGGCTGAGAGAGAGTG
GGATGGAAGACAGCGCTTGCACCTCAGGCTTTACTGTCATGATCAAGGAG
TGCTGCGATGGCATGGGCGACGTCAGCGAGAAGCACGGCGGAGGACCCGT
TGTTCCCGAGAAGGCTGTGCGTTTTCTTTTACCATTATGTCTGTCTCTG
TCCTGGCAGATGACAAGGG-----
GAGGAGGTTACCATCTTACCAGCCGAAGCCAAACTCAGAGCTGTCCTG
TAAGCCCCTTTGCCTGATGTTTGTGGATGAGTCAGACCATGAGACACTAA
CAGCCGTCTGGGGCCTATAGTCGCGGAGCGTAACGCGATGAAAAGAGAGC
AGGCTCATCCTATCTCTGGGTGGCCTGCCACGCTCCTTCCGCTTCCACTT
CAGGGGCACGGGTACGATGAGAAGATGGTGGGAGAGATGGAGGGACTGG
AGGCTCGGGATCCATGTACATCTGCACTCTGTGCGACTCCAGCCGGGCG
GAGGCTCTGAAAACATGGTGTGCACTCCATCACCCGCTCTCACGATGA

GAACCTAGAACGTTACGAAATATGGCGAACCAACCCCTTCTCCGAGTCTG
TGGATGAGCTGCGAGACAGAGTCAAAGGGGTCTCCGCCAAGCCCTTCATG
GAGACCAGCCCATGCTAGATGCATTGCACTGTGACATCGGCAATGCCAC
TGAGTTCTACAAAATCTTCCAGGATGAGATCGGAGAGGTGTACCAAAGG
T---CAAT---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCGCTA
GATAAACAGTTGAGGAAGAAGATGAAGCTCAAACCGGTAATGAGGATGAA
TGGGAACTACGCCCGCAGGCTAATGACCCTGGAGGCTGTGGAGGTGGTGT
GCGAGCTGGTGCCCTCGGAGGAAAGGAGGGAGGCCCTGAGGGAGCTTATG
AGGCTCTACCTCCAGATGAGGCCCGTGTGGCGGCCACCTGCCAGCCAA
AGAATGCCCTGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCACTTTG
CCGACCTCCTCTCCTCTACCTTCAAATACAGGTACAACGAAAGATAACC
AATTACCTTCAAAAGACCTTGGCCACGTGCCCGAAATCATAGAAGAGAG
TNNNTCGTACACCATTGAGATGGGT
CCCCTGGGGCCCCGGTGAAGGAGAACC
CACAGCCTTTTCTGCTGCTCCATTGAAGACCCACAAAACAGACAAAAGTAC
AAGGGCATCAAGACCTACATTTTCGTATAGGGTCACGCCGAGCCACACAGG
GCGTCCCGTCTACAGACGTTACAAACACTTTGACTGGCTGTACAACCGCT
TACTGCACAAGTTCACTGTGATCTCCGTGCCTCACCTGCCTGAGAAGCAG
GCCACAGGGCGATTTGAGGAAGACTTCATAGAGAAACGTAAGAGACGACT
GATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTCTCCCAGTATG
AGGGCTTTGAGCACTTTCTGATGTGTGCTGACGACAAGCAGTGGAAACTG
GGAAAGAGACGGGCAGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCT
GACCTGCGAGATCCCTAACGAGCACCAGGACCTTCAGGATGTCGAAGAGC
GGGTGACTCCTTCAAGGCCCTTTGCTAAAAAATGGACGACAGCGTGATG
CAGCTCACACATGTTGCCCTCAGAGCTGGTGCGCAAACACCTGGGTGGGT
CAGGAAGGAGTTCCAGCGGCTGGGAAATGCCTTCCAGTCCATCAGCCAGG
CATTCATGCTGGACCCTCCCCACAGCTCAAACGCCCTCANNNNNNNNNNNNNNNNNNCCTCTCGCCAC
GTTCTCAAACCTGACCTCTCTGGGTTCATCATTGGAGTCGGCGTGGTGC
GAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGG
GCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCCGATATCCTGCGCTC
CGCCATCTGCTTCCCCTTTGTCTTTCACCTCGGTCAAGAATGGATCTGCCT
GGACCTACGGCACGCTGACCTGCAAAGTGATCGCCTTCTTGGGCGTGCTC
TCCTGTTTCCACACGGCGTTCATGCTGTTCTGCGTCAGCGTCACCCGCTA
CCTGGCCATCGCACACCACCGTTTCTACACCAAGAGGCTGACCTTCTGGA
CCTGCCTGGCTGTCACTGCATGGTGTGGACGTTGTGAGTGGCTATGGCG
TTCCCGCCGGTGTAGACGTAGGGACGTACTCTTTTATCCGGGAGGAGGA
CCAGTGCACGTTCCAGCACCCTCCTTCAGGGCGAACGACTCGCTGGGCT
TCATGCTCCTGCTGGCCCTCATCCTCCTGGCCACACAGCTGGTTTACCTC
AAGCTCATCTTTTTTCGTCCACGACCGCCGGAAGATGAAGCCCGTCCAGTT
CGTGCTGCTGTGAGCCAGAACTGGACCTTCCACGGACCGGGCGCCAGTG
GGCAGGCGGGCGCCAACGGCTGGCCGGATTTGGTCGAGGCCCCACCCCG
CCTACTTTGCTGGGCATCCGGCAGAACAGCAATGCAGCGGGCCCGCAGGCG
TCTACTGGTATTGGATGAATTCAAACGGAGAAGAGGATTAGTAGGATGT
TCTACATCATGACGTTTTTCTTCTTGGCACTGTGGGGGCCCTATCTGGTT
GCCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCCGTAGTCCCCGGGGGCTA
CCTGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTT
TCATCTGCNNNNNNNNNNNNNNNNNNNN-----

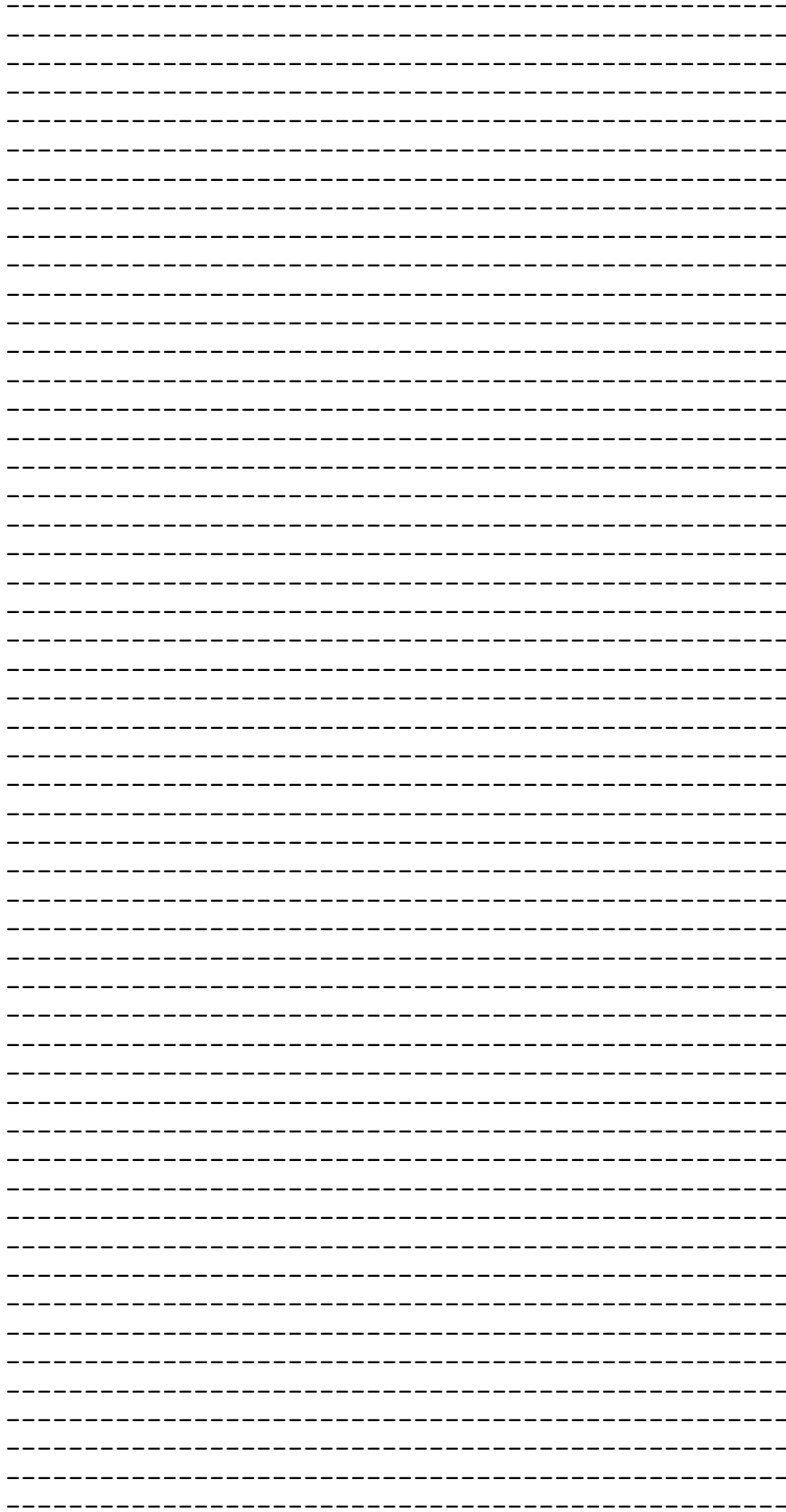
TGGGCAGACTTTCATGTGCGACAAGTTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGTCCCAGGAAGGAGTTTAGC
GCCTGTGCCATTGGCTGTAAGGTGTACATTACTGGTGGGA--GGGGCTC-
AGAGAATGGCGTATCCAAAGATGTGTGGGTCTATGACACTGTGCACGAGG
AATGGTCAAAGGCRGCGCCCATGCTCATTGCCAGGTTCCGGCCACGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTTGTAGGAGGCCACACTGCAGCGAC
CGGCTGCCTCCCGNNNNNNNNNNNGGATGAATACATTGTTGTATTTAGTTCGTTTCAGCAAC
AAGGCTGATACTGAAATGAAGCAGAGCTCATCATGGCACTGGCCCAGGAGT
TCCAAATGAGAGTGGTCACAGTGTCCTTAGAGGAACAGTCTTTTCCCAGT
ATTGTTTCAGGTGATCAGCGGTGCTTCCATGTTAGTCAGCATGCATGGAGC
TCAGCTTATCACCTCGCTTTTTTCTCCCAAGAGGAGCTGCTGTGGTAGAGT
TATTCCCTTTTGTGTGAACCCAGAGCAGTACACTCCGTATAAAAACCCTA
GCCTCACTTCCAGGCATGGACCTTCACTACGCTCCTGGAGGAACACGAA
GGAGGAAAACACTGTGACCCACCCAGACAGACCCCTGGGAGCAAGGAGGCA
TTGTTCACTTGGAAAAAGACGAGCAGGAACGAATTCTGGCAAGTAAGGAT
GTCCCCAGGCACCTTGTGCTGCCGCAACCCAGAGTGGCTCTTCCGGATCTA
TCAGGACACTTTGGTGGACATCCCATCCTTCCCTGGAAGTTCTCAG---AG
AAGCCATGAAG---ACCAAGCCCAACTTGAAAAA---GGCCAAGGCAGCC
AGCACAGTCCACCCGGGCGGGTCCAGAGAGCCCCAATGTCAGACTTCAGT
ACAAACCTCGAATGAGGCAAAACTTACAGTCTCTTGGCAGATCCCCTGGA
ATCTGAAATACCTTAAGGTAAGGGAGGTGAAGTACGAGGTGTGGATACAG
AAAAAAGACACTAGCAAGGGGACACTGGAGGATCAAATCATCCAGGCGAA
CCCAGCGCTGGAAGCGTTTGGCAACGCCAAAACGTTGAGAAATGACAAC
CATCTCGATTTGGAAAATTCATCCGAATTCATTTTGGCACAAGTGGCAAA
CTGTCATCTGCCGACATCGAGACATACCTGCTGGAGAAGTCCCGTGTAC
CTTTCAGCTCAAGGCCGAGAGGAACTACCACATCTTCTACCAGATCCTGT
CCAATGAAAAGCCAGAGCTGCTGGACATGCTGCTGATTACCAACAACCCA
TATGACTACTCCTACATCTCCCAAGGAGAGGTATCGGTGCGCTCCATCAA
TGACGCGGAGGAGTTGATGGCCACTGACAGTGCCTTCGATGTGCTTGGCT
TCACTCCAGAGGAGAAGATGGGCGTCTACAAGCTGACTGGTGGCCATCATG
CACTATGGAAACATGAAGTTCAAACAGAAGCAGCGAGAGGAACAGGCTGA
ACCTGATGGAACAGAGGCAGCTGATAAATCAGCTTACCTAATGGGGCTGA
ACTCCGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAGTCAAGGTAGGA
AATGAATATGTCACCAAAGGTCAAAGTGTGGACCAAGTCTACTACCCCAA
CAAGGAGGCCTTCAAGTGGCAGGAGTGTGGGAAGCACTACAACACCAAGC
TGGGATACAAGCGCCATGTGGCCATGCACTCGGCCACCGCGGGCGACCTG
ACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCGTTCTCCTGGA
GCACCTCAAGAGCCACTCGGGGAAGTCTCAGGAGGCGCAAGGAGAAGA
AACACCCGTGCGACCACTGCGACCGTCGCTTCTACACCAGGAAGGATGTG
AGGCGGCACATGGTGGTGCACACGGGCCGAAAGGACTTCCCTGTGCCAGTA
CTGTGCCCAGCGCTTCGGCAGGAAAGACCATCTGACGCGTCACGTGAAGA
AGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCCGGATATG
TTGGGTCTGTTGGCCACGGGGTCTCCACCCTGCTCCGTGAAGGAGGAGCT
TAGCCCCATGATGTGTGGCATGGGGCCCAACAAAGACCCCATGATGGGCA
AACCTTCCCAGTGGGGCGCCTTTCCCGATGGGCATGTACAACCCCCAC
CAC-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTCACTCA-----
-CACCCGTCCCTGATGCCCGGTTCCCTTGTCTGCAGCTATGGGCATGGGCT
GTCACATGGAGNNNNNNNCTATGCCCTTTTCTCATTCATGGGATGTTTACAAATCAG
TGACGGATCAAATATCGTGAACCTGTTGGCTAGTAACTCTCCGAGTGTTT
CATACGCTTTGACCCAGCAGAAATACTTTCAGTAACTACAGTCCCTGTGATT
GGGTTTTATATTTACGAGCCCATCGAGTACTGGAACCTCCACGGTGCAGGA
GCATCTGAAGACTCTGAGTCATGGCTTCAACAAGATCTCCTGGATGGACA
ACTTTTTCCACTACCTGCGGGTAGTGAATGTGAGCGCATCAACGAAAGGC

GACTTCATCACCATCCTTAAGGGTTCCTTCCTGCGCAGTCCGGAGTACCA
GCATTTCACTGAGGACATCATATTCACCAAGA---ACCGCGAGACTG---
---ATGAGTACGACATTATCGCCTCACGGATGTACTTGGTAGCACGGACC
ACAGAGAAGAAGCGCGAGGAGGTGGTTGAGCTTTTAGAAAAGCTTCGTCC
CTTGATGCTGATCAACAGCATCAAATTCATTGCCTTTAATCCAACGTTTG
TGTTTCATGGACCGCTACAGCTCCTCCGTTCATCTCACCCATCCTGACCTCA
GGCTTCAGCGTACTCACCATCCTCATCCTCACTTTCTTCCTGGTCATCAA
CCCCTTGGGGAACTTCTGGCTCATCCTCACGGTTACGTCCGTGGAGCTGG
GCGTCTTGGGTTTGATGGGCTTTCACCAGTTTGAATGGCAGCCGGCTCTC
AAGAATGTGTCTGCATCTTGCAACGTTGGCATTATTAACGGGCTCTCTGG
ATGGGCTTTCCTCGGTGGATGACTCCCCGGCTGACACAATCACTCGGCGCT
TTCGTTATGATGTGGCACTGGTGTGGCATTAAAGGATCTGGAGGAGGAC
ATCATGGACGGGCTGAGAGAGAGTGGGATGGAAGACAGCGCTTGCACCTC
AGGCTTTAGCGTCATGATCAAGGAATGTTGTGATGGTATGGGTGATGTCA
GCGAGAAGCACGGCGGAGGACCTGTTGTTCCCGAGAAGGCGGTGCGCTTC
TCTTTCACCGTTATGTCTGTCTCTGTCTCGCAGACGAGGARGAG-----
-----GAGGAGGTTACCATTTTCACTGAGC
CAAAACCAAACCTCAGAGCTGTCTGCAAGCCCCCTGCCTGATGTTTCGTG
GATGAGTCAGACCATGAGACACTCACAGCGCTCCTGGGGCCCATAGTTGC
AGAGCGTAATGCAATGAAAGAGAGCAGACTCATTCTATCCATTGGCGGCC
TGCCTCGCTCCATTTCGCTTCCACTTCAGGGGCACGGGGTATGACGAGAAG
ATGGTGCCTGAGATGGAGGGCCTGGAGGCCTCGGGTCCACGTATGTCTG
CACTCTGTGTGACTCCACTCGTGCAGAAGCCTCTCAAACATGGTGCTCC
ACTCCATCACTCGCAATCATGAGGAGAACCCTAGAACGATATGAGATCTGG
AGGACCAACCCCTTCTCYGAGTCTGCAGACGAGCTGCGAGACCGAGTCAA
AGGGGTCTCCGCCAAGCCCTTCATGGAGACCCAGCCACGCTAGACGCAT
TGCACTGCGACATCGGCAACGCCAGCGAGTTCTACAAAATCTTCCAGGAC
GAGATTGGGGAGGTGTACAAAAGGC---CAAC---CCAGCCGGGAGGA
GCGGCGCAGCTGGAGGGCCGCCCTGGATAAACAGCTGAGGAAGAAGATGA
AGCTTAAACCGGTAATGAGGATGAATGGGAACTACGCCCGCCGGCTAATG
ACCCCTGGAGGCTGTGGAGGTGATATGTGAGCTGGTGCCTCCGAGGAGAG
GAAGGAGAACCTGAGGGAGCTCATGAGGCTCTACCTGCAGATGAAGCCTG
TGTGGCGCGCCACCTGTCCAGCCAAAGAATGCCCGACCAGCTGTGCCGC
TACAGCTTCAACTCCCAGCGCTTCGCTGACCTCCTCTCCTCCTTCAA
ATATAGATAACAACGGGAAGATAACCAATTACCTGCACAAGACCCTGGCCC
ACGTGCCTGAAATCATAGAGAGGGAGGGATCCATAGGAGCCTGGGCCAGC
GAGGGGAACGAGTCCGCAAACAAGNNNNNNNNNNNNNNNNNNNGTCCCCAGGGGCCCCAGTGGAAGGAC
AACCCACAGCCTTCTCCTGCTCCATTGAGGACCCACCAAACAGACAAA
GTTCAAGGGTATCAAGACCTACATTTTCGTACCGGGTCACGCCGAGCCACA
CGGGGCGTCCCGTCTACAGACGCTACAAACACTTYGACTGGCTGTACAAC
CGTTTACTGCACAAGTTCCTGTGATCTCTGTTCCCCACCTGCCTGAGAA
GCAGGCCACGGGGCGGTTTGANGAAGACTTCATCGAGAAGCGCAAGAGGCG
ACTGATACTATGGATGAACCACATGACCAGTCACCCAGTCTCTCCAGT
ATGAAGGCTTTGAGCACTTTCTGATGTGTGCTGACGACAAGCAGTGGA
CTGGGCAAGAGACGGGCAGAGAAGGACGAGATGGTGGGCGCACATTTTCAT
GCTGACACTCCAAATCCCCAACGAACACCAGGACCTTCAGGATGTTGAGG
AGCGGGTCGACAACCTCAAGGCCTTTGCGAAGAAAATGGACGACAGCGTG
ATGCAGCTCACACACGTTGCCTCAGAGCTGGTGGTAAACACCTGGGTGG
ATTCAGGAAGGAGTTCAGCGGCTGGGAAACGCCTTCAGTCCATCAGCC
AGGCTTTCATGCTGGACCCTCCCCATAGGTGAGAKACCCTCAACAATGCC
ATCTCCATNNNNNNNNNNNGTTGCTCAAACCTGACCTCTCTGGGTTCATCATCGGAGTTG
GCGTGGTCCGAAACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGC
CTGCACCGAGCGCCCTACTATTTCTGCTGGACCTGTGCGCCTCTGATAT

CCTGCGCTCCGCCATCTGCTTCCCCTTCGTCTTCACCTCGGTCAAGAATG
GATCTGCCTGGACCTACGGCAGCTGACCTGCAAGGTGATTGCCTTCCTG
GGTGTGCTCTCCTGTTTCCACACAGCGTTCATGCTCTTCTGCGTTAGTGT
CACGCGCTACCTGGCCATCGCACATCATCGTTTCTACACCAAGAGGCTGA
CTTTCTGGACGTGTTGGCCGTATCTGTATGGTGTGGACGCTGTCAGTG
GCGATGGCRTTCCCGCCGGTGTAGACGTAGGGACGTACTIONTTTTATCCG
GGAGGAGGACCAGTGCACCTTCCAGCACCCTTCCAGGGCGAATGATT
CGCTGGGCTTTCATGCTCCTGCTGGCRCTCATCCTTCCAGGGCACACAGCTG
GTTTACCTCAAGCTCATCTTCTTCGTCCACGACCGTCGAAAGATGAAGCC
CGTCCAGTTCGTGCTGCGGTTCAGTCAGAACTGGACCTTCCACGGGCCAG
GCGCCAGCGGGCAGGCTGCGGCCAACTGGCTAGCTGGATTTGGTTCGAGGC
CCCACCCCGCTACTCTGCTGGGTATCCGGCAGAACAGCAATGCAGCGGG
CCGCCGGCGTCTACTGGTTTTGGATGAGTTCAAAAACGGAGAAGAGGATTA
GTAGGATGTTTACATCATGACGTTTTTTCTTCCAGGGCGCTGTGGGGGCC
TACCTGGTTCGCTGCTACTGGCGGGTTTTTTGCGAGGGGCCCTGTGGTCCC
TGGAGTTTACTGACAGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGG
TCAATCCTTTTCATCTGCATCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCTGGCGTGGGGACTGG
TCCTGGCACGGAG

C---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGA
GGAGCCCAGTGTGCCACCCCGCAGCGATGGTTTGTACCC---CTG
CCAACAACCGACTGGACTTTTGCTGCCCTCGGCATACGACGCCGCT-----
---GATTTCCGCCGTAACGCGGCCACCCTTGCTGTCTTACGCAGCGGCCGG
AGTTAAGGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCAATCGGC
CTCTTGGCTATTACGCAGACCCGCTCTG---GCTGG---GGAGGACGCACG
CCGCCGAGTACTGTGGTGTAAATAGTAAATCCAGCTCGGTCTTTTCCTG
CTGGCCCGCTAACTCCCTCGGAGGCAGAGCCGGCA---CC---AACTACC
TGT-----CCGAGGA---GGGA---GACTC---CATCACGACGGAG
AGGTCACCG---AT---CGGCGCGTCGGAGGAG---ACCAAACCCAAAGA
CATGAC---GTCCGA---GTCGAGCTGGATAGAG---ACGCCGCTCCTCCA
TAAAGTCCATCGATTCCAGCGACTCTGGGATCTTTG---AACAGGCCAAA
CGGAGAAGAATCTCACCTTCTGCCACACCG-----GTTTCAGAGAC
AGTGTCCCCGTAAAATCCGAGCATCACTCAACAGGCGAAGTCACAGAGC
GAGAAGTGGCGTTGGGGATAAATCCGTTTGCAGATGGGATGGGCGCCTTC
AAAATCAACCACAGCTCCCACGATATTGGCTCCGG---ACAGACGGCGTT
TTCTCCAGGCG---CCCGGTTAC---GCAGCAGCCGCCTTGGGA---C
ACCATCA-----CCACCCGACCACGTTGGCTCT---TACTCCACGGCG
GCTTTCAACTCCACCAGGACTTTCTGTTTCAGAAATCGGGGTTTCGGGGA
TGCCACCG-----GGCGCAGCACAGTTTGTTCGCCTC-----
-----GGGAAGTTT---C-----GCAGGGCCACACGGACACTCAGATGCG
GCGGGGCACCTGCTCTTCCCAGGGCTCCACGAG---CAGGCGGCGAGCCA
CGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGG
ACATGTACGGACGCGCCGAGCAGTACGGCCACGTTACGAGCCCCAGGT--
-CCGACCACTACGCATCGACCCAGCTGCACGGCTACGGCCCCATGAACAT
GAATATGGCCGCG---CACCACGGTGCAGGGCCTTCTTTCGGTACATGA
GGCAGCCGATCAAGCAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAG
CTGACGAATCCAAAAAGTGTGCAAAAACTTTCAGCACGATGCACGA
GCTGGTGACCATCTGACGGTGGAGCATGTGGGGGACCGGAGCAGACCA
ACCACATTTGCTTCTGGGAGGACTGCTCCCGAGAAGGGAAGCCGTTCAAA
GCCAAATACAACTTGTGAATCATATCAGAGTACACACCGGAGAAAAGCC
CTTTCCGTGCCCGTTCCCCGGCTGTGGCAA

>Steindachneria argentea



CA-----

A series of 38 horizontal dashed lines for writing.

-----ATGGGCGCCTTCAAATAAAACCACAGCTC
TCACGACATTGGCTCCGG---ACAGACGGCGTTTTCTCCCAGGCG---C
CAGGCTAC---GCGGCGGCCGCCCTAGGA---CACCACCA-----TCAC
CCCACGCACGTTAGTCT---TACTCCACTGCCGCTTCAACTCCACACG
GGACTTTCCTTTTCAGAAATCGGGGTTTCGGAGACGCCACCAG-----
----CGCGCAGCACAGTTTGTTCGCCCTCCGC---CGCGGGAAGTTT---C
-----GCCGGCCACATGGACACTCCGATGCCACGGGACACCTGCTCTT
CCCGGGGCTCCACGAG---CAAGCGGCGAGCCACGCGTCTCCAATGTCTG
TCAACAGCCAGATGCGACTCGGCTTCTCCGGAGACATGTACGGCCGGGCC
GACCAGTACGGGCACGTTACGAGCCCGAGGT---CCGACCACTACGCGTC
GACCCAGTTGCACGGCTACGGCCCCATGAACATGAATATGGCCGCG---C
ACCACGGAGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATCAAGCAA
GAGCTGATCTGCAAGTGGATCGAGCCGGAGCAGCTGTCAAACCCCAAAAA
GTCGTGCAACAAAACTTTCAGCACGATGCACGAGCTGGTGACCCACCTGA
CGGTGGAGCATGTGGGGGGACCCGAGCAGTC-----

>Stereolepis gigas

AGCCTGCTCATTCGGGCAGAACTAAGCCAACCCGGCGCCCTCTTAGGGGA
CGACCAAATTTATAACGTAATTGTTACAGCACACGCATTTGTAATAATTT
TCTTTATAGTAATGCCAATTATAATCGGAGGATTCGAAACTGACTTGTC
CCCCAATGATCGGGGCCCCAGACATAGCATTCCCTCGAATGAATAATAT
AAGCTTTTACTTCTTCCCCATCCTTCCTCCTCCTTCTTGCTTCTCAG
GAGTAGAGGCTGGCGCTGGCACCGGATGAACAGTCTACCCTCCCCTAGCT
GGTAATTTAGCCCACGCAGGGGCCCTCCGTTGACTTGACAATTTTTTCTCT
ACACTTAGCAGGGATTTCCCTCAATTCCTCGGAGCCATTAACCTCATTACAA
CCATCATTAACATAAAACCCCTGCCATCTCCCAATATCAGACTCCTCTC
TTTGTATGAGCCGTAATAATTACCGCGTCTTCTCCTCCTCTCCCTCCC
AGTTCGCTGCTGGCATTACAATACTTCTTACAGATCGAAACCTCAACA
CCACCTTCTTCGACCCCGCAGGAGGGGGCGACCCAATCCTCTACCAACAC
CTA-----

-----TTCTAGAGAGAAACCTTACCCATCTAACTGCCTTGG
CATGCTATTGCTGTCTGACGCCCACAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACGGA
TCAACTATGACCTGGAAAAGAGGCAC TGCCACCTTCCAGAGCTCCTGAGA
ACGGTCCGTCTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGTTGTAAGTTGAAGATCTTGCAGAATGATGGTGTGTTAAC
AGTCCGTGTGCTCGACCAAGAAAAACAGCCATGCCCTCTTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCA
AAGAGATCATCCCCAAAGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTGTGGGTCTATGACACCGTCCACGAGG

AATGGTCGAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTCGGAGGGCACACCGCAGCAAC
TGGCTGCCTCCCAGCATCTCCNNNNGGATGAATACATTGTTGTGTTTAGTTCGTT
CAACAACGAGGCTGATACTGAATGAAGCAGAGCTAATCATGGCGCTGGCC
CAGGAGTTCCAGATGAGAGTGGTCACGGTATCCCTGGAGGAACAGTCTTT
TCCCAGTATCGTCCAAGTGATCAGCAGTGCTTCCATGTTAGTCAGTATGC
ATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGAGCTGCTGTG
GTGGAGCTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACCCCATATAA
AACCTTGCCTCCCTTCCAGGCATGGACCTTCACTATGTCTCCTGGAGGA
ACACTAAGGAGGAGAACACCATCACCCACCCAGACAGACCCTGGGAACAA
GGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGCGAATACTGGCGAG
CAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTCTTCC
GGATCTACCAGGACACTTCGGTGGACATCCCTTCCCTTCCCTGGAACCTCCTC
AA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GTCAA
GCCGGCCAGCACAGTCCATCCGGGCCGAGTCAGAGAACCCCAATGTCAGA
CCTCAGTACAAACCACTAATGAGGCTAAACTCACAGTCTCCTGGCAGATC
CCGTGGAATCTGAAAATACCTGAAGGTGAGAGAGGTGAAGTACGAGGTG--
-----AAAAAGACACCAGCAAGGGGACCCTGGAGGATCAAATCATCC
AGGCGAACCCCTGCGCTGGAGGCATTCGGCAACGCCAAAACATTGAGAAAC
GACAACTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTCGGTACAAG
CGGAAAGCTGTCTGCTGACATCGAGACGTACCTGCTAGAGAAGTCAC
GTGTCACTTTTAGCTCAAGGCTGAGAGGAACTACCACATCTTCTACCAG
ATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACAA
CAACCCGTACGACTACTCCTACATCTCCCAAGGAGAGGTAACGGTCGCCT
CCATCAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCCTTCGATGTG
CTCGGCTTCACTCCAGACGAGAAGATGGGCGTCTACAAACTGACCGGTGC
CATCATGCACTACGGCAACATGAAGTTCAAACAGAAGCAGCGTGAGGAGC
AGGGGGAGCCGGATGGGACGGAGGCTGCTGATAAATCGGCTTACCTAATG
GGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAGTCAA
GGTAGGAAATGAATACGTACCAAAGGCCAAAGTGTGGACCAAGTCTACT
ACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAAC
ACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCAGG
GGATCTACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACACCCGTGC
TCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCGGGTGGCACCAAG
GAGAAAAAACACCCGTGCGACCACTGTGACCGTCGTTTCTACACGCGGAA
GGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCCTGT
GCCAGTACTGTGCCCAGCGCTTCGGCAGGAAGGACCATCTGACACGTCAC
GTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCC
TGATATGTTAGGTCTTTTAGCGTCGGGGTCACCACCCTGCTCTGTGAAGG
AGGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAGACCCCATG
ATGGGCAAACCGTTCCCCAGTGGGGCCCCTTTCCCGATGGGCATGTACAA
CCCCACCAT-----CTCCAGGCCATGTCTAATTCGTTGGGTGGGTACC
CA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTATGGGC
ATGGGCTGTACATGGAATATCTCATCTACGCCTCTTTCTCATTCATGGG
ATGTTTACAAATCAGCGACGGATCAAATATCGTGAACCTGCTGGCTAGTA
ACTCTCCGAGTGTTCGTACGCTCTGACCCAGCAGAAATACTTCAGTAAC
TACAGTCCCCTGATTGGGTTTTACATTTACGAGCCATTGAGTACTGGAA
CTCAACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTTAACAAGA
TCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTGAATGTGAGT
GCGTCAACCAAGAGCGACTTCATCACCATCCTCAAGGGCTCCTTCCCTGCG
CAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAGA---
ACCGCGAGACTG-----ATGAGTACGACATTATTGCCTCACGGATGTAC
TTGGTGGCACGGACGACAGAGAAAAACGCGAAGAGGTGGTTCGAGCTTCT

GGAGAAGCTTCGTCCGTTGATGCTGATCAACAGCATCAAGTTCATTGCCT
TCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCTGTCATCTCG
CCCATCCTGACCTCAGGCTTCAGCGTACTCACAATCCTCATCCTCACTTT
CTTCTGCTCATTAACCCCTTGGGGAACCTTCTGGCTCATCCTCACTGTAA
CGTCCGTGGAGCTGGGCGTCTTGGGTTTGATGTGGCTTTCCAAGTTTGAA
TGGCAGCCAGCTCTCAGGAATGTGTCACATCTTGCAACGTTGGCATTAT
TAATGGGCTCTCTGGATGGGCTTCTCGGTGGATGACTCCCCAGCTGACA
CCATCACTCGGCGGTTTCGCTATGATGTGGCACTGGTGTGAGCATTAAAG
GATCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGGAAGA
CAGTGCTTGACCTCAGGCTTCAGTGTGATCAAGGAATCTTGCGATG
GCATGGGCGATGTGAGGAGAAGCACGGTGGAGGACCAGTTGTTCTGAG
AAGGCTGTACGTTTCTTTTCACTGTTATGTCTGTCTGTCTGCTGGCAGA
CGATGAGGAG-----GAAGAGGTTA
CCATCTTACCCGAGCCAAAGCCAAACTCAGAATTGTCCTGTAAGCCCCTT
TGCTGACGTTTGTGGATGAGTCAGACCATGAGACACTCACAGCCGTCCT
AGGGCTATAGTTGCAGAGCGTAAAGGGATGAAAGAGAGCAGGCTCATCC
TATCCATGGGTGGACTACCTCGCTCCTTCCGCTTTCACTTCAGAGGCACG
GGATACGATGAGAAGATGGTGCCTGAGCTAGAGGGCCTCGAGGCCTCAGG
GTCTACTATGTCTGCACTCTTTGTGACTCCAGTCGGACAGAAGCCTCTC
AAAACATGGTGCTACACTCCGTCACCCGCAGTCATGAAGAGAACCCTAGAA
CGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTAGATGAGCT
GCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACCCATC
CCACGCTGGATGCATTACACTGTGACATTGGCAATGCCACTGAGTTCTAC
AAAATCTTCCAGGACGAGATCGGGGAGGTGTACCAAAGGT---CAAC--
-CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAACAGC
TGAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAACTAT
GCCCCGAGGCTAATGACCCAGGAGACTGTGGAGGTGGTGTGTGAGCTGGT
GCCCCAGAGCTGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGCTCTACC
TCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCAGCCAAGGAGTGCCCC
GACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCGCTTTGCCGACCTCCT
CTCCTCTACCTTCAAATATAGGTACAATGGAAAGATAACCAATTACCTGC
ACAAGACCCTGGCCCATGTGCCTGAAATCATAGAGAGAGACGGATCCATA
GGAGCCTGGGCCAGCGAGGGGAACGAGTCGGCAAACAAATCGTACCCAT
CGACATGGGCCCTTTGGGTCCCCGGTGGAAAGGAGAGCCACAGCCTTTCT
CCTGCTCCATTGAAGACCCACAAAACAGACAAAGTTCAAGGGCATCAAG
ACGTACATTTTCGTACCGGTCACGCCGAGCCACACAGGGCGTCCCGTCTA
CAGGCGCTACAAACACTTTGACTGGCTGTACAACCGTTACTGCACAAGT
TCACTGTGATCTCCGTGCCCTCACCTGCCCTGAGAAGCAGGCCACGGGGCGA
TTTGAGGAAGACTTCATCGAGAAGCGTAAGAGGGGACTGATACTGTGGAT
GAACCACATGACCAGTCACCCAGTCCCTCCCAGTATGAAGGCTTTGAGC
ACTTCTGATGTGCGCTGATGACAAGCAGTGGAAACTGGGCAAGAGACGG
GCGGAGAAGGACGAGATGGTGGGTGCCCATTTTCATGCTGACCCCTCAGAT
CCCTAATGAGCACCAGGACCTTCAGGATGTAGAGGAGCGGGTCCGACTCCT
TCAAGGCCTTTGCTAAGAAAATGGATGACAGCGTGATGCAGCTCACACAT
GTTGCCCTCGGAGCTGGTACGTAAGCACCTGGGTGGGTTTCAGGAAGGAGTT
CCAGCGGCTGGGAAAATGCCTTCCAGTCTATCAGCCAGGCCTTCATGCTGG
ACCTCCCCACAGCTCAGAAACCTTCAACAACGCCATCTCCCATNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNTGGGTT
TCATCATTGGAGTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCTGCTG
GTCAAAGACAAGAGCCTGCACCGAGCGCCCTACTATTTCTGCTGGACCT
GTGCGCCTCTGATATCCTRCGCTCCGCCATCTGCTTCCCCTTTGTCTTCA
CCTCGGTCAAGAATGGATCTGCCTGGACCTATGGCAGCTGACCTGCAAA
GTGATCGCCTTCTGGGTGTGCTCTCCTGTTTCCACACGGCGTTTATGCT

ATTCTGTGTAAGTGTACACGCTACCTGGCCATCGCACATCACCGTTTCT
ACACCAAGAGGCTGACCTTCTGGACCTGTCTAGCTGTCATCTGCATGGTG
TGGACGTTGTGAGTGGCTATGGCGTTCCCGCCGGTGCTAGACGTAGGGAC
GTACTCTTTTATCCGGGAGGAGGACCAGTGCACATCCAGCACCGTTCCT
TCAGGGCGAATGATTCGCTGGGCTTCATGCTCCTGCTGGCGCTCATTCTC
CTGGCCACACAGCTGGTTTACCTCAAGCTCATTTTCTTCGTCCACGACCG
TCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCTGTCAGCCAGAAGTGA
CCTTCCATGGGCCAGGCGCCAGCGGGCAGGCGGGCCAACTGGCTGGCT
GGATTTGGTTCGAGGCCCCACCCCGCTACTTTGCTGGGCATCCGGCAGAA
CAGCAATGCAGCGGGCCGAGGCGTCTACTGGTATTGGATGAATTCAAAA
CAGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTTCCTG
GCACTGTGGGGGCCCTATCTGGTGCCTGCTACTGGCGGGTGTGTTGCAAG
GGGCCCTGTGGTCCCTGGGGGCTACCTGACGGCAGCCGTGTGGATGAGCT
TTGCNNNGCCAAATCTCGCTTTCACCC
TGGCATGGGGACTGGTCCCTGGCACGG

AGC---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCGCAGCAAACC
GAGGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---C
TGCCAACAACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGCT----
-----GATTTGCGCGGTAACGCGGCCACCTTGCTGTCCTACGCAGCGGCC
GGAGTGAAGGCTC-----TTCCCTGCCGACTGCAGGCTGCTCCAACCG
GCCTCTTGGCTATTACGCAGACCCGTCGG---GCTGG---GGAGGACGCA
CGCCGCCGAGTACTGTGGTGTAAATAGCAAATCCAGCTCGGTCTTTTCC
TGCTGGCCCACTAACTCTATCGGTGGCAGAGCAGGCA---CC---ACTA
CCTGG-----CAGAGGA---GGGA---GACTC---CATCCCGACAG
AGAGGTCACCG---AT---CGGCGGCTCGGAGGAG---ACCAAACCCAAA
GACCTGAC---ATCAGA---GTCGAGCTGGATAGAG---ACGCCGTCCTC
CATTAAGTCCATTGATTCAAGCGATTCTGGTATCTTTG---AACAGGCCA
AAAGGAGAAGAATCTCACCTTCTGCCACGCCG-----GTTTCAGAG
ACAGTATCCCCGTTGAAATCGGAGCATCACTCAACAGGCGAAGTCACGGA
GAGAGAAGTGGCGTTGGGGATAAATCCGTTTCGCGGATGGGATGGGCGCCT
TCAAATAAACCACAGCTCCACGATATTGGCTCCGG---ACAAACGGCG
TTTTCTCCAGGCG---CCCGCTAC---GCAGCAGCCGCCCTGGGA--
-CACCATCA-----CCACCCGACCCACGTTGGCTCT--TACTCCACGG
CGGCTTTCAACTCCACCAGGGACTTCTCTTCAGAAATCGGGGTTTCGGG
GACGCCACCG-----GGCGCAGCACAGTTTGTTCGCCTC---
-----CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATG
CAGCGGGGCACCTGCTCTTCCCAGGGCTCCACGAG---CAAGCGGCGAGC
CATGCGTCTTCCAACGTGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGG
GGACATGTACGGGCGGGCCGACCAGTACGGCCACGTTACAAGCCCGCGGT
---CCGACCACTATGCTTCGACCCAGCTGCACGGCTATGGCCCCATGAAC
ATGAATATGGCCGCA---CACCACGGAGCAGGGGCCCTTCTTTCGATACAT
GAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGC
AGCTGACGAATCCCAAAAAGTTCGTGCAACAAAACCTTTTAGCACGATGCAC
GAGCTTGTGACCCATCTGACGGTGGAGCATGTGGGGGGACCAGAGCAGAC
CAACCACATCTGCTTCTGGGAGGAGTGCGCCAGAGAAGGAAAGCCATTCA
AAGCCAAATACAACTTGTAATCATATCAGAGTACACACCCGGAGAAAAG
CCCTTCCCGTGTGCNN

>Sternoptyx pseudobscura
AGTTTATTAATTTCGGGCGGAACTAAGTCAGCCGGGCGCGCTTCTTGGGGA
CGATCAAATTTATAATGTTATTGTAACCGCGCATGCGTTTGTAAATGATTT
TCTTTATAGTCATGCCTATTATGATTGGGGGATTTGGTAATTGGCTAATC
CCTCTTATAATTGGTGCACCTGATATGGCTTTCCCTCGAATAAATAATAT
GAGTTTCTGACTTCTTCCCTCCATCCTTCCCTACTCCTGTTGGCCTCATCAG

AATGGGGCTGAACTCTGCAGATCTAGCGAAAGGACTCTGCCATCCCAGGG
TTAAGGTTGGCAATGAATATGTCACTAAAGGGCAGGGTGTGGACCAAGTC
TACTACCCCAACAAGGAAGCCTTCAAGTGTGAGGAGTGCGGCAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCACGTGGCCATGCACTCGGCCACGG
CCGGAGACCTCACCTGCAAGGTGTGCTTGCAGAGCTACGAGAGCACGCCG
GCCCTGCTGGAGCACCTGAAGAGCCACTCCGGGAAGTCGTCCGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCGCGCTTCTACACAC
GCAAGGACGTCCGGCGCCACATGGTGGTGCACACCGGCCGCAAGGACTTC
CTGTGCCAGTACTGCGCCAGCGCTTTGGCAGGAAGACCATCTGACGCG
GCACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGGCGGAGC
CTCCGGACATGCTGGGGCTGTTGGGGTCCGGCTCGCCACCCTGCTCCGTC
AAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCTCCAAGGACCC
GCTGATGGCCAAGCCTTTCCCCAGCGGGACCCCTTCCCCATGGGCATGT
ACAACCCACCAC-----TTGCAGGCCATGTCCGGCCCCGGGGGGGC
CAC-----CACCCTCCCTGATGCCCGGTCCCTGTCTGCGGCTAT
GGGCATGGGCTGCCACATGGAC-----

-----TGCTACCCTCCTT
TGAGTGGCAGCCGGCCCTCAAGAACGTGTCCACGTCCTGCCAGGTGGGTA
TCATCGATGGGCTGTGGGGTGGGCTGCGTCCATAGACGACTCCCCGGCA
GACCTGTCTCCCGCGCTTCCGCTATGATGTGGCACTGGTGTGCGCTCT
GAAAGACCTAGAGGAGGACATAATGGAGGGGATGAGGGAACGCGTCGTGG
AGGATAGTACCTGCACCTCGGGCTTCAGCGTGATGATCAAGGAGTCCTGC
GACGGCATGGGGGACGTAGCAGGAGAAGCATGGCGGGGACAGCGGTTC
TGAAAAGGCTGTGCGGTTCTCCCTTACCATCATGTCCATCTCTGTCCAGG
TTGACGGTGAGGAC-----AAGGCT
GTCACCGTCTTCAGGGAGCCCAAGCCAACTCTGAACTGTCTTGCAAGCC
TCTGTGTCTGATGTTGTGGATGAGTCAGATCATGAGACACTGACGGGCG
TCCTCGGGCCTGTGGTGGCCGAGAGGGATGCCATGAAGAACAGCCACCTG
ATCCTATCTCTGGGAAGCCTCCCTCGATCCATTCGCTTTCCTTCCAGGGG
TACAGGGTACGATGAGAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCT
CGGGCTCCACATACATCTGCACCTCTGTGACTCCACACGGGCAGAGGCC
TCGCACAACATGGTGCTTCACTCTGTTACCCGCAGCCACGACGAGAACAA
GGAGCGCTACGAGATCTGGAGGACCAACCCCTATTCCGAGTCCGGCGGAAG
AGCTCCGGAATCGGGTGAAAGGTGTCTCTGCCAAACCCTTATGGAGACC
CAGCCACTCTGGACGCTCTGCACTGTGACATCCGTAATGCCACTGAGTT
CTACAAGATCTTTCATGATGAGATCGGGGA-GTGTACCAGA-GCC---CA
AC---CCAAGCAGGGAGGAGCGCCGGGGTGGCGGACAGCTTTGGACAAG
CAATTGAGAAGGAAGATGAAGCTGAGGCCAGTGATGAGGATGAATGGAAA
CTACGCCCCAGCGGCTGATGACCTGCGAGGCGGTGGAGGTTGTGTGTGAGC
TTGTCCCCTCTGAACAGCGGCGGGGAGGCCCTCAGGGAAGTGTGGGGCTC

TACGTCCAAATGAAGCCTGTATGGCGTGCCACCTGCCAGCCAAAGAGTG
CCCAGACCAGCTGTGCCGCTACAGCTTCAACTCGCAGAGGTTTGCCGAGC
TCCTCTCCTCCACCTTCAAGTACAGATATGACGGTAAGATCACCAACTAT
CTTACAAGACACTGGCCACGTGCCAGAGATTGTAGAGAGGGACGGTTC
CATCGGTGCCTGGGCCAGTGAGGGGACGAGTCGGGCAACAAGTCTTACA
CGATCGAAATGGGCCCAAAGGGCCTCAGTGGAAAAGAGAGCCCTCAGCCA
TTCTCTTGTCTGTTGAGGACCCTACCAAACAGACCAAGTTCAAAGGCAT
CAAGACCTACATATCTTACCGGGTCACCCCAGCCACACCGGGCGACCCG
TATATCGMCGGTACAAGCACTTTGATTGGCTATAACAACCGTCTGCTGCAT
AAGTTCACCGTCATCTCTGTGCCTCACCTGCCGGAGAAGCAGGCCACAGG
GCGCTTCGAGGAGGACTTCATTGAAAAGCGAAAACGGCGGCTGATTCTCT
GGATGGACCACATGACCAGTCACCCGGTCTCTCCAGTACGAGGGCTTT
GAGCACTTCTCATGTGCGCTGACGACAAACAGTGGAAAGCTGGGCAAGCG
GCGGGCGGAGAAGGATGAGATGGTGGGCGCCACTTCATGTTGACCTTTC
AGATTTCCAATGAGCACCAGGACATGCAGGATGTGGAGGAGCGAGTGGAC
TCCTTCAAGTCTTTTGCCAAGAAAATGGATGATAGTGTTCATGCAGTTGAC
GCACGTGACCTCGGAACGGTCCGGAACATCTAGGGGGTTTTAGGAAGG
AATTCCAGCGTCTGGGGAACGCTTTCCAGTCCATTAGTCAGGCCCTTCATG
CTGGACCCTCCTCATAGCTCCGAAGCTCTCAACAATGCCATCTCGCAC--

-----ATCTGCTTCCCCTTTGTGTTACCTCCGTCAAGAACA
GCTCCACCTGGACATACGGCACGCTCACCTGCAAAGTCATCGCCTTCCTG
GGCGTGCTGTCTGTTTTCACACGGCCTTCATGTTATTCTGCGTCAGCGT
GACCCGCTACCTGGCGATAGCCCACCACCGCTTCTACACCAAACGGCTGA
CCTTCTGGACCTGTCTGGCCGTATCTGCATGGTGTGGACGCTGTCGGTG
GCTATGGCCTTTCCCTCCAGTACTGGACGTGGGGACTTACTCATTTCATCAG
AGAGGAGGACCAGTGCACCTTCCAGCATCGCTCCTTTCGAGCCAACGACT
CGCTGGGCTTCATGCTGCTGCTAGCCCTCATTCTGCTGGCCACACAGCTG
GTCTACCTCAAGCTCATCTTCTTTGTCCACGATCGCCGGAAGATGAAGCC
CGTCCAGTTTCGTACCCGCCGTCAGCCAGAACTGGACCTTCCACGGGCCAG
GGGCCAGCGGGCAGGCGGCTGCTAACTGGCTGGCGGGTTTTCGGGAGAGGC
CCGACCCCGCCACCCTGCTGGGCATCAG-CAGAACACCAACCGGCGGG
CCGCAG-CGGCTCCTGGTGCTGGACGAGTTCAAGACGGAGAAGAGGATCA
GCAGGATGTTTTACATCATGACCTTCTTCTTCTTCTGCGACTGTGGGGCCT
TACCTGGTGGCCTGCTATTGGAGGGTGTGGCC--AGGGCCCGCTGTGCC
CGGCGGCTACCTGACGGCGCGTGT--GATGAGCTT-----GCCAGC--
-----GCCAAATCCCAGTTT
CACCTGGCGTAGGGACTGGTCTTGGCACGGAGC--GCAGCGTTCCTACT
TAGTAACAGCTTACTATCCCCACAACAACCGAAGAGCCCACAGTTG--
CTCCCCACAGCGATGGTTTGTACCC--CAGCCAACAACCGACTGGAC
TTTGCCGCTCGGCATACGATGCCGCCGCGCTGCGGATTTTGCCGGCAA
CGCAGCCACTTTGCTTTCCTAT--GCTGCTGGTGTGAAGGCGC-----
TTCCCTGTCCACTGCAGGCTGCTCAAACAGACCTCTCGGCTATTATACT
GACCCGCCAG--GTTGG--GGCGCCCGCACGCCACCACAGTACTTC--
-----AGCAAATCTAGTTTCAAGTCTCTCTTCTGCTGGTCCACAAAACACCA
TTGGGGAAGAAGTGGCA--CC--TCCTACCAGC-----CGGAT
GC--TGGA--GACAC--CCTCTCTACAGATAGATCTCCA--AT--
AGACGCACCAGACGAA--ACAAAACCAAAGACTT-----GTCCGA--
-ATCCAACCTGGATAGAG--ACGCCGTCTCAATAAAGTCAATCGATTCA
AGCGATTCTGGAATCTTTG--AGCAAGCAAAAACGAAGAAGAATTTCTCC
TCCCCTACACCA-----GTTTTAGAGGC--T-TCCCCTGAAAT

CGTTACCACAACAGGTTGATCCTGAACGAGGCTGAGGTCATCTTGGCGTT
GGCACAGGAGTTTTGAGATGAGGGTGGTGACTGTGTCTTGGAGGACAAA
CCTTCTCCAGCATCGTGCAGGTGATCAGTGGTGCCGCCATGCTAGTTAGC
ATGCATGGAGCTCAGCTCATCACCTCAATCTTCTCCTCCTCCAGGGGTGCGGC
TGTGGTGGAACTCTTCCCCTACGGAGTCAACCCTGAGCAGTACACCCTT
ACAAAACATTGGCCTCCTTGCCAGGCATGGACCTTCAGTATGTGGCCTGG
AGGAACACCATGGAGGATAACTCTGTGGCCTACCCAGGCAGACCCTGGGA
CCAGGGGGGCATCGCTCACCTTGATAAGGACGAGCATGAGCGCATCCTGG
CCAGTAGTGAGGTGCCAGGCACCTGTGTTGAGTAATCCGGAATGGCTC
TTCCGCATCTACCAAGACACCAGTTGACATCCCCCTCCCTGCTGGAGGT
TCTTAG---GGAGAGCCTGAAA---ACCAGACCTAACCTGAAGAA---GA
CCAAACCTGCCAGCACTGTTTCATCCAGGGAGGGTCAGGGAGCCTCAGTGC
CAGACTTCGGTCCAGACTATTAATGAAGCCAAGCTCACAGTCTCCTGGCA
GATCCCATGGAACCTCAAGTACTTGAAGGTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGAGAGAC
CCCAGCAAGG

GAACCTTGGAGGATCAAATCATCCAAGCCAACCTGCCCTTGAGGCTTTT
GGTAATGCCAAAACATGAGGAATGACAACCTCATCACGCTTTGGCAAATT
CATCAGGATTCACTTTGGAACCTCCGGCAAGTTATCCTCAGCAGACATAG
AGACGTACCTTCTGAAAAGTCCCCTGTACCTTCCAGCTCAAATCAGAA
AGGAACTACCATATCTTCTTTTCAAGATCTTGTCCAATCACAAGCCAGAGCT
GTTGGACATGCTATTGATTACCAACAACCCGTATGACTACTCCTACATCT
CCCAAGGAGAGGTAACAGTAGCATCTATCAATGATTCTGAAGAGTTGGTG
GCCACTGACAGTGCCTTTGATGTCCCTTGGCTTTACTCCAGAGGAGAAAAT
GGGGTCTACAAGTTGACAGGCGCCATAATGCATTATGGCAACATGAGGT
TCAAGCAAAGCAGCGTGAGGAACAGGCAGAGCCTGATGGCACCGAAGCG
GCAGACAAGTCGGCTTACCTAATGGGGCTGAACTCTGCAGATCTTGTGAA
AGGACTCTGCCACCCCAGGGTCAAGGTGGAATGAGTATGTCACCAAAG
GGCAGGGTGTGGATCAAGTCTATTAC-----

-----TACCTGAT
CTACGCCTCCTTCTCCTTCATGGGATGTTTACAAATCAGTGACGGATCTA
ACGTGGTCAACCTGTAGCCAGCAACTCCCCAGCGTGTCTACGCAGTG
ACTCAGCAGAAGTACTTCAGTAACTACAGCCCAGGATGATTGGGTTCTACAT
WTACGAGCCCATCGAGTACTGGAACCTCCACAGTGCAGGAGCATCTCAAAA
CGCTGGGCCACGGCTTAAACAAGATCTCCTGGATGGACAACCTACTTCCAC
TACCTAAAGGTGGTGAACGTGAGCGCCTCGACCAAGAGTGACTTCATCAG
CATCCTCAAAGGCTCCTTCCTGCGGAGCCCGGAGTACCAGCACTTCACGG
AGGACATCATCTTCTCCAAGA---ATGGCG-----ATGAGTAC
GACATCATCGCGTCCAGGATGTACCTGGTGGCGGAACCACAGAGAAAAC
GCGGGAGGAAGTGGTGGAGCTGTTGGAGAGGCTCCGCCCCCTCTCGCTCA
TCAACAGCATCAAGTTCATCGTCTTCAACCCACCTTYGTTTTTCATGGAC
CGCTACAGCTCCTCAGTTCATCTCGCCATCCTCACCTCGGGCTTCAGCGT

CAATCATCAATATGAAGCCCCCAGCCATCTCCCAATATCAGACACCCCTG
TTCGCTGTGAGCTGTTCTAGTCACCGCTGTCCTCCTCCTTCTATCCCTCCC
TGTCCTAGCTGCCGGAATTACAATGCTTCTCACCGACCGAAACCTCAATA
CAACATTCCTCGACCCGGCGGGGGAGGAGACCCCATTTCTCTACCAACAC
CTGTTCTGATTTTTTCGGGCACCCCGAAGTCTACATTCCTAATCCTCCCAGG
CTTTGGCATGATCTCTCATATCGTCGCCTACTACTCGGGGAAGAAAGAAC
CTTTCGGGTACATGGGAATAGTCTGAGCCATGATGGCCATCGGACTCCTA
GGCTTCATCGTCTGAGCGCACCATGTTCACTGTTGGGATAGACGTAGA
TACTCGAGCATNNTTCTGGAGAGGAACCTCCATCCGTCCNACTGCC TGGGCA
TGCTGCTCCTCTCTGACGCCCACCAGTGCACCAAGCTGTCCGAGCTGTCC
TGGGGCATGTGCCCTCAGTAAC TTTACCGCCATTTGCAAGACCGAGGACTT
CCTGCAGCTGCCCAAAGACATGGCGGTCCAGCTGCTGTCCCACGAGGAGC
TGGAGACGGAGGACGAGAGGCTGGTCTACGAGGCCGCCCTCAGCTGGGTCT
A ACTACGACCTGGATAGACGACACTGTCACCTTGCCAGAGCTGCTGAGGAC
AGTCCGTCTGGCCCTGCTGCCCGCCATCTTCCTCATGGAGAACGTCWCCA
CAGAGGAGCTGATCAACGCGCAGACCAAGAGCAAGGCACTGGTGGACGAG
GCCATCCGCTGCAAGCTGAGGATCCTGCAGAACGAGGGCGTGGTCAACAG
CCCGCTGGCCAGGCCCAGGAAGACCAGCCACGCCCTYTTCTGCTGGGTG
GGCAGACCTTCATGTGCGACAAGCTCTACCTGGTGGACCAGAAGGCCAAG
GAGATCATCCCCAAGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGCGC
CTGCGCCATCGGCTGCAAGGTCTACATCACCGGAGGCC--GGGGCTC-TG
AGAACGGGGTTTTCCAAGACGTTTTGGGTCTACGATACGTC CCACGAGGAG
TGGTCGAAGGGCGGCCCATGCTCATCGCCCGGTTCCGGCCACGGCTCAGC
AGAGCTGAAACACTGCCTCTACGCGGTGGGCGGACACACGGCCGGATCAG
GCTGCCTCCCCGCTTCCCCCTCG-----

-----AGGGATCCCAGTAAGGGAACCTTGAGGATCAAATCAT
CCAGGCTAACCTGCACTGGAGGCTTTCGGCAATGCCAAAACATTGAGAA
ATGACAACCTCGTCACGCTTTGGAAAATTCATCCGGATTCAC TTTGGAACC
ACTGGCAAGTTGTCCTCTGCAGACATAGAGACTTACCTTCTGGAAAAGTC
ACGAGTCAC TTTT CAGCTCAAGTCAGAGAGGAACTATCATATCTTCTTCC
AGATCTTGTCCAATCAAAGCCAGAGCTTTTGGACATGCTTTTAAATCACC
AACAATCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTAGC
ATCCATCAATGATTCTGAGGAGTTGATGGCCACTGACAGTGCATTTGACG
TGCTTGGCTTTACTCAAGAGGAGAAAATGGGAGTCTACAAGTTGACAGGT
GCAATCATGCATTTACGGCAACATGAGGTTCAAGCAAAGCAGCGAGAGGA
GCAGGCAGAGCCTGATGGCACTGAGGCTGCTGACAAGTCAGCTTACCTAA
TGGGGCTGA ACTCTGCAGATCTAGTCAAGGGGCTCTGCCATCCCACGGTT
AAGGTTGGCAATGAGTTTGTCACTAAAGGGCAGGGAGTAGACCAAGTCTA
CTACCCCAACAAGGAGGCTTCAAGTGCAGGAGTGCGGCAAGCACTACA

ACACCAAGCTGGGATACAAGCGACATGTGGCCATGCACTCGGCCACGGCG
GGGGACCTCACCTGCAAAGTGTGCATGCAGAGCTACGAGAGCACGCCCGT
GCTGCTGGAGCACCTCAAGAGCCACTCGGGGAAATCCTCGGGGGCGCCA
AGGAGAAGAAGCACCCATGCGACCCTGTGACCGCCGCTTCTACACCCGC
AAGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCCT
GTGCCAGTACTGCGCCCAGCGCTTTGGCAGGAAGGACCACCTGACGCGAC
ACGTTAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCT
CCGGATATGTTAGGGCTTTTAGGGTCCGGTTCCCCACCTTGCTCTGTCAA
GGAGGAGCTCAGCCCTATGATGTGCAGCATGGGTCCCAACAAAGACCCTA
TGATGGGCAAGCCCTTCCCCAGCGGGACCCCTTCCCGATGGGCATGTAC
AACCTCACCAC-----CTCCAGGCCATGTCCAATCCTGGGGTGGGTCA
CCCG-----CACCCCTCCCTGATGCCCGGTCCCTGTCTGCAGCTATGG
GCATGGGCTGCCACATGGAGTACCTGATCTACGCCCTCCTTCTCCTTCATG
GGATGTTTACAAATTAGCGACGGATCCAACGTTGTCAACCTGTTAGCCAG
CAACTCCCCCAGTGTGTCTGACGCTCTGACGCAGCAGAAGTACTTCAGTA
ACTACAGCCCTGTGATCGGTTTTCTACATCTATGAACCCATCGAGTACTGG
AACTCCACGGTGCAGGAGCACCTGAGAACTCTGGGCCAGGGCTTCAACAA
GATCTCCTGGATGGACAATACTTCCACTACCTGAAGGTGGTGAACGTGA
CCGCCTCCACCAAGAGCGACTTCATTGCCATCCTCAAAGGCTCCTTCCTG
AAGAGCCCGGAGTACCAGCACTTCCCGAGGACATCATCTTTTTCGAAGA-
--AAGCG-----AGGAGTATGACATCATCGCATCCAGGATGT
ACCTTGTGGCGCGGACCACGGAGAAGACCCGGGAGGAGGTGGTGGAGCTG
CTGGAGAGGCTCCGCCCCCTCCTCCATCAACAGCATCAAGTTCATCGT
CTTCAACCCACCTTCGTCTTCATGGACCCTTACAGCTCTTCAGTCATAT
CACCCATTCTCACCTCAGGCTTCAGTGTGCTCACCATCCTCATCCTCACC
TTCTTCTGGTCAATCAACCCCTGGGGAACCTTTTGGTTGATCCTGACGGT
GACCTCTGTGGAGCTGGGTGTTCTAGGCCTGATG-----

-----CCCC
TATGTCTGATGTTTGTGGATGAGGCAGACCACGAGACACTCACTGCTGTC
CTGGGGCCCGTCGTCGCAGAGCGTAACGCTATGAAGCAGAGTCGACTCAT
ACTCTCTCTGGGCGGCCCTGCCTCGCTCCTTCCGCTTCGAATTCGAGGCA
CGGGATACGACGAGAAGATGGTGCCTGATGTGGAGGGCTTGGAGGCCTCA
GGCTCCACCTACATCTGCACTCTGTGTGACTCCACCCGGGCGGAGGCCTC
TCACAACATGGTACTGCACTCCATCACCAGCAGTACCACGAAAACCTGG
AGCGCTACGAAATATGGAGGACCAATCCGTTTGGCTGAGTCCGCAGACGAG
CTGCGAGACCGGGTCAAAGGAGTCTCCGCCAAGCCCTTCATGGAGACCCA
GCCCCTCTGGATGCA-TGCACTGTGATATGGGTAATG-----

-----TCGTACACG
ATCGAGATGGGCTCCAAAAGGCCTCAATGGAACGAGAGTCCYSAGCCTTT
CTCCTGCTCCGTCGAAGACCCCACCAARCAGACAAAGTTCAAAGGCATCA
AGACCTACATATCGTACCGGTSACCCCCAGCCACAYGGGGCGGCTGTG
TACCGCCGGTACAAGCACTTTGATTGGCTGTACAACCGCCTGCTGCACAA
GTTACCGTCATATCCGTGCCSCACCTGCCSGAGAARCAGGCCACGGGGC
GYTTCGAGGAGGATTTCAATTGAGAAGCGCAARCGGCGRCTGGTGCTGTGG
ATGGACCACATGACCAGCCACCCGGTSCTGTCSAGTACGAGGGCTTCGA
GCACTTCCTCATGTGCGCCGACGACAAGCAGTGGAAGCTGGGCAAGCGGC
GGGCGGAGAAGGACGAGATGGTGGGCGCCATTTTCATGCTGACCTTCCAG
ATCCCCAASGAGCACCAGGACCTKCAGGATGTGGAGGAGCGGGTGGACTC
CTTCAAGTCGTTTCGCCAAGAAAATGGACGACAGTGTSATGCAGCTGACGC
ACGTGGCSTCGGAGCTGGTGAGGAAACATCTGGGGGGTTTCAGGAAGGAG
TTYCAGCGTCTGGGGAACGCCTTCCAGTCCATCAGTCAGGCGTTTCATGCT
GGACCCYCTCACAGCTCCGAGGCCCTCAACAACGCCATCTCGCAC----

-----GCCAAATCTCGCTTTCA
CCCTGGCGTAGGGACTGGTCCTGGCACAGACC--GCAGCGTCCCCTTA
GTAACAGCTTGCTATCCCCGCAACAAACCGAGGAGCCCGCGGTTG--GT
TCCCCGACGCGATGGTTTGTCAACC--CTGCCAACAACCGACTGGACTT
TGCCGCTCGGCATACGATGCTGCCGCCGCTGCAGACTTCGCCGGTAACG
CGGCCACCTTGCTGTCGTACGCGGCGGCTGGAGTGAAGGCC--TT
CCCCGTCCACGGCAGGCTGCTCAAACAGACCTCTCGGGTATTACGCAGA
CCCGTCAG--GCTGG--GGCGCCCGCACACCACCGCAGTACTGT----
----ACCAAGTCCAGCTCGGTTCTCTCTTGCTGGCCTACAAATACCGTT
GGGGGCAGAACGGGCC--CCTCCAGCTACCTGG-----CCGAGGA
--TGGA--GACGC--GCTGCCACAGAGAGGTCTCCG--AT--TG
GCGCGTCAGACGAA--ACCAAACCTAAAGACTT-----GACCGA--G
TCCAGCTGGATAGAG--ACGCCGTCCTCAATTAAGTTCGATTGATTCAAG
TGATTCTGGAATCTTTG--AACAAGCAAAAAGGAGAAGAATATCTCCTT
CTGCCACACCA-----GTTTCGGAGGCTGTGTCCCGTTGAAATCC
GAG-----ACAGGCGAAGTCACCGAAAGAGAAGTGGCTTTGGGGAT
AAATCCGTTTCGACAGCGGGATGGGCGCCTTCAAAATCAACCACAGCTCGC
ATGATCTCGGTTCCGG--TCAAACGGCGTTTTCTCCAAGCG--CCC

GGCTAC---GCAGCTGCTGCGCTCGGA---CACCACCA-----CCACCC
GACACACGT CAGCTCC---TACTCCACCGCGGCTTCAACTCCACCCGGG
ACTTTCCTCTCAGAAATCGGGGCTTCGGAGACGCCACCAG-----
--TGCGCAACACAGTCTCTTCGCATCCGC---AGCGGGAAGTTT---T--
----GCAGGGCCACATGGACTCAGATGCCGCGGGGCACCTGCTCTTCC
CSGGACTTCACGAG---CAAGCCGCGAGCCACGCGTCCTCCAATGTTGTT
AACAGTCAAATGCGCTTGGGCTTTTCGGGGGACATGTACGGGCGGGCCGA
CCAGTACGGCCACGTTACCAGCCC GCGTT---CCGACCACTATGCTTCGA
GCCAGCTGCACGGCTATGGCCCTATGAACATGAATATGGCCGCA---CAT
CACGGAGCGGGGCTTCTTCCGTTACATGAGGCAGCCGATTAACAAGA
GCTGATCTGCAAGTGGATCGAACCCGAGCAACTATCGAATCCGAAAAAGT
CGTGCAACAAAACCTTTTAGCAGATGCACGAGCTGGTGACCCATTTGACG
GTGGAGCATGTGGGGGACCGGAGCAGTCAACCATATTTGCTTCTGGGA
WGAGTGC GCGGAGAAGGAAAACCATTCAAAGCCAAATACAAACTTGTGA
ACCACATCAGAGTGCACACCGGGGAGAAGCCATTTCCATGTCCCTTTCCC
GGCTGTGGCAA-

>Stylephorus chordatus

AGTCTTCTCATTTCGAGCTGAACTAAGCCAACCCGGCGCACTTCTAGGCGA
TGATCAGATTTATAATGTTATTGTAACCGCACATGCCTTTGTAAATAATTT
TCTTTATAGTAATGCCCTAATAATTGGAGGATTTGGTAACTGACTAGTC
CCATTAATAATCGGGGCCCTGATATAGCCTTTCCCGTATAAATAATAT
AAGTTTCTGACTCCTCCCTCCATCCTTCTTACTGCTTCTTGCATCTTCTG
GAGTTGAAGCAGGGGCAGGAACAGGCTGAACTGTCTACCCCTCTAGCA
GGCAATCTTGCCCATGCCGCTGCTTGTGGATCTTACTATCTTTTCTCT
CCACTTAGCAGGAATCTCATCCATCCTAGGGGCAATCAACTTTATTACCA
CAATTATTAATAATAAAACCCCGCCATCTCACAGTATCAAACCTCCCTA
TTCGCTCTGAGCCGTTTGTAGTAACAGCAGTTTCTACTCCTCCTCACTCCC
AGTACTCGCAGCAGGCATCACGATATTACTTACAGACCGCAACCTAAACA
CCTCTTTCTTTGATCCTGCAGGAGCGGAGACCCCATCCTATATCAACAC
CTATTCTGATTCTTCGTCATCCTGAAGTTTACATTCTAATTCTCCCGG
ATTCGGAATAAATTTCCCATATCGTTGCCTACTACTCAGGCAAAAAAGAAC
CATTCGGATATATAGGCATGGTTTGGAGCTATAATAGCCATCGGCCTACTA
GGCTTATTGTATGAGCTCACCATATTTACAGTCGGAATAGACGTAGA
CACTCGAGCATANNNNNNNNNGAGAAACCTTACCCACCAACTGCCTGGGCATGCTCC
TGCTGTCCGACGCCACAGTGCACCAAGCTGTTCGGAGCTGTTCGTGGAGC
ATGTGCCTGAGCAACTTCCCCGCCATTTGCAAGACGGAGGACTTCTCCA
AATGCCCAAAGACATGGTCGTGCAGCTCCTGTCCCACGAGGAGCTCGAGA
CGGAGGACGAGAACTCGTTTACGAGGTCGCGCTCAACTGGGTGACCTAC
GACCTGGAAGGGAGGCACTGCCACTTGCCGGAGCTGCTGAAAACAGTCCG
CCTGGCCCTGCTCCCCGCAATCTTCTCATGGAAAACGTGTCCATGGAAG
AGCTGATCAACGCCAGATCAAGAGCAAGGCGCTGGTTCGACGAGGCCATC
CGCTGCAAGCTGAAGATCTTGCAGAACGACGGCGTGGTCAACAGCCCTG
TGCCCGTCCGAGGAAAACAGCCACGCGCTGTTCTGCTGGGAGGGCAGA
CGTTTATGTGTGACAAGCTTTACCTGGTGGACCAGAAGGCCAAAGAGATT
ATCCCGAAGGCTGACATACCCAGCCCCAGAAAGGAGTTTCAGCGCCTGTGC
CATCGGCTGTAAGGTTTACATCACGGGCGGGC--GGGGCTC-CGAGAACG
GCGTGTCCAAAGACGTGTGGGTGTACGACACGGTGCACGAGGAGTGGTCC
AAGGCGGCGCCATGCTCATAGCCAGGTTTGGTTCACGGCTCCACGGAAC
GAAGCACTGCCTGTACGTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGA
GGATTACATAGTGGTCTTCTCTCGTTCC
ACCACCAGGCTGATCCTAAATGAAGCAGAAGTGCATGGCACTGGCCCA
GGAGTTTCAGATGAGAGTCATTACGGTCTCCCTGGAGGAGCAGTCTTTTA
CCAGCATCGTTCAGGTGATCAGCGGGCGTCCATGTTGGTTCAGCATGCAC

GGAGCTCAGCTGGTCGCATCGCTGTTTCTGCCTAGAGGGGCGGGCGGTGGT
GGAGCTGTTCCCTACGCTGTGAACCCGGAACAGTACACCCCTTATAAAA
CCCTCGCCTCCCTGCCAGGCATGGACCTCCAATATGTTGCCTGGAGAAAC
ACTATGGAAGAGAACACGGTCAACCACCCAGACAGGCCCTGGGACCAAGG
GGGCATCGTACACTTGGACAAGGAGGAGCAAGAGCGCATCCAGGCCAGCA
AGGACGTCCCCAGGCACCTCTGCTGCCGTAACCCAGAGTGGCTCTTCAGA
ATCTACCAGGACACTTGGTGGACATCCCTTCACTCTTGGAGGGGCTCAA
GGCGGAAGGTCTCAAG---AGGAGGCCCGCTTGAAGAA---G---AAGC
CAGCGAGCACGGTTACCCCGGACGGGTGAGAGAGCCCCAGTGCCAGACC
TCCGTGCAGGCCGCAACGAGGCCAAGCTCACAGTCTCCTGGCAGATCCC
GTGGAACCTGAANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAAGAAGGATTCAGC
AAAGGAACCCCTGGAAGATCAAAAT
CATCCAGGCCAACCCTGCGTTGGAGGCCCTTTGGTAATGCCAAAACATTGA
GAAATGATAACTCCTCCCGTTTTGGGAAATTCATCCGCATTCACTTTGGA
ACCAGCGGCAAGTTAAGCTCTGCTGACATTGAAACTTACTTGCTGGAAA
GTCAAGAGTCACTTCCAGCTGAAAGTCGGAGAGGAACTATCACATCTTCT
TCCAGATCTTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGTTGATC
ACCAACAACCCATATGACTACTCCTACATCTCCAAGGAGAGGTAACGGT
AGCGTCTATCAATGACTCAGAGGAGCTCATGGCCACTGACAGTGCCTTTG
ATGTTTTGGGCTTCACTGCAGAAGAGAAGATGGGAGTGTACAAGTTGATT
GGGGCCATTATGCACTATGGCAACATGAGGTTTTAAGCAGAAGCAGCGCGA
GGAACAGGCAGAACCAGATGGGACGGAGGCTGCTGATAAATCCTCTTACT
TGATGGGTCTGAACTCTGCAGATCTCATCAAAGGATTATGCCACCCCAGG
GTCAAGGTAGGAAATGAATANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCCCAACAAGGAGG
CCTTCAAATGTGAGGAA
TGTGGCAAGCACTACAACCAAGCTGGGATACAAGCGCCATGTGGCCAT
GCACTCCGCCACGGCGGGAGACCTCACCTGCAAGGTGTGCATGCAGAGTT
ACGAGAGCACCCCCGTGCTGCTGGAACACCTGAAGAGCCACTCCGGGAAG
TCCTCGGGCGGGCGCCAAGGAGAAGAAGCACCCGTGCGACCACTGCGACCG
CCGCTTCTACACCCGCAAAGACGTGAGGCGACACATGGTCTGCCACACCG
GCCGCAAGGACTTCTGTGCCAGTACTGCGCCCAGCGCTTCGGCAGGAAG
GACCACCTGACCGGACACGTGAAGAAGAGCCACTCGCAAGAGCTGCTGAA
GATCAAGACGGAGCCTCCCGACATGCTGGGGCTCCTGAGCTCTGGCTCGC
CGCCGTGCTCCGTCAAGGAGGAGCTCAGCCCCATGATGTGCAGCATGGTT
CCCAACAAGACCCCATGATGGGCAAGCCCCTCCCGAGCGGCACCCCTT
CCCCATGGGTATGTACAACCCCAACCAC-----CTCCAGGCCATGTCCA
ACTCCGGGGTGGGCNNNNNN-----
NN
NNNNNNNNNNNNNNNNTTCATGGGATGTTTACAAATCAGCGACGGA
TCCAACATCGTAAACCTGCTGGCGAGCAACTCTCCGAGCGTTTCTTACGC
TACCACCCAGCAGAAGTACTTCAGCAACTACAGTCCCCTGATTGGATTCT
ACATTTACGAACCTATCGAGTACTGGAACTCCACGGTGCAGGAGCACCTG
AAGACACTGAGTCACGGTTTTCAACAAGATCTCCTGGATGGACAACCTCTT
CCATTACCTGCGGGTGGTGAACGTGAGCGCGTCGACAAAGAACGACTTCA
TCACCATCCTTAAGGGTTCCTTCTCCTGCGCAGCCCCGAGTACCAGCACTTC
ACGGAGGACATCATCTTCTCCAAGG---ACCCCGAAAGCG-----ACGA
GTACGACATCATCGCCTCGCGCATGTACCTGGTGGCGAGGACCACGGAAA
AGAAGCGAGAGGAGGTGGTGGAGCTCCTGGAGAAGCTCCGCCCACCTGATG
CTCATCAACAGCATCAAGTTCATCGCGTTCAACCCACTTTTGTATTCAT
GGACCGCTACAGCTCCTCTGTGCTCTCCCCGATTCTGACCTCGGGCTTCA
GCGTGCTCACCATCCTCATCCTCACTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNGGCCACCACCCATTTCGAGTGGCG
GCCCCCCTCGGGAACGTCTCGGCCGCGTGCCACGTGGGCATCGTCGACG

-----NNNNNNNNNNCTTTCACCTGGCGTGGGGACTGGTCCTGGCACGGAG
C---GCAGCGTCCCACTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGA
GGAGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTCAACC---CTG
CCAACAACCGACTGGACTTTTGTGCTCGGCATACGACGCCGCT-----
---GATTTCCGCGGTAACCGGCCACCTTGCTGTCTACGCAGCGGCCGG
AGTGAAGGCTC-----TTCCCCTGCCGACGGCAGGCTGCTCCAACGGC
CTCTTGGCTATTACGCAGACCCGTCAG---GCTGG---GGAGGACGCACG
CCGCCGAGTACTGTGGCGTAAATAGCAAATCCAGCTCGGTCTTTTCCTG
CTGGCCCGCTAACTCTATCGGCGGCAGAGCCGGCA---CC---AACTACC
TGG-----CTGAGGA---GGGA---GACTC---CATCCCGACAGAG
AGGTCACCC---AT---CGGCGGCTCGGAGGAG---ACCAAACCCAAAGA
CATGAC---TTCAGA---GTCGAGCTGGATAGAG---ACGCCGTCTCCA
TTAAGTCCATCGATTTCGAGCGATTCTGGTATCTTTG---AACAGGCCAAG
AGGAGAAGGATCTCCCCTTCNNNNNNNNNN-----
NNNGAAGTCACAGAGAGAGAAGTC
GCGTTGGGGATAAATCCTTTTCGAGACGGAATGGGCGCCTTCAAATAAA
CCACAGTTCTCACGACATTGGCTCCGG---ACAAGCTGCATTCTCATCCC
AAGCA---TCCGGCTAT---GCAGCGGCTGCCCTGGGA---CATACCA-
-----TCACCCGACTCATGTTAGCTCT---TATTCCACAGCGGCTTTCAA
TTCTACACGGGACTTTCTCTTCAGAAATCGTGGGTTTGGAGACGCCACCA
G-----TGACAGCACAGTTTGTTCGCCCTCCGC---CGCCGGA
AGTTT---T-----GCTGGGCCACATGGACACTCCGATGCCACGGGGCA
CCTGCTCTTCCAGGGCTTACAGAG---CAAGCCGCCAGTCATGCTTCGT
CTAATGTTGTTAACGGTCAGATGCGACTGGGCTTTTCCGGAGACATGTAC
GGTCGGGCCGACCAGTATGGCCACGTTGCAAGCCCAAGGT---CCGACCA
TTATGCTTCAACACAGTTGCATGGCTATGGCCCCATGAACATGAATATGG
CTGCA---CACCACGGAGCAGGGGCCCTTCTTTCGATACATGAGGCAGCCG
ATTAACAAGAGCTCATCTGCAAGTGGATCGAACCGGAGCAATTGTCGAA
TCCGAAGAAGTCGTGCAACAAAACCTTTTAGCACGATGCATGAGTTGGTAA
CCCATCTGACAGTGGAGCATGTGGGGGGACCCGAACGCTCCAACNNNNNNNNNNNNNNNNNNNNNNNNNN
NN
NN

>Sudis atrox
AGCCTGCTCATCCGAGCTGAATTAAGCCAACCAGGCGCCCTTCTTGGAGA
CGACCAAATTTATAATGTAATCGTAACAGCACACGCCTTTGTAATAATTT
TCTTTATAGTAATAACCAATCATGATTGGAGGATTTGGAAACTGGCTTATT
CCCCTTATGCTCGGGGCCCCAGACATAGCATTCCCCGAATAAACAACAT
AAGCTTCTGACTTCTTCCCCCTTCTTTCCTTCTGCTCCTAGCCTCCTCCG
GAGTTGAATCTGGAGCCGGAACCGGATGAACGGTTACCCTCCCCTGGCC
GGGAACCTCGCCACGCCGGAGCATCCGTTGACCTAACTATTTTCTCTCT
TCATCTAGCAGGAATCTCCTCAATCTTGGAGCCATTAACCTCATCACAA
CAATCATCAACATGAAACCCCCGCTATTTCCCAATACCAAACACCTCTA
TTTGTATGATCCGTCCATTAACCGCTGTCCTTCTGCTCTTATCCCTGCC
TGTCCTTGGCGGCTGGAATTACAATGCTACTGACAGACCGAAACCTAAACA
CAACCTTCTTCGACCCCTGCAGGGGGAGGGGACCCAATTTCTCTACCAACAC
CTATTCTGATTTTTTCGGCCATCCAGAAGTTTATATTTCTAATTCTACCCGG

ATTTGGAATGATTTCCACATTGTTGCCTACTACTCAGGCAAAAAAGAAC
CTTTCCGATACATGGGAATGGTGTGAGCCATAATAGCCATCGGCCTACTT
GGGTTCATCGTATGGGCCACCACATGTTACGGTTGGGATAGACGTAGA
TACACGAGCANNNTTCTCGAGAGGAACCTGCACCCATCCAACCTGCTTGGCAT
GCTGCTACTATCAGATGCCACCAGTGCACCAAGCTGTCAGAGCTGTCCT
GGGGTATGTGTCTCAGCAACTTCCCTGCCATCTGCAAGACGGAGGACTTC
CTCCAGCTGCCCAAAGACATGGTGGTGCAGCTCCTGTCCCATGAAGAGCT
GGAGACGGAAGATGAGAGACTGGTTTATGAGGCTGCCCTTAACTGGGTCA
ACTATGACCTGGAGAGGAGACACTGCCACCTGCCAGAGCTGCTGAGAACC
GTACGCCTGGCCTTGCTTCCCGCCATCTTCTCATGGAGAACGTCTCCAC
AGAGGAGCTGATTAATGCCCAGGCAAAGAGCAAGGAGTTGGTGGACGAGG
CCATCCGCTGCAAGCTGAAAATCCTGCAGAATGATGGTGTGGTCAACAGT
CCCTGTGCCCGGCCAGAAAGACCAGCCATGCCCTTTTCTGCTGGGAGG
GCAGACCTTCATGTGTGATAAGCTGTACTTGGTGGACCAGAAAGCCAAAG
AGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGTGCC
TGTGCCATTGGCTGTAAGGTATACGTGACAGGCGGGA--GAGGCTC-AGA
GAACGGTGTGTCTAAAGACGTGTGGGTCTATGACACCGTACATGAGGAGT
GGTCCAAGGCAGCACCCATGCTTATTGCCAGGTTTGGCCATGGCTCTGCT
GAGCTCAAACACTGTCTCTATGTGGTTGGAGGACACACAGCAGCCACTGG
CTGCCTCCCAGCTTCTCCGTCTGGATGAGTACATTGTAGTGTTCAGTCGT
TCCACAACCAGGCTGATACTGAATGAAGCAGAGCTGATACTGGAACCTGGC
CCAAGAGTTTTCAGATGAGGGTGGTTACAGTGTCCCTGGAGGAACAGTCTT
TCCCCAGCATCGTACAGGTCATCAGTGGGGCGTCCATGTTGGTTAGTATG
CACGGAGCTCAGCTCGTCACCTCACTCTTCTCCCTAGAGGAGCTGCTGT
AGTAGAGCTCTTCCCCTATGCTGTGAACCCGGAACAGTACACCCCATACA
AAACCCTAGCCTCCCTACCAGGCATGGACCTTCAATACGTTTCTGAGG
AACACTATTGAGGAGAATACTGTACCCACCCAGACAGACCCTGGGACCA
AGGAGGCATTGCCCATTTGGAGAAAGAAGAGCAGGAGAGAATCCTAGCCA
GCAAGGACGTCCCCAGGCACCTATGCTGCCGCAACCCAGAGTGGCTKTTT
AGGATCTACCAGGACACTCTGGTGGACATCCCCCTTCTGGAAGTCCT
CAA---GGAGGGCCTGAAG---ATGAGACCAAGCTTGAAGAA---GTCCA
AACCAGCCAGCACAGTTCACCCGGGCGGGTCCGAGAACCCAGTGCCAG
ACTTCAGTCCAAGCCACCAACGAGGCTAAACTCACAGTATCCTGGCAGAT
CCCATGGAACCTTAAGTACCTGAT-GTGCAGAGGTTGAAGTACGAGGTAT
GGATCAGAAAAAGGGACACAAGCWAGGGAACCCCTGGAGGATCAAATCATT
CAGGCAAACCCTGCGCTGGAGGCTTTCGGTAATGCCAAAACATTGAGGAA
TGATAATTCTTCCGCTTTGGAAAATTCATCCGAATCCATTTTCGGAACCA
GTGGCAAACCTGTCTCTGCGGACATTGAGACCTACCTGCTGGAGAAGTCA
CGGGTCACCTTTCAGCTCAAGGCAGAGAGGAACTACCACATTTTCTTCCA
GATCTTGTCCAATGAAAAGCCAGAGCTGCTGGACATGATGCTGATCACCA
ACAACCCCTATGACTACAGCTACATCTCCCAAGGAGAAGTAACCGTGGCT
TCCATCAATGATTCGGAAGAGCTGATAGCCACCGACAGTGCCTTTGATGT
GCTCGGCTTCACGCAGGAGGAGAAGATGGGAGTCTACAAGTTGGTAGGGG
CCATTATGCACTATGGCAACATGAGGTTCAAGCAAAAGCAGCGCGAGGAA
CAGGCCGAGCCTGACGGTACAGAGGCTGCCGATAAGTCAGCTTACCTAAT
GGGGCTGAATTCAGCGGAYCTAATCAAGGGACTCTGCCACCCAGAGTTA
AGGTAGGGAATGAGTACGTCACCAAAGGCCAGGGTGTAGATCAAGTCTAC
TACCCCAACAGGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAA
CACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCGG
GGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACAAGAGCACACCTGTC
CTCTGGAGCACCTGAAGAGCCACTCGGGGAAGTCGTCTGGCGGAGCCAA
GGAAAAAAGCACCCGTGCGACCACTGCGACCGCTTTTCTACACACGGA
AGGATGTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCTCTG

TGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACTCGCCC
CGTGAAAAAAGCCCCTCGCAGGAGCTGCTGAAGATCAAGACGGACCCTC
CTGACATGTTAGGTCTTTTAGCTTCGGGGTCACCACCTTGCTCTGTGAAG
GAGGAGCTTAGCCCCATGATGTGCGGCATGGGTCCCAACAAACACCCAG
GACGGGCAAACCTTTCCCCACTGGCGCCCCTTTCCGATGGGCATGTACA
ACCCCCACCAC-----CTTCAGGCCATGTCTAATTTCTGGGGTGGGTAC
CCC-----CACCCGTCCTGATGCCAGCTCCCTGTCTGCAGCTATGGC
CATGGGC-----TATCTCATCTACGCCTCCTTCTCCTTCATGG
GATGTTTACAAATCAGCGACGGCTCCAACGTGGTGAACCTGCTGGCGAGC
AACTCTCCGAGCGTGTCTGACGCCCTCACGCAGCAGAAGTACTTCAGCAA
CTACAGCCCGGTGATCGGGTTCTACATCTACGAGCCCATCGAGTACTGGA
ACTCCACGGTGCAGGAGCACCTGAAGACACTGAGCCACGGCTTCAACAAG
ATCTCCTGGGTGGACAACCTTCGTCCACTACCTGCGTGGGTGAACCTGAG
CGCGTCTACCAAGGCCGACTTTGTGCGCCGTCCTCAAGGGCTCCTTCTG
GGAGCCCCGTGTACCAGCACTTACCAGGACATCATCTTCTCCAAGA--
-GCCACGAGAACA-----GCGACTACGACATCATCGCGTCGCGCATGTA
CCTGGTGGCGCGCACCACCGAGAAGCGCCGCGAGGATGTGGTGGAGCTGC
TGGAGAAGCTSCGTCCGCTGATGCTCATCAACAGCATCAAGTTCATCGCC
TTCAACCCACCTTCGTCTTCATGGACCGCTACAGCTCGTTCGGTTCATCTC
GCCCATCCTCACCTCGGGCTTACAGCGTGTCTACCATCCTCATCTCACCT
TCTTCTCGTTCATCAACCCGCTGGGGAACCTGTGGCTCATCCTGACGGTC
ACGTCCGTGGAGCTGGGCGTGTGGGCTGATGGGCTACCACACATTCGA
GTGGAAGCCAGCCCTCAAGAACGTATCCCCATCCTGCCATGTGGGTATCA
TCAATGGGCTTTCCGGGTGGACTGCCTCAGTGGATGACGTCCGTGCTGAC
ACCATCACCCGTCGGTTCCGCTATGACGTGGCGCTTGTATCAGCCCTGAA
GGACCTAGAGGAGGACATCATGGAAGGACTGAGGGAGTGTGGGCTGGAAG
ACAGCGTTTGCACCTCAGGCTTCATTGTTATGATCAAAGAGTCTGTGAT
GGCATGGGAGATGTCAGCGAGAAGCACGGTGGGGGGCCCGGATGCCTGA
GAAGGCTGTGCGTTACTCTTTTACCATCATGTCTGTCTGTCCAGCCCG
ACGGAGAGGAG-----GAGGCGGTT
GTCATCTTACGGGAGCCAAAGCCCAACTCTGAACTGTCTGTAAACCCCT
GTGCTGATGTTTGTGGACGAGTCTGACCACGAGACACTCACAGCTGTCC
TGGGGCCTTTGGTAGCAGAGAGGAACCGGATGAAGCAAAGCCGACTCATC
CTCCAGTGGGAAGCCTCCCCCGCTCCTTCCGCTTCCACTTCAGAGGCAC
AGGCTACGATGAGAAGATGGTGCAGAGATGGAAGGCATGGAGGCCTCAG
GCTCCACCTATATCTGCACTCTTTGCGACTCCACTCGGGCAGAAGCCTCT
CACAACATGGTGTGCACTCTGTCACTCGCAGCCACGATGAGAACCCTGGA
GCGCTATGAGGTATGGAGGACCAACCCCTTCTCGGAGTCTGCCACGGAGC
TGCGAGATCGAGTCAAAGGGGTGTCCGCCAAACCATTTATCGAGACCCAT
CCGACTATGGATGCATTACATTGTGACATAGGTAATGCCACTGAATTCTA
CAAAATCTTCCAGGATGAGATTGGGGAGGTGTTCCAGAAGGC---CAAT-
--CCTAGCCGAGAAGAACGGCGCAGCTGGAGGGCAGCCCTTGATAAACAG
CTGAGGAAGAAGTTGAAGCTGAAACCAGTGATGCGGATGAATGGGAAC
CGCCGAAGGCTGATGACCGAGGAGGCTGTAGAGGTGGTGTGTGAACTGG
TGCCCTCAGAAGAGACGGGAGGCCCTGAGGGAGCTGATGGGGCTCTAT
ATCCAGATGAAGCCGGTGTGGCGTGTACCTGCCAGCCAAGGAGTGCC
TGACCAGCTGTGCGGCTACAGCTTTAACTCTCAGCGTTTTGCTGATCTCC
TCTCTTCCACCTTCAAATACAGGTACGATGGGAAGATCACCAACTACCTG
CACAAGACCCTGGCCATGTCCCTGAAATCATAGAGAGAGATGGCTCCAT
CGGAGCCTGGGCCAGTGAGGGGAATGAGTCTGCGAACAAG-----

TGGGCTTCATGAG---CAAGCGGCGAGCCATGCGTCGTCTAACGTTGTAA
ACAGCCAGATGCGACTGGGCTTTTCCGGGGACATGTACGGGCGGGCCGAC
CAGTATGGCCACGTTACAAGCCCGAGGT---CCGACCACTACGCTTCGAC
CCAACCTGCACGGCTATGGCCCTATGAACATGAATATGGCCGCT---CACC
ACGGAGCAGGGGCTTCTTTTCGGTACATGAGGCAGCCGATCAAACAAGAG
CTAATCTGCAAGTGGATCGAACCGGAGCAACTGTGCAATCCCAAAAAGTC
GTGCAACAAAACCTTTTAGCACGATGCATGAGCTTGTGACCCACCTGACGG
TGGAGCATGTGGGAGGACCCGAGCAGTCGAACCACATTTGCTTCTGGGAA
GATTGTGCCAGGGAAGGAAACCATTCAAAGCCAAATACAAACTCGTAAA
TCATATCAGAGTTCACACCGGAGAAAAACCGTTCCCGTGTCCATTCCCCG
GCT-----

>*Symphurus atricaudus*

AGTGTTCATCATTGCAATTGAACTGAGTCAGCCCGGACCAATAATGGGGGA
CGATCAAATTTACAATGTGGTGGTTACAGCACATGCCTTCGTAATAATCT
TCTTCATAGTTATAACCCGTGCTAATTGGAGGCTTCGGAAACTGGCTAATC
CCCTTAATGTTGGGCGCCCCGGATATAGCATTCCCCCGAATAAATAATAT
AAGCTTCTGACTTCTACCCCCCTCCTTTCTTTTACTCCTAACTTCTTCAG
CAGTTGAAGCAGGGGCGGAACCGGATGAACTGTCTACCCCCCTCCTCC
TCCAACCTTAGCCACGGGGGGGCTCTGTTGACATGGCAATTTTTTCACT
CCACCTAGCTGGTGTATCATCCATTTTAGGCGCAATTAACCTTTATCACAA
CCATTTTTAACATAAAACCTGCTGGCATGACTATTTATCAGATGCCGTTA
TTTGTGTTGATCAGTCCCTTATTACTGCCGTCTATTACTGCTGTGCTTACC
CGTTCTGGCTGCGGCCATTACTATACTTTTAACGGATCGAAACTTAAACA
CGGCTTTCCTTTGACCCCGCTGGGGGAGGGGACCCATCTTATAACCAGCAT
TTA-----

-----NNNNNNNGAGAAACCTTCACCCGTCAAATTGCTTTGGCATGCTGT

TGCTGTCCGATGCCACCAGTGTACCAAGCTGTGCGAACTGTCTGGGGA
ATGTGCCTCAGCAACTTCCCTGCCATTTGCAAGACCGAGGACTTCCCTCCA
GTTACCTAAAGATATGGTGTATCCAGCTCTTGTACATGAGGAGCTGGAGA
CAGAAGATGAGAAACTGGTCTACGAAGCTGCCTTGAACCTGGATCAACTAC
GACCTGGAAGGAGGCACTGCCACATGCCAGAGCTTCTGAGGACCGTTTCG
CCTTGCCTTGCTGCCTGCCATCTTCTGATGGAGAACGTTTCCACAGAAG
AGCTGATTAACACCCAGACCAAGAGCAAGGAGCTGGTAGACGAAGCTATC
CGCTGTAAGCTGAAAATCCTGCAGAATGACGGTGTGTTCAACAGTCCATG
CGCTCGGCCGAGAAAAACCAGCCATGCCCTGTTTCTTAGGAGGGCAGA
CATTCATGTGTGACAAGTTATATCTGGTTGACCAGAAGGCCAAAGAGATT
ATCCCAAAGGCAGACATTCACAGTCCAGGAAGGAGTTCAGTGCCTGCGC
CATCGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGTTT-AGAGAATG
GCGTGTCTAAAGATGTGTGGGTCTATGACACAGTCCATGAGGAATGGTCC
AAGGCTGCTCCGATGCTCATTGCTAGGTTTCGGCCATGGCTCTGCGGAGTT
AAAACACTGTCTCTACGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGA
TGATTACGCTGTTGTGTTTCAGTTCGTTCCAC
GACAAGGCTCATACTCAACGAAGCAGAGCTCATACTAGCACTGGCCCAGG
AGTTCAGATGAGAGTAGTAACAGTGTCCCTGGAGGAACAGTCTTTCCCC
AGTATAGTCCAGGTGATCAGTGGTGTCCATTTTAGTCAGCATGCATGG
AGCTCAACTCATCACGTCCTTCTCCCAAGGGGAGCAACTGTGGTGG
AACTCTTCCCCTTTGCTGTCAACCCAGAGCAATATGCACCGTATAAAACC
CTTGCCCTCCCTCCAGGCATGGACCTTAACCTATAATTCATGGAGGAACGC
AAAGGAGGAAAACACCGTCAACCCAGACAGACCGTGGGAACAAGGAG
GCATTTCTCATTGAGGAGGAGGAGCAAGAGCGAATTATGGCTAGTAAG

CATGATGGGCAAACCGTTCCCCAGTGGGGCCCCTTTCCCGATGGGCATGT
ACAACCCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCCA-----CACCCGTCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTCACATGGAA-----

-----GGCTTTCACCAGTT
TGAGTGGCAGCCAGCTCTCAAGAATGTGTCCACACTTTGCAATGTTGGCA
TTATTAACGGGCTCTCTGGATGGGCTTCCTCGGTGGATGACTCCCCGGCT
GACACCATCACTCGCAGGTTTTCGCTATGATGTGGCACTGGTGTGAGCATT
AAAGGACCTGGAGGAGGACATCATGGAGGGGCTGAGAGAGAGTGGGATGG
AAGACAGCGCATGCACCTCAGGCTTCAGTGTGATGATCAAGGAAGCTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCGGTTGTTCC
CGAGAAGGCTGTACGTTTCTCTTTCACCTATTATGTCTGTCTCTGTCCTCG
CARACRATAAGGAG-----GAAGAG
CTTACCATCTTACCCGAGCCGAAGCCAAACTCGGAGCTGTCCTGTAAGCC
CCTTTGCCTGACGTTTGTGGACGAGTCAGACCATGAGGCGCTCACAGCCG
TCCTGGGGCCTTTAGTTGCGGAGCGTAATGCAATGAAGGAGAGCAGGCTC
ATCCTGTCCATGGGCGGACTGTCCCGCTCCTTCCGCTTCCACTTCAGAGG
CACGGGATACAATGAGAAGATGGTACGTGAGATGGAGGGCCTCGAGGCCT
CAGGTCCGCTATGTCTGCACTCTCTGTGACTCCAGTCGGGCAGAAGCC
GCTCAGAACATGGTGCTGCACTCCGTCACCCGCAATCATGAGGAGAACCT
AGAACGTTACGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGTGGATG
AGCTGCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACA
CATCCACGATGGATGCACTACACTGTGACATTGGCAATGCCACCGAGTT
CTACAAAATTTTCCAGGACGAGATCGGGGAGGTGTACAAAAGGT---CA
AC---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAGATAAAGCTTAAACCGGTAATGAGGATGAATGGGAA
CTATGCCCCGAGGCTAATGACCCAGGAGGCTGTGGAGGTGGTGTGTGAGC
TGGTGCCCTCGGAGGAGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTC
TACCTCCAGATGAAGCCTGTGTGGCGCGCCACCTGCCAGCCAAGGACTG
CCCCGACCAGCTGTGCCGCTACAGCTTCAACTCCCAGCGCTTCGCCGACC
TCCTCTCCTCTACCTTCAAATATAGGTACAACGGAAAGATAACCAATTAC
CTGCACAAGACCCTGGCCACGTGCCGAAATCATAGAGAGAGACGGGTTC
CATAGGAGCCTGGGCCAGCGAGGGGAACGAGTCCGGCAAACAAA-----

ACCACGGAGCCGGGGCCTTCTTTTCGATACATGAGGCAGCCGATCAAACAA
GAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACGAATCCCAAAA
GTCGTGCAACAAAACTTTTAGCACGATGCACGAGCTCGTGACCCATCTGA
CGGTGGAGCATGTGGGGGACCGGAGCAGACCAACCACATCTGCTTCTGG
GAGGACTGCGCC-----A-----

>Synaphobranchus oregoni

AGCCTGCTAATCCGAGCCGAGCTAAGCCAGCCCCGGAGCCCTACTTGGGGA
CGACCAGATCTATAATGTTATTGTTACAGCACATGCCTTCGTAATAATCT
TCTTTATAGTAATACCCGTGATAATCGGGGGATTTGGCAATTGATTAGTA
CCCCAATAATTGGGGCCCCAGATATAGCATTCCCACGAATAAATAACAT
AAGCTTCTGACTCCTCCCCCATCATTTCTTCTACTATTAGCCTCATCTG
GGGTAGAAGCTGGTGCAGGAACGGGATGAACAGTCTACCCACCTCTTGCT
GGCAACCTGGCCCACGCCGGGGCCTCCGTAGACTTGACCATTTTCTCCCT
CCATCTCGCAGGGATCTCGTCTATCCTTGGGGCCATTAACCTTTATTACTA
CAATTATTAATAATAAAAACCCCTGCCATCTCACAATACCAAACCCCGCTA
TTTGTTGAGCCGTCCTAGTAACGGCAGTCCTTCTACTACTATCCCTACC
AGTTCCTTGCCGAGGAATCACTATACTCCTTACTGACCGAAACCTAAATA
CAACCTTCTTTGACCCGGCAGGGGGAGGGGACCTATTCTATAACCAACAC
TTATTTTGATTCTTTGGCCACCCAGAAGTGTATATTTAATCTTACCCGG
CTTTGGAATAATTTACACATTGTTGCATATTATGCTGGCAAAAAGAAC
CCTTCGGCTACATAGGAATGGTGTGAGCCATGATGGCTATCGCCCTCCTC
GGCTTCATTGTATGGGCCATCACATGTTACAGTTGGGATAGACGTGGA
CACACGCGCCTA-----

-----GGACGAGTATATTGTGGTCTTCAGC
CGCTCCGTAAACAGGCTGATCCTGAACGAGGCAGAGCTGATCCTGGCACT
AGCCCAGGAGTTCCAGTTGAAGGTCGTTACCGTGTCCCTGGAGGAACAGT
CCTTTGCAGACATCATCCGAGTCATCAGCAGGGCATCTATGCTGGTCAGT
ATGCACGGGGCCCAGCTGGTCACCTCTCTTCTTCCCTTCCCCGTGGCGCCGC
TGTGGTGGAGCTCTTCCATATGCCGTCAACCCAGAGCATTATGCTCCCT
ACAAGACACTGACCTCGCTGCCGGGCATGGACCTGCAGTATGTGGCCTGG
AGGAACACCAAGGAGGAGAACTCTGTGACCTTCCCCGAGCGCGCCTGGGA
CCAGGGTGGCATTGCACACTTGGAAAAGGAGGAGCAGGAACGTATCCTGA
AGAGCAGCGAGGTGCCGCGACACCTGTGCTGTGCGGAACCCGGAGTGGCTC
TTCCGCATCTACCAGGACACCAAGGTGGACATTGCATCCCTACTTGAAGC
ACTGCG---CCAGGGACTGACC---TCCAGGCCAGGGCCCAAAAAG---GG
CTAGGCCCAGCAGCATAGTTCACCCAGGCAGGGTGGAGGGAGCCCAAGTGC

-----TCCTACA
CCATCGAGATGGGCACCTGGGGGCCCCAGTGGAAGGAGAGCCCCAGCCG
TTCTCCTGCTCCATAGAGGACCCCACCAAGCAGACCAAGTTCAAGGGCAT
AAAGACCTACATCTCGTACCGCGTGACGCCAGCCACACGGGCCGCCCCG
TGTACCGCCGCTACAAGCACTTCGACTGGCTCTACAACCGCCTGCTGCAC
AAGTTCACCGTTCATCTCTATCCCCACCTGCCCGAGAAGCAGGCCACGGG
CCGCTTCGAGGAGGACTTCATCGAGAAGCGCAAGAGGCGGCTCATCCTGT
GGATGGACCACATGACCAGCCACCCTGTGCTTTTCGCAGTACGAGGGCTTC
GAGCACTTCCTGATGTGCGCCGACGACAAGCAGTGGAAGCTGGGAAAGCG
GCGGGCGGAGAAGGACGAGATGGTGGGCGCGCACTTCATGCTCACTTTCC
AGATCCCCAACGAGCACCCAGGACCTGCAGGACGTGAAGGAGCGGGTGGAC
TCCTTCAAGGCCTTCGCCAGGAAGATGGACGACAGCGTGCTGCAGCTCAC
GCACGTGGCCTCCGAGCTGGTGCGCAAGCATCTGGGAGGCTTCCGGAAGG
AATTCCAGAGGCTGGGGAATGCCTTCCAGTCCATCAGCCAGGCGTTCACA
CTGGATCCTCCCCACTGCTCCGACGCCCTCAACACCGCCATATCCCAC--

-----GCCAAATCCCGCTTC
CACCTGGCGCCGGGACCGGTCCTGGCACGGACC--GCAGCGTCCCACT

TAGCAACAGCTTGCTATCCCCGCAACAAGCCGAAGAGACCGCAGCAG---
CCTCCCCGCAGCGATGGTTTTGTCACCC---CTGCCAACAATCGACTGGAC
TTTGCCGCCTCGGCATACGATGCCGCTGCCGCGGCTGATTTTGCCGGTAA
CGCGGCCACCCTGCTGTCTTACGCAGCTGCTGGAGTCAAGGCGC-----
TTCCACTGCCCACTGCGGGGTGTTTACGGTAGACCTCTGGGTTATTACGCC
GACCCCTCGG---GCTGG---GGCACGCGCACTCCACCCCAGTATTGT--
-----AGTAAATCCAGTTCAGTTCCTCTCTTGTGGCCAACAAATTTCCA
CTGGGAGCAGGACTGGAA---CCTCAAATTACCTGG-----TGGAT
GA---GGGG---GACAC---GATGGTAACGAAAGGTCTCCA---CT---
AAGTGCCTCCGAGGAC---GCCAAACCTAAAGACCT-----GTCGGA--
-ATCCAGCTGGATAGAG---ACACCTTCCTCCATTAAATCGATCGATTCA
AGTGATTCTGGAATTTTTG---AGCAGGCGAAAAGGAGGCGAATATCACC
TTCTGCCACGCCG-----GTTTCTGAAACGGCGTCTCCGTTGAAAA
GCGAA-----

-----TCAACCACAGCAC
CCACGACCTGGGCTCTCG---ACAAAAGGCGTTTTCTCGCAAGCG---C
CAGGCTAT-----GCCGCTGCCCTGGGA---CACCATCA-----CCAC
CCCACCCATGTAGCTCC---TATTCCACCGCGGCTTTCAATTCCACTCG
GGACTTTCTGTTTTCGAAACCGGGGTTTTCGGAGACGCGACAAG-----
----CGCACAGCACAGTCTCTTCGCCCTCCGC---AGCGGGAAGTTT---T
-----GCAGGGCCACATGGACACTCGGATGCAACTGGGCACCTGCTTTT
TCCGGGACTTACAGAG---CAAGCGGCCACTCACGCGTCTTCCAATGTTG
TAAACAGTCAGATGCGTCTGGGCTTTTCTGGGGACATGTACGGTAGAGCC
GAGCAGTACGGCCATGTAACCAGCCCCAGGT---CCGATCATTACGCTTC
GACCCAATTGCACGGATATGGCCCCATGAACATGAACATGGCTGCA---C
ATCACGGGGCAGGGGCCCTTCTTTTCGGTACATGAGGCAGCCGATAAAGCAG
GAACTCATCTGCAAAATGGATCGAACCAGAACAATTGACGAACCCGAAAAA
GTCTTGAACAAAACCTTTCAGTACGATGCACGAGCTCGTTACACATCTCA
CAGTGGAGCATGTGCGGGGACCAGAACAATCGAATCATATCTGCTTTTGG
GAAGAGTGTCCAAGAGAAGGAAAACCTTTAAGGCGAAGTACAAACTTGT
AAATCACATCAGAGTGCACACCGGTGAAAAACCATTTCCATGCCCGTTTC
CTGGCTGTGGGAAA

>Synnathus fuscus

AGTCTCCTCATTTCGAGCGGAACCTTAGTCAACCGGGGGCCCTCCTAGGCGA
CGACCAGATTTACAATGTAATCGTTACGGCCCATGCTTTCGTTATAATTT
TCTTCATAGTTATAACCCATCATAATTGGGGGTTTTGGTAACTGGTTAGTG
CCTTTAATAATTGGAGCCCCAGATATAGCATTCCCTCGAATAAATAATAT
GAGCTTCTGACTACTACCCCCCTCTTTCTGCTTCTACTTGCCCTTTCAG
GAGTGAAGCAGGCGGGGTACAGGGTGAAGTGTCTACCCCCGCTCTCA
GGTAAATTTAGCCCATCAAGGAGCTTCTGTAGACCTTACAATTTTCTCTTT
GCACCTAGCGGGGGTATCCTCGATCCTCGGAGCTATCAACTTCATCACCA
CTATTATTAATATAAAACCCCTTCAATCTCTCAATACCAGACACCCTTA
TTTGTTTGGGCTGTCTCATCACTGCCGTTCTGCTTCTTCTCTCCCTGCC
TGTCTTAGCAGCTGGTATTACTATGTTATTAAGTACCGTAATTTAAACA
CAACTTCTTTGACCCCGCAGGAGGGGGGACCTATTCTCTACCAACAT

>Synodus kaianus

AGCCTTTTAATCCGCGCTGAACTTAGCCAGCCCCGAGCCCTTTTAGGGGA
TGACCAGATCTACAATGTAATTGTTACAGCCCACGCGTTCGTAATGATTT
TCTTTATAGTGATAACCAATCATAATTGGCGGTTTTGGAAATTGGCTTATC
CCTCTAATGATCGGCGCCCCGATATAGCATTTCGCCGATGAACAACAT
GAGCTTCTGGCTTCTGCCCCATCATTCCTTCTTCTCCTAGCATCTTCTG
GGGTCGAGGCCGGAGCCGGCACC GGATGAACGGTTTACCCCCATTAGCA
GGCAACCTGGCTCACGCTGGGGCTCAGTAGACTTAACAATTTTTTCTCT
CCACTTGGCGGGAATTTCTTCTATTTTAGGCGCAATCAACTTTATTACAA
CTATTATTAACATAAAAACCCCCATCAATCTCCCAGTATCAGACCCCCCTT
TTCGTTTGGGCCGTGCTAATTACAGCGGTGCTACTTCTGCTTTCTCTTCC
GGTCTGGCGGCTGGTATTACAATACTACTCACGGATCGAAATTTAAACA
CCACTTTCCTTCGACCCTGCAGGGGGCGGAGACCCTATCTTATAACCAACAC
CTGTTTTGGTTCTTCGGACACCCCCGAGGTCTATATTCTAATCCTTCCAGG
CTTTGGGATAATCTCCCACATTGTGGCCTATTACGCCGGCAAAAAAGAAC
CATTCCGATAACATGGGCATGGTTTGGGCAATGATGGCAATCGGCTTACTA
GGGTTTATCGTTTTGAGCTCATCACATATTCACTGTGGGGATGGACGTAGA
CACGCGCGCATATTCCTTGAGAGGAAC TTGCATCTCTCCAAC TGCCTTGG
CATGCTGTTATTGTCAGATGCCACCAGTGCACCAAAC TGT CAGAGCTGT
CGTGGGGTATGTGCC T CAGCAATTTCCCGCCATCTGTAAGACAGAGGAC
TTTCTTCAGCTCCCCAAGATATGGTAGTGCAGCTTCTGTCCCACGAGGA
GCTGGAGACTGAAGATGAGAGACTTGT TTTATGAAGCTGCCCTCAACTGGG
TCAATTATGACCAAGAGAGGAGACACTGCCATCTACCAGAGCTCCTTAGA
ACCGTGGCGCTGGCTCTGCTTCCCTGCTATCTTTCTCATGGAGAATGTCTC
CACTGAGGAGCTGATCAATGACCAGGCTAAAAGCAAGGAGTTGGTTGATG
AAGCCATCCGTTGCAAGTTGAAGATTCTGCAGAATGATGGCGTGGTCAAC
AGTCCATGTGCCCGGCCAGAAAGACCAGTCATGCCCTTTTCTCTTAGG
AGGACAGACCTTCATGTGTGACAAACTGTACCTGGTGGATCAAAGGCCA
AAGAGATTATTCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCAATTGGCTGTAAGGTCTACGTTACGGGTGGGC--GGGCTC-
AGAAAATGGGGTGTCCAAAGATGTGTGGGTCTATGATACTGTGCATGAGG
AGTGGTCCAAGGCAGCACCCATGCTGATCGCAAGGTTTCGGCCATGGCTCT
GCTGAACTCAAACACTGTCTCTATGTGGTGGGAGGTCACACAGCGGCCAC
TGGCTGNNNNNNNNNNNNNNNNNNNGGATGAATACATCGTGGTGTTCAGTCCGCTCTTCAACAAGACTGA
TCGTGAATGAAGCGGAACTGATTCTGGCATTGGCCCAAGAGTTCCAGATG
AGGGTGGTCACAGTTTCCTTGGAGGAACAATCGATTCCCAGTATTGCCAA
GGTAATCAGCCGAGCCTCCATGTTGGTTAGTATGCATGGAGCTCAGCTTG
TCACCTCGCTGTTCC TCCCTAGAGGTGCTGCGGTGGTCGAGCTTTTCCCC
TTTGCCGTCAATCCAGAACAGTACACCCCGTACAAAACACTAGCCTCTTT
ACCAGGTATGGATCTCCACTATGTTTCTTGGAAACAACACTTTTGAGGAAA
ACACTGTCACACACCCGGATAGACCTTGGGAACAAGGAGGCATTGCCAC
TTGGAAAAAGAAGAACAGGAACGAATCCTAGCCAGCAAAGATGTTCCCCG
ACACCTCTGCTGCCGCAATCCAGAATGGCTGTTCCGGATCTATCAGGACA
CGCTGGTGGACATCCCTTCATTCTGGAGGCGCTGAA---GGAAGGCTTG
AAG---ACCAGGCCAAGCTTGAAAAA---GTCCAAGCCAGCCAGCACTGT
TCAYCCCGGCAGGGTGAGGGAGCCCCAGTGT CAGACATCAGTCCAAGCTA
CAAATGAG--CTAGCTCACGGTATCGTGGCAGATCCC GTGGGAGCTGAAG
TATCTGAT-GTGCAGAGGTTAAGTACGAGGTGTGGATGCGGAAAAAGGA
TTCAAGTAAGGGAACCTGGAGGATCAAATCATTCAGGCTAACCTGCAC

TGGAAGCCTTTGGTAATGCTAAAACAGTGAGGAATGACAATTCCTCCCGC
TTTGGAAAATTCATCCGCATTCACCTTTGGAAGTAGTGGCAAACCTGTCATC
AGCAGATATTGAGACTTACTTGCTGGAGAAATCACGGGTACCTTTCAGC
TCAAGTCAGAGAGGAACACCACATCTTCTTTTCAGATCTTGTCCAATCAA
AAGCCTGAGCTGCTTGACATGCTGTTGATCACCAACAACCCATACGACTA
CAGTTACATTTCCCAAGGAGAGGTCACTGTAGCCTCCATCAATGACTCAG
AGGAGCTGATGGCCACTGACAATGCTTTTGTATGTCCTTGGATTCACTCAA
GAAGAGAAGATGGGAATCTACAAGCTGGTAGGAGCCATCATGCACTACGG
CAACATGAGGTTCAAACAGAAACAGCGCGAGGAGCAGGCTGAGCCTGACG
GCACAGAAGCTGCTGATAAATCAGCCTACTTGATGGGGCTGAATTCAGCT
GATCTCATCAAAGGACTGTGCCATCCCAGAGTTAAAGTAGGGAATGAGTA
CGTCACCAAAGGCCAGGTTGTAGATCAAGTCTACTACCCCAACAAAGAGG
CCTTCAAGTGTGAGGAGTGTGGGAAGCACTACAACACCAAGCTGGGATAC
AAGCGTCACGTTGCCATGCACTCTGCCACTGCAGGAGATCTCACCTGTAA
AGTGTGCATGCAGACATACGAGAGCACCCCGGTGCTTTTGGAGCACCTCA
AGAGCCACTCTGGGAAGTCTTCAGGTGGCACCAAGGAGAAAAAACATCCG
TGTGACCACTGTGACCGTCGTTTCTATACGCGAAAAGGATGTGAGACGGCA
CATGGTGGTCCACACGGGCCGAAAAGGACTTTCTGTGCCAGTACTGTGCC
AGCGCTTCGGCAGGAAGGACCATCTGACACGCCATGTGAAGAAGAGCCAC
TCGCAGGAGCTCCTGAAGATCAAGACGGAGCCTCCTGATATGTTAGGTCT
TTTAGCTTCAGGGTCACCACCGTCTGTGAAGGAGGAGCTCAGCCAA
TGATGTGCAGCATGGGTGCCAACAAAGATCCCATGATGGGCAAACAGTTC
TCAAGTGGGCCGCTTTTCCCATGGGCATGTACAACCCCCACCAT-----
-CTTCAGGCCATGTCTAATTCTGGGGTCGGTCACCCG-----CACCCAT
CCCTGATGCCAGTTCCTTATCTGCAGCTATGGGAATGGGCTGTCATATG
GAATATCTTATCTATGCTTCATTTTCTTTCATGGGATGTTTACAAATCAG
YGATGGGTCAAACATTTGTGAATTTACTGGCAAGTAACCTCTCCAAGTGTGT
CCTACGCACTGACACAGCAGAAGTACTTCAGCAACTACAGCCCTGTCATT
GGGTTTTACATCTACGAGCCATTGAGTACTGGAACCAACAGTGCAGGA
ACACCTGAAGACGCTGAGCCATGGCTTCAACAAGATCTCCTGGATGGACA
ATTTCTTCCACCACCTGCGGGTTGTGAACGTTAGCGCGTCAACGAAGGCG
GACTTCATCAGTACCCTCAAAGGCTCCTTTCTTCGGACACCTGAGTACCA
GCACCTCACAGAGGATATCATCTCTCCAGRA---ACCGTGAGAGCG---
---ATCAGTATGACATCATTGCGTCACGCTTGATCTGGTGGCACGCACC
ACCGAGAAGAGGCGTGAAGAAGTGGTGGAGCTCCTGGAGAAGCTGCGTCC
CCTGATGCTCATCAACAGCATCAAGTTCATCGCCTCAACCCACCTTCG
TATTCATGGACCGGTACAGCTCTTCGGTCACTCTCCATTCTCACCTCA
GGCTTCAGTGTGCTCACCATCCTCATTTCTCACCTTCTTCTGGTCACTAA
CCCGCTGGGGAACTTCTGGCTCATCTGACGGTGACGTCTGTTGAGCTGG
GTGTGCTGGGACTGATGGGCTACCATGCTTTTGTAGTGGCAGCCAGCCCTC
AAGAACGTGTCCCTTCCCTGCCATGTGGGCATCATCAATGGGCTGTCAGG
CTGGGCTGCCTCAGTGGATGATTCCCCAGCAGATACCATTGCCCCGCGGT
TTCGCTATGATGTAGCCCTGGTGTCTGCTCTGAAGGACCTGGAGGACGCC
TTCATGGATGGACTGAGAGAGCATGGGCTGGAAGACAGCGATT-----C
AAGATTCAATGTGATGATCAAGGAATCCTGTGATGGTATGGGGGATGTCA
GTGAGAAGCATGGTGGTGGGCCGGCAGTCCCGGAGAAGGCTGTGCGCTTC
TCCTTTACCGTCATGTCCATTTCCGTCCAAGCAGATGGAGAGGAG-----
-----GAGGCAGTGGTCCTTTTCCGTGAAC
CAAAGCCCAACTCGGAACTGTCTGTAAGCCGTTATTCCTGATGTTTGTG
GATGAGTCTGACCATGAGACACTCACAGCCATCCTGGGGCCTCTGATAGC
TGAGAGAAATACCATGAAGGAGAGCCGACTCATTCTCTCGATGGGTGGAC
TCCCCCGGTCTTTTTCGTTCCATTTTCAGAGGAACTGGCTATGATGAGAAG
ATGGTGCAGAGATGGAAGGCCTGGAGGCCTCAGGCTCCACCTACGTCTG

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGGA
TAAATCCGTTTCGCGGACGGGATGGGCGCCTTCAAGATAAACACAGCTCG
CACGACATTGGCTCCGG---GCAAACGGCGTTTTTCGTCTCAGGCA---CC
CGGCTAT---GCAGCGGCCGCCCTGGGG---CACCACCA-----CCACC
CAACCCACGTTAGTTCG---TACTCCACGGCAGCTTTTAATTCCACCAGG
GACTTTCTGTTTCAGAAACCGGGGCTTCGGAGACGCCACGAG-----
---CGCGCAGCACAGCTTGTTTCGCCTCCGC---CGCGGGAAGTTT---C-
-----GCAGGCCACATGGACACTCCGATGCCGCGGGACACCTGCTCTTT
CCGGGGCTTCACGAG---CAAGCCGCGAGCCACGCGTCTTCTAACGTCGT
TAACAGCCAGATGCGGCTGGGCTTTTCAGGGGACATGTACGGGCGGGCCG
AGCAGTACGGACACGTTACCAGTCCGCGGT---CCGACCACTACGCTTCG
ACCCAGTTACACGGCTACGGCCCCATGAACATGAATATGGCCGCG---CA
CCACGGCGCGGGGGCTTCTTTTCGATACATGAGGCAGCCGATAAAAACAAG
AGTTGATCTGCAAGTGATCGAACCGGAGCAGTTGACGAATCCCCAAAAA
TCGTGCAACAAAACCTTTCAGCACAATGCACGAGCTTGTGACCCATCTGAC
GGTGGAGCATGTGGGGGGACAGAGCAATCAAACCACATTTGCTTTTGGG
AAGACTGTTCTCGTGAAGGAAAACCGTTCAAAGCCAAATACAAACTTGTG
AATCATATCAGAGTTCACACCGGAGAAAAACCATTCCCATGCCCATTTCC
TGGCT-----

>Talismania bifurcata

NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCTTTATAGTAATAACCAATTATGATTGGGGGCTTCGGAAA
CTGGCTGC
TCCCCCTAATGCTGGGGGCCCCCTGACATAGCATTCCCCGAATAAACAAC
ATGAGCTTCTGGCTCCTCCCACCCTCCCTGCTCCTTCTCCTCTCCTCCTC
CGGGGTTGAAGCCGGCGTCCGGACAGGATGAACGTCTACCCCCCTTTAG
CCGGCAATCTAGCCCACGCCGGCGCATCTGTAGACCTCGCCATCTTCTCC
CTCCACCTGGCAGGTGTCTCCTCAATCCTGGGGTCAATCAACTTTATTAC
CACAATCACCACATGAAACCCCCGCCATCTCGCAGTACCAAACACCCC
TTTTCGTGTGGTCTCTTCTCGTTACCACAGTCCCTGCTCCTTCTGTCCCTC
CCTGTGCTAGCCGACGCTATTACCATGCTTCTCACAGACCGCAACCTTAA
TACGACGTTCTTTGACCCGGCCGGAGGGGGAGACCCCATCCTATAACCAAC
ACCTATTCTGGTCTTCGGCCACCCAGAAGTTTACATCTTAATCCTTCCC
GGGTTTGGC ATCGTCTCACACGTGGTTCGCCTACTACGCCGGCAAAAAGA
GCCATTCGGCTATATGGGCATGGTTTGAGCTATGATAGCTATCGGACTTC
TGGGGTTTCAATTGCTGGGGCCATCACATGTTACAGTTCGGAATAGACGTA
GACACCCGTGCCTA--TTCTAGAGAGAAACCTTACCCGACTAACTGCCTT
GGCATGCTGTTGCTGTCGGATGCCACCAGTGCACCAAGCTGTCAGAGCT
TTCTTGGGGCATGTGCCCTCAGCAACTTCCCCGCTATTTGCAAGACAGAGG
ACTTCTCCAGCTTCCCAAGACATGGTGGTGCAGCTTTTGTACATGAG
GAGCTGGAGACAGAAGATGAGAGACTGGTTTATGATGCTGCCCTGAACTG
GATCAACTATGACCTGGAAAGGAGGCACTGTCACCTTCCGGAAGTGTGA
GAACGGTCCGTCTTGCTCTGCTGCCC GCCATCTTTCTAATGGAGAATGTC

-----CATCACTCAACAGGCGAAGTCACAGACAGAGAAGTGGCTTTGG
GGATAAATCCGTTTCGCTGACGGAATGGGCGCTTTCAAAATCAACCACAGC
TCCCACGATCTTGGCTCAGG--GCAAACGGCGTTGCCTCGCAGGCT--
-CCCGGCTAC--GCAGCCGCTGCCCTGGGA--CACCATCA-----CC
ACCCAACCCATGTCAGCTCC--TACTCCACCGCGGCGTTCAACTCCACC
CGGGACTTTCTCTTTCGGAATCGGGGATTCGGAGACGCCACTAG-----
-----CGCACAGCACAGTCTCTTCGCCTCAGC--TGCGGGAAGTTT--
-C-----GCAGGGCCACATGGACACACCGATGCCACGGGACACCTGCTC
TTCTCGGGACTGCACGAG--CAAGCGGCGACCCACGCGTCTTCGAACGT
GGTGAACAGTCAGATGCGCCTAGGCTTTTCGGGGGACATGTACGGAAGAG
CCGAGCAGTACGGTCACGTAACGAGCCCCCGGT--CCGAGCACTACGCT
TCGACTCAGTTGCACGGCTATGGCCCCATGAACATGAATATGGCTGCC--
-CATCACGGTGCAGGGGCCTTCTTCCGTTACATGAGGCAGCCGATCAAGC
AAGAGCTGATCTGCAAGTGGGTGGAACAGAGCAGCTGTGCAATCCGAAA
AAGTCTGCAACAAAACCTTTCAGCACGATGCATGAGCTCGTGACCCACCT
TACAGTGGAAACATGTTGGGGGACCGGAACAGTCGAATCACATTTGCTTTT
GGGAAGAGTGTCCGCGAGAAGGGAAACCATTTAAAGCCAAGTACAAACTT
GTAAATCATATTAGAGTGCACACCGGATAGAAGCCGTTTCCATGTCCATT

CCCC-----

>Tetraodon miurus

AGCCTTCTTATCCGAGCTGAACTCAGCCAACCAGGCGCACTACTTGGTGA
TGATCAGATTTATAATGTGATCGTTACAGCCCATGCATTTGTAATAATTT
TCTTTATAGTAATAACAGTCATAATCGGCGGGTTTGGAAACTGACTTGTG
CCCCTTATAATTGGAGCCCCTGACATAGCATTCCCCGAATAAATAACAT
GAGTTTTTACTTCTGCCCCCTCCTTCATTCTTCTCTTAGCATCTTCTG
GGGTAGAAGCAGGAGCTGGCACAGGATGAACCGTCTACCCCCACTAGCG
GGCAATTTAGCCCACGCAGGCGCATCCGTTGATCTCACTATTTTCTCCCT
TCACTTAGCTGGTGTCTCATCAATTTTAGGCGCTATTAACCTTTATTACAA
CAATTATCAATATAAAAACCCCCAGCTATCTCCCAATACCAAACGCCCTG
TTCGTATGGGCCGTCTTAATCACCGCGTACTTCTCCTACTATCCCTACC
GGTCTCGCAGCAGGAATTACAATACTTCTTACAGACCGAAACCTAAACA
CCACCTTCTTCGACCAGCCGGTGGAGGAGACCCCATCCTTTACCAACAC
CTATTCTGATTCTTCGGACA-----

-----TTCCCTGGAGAGAAAACCTTCACCCGTCCAACCTGCCTCGG
CATGCTGCTGCTGTCTGATGCCACCAGTGCACCAAACCTCTCCGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTTCCCGCAATTTGCAAGACGGAGGAG
TTCCCTCAAACCTGCCAAAGATATCGTGGTGCAACTGTTGTCCCACGAGGA
GCTGGAAACCGAAGACGAGAGGCTGGTCTATGAAGCGGCCCTCAACTGGA
TCAACTATGACCTGGAAAAGAGGCACCTGCAACCTGCCAGAGCTGCTGAGA
ACGGTCCGTCTGGCCCTTCTGCCTGCCATCTTCCTCATGGAGAATGTTTC
TACAGAAGAACTGATCAACGCCACAGCCAAGAGCAAGGAGCTGGTGGATG
AAGCTATCCGCTGTAAGCTGAGAATCCTGCAGAACGATGGCGTTGTCAAC
AGCCCGTGGCGACGGCCTCGAAAGACCAGCCACGCCCTCTTTCTCCTCGG
TGGGCAGACCTTCATGTGTGATAAGCTGTACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATTTCCAGTCCGAGGAAGGAGTTCAGT
GCCTGCGCCATCGGCTGTAAGGTGTACATCACAGGTGGGA--GGGGCTC-
GGAAAACGGGGTCTCAAAGACGTGTGGGTGTACGACACCGTCCACGAGG
AATGGTCAAAGGCAGCGCCCATGCTGATTGCCAGGTTTGGCCATGGTTCT
GCAGAGCTGAAACACTGCCTCTATGTGGTGGGAGGTCACACTGCAGCAAC
CGGTTGCCCTGCCAGCATCTCCGTCTGGATGAATACATCGTGGTGTTCAGT
CGCTCGGCAGCAGGCTGATCCTGAACGAAGCCGAGCTCATTATGGCACT
GGCGCAGGAGTTCCAGATGAGGGTGTGACGGTGTCCCTGGAGGAGCAGA
GCTTCCCAGCATCATCCAGGTGATCAGCGGCGCCTCCATGCTGGTCAGC
ATGCACGGAGCTCAGCTGATCACCTCGTGTTCCTCCCTCCGGGAGCCGT
GGTGGTTCGAGCTGTTCCCTTCGCCGTCAATCCGGATCAGTACACCCCAT
ACCGGACGCTCGCCTCCCTGCCGGCATGGACCTCCACTACATTCCCTGG
AGGAACACGGAGGAGCAGAACACCCCTCACCCACCCAGACAGACCCCTGGGA
CCAAGCGGCATCGCTCACCTGGAGGAGGAGGAGCAGGAGCGAATCATGG
CCAGCAAGGACGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTT
TTCCGCATCTACCAGGACACCTTAGTGGACATTCCGTCTTTCTGGAGGT
CCTTCA---GGAGGGACTGAAG---GCAAAGCCCGTTTTAAAGAA---GT
CCAAGCTGTCCGGCACGCTTCACCCGGGCCGGGTGACAGATCCCCATTGT
CAGACCTCCGTCCAAACCAGCAGTGAGGCCAAACTGACCGTCTCCTGGCA
GATCCCCTGGAATCTGAAGTACCTGAAGGTGACAGAGGTGAAGTACGAGG
TGTGGATNNNNAGGAGAGATGCCAGCAAGGGGACCCCTGGAGGACCAGATCATCC
AGGCCAACCCGGCCCTGGAGGCCTTCGGCAACGCAAAAACGGTGAGAAAC
GACAACTCCTCCCGCTTTGGAAAATTCATTGCAATCCATTTTGGTCCGAG
CGGCAAGCTGTCTGCTGCGGACATCGAGACGTATCTGCTGGAGAAGTCCC

GGGTCACCTTCCAGCTGAAAGCTGAGAGGAACTATCACATCTTCTACCAG
ATCCTGTCCAATCAAAAGCCAGAACTTCTGGACTTGTGCTCATCACCAA
CAACCCGTACGACTACTCTTACATCTCCCAAGGAGAAGTGACGGTGGCCT
CCATCAACGACTCGGAGGAGCTGAGGGCCACCGACAGCGCCTTCGACGTG
CTGGGCTTACGCCGGATGAGAAGATGGGCGTGTACAAGCTGACGGGCGC
CATCATGCACTACGGTAACATGAAGTTCAAGCAGAAGCAGCGGAGGAGC
AGGCCGAGCCGGACGGGACGGAGGCTGCGGATAAAATCAGCTTATCTGATG
GGCCTGAACTCCTCCGACCTGATCAAGGGGCTGTGCCACCCCGAGTCAA
AGTGGGGAACGAATACGTGACCAAAGGCCAGAGCGTGGACCAGGCTACT
ACCCCAACAAAGAGGCCCTTCAAGTGTGACGAGTGTGGGAAGCACTACAAC
ACCAAATGGGCTACAAGCGCCACGTGGCCATGCACTCGGCCACCGCCGG
AGACCTCACCTGTAAGGTGTGTCTGCAGACCTACGAGAGCACGCCGGTGC
TCCTGGAGCACCTGAAGAGCCACTCGGGGAAGTCCCTCAGGCGGCACCAAG
GAGAAGAAGCACCCGTGCGACCACTGCGAGCGGCGTTTCTACACGCGCAA
AGACGTGAGGCGGCACATGGTGGTCCACACGGGCGGAAGGACTTCCTGT
GCCAGTACTGCGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCGGCAC
GTGAAGAAAAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGCCTCC
AGACATGCTGGGACTGCTGACCTCCGGCTCGCCCGGTGTTCCGTGAAGG
AGGAGCTCAGCCCCATGATGTGTGGCGTGGGGCCCAACAAAGACCCCATG
ATGGCTAAACCTTTCCCTGGCGGTGGCCCTTCCCAATGGGCGTGTACAG
CCCCACCAT-----CTGCAGGCCATGTCTAATTCTGGGGTGGGTACC
CG-----CACCCGTCCCTCATGCCACCTCCTTGTCTGCAGCTATGGGC
GTGGGCTGTTCCATGGAGTATCTCATTTATGCATCGTTCTCATTTATGGG
ATGTTTACAAATCAGCGATGGGTCAAATATTGTAAACCTACTGGCCAGTA
ACTCTCCAAGCGTTTCATTTGCCTTGACCCAACAGAAATACTTCAGCAAC
TACAGTCCTGTGATCGGCTTTTATATTTACGAGCCATTGAGTACTGGAA
CTCCACAGTGCAAGAGCACCTGAAGACTCTGAGTCATGGCTTCAATAAGA
TCTCCTGGATGGACAACTTTTTCCACTACTTAAAAGTAGTGAATGTAAGC
GCGTCCACCAAGAACGACTTCATCAGCATCCTGAAGGACTCCTTCCTGAG
GAGCCCGGAGTACCAGCACTTACCGAGGACATCATATTCTCAAAGA---
ACCGTGAGACCG-----ATGAGTACGACATCATCGCCTCGCGGATGTAC
CTGGTCGCGCGGACCACGGAGAAGAAGCGTGAGGAGGTGGTTCGAGCTTCT
GGAGAAGCTCCGCCCGCTGATGTTGATCAACAGCATTAAGTTCATTGCCT
TTAATCCCACCTTTGTGTTTCATGGACCGCTACAGCTCCTCGGTGATCTCA
CCCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTTACTTT
TTTCTGGTAATCAATCCCTTGGGTAACTTCTGGCTCATTCTCACCGTGA
CATCCGTGGAGCTGGGCGTGTGGGGTTGATGGGCTTTCACCAGTTTGA
TGGCAGCCACCCCTTAAGAATGTGTCCAGGTCTGCAGTGTGGGATCAT
CAATGGACTGTCTGGATGGACTTCTCGGTTGATGATTCTCCAGCTGACA
CCATCACTCGGCGATTCCGCTATGACGTAGCAATCGTGTGAGCATTA
GACCTGGAGGAAGACATCATGGAGGGGCTGAGAGACAATGGGATAGAAGA
CAGCACTTGCACGTTGGGTTTTCAGCATCCTGATCAAAGAGTCTTGGGATG
GTATGGGTGATGTCAGTGAGAAACATGGCGGAGGTCCACTTGTTCCTGAG
AAGGCTGTACGTTTCTCTTTTACTATCATGTCTGTCTCTGTCAAGGCAGA
AGGTGAGAAG-----GATAAAGTT-
--ATCTTACC GAACCGAAACCAAACCTCAGAGCTGTCCTGCAAGCCCCTT
TCCCTGATGTTTGTGGATGAGTCAGACCACGAGACCCTTACAGCTATCAT
GTCACCCATAATTGCAGAGCGTGATGCAATGAAAGAGAGCAGACTCATAG
TGCTATTGGCGGTTTACCCCGCTCCTTCCGCATTCATTTAGAGGCACA
GGGTACGATGAGAAAATGGTGGCTGAGATGGAGGGCTTGGAGGCTGCAGG
GTCCACGTACATCTGCACACTTTGCGATTCCAGTCGTGTAGAAGCTTCTG
AAAACATGGTGTGCTGCATTCATCACCCGCAGTCATCATGAGAATTTAGAG
CGCTATGAAATATGGCGGACCAACCCCTTTTCCGAGTCTGTAGATGAGCT

ACGAGACAGAGTCAAGGGGTCTCTGCTAAGGCATTTATGGAGACTCATC
CCACTCTGGATGCACTGCACTGTGAGATAGGCATCGCCACTGAATTTTAC
AAAATCTTCCAGGATGAGATCGGGGAGGTGTACACTAAGGT---TAAC--
-CCTAGTCGGGAGGAGCGGCCTGGATGGAGGGCAGCCCTGGATAAACAGC
TGAGGAAGTCCATGAAGCTCAAACCAGTAATGAGGATGAATGGCAACTAC
GCTCGCCGGCTCATGAGCCTGGAGGCTGTGGAGTTGGTGTGTGAGTTAGT
GCCTACAAAAGGGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTCTACC
TCCAGATGAAGCCTGTGTGGCGTGCCACCTGTCTGCCAAAGAGTGTCCG
GACCAGCTGTGCCGTATAGCTTCAACTCACAGCGCTTTGCAGAGCTCCT
CTCTCCACTTTCAAATATAGATACAACAAAAAAATCACTAATTACCTCC
ACAAAACCCTCGCCACGTTCCCGAAATCATAGAGAGAGATGGCTCGATA
GGAGCATGGGCAAGCGAGGGGAATGAGTCAGCAAAACAAAGCCTACCCAT
TGAGATGGGCCCCCTGGGGCCTAAGTGGAAAGGAGAGCCACAGCCTTTCT
CCTGCTCCATCGAAGATCCCACAAAACAGACAAAAGTTCAAAGGCATCAAG
ACATACATTTTCGTACCGGGTACAGCCGAGTCACACGGGACATCCCGTGTA
CAGGCGTTACAAACACTTTGACTGGCTGTATAACC GCCTGCTGCATAAGT
TTACTGTGATATCCGTGCCACCTGCCTGAGAAGCAGGCCACGGGGCGC
TTTGAGGAAGACTTCATCGAGAAGCGCAAGAGGCGACTGATTCTGTGGAT
GGACCATATGACCAGTCACCCCGTCTCTCCAGTACGAAGGCTTCGAGC
ACTTTCTGATGTGCGCTGACGACAAGCAGTGGAAAGCTGGGCAAGAGGCGG
GCGGAGAAGGATGAGATGGTGGGGGCCACTTCATGCTGACCCTTCAGAT
CCCCACCGAGCACCAGGATCTTCAGGACGTGGAGGAGCGCATCGACTCCT
TCAAGTGCTTCGCCAAAAAGATGGACGACAGCGTGATGCAGCTGACGCAC
GTCGCCTCTGAGCTGGTGCGCAACACCTGGGCGGCTTCAGGAAGGAGTT
CCAGCGGCTGGGAAATGCCTTCCAGTCCATCAGCCAGGCCTTCATGCTGG
ACCCCTCTTACAGCTCGGAGGTCTGAACAACGCCATCTCCCACNNNNNNNNNTTCCTC
AAACTGACCTCTCTGGGCTTCATCATTTGGTGTGCGCGTGGTTCGGAAACCT
CCTGATCTCCATCCTGCTGGTCAAAGATAAGAGCCTGCACCGAGCGCCCT
ACTATTTCCCTGCTGGACCTGTGCGCCTCGGACATTTCTCGATCCGCCATC
TGCTTCCATTTGCTTTCACCTCCGTCAAGAATGGATCCGCGTGGACGTA
CGGCACACTGACCTGCAAGGTGATCGCCTTCTGGGCGTGTCTCCTGTT
TCCACACAGCGTTTATGCTGTTCTGCGTTAGTGTACGCGCTATTTAGCC
ATAGCGCACCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGCCT
GGCCGTCATCTGCATGGTTTTGGACGTTGTGCGGTGGCGATGGCGTTCCCGC
CGGTGCTTGATGTGGGGACGTACTCTTTTATCCGGGAGGAGGACCAGTGC
ACGTTCCAGCACCGCTCCTTCAGGGCGAATGACTCCCTGGGCTTCATGCT
CCTCCTGGCTCTCATCCTCCTCGCCACACAGCTGGTTTACCTCAAGCTCA
TCTTTTTCGTCCATGATCGCCGGAAGATGAAGCCTGTCCAGTTTGTGCCT
GCTGTTAGCCAAAACCTGGACATTTACGGGCGGGTGCCAGTGGGCAGGC
CGCCGCCAACTGGCTGGCTGGATTCGGGCGAGGCCACCCACCGACTC
TGCTGGGCATCCGGCAGAACAGTAACGCGGCGGGCCGAGGCGTCTTCTG
GTACTGGATGAGTTCAAACGGAGAAGAGGATTAGTAGGATGTTCTACAT
CATGACGTTTTTCTTCTGGCACTGTGGGGGCCCTATTTGGTTCGCTGCT
ACTGGCGGGTATTTGCAAGGGGCCCGTGGTCCCCGGAGGCTACCTGACA
GCAGCCGTGTGGATGAGCTTTGCCAGGCCGGGTCAATCCTTTTCATCTNNNNNNNNNNNNNNNNNNNG
CCAAATCTCGCTTTCACCCTGGCATGGGGACTGGTCTGGCACGGAGC--
-GCAGCGTCCCCTCGGCAACAGCTTGCTATCCCCGCAGCAAAGCGAGGA
GCCACTGTTGACACCCCCCGCAGCGATGGTTTGTACCC---CTGCCA
ACAACCGACTGGACTTCGCAGCCTCGGCATACGACGCCGCT-----
GATTTCCCGGTAACGCGGCCACCTTGTGTCTACGCAGCGGCCGGAGT
GAAGGCTC-----TTCCTCTGCCGACCGCAGGCTGCTCCAACCGGCCTC
TTGGCTATTACGCAGACCCGTCCG--GCTGG---GGAGGACGCACGCCG
CCGCAGTACTGCGGCGTGAACAGCAAATCGGGTTCGGTCTTTTCTGCTG

GCCCCGAACGCGATCGGAGGCAGAGCCAGCA---CC---AGCTACCTGT
-----CCGAGGA---GGGG---GACTC---CATCCCGGCAGAGAGG
TCACCG---AT---TGGCAGCTCCGAGGAG---ACCAAACCCAAAGACGT
ACC---GTCAGA---GTCGAACTGGGTAAAG---ACGCAGTCCTCCATCA
AATCCATAGATTCAAGCGACTCTGGAATTTTTG---AACAGGCCAAACGG
AGAAGGATCTCACCCACAGCGACCCCA-----GTTTCAGAGACAAT
GTCCCCGTAAAGTCTGAGCATCACTCAACAGGCGAAGTCACAGAGAGAG
AAGTGGCGTTGGGGATAAATCCGTTTGCAGATGGGATGGGCGCCTTCAA
ATAAACACAGCTCCACGACATTGGCTCCGG---ACAGACGGCGTTTTTC
TTCTCAGGCG---CCGGCTATGCAGCTGCAGCAGCCCTGGGA---CACC
ATCA-----TCACCCGACCCACGTTGGTTCT---TACTCGACGGCGGCT
TTCAACTCCACCAGGGACTTTCTCTTCAGAAATCGGGGATTTGGGGATGC
CGCCGG-----GGCGCAGCACAGTTTGTTCGCGTC-----
-CGGAAGTTT---C-----GCAGGGCCACATGGACTCAGAGGCAGCA
GGGCACCTGCTGTTCCCGGGGCTCCACGAG---CAAGCGGCGAGCCACGC
GTCTTCCAACGTGGTTAACAGCCAAATGCGCCTGGGCTTCTCSGGGGACA
TGTATGGAAGAGCAGACCAGTACGGCCACGTTACGAGCCCACGTT---CC
GACCATTACGCATCGACCCAGCTACACGGCTATGGCCCCATGAACATGAA
TATGGCCGCG---CACCACGGAGCGGGGGCCTTCTTCCGATACATGAGGC
AGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTCGAGCCGGAGCAACTG
TCAAACCCGAAAAAGTCGTGCAACAAAACTTTTAGCACTATGCACGAGCT
GGTGACCCATCTCACCGTGGAGCATGTGGGGGACCGGAGCAGACCAACC
ACATCTGCTTCTGGGAAGAATGCTCCAGGGAAGGAAAGCCGTTCAAAGCC
AAATACAAACTTGTGAATCATATCAGAGTACACACGGGGGAGAAGCCCTT
TCCGTGTCCGTTCCCGGCTGTGGCAA

>Thaleichthys pacificus

AGCCTCCTTATCCGAGCCGAGCTAAGCCAACCTGGTGCCCTTCTAGGGGA
TGACCAGATTTATAATGTTATCGTCACTGCGCACGCTTTTGTATAATCT
TTTTTATAGTTATAACCAATCATGATTGGAGGGTTTGGTAACTGGCTCATC
CCCCTTATGATCGGAGCCCCGATATGGCCTTTCCCGCATAAATAATAT
AAGTTTCTGACTTTTACCTCCCTCCTTCTCCTTTTAGCTTCTTCTG
GTGTTGAAGCGGGAGCCGGAACCTGGCTGAACAGTTTATCCGCGCTTGCT
GGCAATCTGGCCCATGCCGGAGCTTCCGTTGATCTAACAAATTTTCTCCCT
TCACCTTGCGGGGATCTCCTCTATCTAGGGGCCATCAATTTTATTACAA
CCATCATTAATATGAAGCCCCCTGCCATTTCCCAATACCAGACCCCCTTA
TTCGTCTGAGCCGTCCTGATTACGGCCGTTCTTCTCCTTTCCCTCCC
AGTTTCTAGCTGCTGGAATTACTATGCTTCTAACAGACCGAAATCTTACA
CCACTTCTTTGACCCTGCCGGGGAGGGGACCCCATTTCTATATCAACAT
TTANNN
NN
NN
NNTTCTGGAGAGGAACCTGCACCCGTCCAACCTGCCTGGGCATGCTGCT
GCTGTCCGACGCCACCAGTGCACCAAGCTGTCCGAGCTGTCTGGGGCA
TGTGCCGAGCAACTTCCCGGCATCTGTAAGACGGAGGACTTCTCCAG
CTCCCAAGGACATGGTGATTACGCTGCTGTCCCACGAGGAGCTGGAGAC
GGAGGACGAGAGGCTGGTGTACGAGGCGGCCCTCAACTGGGTGAACACG
ACCTGGAGAGACGCCACTGCGGCCCTGCCGGAGCTGCTGCGCACCGTCCGC
CTGGCGCTGCTGCCCAGCATCTTCTCATGGAGAACGTCTCCACGGAGGA
GCTGATCAACGCCAGGTGAAGAGCAAGGAGCTGGTGGACGAGGCCATCC
GCTGCAAGCTGAAGATCCTGCAGAACGACGGCGTGGTCAACAGCCCCTGC
GCCCCCCCCGCAAGACAAGCCACGCCCTGTTCTTCTGTTGGGCGGACAGAC
CTTCATGTGCGACAAGCTCTACCTGGTGGACCAGAAGGCCAAGGAGATCA
TCCCAAGGCGGACATCCCAGCCCCAGGAAGGAGTTCAGTGCTGTGCC

ATCGGCTGCAAGGTCTACGTACAGGGGGC--GGGGCTC-GGAGAATGG
CGTGTCCAAAGATGTGTGGGTGTACGACACCGTGCAGGAGGAGTGGTCCA
AGGGGCGCCGATGCTCATCGCCCGTTCCGGCCACGGCTCAGCTGAGCTG
AAACTGCTCTACGTGGTGGGAGGGCATAACCGCGCCACGGGCTGCCT
GCCGGCTCTCCCTCCGGACCAGTACATCGTGGTGTTCAGTCGCTCCCA
ACCAGGCTGATCCTCAACGAGGCCGAGCTGATCCTGGCGTTGGCGCAGGA
GTTCCAGATGAGGGTGGTGACGGTCTCCATGGAGGACCAGACCTACTCCA
GCATCGTGCAGTTATCAGCGGAGCCTCCATGCTCGTCAGCATGCACGG
GCTCAGCTCGTACCTCGCTCTTCCCTCCCAGAGGGGCGGCTGTGGTGA
GCTCTTCCCCTACGCGGTACGCCCGAGCAGTACACCCCTTACAAGACCT
NN
NN
NN
NN--NNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNN--
NN
NN
NNNNNNNNNNNNNNNNNNNNNNNAAGAGAGATCCCAGCAAGGGAACCTTGAGGATCAAATCAT
CCAGGCTAACCTGCCTTGGAGGCTTTTGGTAATGCCAAAACCTTAAAGGA
ATGACAACTCGTCACGTTTCGAAAATTCATCCGGATTCACTTTGGAACC
AGTGGCAAGCTGTCTCAGCTGACATAGAGACTTATCTTCTGAAAAGTC
ACGTGTCACCTTCCAACCTCAAGTCAGAAAGGAATTACCATATCTTCTTTC
AGATCTTGTCCAATAAAAAGCCAGAGCTGTTGGACATGCTTCTGATTACC
AACAAACCATATGACTACTCGTACATCTCCCAAGGAGAGGTAACAGTAGC
ATCTATCAATGATGCTGATGAATTGATGGCCACTGACAGTGCCTTTGATA
TCCTTGGCTTTACTCAAGAGGAGAAAATGGGGGTCTACAAGTTGACAGGA
GCTATCATGCATTTTGGCAACATGAAGTTCAAGCAAAGCAGCGTGAGGA
GCAGGCAGAGCCTGACGGCACTGAGGCGGCTGACAAGTCAGCTTACCTCA
TGGGGCTGAACTCTGCAGATCTTGTGAAAGGACTCTGCCATCCCAGGGTC
AAGGTTGGCAATGAGTATGTACCAAAGGGCAGGGTGTAGATCAAGTCTA
CTATCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTCCGGGAAGCACTACA
ACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGTCA
GGGATCTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGCACACCCGT
GCTCTTGGAGCACCTCAAGACCCACTCGGGGAAGTCTTCGGGCGGCACCA
AGGAGAAAAAGCACCCGTGCGACCCTGTGACCGTCTTCTACACGCGC
AAGGATGTGAGACGGCACATGGTGGTCCACACGGGTCGAAAGGACTTCCT
CTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCATCTGACACGTC
ACGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAGGATCAAGACGGAGCCT
CCGGATATGTTGGGTCTTTTAGCGTCCGGGTACCACCTTGCTCTGTGAA
GGAGGAGCTCAGCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCCA
TGATGGGCAAACCGTTCCCCAGCGGGGCCCTTTTCCGATGGGCATGTAC
AACCCCAACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTCA
CCCG-----CACCCTGCCCTGATGCCAGTCCCTTGCTCTGCAGCTATGG
GCATGGGCTGCCACATGGAATACCTGATATACGCCCTCCTTCTCCTTCATG
GGGTGTCTGCAGATCAGCGACGGGTCCAACGTGGTCAACCTGCTGGCCAG
TAACTCTCCCAGCGTCTCCTACGCCATGACGCAGCAGAAATACTTCAGCA
ACTACAGCCCTGTGATCGGCTTCTACATCTACGAGCCGATTGAGTACTGG
AACTCCACGGTGCAAGAGCACCTGAGGACGCTGGGACACGGCTTCAATAA
GATCTCCTGGATCGACAATACTTCCACTACCTGAAGGTGGTGAACGTGA
GCGCCTCCACCAAGAGCGACTTCACTCCATCCCTCAAAGGCTCATTCCTG
CAGAGCCCAGAGTACCAGCACTTACGGAGGACATCATCTTCTCCAAGA-
--ACGGCG-----AGGAGTACGACATCATTGCGTCCAGGATGT
ACCTGGTGGCCCGGACCACGGAGAAGACGCGGAGGAGGTGGTGGAGCTT

CTGGAGAGACTCCGCCCCCTGTGCTCATCAACAGCATCAAGTTCATCGT
GTTCAACCCACCTTCGTCTTCATGGATCGCTACATCTCCTCCGTCATCT
CGCCATCCTCACCTCTAGCTTCAGCGTCCTCACCATCCTCATCCTCACC
ATCTTCTGTTGGTGGTCAGCCCCCTCGGGAACCTTCTGGCTGATCCTGACAGT
GACGTCAGTGGAGCTAGGCGTGCTGGGCCTGATGGGCTATCATCCCTTCG
AATGGCAGCCGGCCCTCCGGAACGTTTCCCCGGCTGTCAGGTGGGCATC
ATCGACGGCCTGTCAGGATGGACAGCTTCGGTGGACGACTCCCCAGCGGA
CACCATCTCGCGGAGGTTCCGCTACGACGTGGCTCTGGTGTCTGCCCTGA
AGGACCTGGAGGAGGACATCGTGGAGGGCTTGAGGGAGCACGGCCTGGAA
GACAGTTCCTGCACCTCCGGCTTACCCTGACCATCAAGGAGTCTGTGA
TGGCATGGGGGACGTCAGTGAGAAGCACGGAGGGGGCCGGCCATTCTG
AAAAGGCCGTCCGCTTCTCCATCACCCTCATGTCCGTCTCCGTCTGGCC
GAGGGGGAGGAG-----GAAGCGGT
CACCGTCTTCAGAGAGCAGAAGCCAACTCGGAGATGTCCTGCAAACCTC
TCTGCCCTGATGTTTGTGGACGAGTCGGACCACGAGACCCTGACGGCCATC
TTGGGGCCTGTGGTGGCCGAGAGGAACGCCATGAAGAACAGCCGCTCAT
ACTGGCCATGGGCGGCTCCCTCGCTCCTTCCGCTTCCACTTCAGGGGCA
CAGGCTATGACGAGAAGATGGTGC GCGAGATGGAGGGCCTGGAGGCTTCA
GGCTCCACCTACGCTTGCACCCTCTGCGACGCCACCAGAGCTGAGGCCTC
CAAAAACATGGTGTCTCCACTCAGTCACCCGCAGCCACGACGAGAACCTGG
ACCGCTACGAGCTGTGGAGGACCAACCCCTACTCTGAATCGGCGGACGAG
CTGCGAGACCGGGTAAAGGGGTCTCCGCCAAGCCCTTCATGGAGACCA
GCCACACTGGACCGCTGCACTGTGACATCGGCAACGCCACCGAGTTCT
ACAAGATCTTCCAGGACGAGATCGGGGAGGTGCATTGCAGGCC---CAAC
---CCGAGCAGGGAGGAGCGTCGGAGCTGGAGGGCGGCTCTGGACAAGCA
GCTCAGGAAGAAGATGAAGCTGAAGCCCGTGATGAGGATGAACGGAAACT
TTGCCCGGCGACTGATGACGGCGGAGGCGGTGGAGGTGGTGTGCGAGCTG
GTGCCGTGCGAGCAGCGGAGCGAAGCCCTCAGGGAGCTGATGAACCTCTA
CATCCAGATGAAGCCCGTGTGGCGCGCCACGTGCCAGCCAAAGAGTGCC
CCGACCAGCTGTGTCGCTACAGCTTCAACTCCCAGCGCTTCGCTGACCTC
CTCTCYTCCACCTTCAAGTACAGGTACGACGGGAAGATCACCAACTACCT
CCACAAGACTCTGGCCACGTTCTGAAATCATAGAGAGAGATGGCTCCA
TCGGGGCCTGGGCCAGTGAGGGGAACGAGTCGGGAAACAAATCATACACC
ATTGAGATGGGCCCCAAAAGGGCCCCAGTGAAAGAGAGCCCTCAGCCGTT
CTCCTGTTCTGTGGAGGACCCTACCAAACAGACCAAGTTCAAAGGCATCA
AGACCTATATATCTTACAGGGTCACCCCCAGCCACACAGGGCGACCCGTC
TACCGCCGGTACAAGCACTTCGATTGGCTATAACAACCGTCTGCTGCATAA
GTTACCGTCATCTCTGTGCCTCACCTGCCGGAGAAACAGGCCACAGGAC
GTTTTGAGGAGGACTTCATCGAGAAGCGCAAAAGACGGTTGGTCATCTGG
ATGGACCACATGACCAGTCATCCTGTCCTATCACAGTACGAGGGCTTGGA
ACACTTCCTCATGTGTGCTGATGACAAGCAGTGGAAGCTGGGCAAGCGGC
GGGCGGAGAAAGATGAGATGGTGGGTGCCCACTTCATGCTGACCTTTCAG
ATTCCCAACGAGCACCAGGACCTGCAGGACGTGGAGGAGCGAGTGGACAC
CTTCAAGTCCTTTGCCAGGAAGATGGATGAAAGCGTCATGCAGCTGACCC
ACGTCGCCTCAGAACTGGTTCGAAAACACCTTGGTGGCTTCAGGAAAGAG
TTTCAGCGCCTGGGAAACGCGTTCCAGTCCATCAGTCAGGCTTTCATGCT
TGACCTCCTCACAGCTCGGATGCCCTCAACAATGCCATCTCACACCCTC
TTGCCAGTTCTTCAACTGACCTCCTTGGGTTTCATCATCGGCGTTGGA
GTGGTCGGCAATCTTCTGATCTCCATCCTACTGGTCAAAGACAAGAGCCT
GCACCGAGCGCCCTACTACTTCCCTGCTGGACCTGTGCGCCTCCGACATCC
TGCGTTCGGCCATCTGCTTCCCCTTCGTGTTACCTCCGTCAAGAATGGT
TCCGCTGGACGTACGGAACCCTAACCTGCAAAGTGATCGCCTTCTGGG
GGTCTGTCTGTTTTACACGGCCTTCATGTTGTTCTGCGTCAGCGTGA

CCCGCTACCTGGCCATCGCCACCATCGCTTCTACACCAAGAGGCTGACC
TTCTGGACGTGCTTGGCCGTCATCTGCATGGTGTGGACGCTGTCAGTGGC
CATGGCCTTCCCCCGGTGCTGGATGTAGGGACGTACTCCTTCATCAGGG
AGGAAGACCAGTGACACTTCCAGCACCCTCCTCAGAGCCAACGACTCC
CTGGGCTTCATGCTGCTGCTCGCCTCATCCTGCTGGCCACGCAGCTGGT
CTACCTCAAGCTCATCTTTTTTCGTCCACGACCGCCGGAAGATGAAGCCGG
TCCAGTTCGTGCCGGCGGTGAGCCAGAACTGGACCTTCCACGGGCCC
GCCAGCGGCCAGGCGCGGCTAACTGGCTGGCGGGCTTCGGGAGAGGCC
CACTCCGCCACCCTTCTGGGCATCAGGCGAACAGCAACGCGGCGGGCC
GCAGGCAGTCTCGTGGTGGACGAGTTCAAGACGGAGAAGAGGATCAGC
CGGATGTTTTACATCATGACCTTCTTCTTCTGGCACTGTGGGGTCCCTA
TCTGGTGGCCTGCTACTGGAGAGTGTTCGNNNNNNNNNNNNNNNNNNNN
NNNGCCAAAT
CTCGCTTTCACCT
GGCGTAGGGACTGGTCTGTCAGCAGGACC---GCAGCGTCCCACTTAGTAA
CAGCTTGCTATCCCCGCAACAAACCGAAGAGCCACAGTTG---CTTCCC
CACAGCGTTGGTTTTGTCACCC---CTGCCAACAACCGACTGGACTTTGCC
GCCTCGGCATACGATGCTGCCGCTGCTGCAGATTTTGCCGGCAACGCGGC
CACCTTGCTGTCTTACGCAGCGGCTGGAGTGAAGCGC-----TTCCC
TCTCCACGGCAGGTTGCTCCAACAGACCGCTCGGGTATTACGCCGACCCG
TCAG---GCTGG---GGCGCCGTACGCCACCACAGTACTGT-----
-AGCAAGTCGAGCTCCGTTCTCTCATGCTGGCCACGAATACTGTTACCG
GCAGAACGGGAC---CGTCCAGTTACCTGG-----CCGAGGA---G
GGA---GACGC---CATTCCCACAGAGCGGTCTCCA---AT---AGGGGC
GTCAGACGAG---GCAAAACAAAAGACTT-----GTCCGA---ATCCA
ACTGGATAGAG---ACGCCGTCTTCAATAAAGTCAATTGATTCCAGTGAT
TCTGGAATCTTTG---AGCAAGCAAACGGAGAAGAATTTCTCCGTCTGC
CACACCA-----GTTTTGGAGACGGTGTCCCGTTAAAATCCGAA-
-----ACAGGCGAAGTCACAGAAAGAGAAGTGGCTTTGGGGATAAAT
CCGTTTGCAGACGGGATGGGTGCTTTCAAATCAACCACAGTTTCGCATGA
TCTTGGCTCCGG---GCAAACTGCATTTTCTTCCCAAGCG---CCC GGCT
AC---GCAGCCGCTGCACTGGGA---CATCACA-----CCACCCGACT
CATGTCAGTTCT---TACTCTACGGCGGCTTTCAATCCACCCGGGATTT
TCTCTTCAGAAATCGAGGCTTCGGAGACGCTACCAG-----CG
CTCAGCATAGTCTCTTCGCCTCCGC---AGCGGGAAGTTT---T-----
GCAGCCCCACATGGACACTCAGATGCAGCGGACACCTGCTCTTCCAGG
ACTTCACGAA---CAAGCCGCGAGCCATGCTTCCCTCAAATGTTGTTAATA
GTCAGATGCGATTGGGCTTTTCGGGGACATGTACGGCAGGGCCGACCAG
TATGGCCACGTTACAAGCCC GCGGT---CCGACCATATGCTTCGACCCA
GTTGCATGGCTATGGCCCTATGAACATGAATATGGCTGCG---CATCATG
GAGCAGGGGCTTCTTCCGTTACATGAGGCAGCCGATAAAAACAAGAGCTG
ATCTGCAAGTGGATCGAACC GGAGCAACTAACGAACCCGAAAAAGTTCGTG
CAACAAAATTTTAGCACAAATGCACGAGCTCGTCACCCATCTGACGGTGG
AGCATGTGGGAGGACCGGAGCAGTCGAACCACATTTGCTTCTGGGAAGAG
TGTGCCCGAGAAGGAAAACATTCAAAGCTAAATACAACTTGTGAACCA
CATCAGAGTGACACCCGGAGAGAAAACATTTCATGTCCATTTCCCGGTT
GTGGCAA

>Thymallus brevirostris
AGTCTCCTTATTCGAGCCGAATAAGCCAGCCCGGAGCCCTTCTGGGTGA
TGATCAAATTTATAATGTGATCGTACGGCCATGCTTTCGTTATGATTT
TCTTTATAGTCATGCCAATTATGATTGGTGGGTTTCGGAACTGATTAATC
CCCCTTATGATTGGTGGCCCTGATATAGCCTTTCCCGAATAAATAACAT
GAGCTTTTGACTACTTCCCCATCCTTTCTCCTTCTTCTAGCCTCATCTG

GGGTTGAAGCCGGGGCCGGGACAGGGTGGACAGTATATCCCCCTCTGGCA
GGTAACCTGGCCCACGCAGGAGCCTCTGTAGATTTAACTATCTTCTCCCT
TCACTTAGCTGGTATTTCTTCTATTTTGGGGGCCATTAATTTTATTACAA
CCATTATCAACATGAAGCCCCAGCGATTTCTCAATACCAAACCCCTCTT
TTTGTATGGGCTGTTCTGATTACCGCCGTCCTATTACTTCTCTCTCTGCC
TGTCTTGACAGCAGGCATCACAAATGTTACTCACAGACCGAAATCTTAATA
CCACTTCTTTTGACCCAGCAGGAGGAGGGGACCCAATCCTTTTATCAACAT
CTATTTTGATTTTTTTGGCCACCCAGAAGTTTATATTCTTATTCTTCCAGG
CTTCGGTATAATTTTACACATCGTTGCATACTACTCTGGTAAAAAGAAC
CCTTTGGATATATAGGCATGGTTTGGAGCCATGATAGCCATTGGTCTCTTG
GGTTTATCGTTTGGAGCCATCACATGTTTACTGTTGGTATGGACGTCGA
CACTCGTGCCTA-----

-----GGACGAGTACATCGTAGTGTTTCAGT
CGTTCATCAACAGACTCATCCTGAAAYGAAGCAGAGCTGATCCTGGCATT
GGCGCAGGAGTTCCAGATGAGAGCCGTGACTGTGTCTCTGGAGGAGCAGA
CCTTCCCAGCATCGTCAAGGTCATCAGCGGGGCCCTCCATGTTGGTCAGC
ATGCATGGGGCCCAGCTGGTCTCCTCTCTCTTCCCTCCCCGGGGGGCCGT
CGTAGTGGAGCTCTTCCCCTATGCCGTCAAYCCAGAGCAGTACACCCCTT
ACAAAACCCTGGCCTCTCTACCAGGCATGGACCTGCAGTATGTGGCCTGG
AGGAACATGGTGGAGGAGAATCAGTGGCCCACCCAGAGAGGCCCTGGGA
GCAGGGAGGTATAGCCACCTGGAGAAGGAAGAGCAGGAGCACATCCTGG
CCAGTAARGAAGTACCCARACACCTGTGCTGCCGCAACCCTGAGTGGCTC
TATCGCATCTACCAGGACACCATAGTGGAAATCCCTTCTTTACTAGAGAC
TCTCAG---AGAGACMGTGAAA---ACMAGGCCCAACCTGAAGAA---GG
CCAAGCCTGCCAGCACGGTCCACCCGGGCCGGGTTCAGAGAGCCCCAGTGC
CAGACGTCGGTCCAGGCCACCAACGAGGCCAAGCTGACTGTGTGCTGGCA
AATCCCCTGGAACCTCAAGTACCTGAAGGTCAGGGAGGTGAAATACGAAG
TATGGATCCAGAAGAGGGATCCAAGCAAGGACCCCTGGAAGATCAAATC
ATCCAGGCTAATCCTGCACTGGAGGCTTTCGGTAAATGCCAAAACACTGAG
AAATGACAACTCATCACGTTTTCCGGTAAATTCATCCGTATTCACCTCGGCA
CCAGTGGGAAACTATCATCTGCCGACGTAGAGACTTACCTTCTTGAGAAG
TCCCGTATCACCTTTCAGCTCAAAGCTGAGAGGAACTACCACATTTTCTT
CCAGATATTGTCCAACCAAAAGCCAGAGCTGTTGGACATGCTGTTAATCA
CCAACAATCCATATGACTACTCCTACATCTCTCAAGGAGAGGTAACAGTA
GCATCCATCAATGATTTCTGAGGAACTGATGGCCACTGACAGTGCCTTCGA
TGTACTIONGGCTTTACTGCAGAGGAGAAACAGGGGGTCTACAAGTTGACAG
GTGCCATCATGCACTACGGTAAACATGAGGTTCAAACAAAAGCAGCGGGAA
GAGCAGGCAGAGCCTGACGGTACAGAAGCTGCTGACAAGTCAGCTTACCT

TATGGGAATAAACTCTGCAGATCTGATTAAAGGACTTTGCCATCCCAGAG
TCAAGGTTGGCAATGAGTATGTCACCAAAGGTCAAGGTGTAGATCAGGTC
TACTACCCCAACAAAAGAGGCCTTCAAGTGTGAGGAGTGTGGCAAGCACTA
CAACACCAAGCTGGGCTACAAGCGTCACGTGGCCATGCATTCAGCCACGG
CAGGGGACCTCACCTGTAAGGTGTGCCTGCAGAACTATGAGAGTACCCCT
ACCTGTGGAGCATCTCAAGAGCCACTCGGGCAAGTCCTCCGGAGGTGC
CAAGGAGAAGAAGCACCCGTGTGACCCTGTGACCGCCGCTTTTACACAC
GGAAGGACGTGCGCCGCCACATGGTGGTCCACACCGGCAGAAAGGACTTC
CTGTGTCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
GCATGTGAAGAAGAGCCACTCTCAGGAGCTGCTAAAGATAAAGACGGAGC
CTCCGGACATGCTAGGCCTGCTGGGCTCTGGCTCCTCCCCCTGCACTGTC
AAAGAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCCAACAAAAGACCC
CATGATGGTCAAGCCGTTCCCCAGCGGCACCCCTTCCCCATGGGCATGT
ACAACCCCCACCAC-----CTCCAGGCTATGTCCAACCCTGGGGTGGGT
CAC-----CACCCTCTCTGATGCCCGGCTCCTTGTCTGCTGCCAT
GGGGATGGGCTGCCACATGGAGTATCTGATCTATGCCCTCCTTCTCCTTCA
TGGGATGTTTACAAAATCAGTGTGGATCCAACATCGTCAACCTCCTAGCC
AGCAACACGCCCAGTGTGTCCTACGCCACGACCCAGCAGAAGTACTTCAG
TAACTACAGCCCCGTGATCGGCTTCTACATCTATGAGCCCATCGAGTACT
GGAACTCCACGGTGCAGGAGCACCTCACAACACTGAGCCACGGCTTCAAC
AAGATCTCCTGGATGGATAACTACTTTCAGTACCTGAAGGTGGTGAATGT
GAGCGCTCGACCAAAAAGTGATTTTATCACCATCCTGCAGGGCTCCTTCC
TGCGCAGCCCGGAGTATCAGCACTTCATGGAGGACATCATTCTGTCCAAG
ACAGATGGAG-----ATGAAATGGAGATCATCGCGTCCAGGAT
GTACCTAGTGGCGCGGACCACAGAGAAGACACGGGAGGAGGTGGTGGAA
TGCTGGAGAGGCTCCGCCCCCTCTCGCTCATCAACAACATCAAGTTCATC
GTCTTCAACCCACCTTTCGTCTACATGGACCGTTATAGCTCCTCCGTGGT
CTCACCCATCCTCACATCGGCCCTCAGCGTGCTCACCATCCTCATCCTCA
CCTTCTTCTTGGTTCATCAACCCTCTGGGAACTTCTGGTTGATCCTGACC
GTCACCTCCGTAGAGCTGGGGGTCTGGGCCTCATGNNNNNNNNNNNNNNNNNN
NNNNNNNNNNCACCTCCTGCCATG
TGGGGATCATTGACGGGCTATCAGGGTGGGTTCGCTTCGGTGGACGACTCC
CCAACAGACACAGTCACGCGTCCGGTTCGGCTACGACGTGGCCCTGGTGT
GGCCTTGAAGGACCTGGAGGAGGAAATCATGGAGGGGCTGAGAGAGCGAG
GCCTGGAGGACAGTATTGCACCTCAGGCTTCAGCGTCATGATCAAGGAG
TCCTGCGATGGCATGGGGGACGTGAGTGAAGCATGGCGGAGGGCCTGC
CATCCCGAAAAGGCTGTGCGTTTCTCCTTACCATCATGTCCGTTTCAA
TTCAAGCTGAGGGAGAAGAT-----
GAGGCGATCACCATTTTCCAGGAGCCCAAGCCCAACTCAGAGATGTCCTG
CAAGCCTCTCTGCCTGATGTTTGTGGACGAGTCAGACCACGAGATGCTCA
CAAGCGTCCCTGGGGCCTGTTAAGGCCGAAAGGAATGCTATGAAGCACAGC
CGTCTCATCCTGTCTGTGGGAGGCCTTTCTCGCTCCTTCCGCTTCCACTT
CCGGGGCACGGGCTACGACGAGAAGATGGTGGGAGAGATGGAGGGTTTGG
AGGCCTCTGGCTCCACTTACATCTGCACCCTGTGTGACTCCACTCGGGCA
GAGGCTCCCACAACATGACTCTTCACTCTGTACCCGCAGCCACGACGA
GAATCTGGAGCGTTACGAACCTTGGAGGACCAACCCTTATTCTGAGTCAG
CTGAGGAGCTGCGAGACAGAGTCAAAGGTGTCTCTGCCAAGCCCTTCATG
GAGACCCAGCCACACTGGACGCCCTACACTGTGATATCGGCAACGCCAC
CGAGTCTACAAGATCTTCCAGGATGAGATAGGGGAGGTCTATCACAAGG
C---CAAC---CCCAGCCGGGAGCAGCGTCCGGAGCTGGCGGGCCGCCCTG
GACAAACAGCTGAGGAAGAAGATGAAGCTGAAGCCTGTAATGAGAATGAA
TGAAACTATGCACGGAAGCTGATGACCCGGGAGGCAGTGGAGGCAGTGT
GTGAGCTGGTGGCTCAGAGGAACGTCAGGAAGCCCTGAGGGAGCTGATG

GGGCTCTACATCCAGATGAAGCCTGTGTGGCGCTCCACCTGCCCGGCCAA
GGAGTGCCCAGATCAGCTCTGCCGGTATAGCTTCAACTCCCAACGCTTCG
CAGAGCTGCTCTCCACCGTCTTTAAGTACAGGTATGACGGCAAGATCACC
AACTACCTGCACAAGACTTTGGCCACGTGCCAGAGATCGTGGAGAGGGA
TGGCTCCATTGGGGCCTGGGCCAGCGAGGGGANNNNNNNNNNNNNNNNNTCGTACACCATTGAGATG
GGCCCCAAAGGGCCTCAATGGAAAGAAAGCCCCACACCTTTCTCTTGCTC
CATCGAGGATCCTACCAAGCAGACCAAGTTCAAAGGCATCAAGACCTACA
TATCGTACCGAGTGACCCCAAGCCACAATGCGAGGCCTGTGTACCGGCGT
TACAAGCACTTTGACTGGTTGTACAACCGTCTACTGCACAAGTTCACAGT
CATCTCCGTGCCCCACCTCCCCGAGAAACAGGCAACGGGCGCTTCGAAG
AGGATTTTCATCGAGAAACGCAAGAGGGCGGCTGATCCTATGGATGGACCAC
ATGACCAGCCACCCGGTCTGTGCGCAGTACGAGGGCTTCGAGCACTTCCT
CATGTGCGCCGACGACAAGCAGTGGAAGCTCGGCAAGAGGGCGGGCAGAGA
AGGACGAGATGATGGGCGCCAACCTTCATGCTCACCTTCCAGATCCCAAAC
GAGCACCAGGACCTGCAGGACGTGGAGGAACGCGTGGACTCCTTCAAGTC
CTTCGCCAAGAAAATGGATGACAGCGTCATGCAGCTTACGCATGTGGCCT
CGGAACTGGTGCAGGAAACACCTCGGAGGCTTCCGGAAGGAATTTACAGCGG
CTGGGGAACGCTTTCCAGAACGTACAGTCAGGCGTTCATGCTGGACCCTCC
CCACTGCTCAGACGCTCTCAACACCNNNNNNNNNNNNNN-----

-----GCCAAATCTCGCTTTCACCCTGGCGTAGGGACTGGTCC
TGGCACGGACC--GCAGCGTCCCACCTTAGTAACAGCTTGCTATCCCCGC
AACAAACCGAAGAGCCCACAGTTG--CATCCCCGCAGCGATGGTTTGTC
ACCC--CTGCCAATAACCGACTGGACTTTGCCGCTCGGCATACGATGC
CGCCGCGGCTGCTGATTTTGCCGGTAACGCGGCCACCCTCCTGTCATACG
CAGCGGCTGGAGTAAAGGCAC-----TCCCCCTGCCACTGCAGGGTGC
TCAAGCAGACCACTAGGTTACTATGCCGACCCATCCG---GTTGG---GG
CACACGCACACCACCCAGTACTGC-----AGTAAGTCTAGCCCTG
TTCTCTCTTGCTGGCCCACAAATCTGTGGTGGCAGAACAGGCA---CC
TCTAACTACCTGG-----TTGATGA---CGCC---GATAC---CAT
CCCAACAGAAAGGTCACCC---AT---CGGAGGGTCTGATGAG---GCAA
AACCAAAAGACTT-----ATCCGA---ATCCAGCTGGATAGAG---ACG
CCGTCTCAATCAAGTCGATTGATTCAAGTGATTCTGGCATCTTTG---A
GCAAGCCAAACGGAGAAGAATTTACCGCCTGCCACACCG-----G
TTTCGGAAA-----CCATTTGAAATCTGAG-----ACAGGCGAA

GTCACAGAAAGAGAAGTGGCTTTGGGGATAAATCCGTTTCGCAGACGGGAT
GGGAGCTTTTAAAAATAAACACAGCTCCCAYGACCTGAGCTCAGG---AC
AGACGGCATTCTCTTCCCAGGCT---CCCGGCTAT---GCTGCTGCCGCC
CTGGGT---CACCACCA-----CCACCCGACACACGTCAGCTCC---TA
CTCCACCGCAGCCTTCAACTCCACCCGGGACTTTCTCTTCAGAAATCGGG
GCTTCGGAGACGCAACCAG-----CGCGCAGCACAGCCTGTTT
GCCTCGGC---AGCGGGAAGTTT---T-----GCAGGGCCACATGGACA
CTCCGATGCCRCGGGGCACCTGCTCTTCCCGGGACTCCACGAG---CAAG
CCGCCAGCCATGCGTCRTCTAATGTYGTCAACAGCCAGATGCGSCTTGGC
TTTACCGGGGACATGTACGGCCGGGCTGACCAGTATGGACACGTTACGAG
TCCCCGCT---CCGACCACTACGCTCCACCCAGCTGCATGGCTATGGCC
CTATGAACATGAACATGGCGGCT---CACCACGGGGCAGGGGCTTCTTC
CGATACATGAGGCAGCCCATCAAAACAAGAGCTMATCTGTAAGTGGGTAGA
GCCAGAACAGTTGTGCAACCCCAAAAAGGCTTGCAACAAAACCTTTCAGCA
CGATGCACGAGCTTGTGACCCACCTGACAGTGGAGCATGTGGGGGGACCG
GAGCAGTCGAACCATATTTGCTTTTGGGAAGAGTGCCTCCGAGAAGGAAA
ACCGTTCAAAGCCAAATACAAACTTGTAATCATATCAGAGTGCACACCG
GAGAGAAACCATTCCCATGTCCCTTCCCCGGCTGTGGAAAA

>Toxotes jaculatrix

AGCCTCCTTATTTCGAGCAGAAGCTTAGCCAACCTGGTGCTCTTCTGGGAGA
CGACCAGATTTACAATGTAATTGTTACGGCCACGCCTTTGTAATAATTT
TCTTCATAGTCATGCCATTATAATTGGAGGCTTTGGGAAGTACTCATC
CCCCAATGATTGGTGCCCTGATATGGCATTCCCCCGAATGAACAACAT
AAGCTTCTGGCTCCTACCACCTCCTTCCTGCTGCTTCTTGCCATCATCTG
GTGTCGAAGCAGGCGCCGGTACTGGCTGAACAGTCTATCCTCCTCTAGCC
GGTAATCTGGCCCATGCAGGAGCATCTGTGATCTAACCATCTTCTCACT
TCACCTGGCCGGGGTCTCCTCAATTCTCGGTGCAATCAACTTCATTACAA
CCATCATCAACATAAAACCAACGGTTGTCACTATATACCAAATTCCCCTA
TTTGTGTTGAGCCGTCCTCATTACAGCCGTCCTTCTCCTCCTTTCCTACC
CGTCCCTAGCTGCTGGCATCACTATGCTCCTTACAGATCGAAACTTAAACA
CTGCCTTCTTCGACCCAGCAGGAGGAGACCCCATTCCTTTACCAACAC
CTGTTT-----

-----TTCCTGGAGAGAAACCTTACCCGTCTAACTGTCTTGG
CATGTTGTTGCTGTCTGACGCCCACAGTGTACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACACAGAGGA
GCTAGAGACTGAAGATGAGAGACTGGTGTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAAAGGAGGCACTGCCACCTTCCAGAGCTTCTGAGA
ACGGTCCGCCTCGCCCTGCTGCCTGCCATCTTTCTGATGGAGAATGTCTC
CACAGAAGAGCTGATCAACGCCCAAGGCAAGGAACTGGTGGATG
AAGCTATCCGCTGTAAGCTGAAAAATCCTGCAGAATGACGGCGTTGTTAAC
AGCCCGTGTGCTAGACCAAGAAAAACAGCCATGCTCTCTTTCTCTGCGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTAGACCAGAAGGCCA
AAGAAATTATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAATGGTGTGTCTAAAGATGTGTGGGTCTACGACACCGTCCACGAAG
AATGGTCAAAGCAGCTCCCATGCTCATCGCCAGGTTTGGCCATGGCTCT
GCGGAGCTGAAGCACTGCCTCTACGTGGTAGGAGGTCACACCGCATCAAC
AGGCTGCCTCCCGGCTTCCATCCGGACGATTACATTTGTTGTGTTTCACT
CGTTCAACAACAAGACTGATACTTAATGAGGCGGAGCTAGTCATGGTGCT

GGCCAGGAGTTCCAGATGAGGGTGGTCACTGTATCCCTGGAGGAACAGT
CTTTCCCTGGTATTGTCCAGGTGATCAGCAGTGCCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCTAGAGGAGCTGT
TGTAAGTGGAACTGTTCCCTTTGCTGTGAACCCAGAACAGTACACCCCAT
ATAAAAACCTTACCTCCCTTCCAGGGATGGACCTTCACTATATCTCCTGG
AGGAACACTAAGGAGGAAAACACCATCACCCACACAGATAGACCTGGGA
ACAAGGAGGCATTGCTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTTA
CCAGTAAGGAGGTCCCCAGGCACCTCTGCTGCCGCAACCCAGAGTGGCTC
TTCCGGATCTACCAGGACACTTTAGTGGACATCCCTTCCCTTCCCTGGAAGT
CCTCAA---AGAGGGCATGAAG---ACCAAGCCATCTTGAAAA---GT
CAAAGCCGGCCAGCACGGTCCACCCTGGCCGAGTTAGAGAACCCAGTGT
CAGACTTCAGTACAGACCTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTAAGAGAGGTGAAGTACGAGG
TGTGGATCCAGAAAAAGACACCAGCAAGGGGACGCTGGAGGATCAAATC
ATCCAGGCAAATCCTGCACTAGAGGCCTTTGGGAACGCCAAAAACAGTAAG
AAACGACAATTCATCTCGTTTTGGAAAATTCATTCGTATTCACTTCGGAA
CAAGTGGCAAATGTCGTGCTGACATTGAGACATACCTGCTGGAGAAG
TCACGTGTCACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAAAGCCAGAGCTGCTGGACATGCTGCTGATCA
CGAACAAACCCATATGACTACTCCTACATCTCCCAAGGAGAGGTAACAGTT
GCCTCCATCAACGACTCAGATGAGCTGATGGCTACTGACAGCGCCTTCGA
TGTGCTCGGTTTACACCCGAGGAGAAGATGGCTGCTATAAACTGACTG
GTGCCATCATGCACCACGGCAACATGAAATTCAAACAGAAGCAGCGTGAG
GAGCAGGCGGAACCTGATGGGACGGAGGCAGCTGATAAATCAGCTTACCT
GATGGGGCTGAACTCTGCTGACCTTATCAAAGGCCGTGCCACCCAGAG
TCAAGGTAGGCAATGAATACGTCACCAAAGGTCAAAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAATGTGAGGAGTGTGGGAAGCACTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGAGCTACGAGAGTACACCT
GTTCTCCTGGAGCACCTCAAGAGTCACTCTGGGAAATCTTCCGGCGGTGC
CAAGGAGAAAAAACACCCGTTGACCACCTGTGACCGTCGTTTCTACACAC
GGAAGGATGTAAGGCGGCACATGGTGGTTACACGGGCCGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAGACCACCTGACACG
CCACGTGAAAAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCGGATATGTTAGGCCTTTTAGCTTCTGGATCGCCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCCATGATGTGCGGCATGGGTTCCAATAAAGACCC
CATGATGGGCAAACCGTTCCCCAGTGGGGCCCTTTTCCAATGGGCATGT
ACAACCCCAACCAT-----CTCCAGGCGATGTCTAATACTGGGGTGGGT
CACCCA-----CACCCGTCCCTAATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGTTGTACATGGAATATCTCATCTACGCCCTTTTCTCATTCA
TGGGATGTTTACAAATTAGCGATGGATCGAATATCGTCAACCTGCTGGCT
AGTAACTCTCCAGTGTTCATATGCTCTGACCCAGCAGAAATACTTCAAG
TAACTACAGTCTGTGATTGGGTTTACATTTACGAGCCCATCGAGTACT
GGAATCCACAGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTGCGGGTGGTGAATGT
GAGTGGCTCAACCAAGAGTGACTTCATTACCATCCTTAAAGGCTCCTTCC
TTCGCAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCCAAG
A---ACCGTGAGACGG-----ACGAGTACGATATATTGCCTCACGGAT
GTACTTGGTGGCACGAACAACCTGAGAAGAAGCGCGAGGAGGTGGTGGAA
TTCTGGAAAAGCTTCGTCCGTTGATGCTAATCAATAGCATCAAGTTCATT
GCCTTCAATCCTACGTTTGTGTTTCATGGACCGCTACAGCTCCTCCGTCAT
CTCGCCATCCTGACCTCAGGCTTCAGCGTACTCACTATTCTCATCCTCA
CTTTCTTCTTGGTCATCAACCCCTTAGGAACTTCTGGCTCATCCTCACA

-----NNNNAATCTCGCTTTCACC
CTGGCGTGGGGACTGGTCCTGGCACGGAGC---GCAGCGTCCCACTCGGC
AACAGCTTGCTATCCCCGAGCAAACCGAGGAGCCACTGTTGCCACCCC
CCCGCAGCGATGGTTTGTCAACC---CTGCCAACAACCGACTGGACTTTG
CTGCCTCGGCATACGACGCCGCT-----GATTTCCGCCGGTAACGCG
GCCACCTTGCTGTCTACGCAGCGGCCGGAGTAAAGGCTC-----TTCC
CCTGCCGACTGCAGGCTGCTCCAACCGGCCTCTTGGCTATTACGCAGACC
CGTCAG---GCTGG---GGAGGACGCACGCCGCCGAGTACTGTGGTGTA
AATAGCAAATCCAGCTCGGTCTTTTCCTGTTGGCCCGCTAACTCTATCGG
TGGCAGAGCGGCCA---CC---AACTACCTGG-----CCGAGGA--
-GGGA---GACTC---CATCCCGACGGAGAGATCACCT---AT---CGGC
GGCTCGGAGGAG---ACCAAACCCAAAGACATGAC---ATCTGA---GTC
GAGCTGGATAGAG---ACGCCGTCTCTATTAAGTCCATTGATTCAAGCG
ATTCTGGTATTTTTG---AACAGGCCAAAAGGAGAAGAATCTCACCTTCT
GCCACGCCG-----GTTTCAGAGACAGTGTCCCGTTAAAATCTGA
GNNNGATAAATCCGTTTCGCGGATGGGATG
GGCGCCTTCAAATAAACCACAG
CTCCCACGATATTGGCTCCGG---ACAGACGGCGTTTTCTCTCAGGCG--
--CCCGGCTAC---GCAGCAGCCGCCCTGGGG---CACCATCA-----C
CACCCGACCCATGTTGGCTCT---TATTCCACGGCGGCTTTCAACTCCAC
CAGGGACTTTCTCTTTCAGAAATCGGGGTTTTCGGGGACGCCACCGG-----
-----GGCGCAGCACAGTTTGTTCGCCTC-----TGGAAGTTT-
--C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGGCACCTGCT
CTTCCCAGGGCTCCACGAG---CAAGCGGCGAGCCATGCCTCTTCCAACG
TGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTACGGACGG
GCCGACCAGTATGGCCACGTTACAAGCCACGGT---CCGACCACTATGC
TTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA-
--CACCACGGAGCAGGGGCCCTTCTTTCGATACATGAGGCAGCCGATCAAA
CAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACAAATCCTAA
AAAGTCGTGCAACAAAACCTTTTAGCACGATGCACGAGCTTGTGACCCATC
TGACGGTGGAGCATGTGGGGGGACCAGAGCAGACCAACCATATCTGCTTC
TGGGAGGACTGCTCCAGAGAAGGAAAGCCTTTCAAAGCCAAATACAAACT
TGTAATCATATCAGAGTACACACCCGGAGAAAAGCCCTTTCCGTGTCCGT
TCCCCGGCTGTGGCAA

>Trachinotus carolinus
AGCCTACTTATCCGAGCGGAGCTTAGTCAACCTGGCGCCCTCCTAGGAGA
TGACCAAATTTACAATGTAATCGTTACAGCTCATGCCTTCGTAATGATTT
TCTTTATAGTAATGCCAATTATGATTGGAGGCTTTGGAACTGACTTATC
CCACTAATGATTGGAGCCCCTGATATAGCATTCCCTCGAATAAATAACAT
GAGCTTCTGACTTCTCCCTCCCTCTTTCCTTCTTCTTCTCGCCTCCTCTG
GGGTAGAAGCAGGTGCCGGAACCGGTTGAACAGTCTACCCTCCCTTAGCT
GGTAATCTTGCCCATGCAGGAGCATCTGTTGATTTAACCATTTTCTCTCT
TCATTTAGCTGGTATTTTCATCAATTCAGGGGCTATTAACCTTCATCACA
CAGTAATTAACATAAAACCTCATGCTGTCTCTATATATCAAATCCCCTA

TTTGTCTGAGCCGTTCTAATCACAGCTGTCCTCCTGCTCCTCTCACTTCC
CGTTTTAGCTGCCGGCATTACTATGCTTCTAACCGACCGAAACCTAAACA
CTGCCTTCTTTGACCCAGCTGGGGTGGGGACCCAATCCTATAACCAACAC
CTT-----

-----TTCCTAGAGAGAAACCTTCACCCCTCTAACTGTCCTGG
CATGCTGCTGCTGCTGACGCCACCAGTGTACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAC
TTCTCCAACCTGCCCAAAGATATGGTGGTCCAGCTTTTATCACACGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCTGCCCTTAACTGGA
TCAACTATGACCTGGAGAGGAGGCACTGCCACCTCCCAGAGCTTCTGAGA
ACGGTCCGCCTCGCCCTGCTGCCTGCCATCTTTCTGATGGAGAATGTCTC
GACAGAAGAGCTAATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAAAATCCTGCAGAATGATGGTGTGCTTAAAC
AGCCCATGTGCTCGACCAAGAAAAACCAGCCATGCCCTGTTTTCTTCTGGG
AGGGCAGACTTTCATGTGTGACAAGTTGTACCTGGTAGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCTGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAAAAATGGTGTGTCTAAAGATGTATGGGTCTACGATACCGTCCATGAGG
AATGGTCCAAAGCAGCGCCCATGCTCATCGCCAGGTTTCGGCCATGGCTCT
GCGGAGCTGAAACACTGCCTCTACGTGGTAGGAGGTCACACGGCAGCCAC
TGGCTGCCTCCCGCTCTCCATCNNGACAATTACATTTGTTGTGTTTCACTCG
GTCAACGACAAGGCTGATACTCAATGAAGCGGAGCTAATCATGGCGCTGG
CCCAGGAGTTCCAGATGAGAGTGGTCACGGTGTCCCTGGAGGAGCAGTCT
TTCCCCAGTATCATCCAGGTGATCAGCAGCGCCTCCATGTTAGTCAGCAT
GCACGGAGCCCAGCTAATCACCTCGCTCTTCCCTCCCCAGAGGAGYTGCTG
TGATGGAAGTGTTCCTTTTGTGTGAACCCAGAGCAGTACACCCCATAT
AAAACCTGGCCTCCCTTCCAGGCATGGACCTTCACTATATATCCTGGAG
GAACACTAAGGAGGAAAACACCATCACCCATCCAGACAGACCCTGGGAAC
AAGGAGGCATTGTTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGGCA
AGTAAGGACGTCCCCAGGCACCTGTGCTGCCGCAACCCGGAATGGCTCTT
CCGGATCTACCAGGACACTTTGGTGGACATCCCTTCCTTCCCTGGAAGTCC
TCAA---AGAGGGCATTA---ACCAAGCCCAGCTTTAAGAA---GTCA
AAGCCAGCCAGCACGGTCCATCCAGGCCGAGTCAGAGAACCTCAGTGTCA
GACCTCAGTACAAACCTAACGAGGCCAACTCACAGTCTCCTGGCAGA
TCCCGTGGAACTCTGAAATACCTGAAGGTAAGAGAGGTGAAGTATGAGGTG
TGGATCCAGAAAAAGACACTAGCAAGGGGACACTGGAGGATCAAATCAT
CCAGGCAAACCCTGCACTAGAGGCCTTCGGCAATGCCAAAACCTCTGAGAA
ATGACAACCTCATCTCGTTTTGGAAAATTCATTTCGAATCCACTTCGGTCCA
AGTGGCAAACCTGTCTGCTGACATCGAGACGTATCTGCTGGAGAAGTC
ACGTGTCACCTTTCAGCTCAAGGCCGAGAGGAACTACCACATCTTCTACC
AGATCCTGTCCAATCAGAAGCCAGAGCTGCTGGACATGCTGCTGATCACA
AACAACCCGTACGATTACTCCTACATCTCACAGGGAGAGGTAACCGTTGC
CTCCATCAATGATTACAGAGGAGCTGATGGCCACCGACAGTGCCTTTGATG
TGCTTGGCTTCACTCCAGAGGAGAAGATGGGTGTCTATAAACTGACCGGT
GCCATCATGCACTATGGCAACATGAAGTTCAAAACAGAAGCAGCGCGAGGA
GCAGGCTGAACCTGATGGGACTGAGGCTGCTGATAAATCAGCTTACCTGA
TGGGGCTGAACCTCCGCTGACCTCATCAAAGGCCTGTGCCACCCCAGAGTC
AAGGTAGGAAATGAATATGTACCAAAGGCCAAAAGTGTGACCAAGTCTA
CTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCACTACA
ACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGGCA

GGTGATCTCACCTGTAAAGTCTGCATGCAGAGCTACGAGAGCACGCCTAT
TCTCCTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCTGGTGGCACCA
AGGAGAAGAAGCACCCGTGCGACCCTGCGACCCGCTTTCTACACACGG
AAGGATGTGAGACGGCACATGGTGGTCCACACAGGCCGCAAGGACTTCCT
ATGCCAGTACTGTGCCAGCGTTTTGGCAGGAAGGACCACCTGACGCGCC
ACGTGAAGAAGAGCCACTCNCAGGAGCTGCTGAAGATCAAGACGGAGCCTC
CGGACATGTTAGGGCTTTTAGCCTCCGGGTACCGCCCTGCGCTGTGAAG
GAGGAGCTCAGCCCCATGATGTGCAGCATGGGTCCTAACAAAGACCCCAT
GATGGGCAAACCGTTCGCCAGTGGGGCCCCTTTTCCAATGGGGATGTACA
ACCCCCACCAT-----CTCCAGGCGATGTCTAATACGGGGGTGGGTAC
CCA-----CACCCGTCCCTAATGCCAGCTCCTTGTCTGCAGCTATGGG
CATGGGCTGTACATGGAGTATCTCATCTATGCCTCTTTCTCATTCATGG
GATGTTTACAAATCAGTGATGGATCGAATATCGTCAACCTGCTGGCTAGT
AACTCTCCGAGTGTTCGTATGCTCTGACCCAGCAGAAGTACTTTAGTAA
TTACAGTCTGTGATTGGGTTTTACATTTATGAGCCATTGAGTACTGGA
ACTCCACGGTGCAGGAGCACCTGAAGACCTTGAGTCATGGCTTCAACAAG
ATCTCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTCAATGTGAG
TGCATCAACTAAGAGCGACTTCATCACCATCCTTAAAGGCTCCTTCCTGC
GCAGCCCGGAGTATCAGCACTTCACTGAGGACATCATATTCTCCAAGA--
-ACCGTCAAACCG-----ACGAGTATGATATCATTGCCTCACGGATGTA
CTTGGTGGCGCGGACGACTGAAAAGAAACGCGAGGAGGTGGTGGAGCTTC
TGGAAAAGCTTCGTCCGTTGATGCTAATCAACAGCATCAAGTTCATTGCC
TTCAATCCCACGTTTGTGTTTATGGACCGCTACAGCTCCTCCGTCATCTC
GCCCATCCTGACCTCAGGCTTACGCGTGTCTACTATCCTCATCCTCACTT
TCTTCTGGTTCATCAACCCCTTGGGGAACCTTCTGGCTCATTCTCACGGTC
ACATCCGTGGAGTTGGGCGTTCTGGGTTTTGATGGGCTTTTACCAGTTTGA
ATGGCAGCCAGCTCTCAAGAATGTGTCAACATCTTGCAATGTTGGCATT
TTAATGGGCTCGCTGGATGGGCTTCTTTCAGTGGATGACGCCCCAGCTGAC
ACCATCACTCGGCGATTTTCGCTATGATGTGGCACTGGTGTGAGCATTA
GGATCTGGAGGAGGACATCATGGAAGGGCTGAGAGAGGGTGGGATGGAAG
ACAGTCTTGTACCTCAGGCTTTACTGTTCATGATCAAGGAATGTTGTGAT
GGCATGGGTGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCTGGA
GAAGGCTGTACGTTTCTCTTTTCACTGTTATGTCTGTCTCTGTCTGCGCAG
ACGATAAGGAG-----GAGGAGGTT
ACCATCTTACCAGAACCAAGGCCAAACTCAGAAGTGTCTGTAAACCCCT
TTGCTTGATGTTTGTGGATGAGTCAAGACCATGAGACACTCACAGCTCTCC
TGGGGCCTTTAGTTGCAGAGCGTAACGCAATGAAAGAGAGTAGGCTCATT
CTGACCATAGGTGGCCTGCCTCGCTCCTTCCGCTTCCACTTACAGAGGCAC
GGGATACGATGAGAAGATGGTGGGAGAGATGGAAGGTCTGGAGTCTCAG
GGTCCACATATGTCTGCACTCTGTGTGACTCGAGTCCGGCAGAGGCCTCT
CAAAACATGGTGTACTCACTCAGTACCCGCTGTCTATGAAGAGAACCCTAGA
TCGTTATGAAATATGGAGAACCAACCCCTTCTCTGAATCTGTAGACGAAC
TGCGAGACAGAGTCAAAGGGTCTCTGCAAAGCCCTTCATGGAGACCCAG
CCCACGATAGATGCATTACTGTGACATTGGCAATGCCACTGAGTTCTA
CAAAATCTTCCAGGATGAGATTGGGGAAGTGTATCAGAAGGT---CAAC-
--CCCAGCCGGGAGGAAAGGCGCAGCTGGAGGGCAGCCTTAGACAAACAG
CTAAGGAAGAAGATGAAGCTTAAACCGGTAATGAGGATGAATGGGAAC
CGCCCGCAGGCTAATGACCCTGGAGACTGTGGAGGTGGTGTGTGAACTGG
TGCCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTCATGAGGCTCTAC
CTCCAGATGAGACCTGTGTGGCGTGCACCTGCCAGCCAAGGAATGCC
AGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCATTTTGCTGACCTCC
TCTCCTCTACCTTCAAATATAGGTACAATGGAAAAGATAACCAATTACCTT
CACAAGACTCTGGCCCATGTGCCTGAAATCATAGAGAGGGATGGATCCAT

TGGAGCCTGGGCCAGTGAGGGGAATGAGTCAGCAAACAAGTCATACACCA
TTGAGATGGGTCCCTTGGGGCCCGGGTGAAGGAGAACCCACAGCCTTTC
TCCTGCTCCATTGAAGACCCAACAAAACAGACAAAAGTTCAAGGGAATCAA
AACCTACATTTTCGTACCGGGTCACGCCGAGCCACACAGGGCGTCTGTCT
ACAGGCGTTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAG
TTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACGGGGCG
ATTTGAGGAAGACTTCATCGAGAAGCGTAAGAGACGACTGATACTGTGGA
TGAACCACATGACCAGTCACCCAGTCCCTCTCCCAGTACGAAGGCTTTGAG
CACTTTCTGATGTGTGCTGACGACAAGCAGTGGAAACTGGGAAAGAGACG
GGCGGAGAAGGACGAAATGGTGGGCGCCATTTTCATGCTGACACTCCAGA
TCCCTAACGAGCACCAGGACCTTCCAGGATGTGGAGGAGCGGGTCCGACTCC
TTCAAGGCCTTTTGCCAAAAAATGGACGACAGCGTGATGCAGCTCACACA
TGTTGCCCTCAGAGCTGGTGCCTAAACACCTGGGCGGGTTCCAGGAAGGAGT
TCCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCATTCATGCTG
GACCTCCCCACAGCTCAGATACCTCAACAACGCCATCTCCCATNNNNNNNNNCAGT
TCCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTCGGTGTGGTTGGG
AACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGC
GCCCTACTATTTTCTGCTGGACCTGTGCGCCTCTGATATCCTGCGCTCCG
CCATCTGCTTCCCCCTTTGTCTTACCTCAGTCAAGAATGGATCTGCCTGG
ACCTACGGCAGCTGACCTGCAAAGTGATTGCCTTCCCTGGGTGTGCTCTC
TTGTTTCCACACAGCATTCATGCTGTTCTGTGTCAGTGTTACTCGCTACC
TGGCCATCGCACATCACCGTTTCTACACTAAGAGGCTGACCTTCTGGACC
TGCTGGCTGTCTGTCATGCTGGTGTGGACGTTGTCAGTGGCTATGGCGTT
CCCGCCGGTGTCTCGATGTAGGGACGTACTCTTTTATCCGGGAGGAGGACC
AGTGCACATTCCAGCACCATTCCTTCCAGGGCAAATGATTCCGCTGGGCTTC
ATGCTTCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAA
GCTCATCTTTTTTGTCCACGACCGTCGAAAGATGAAGCCTGTCCAGTTCCG
TGCTGCTGTGAGCCAGAAGTGGACCTTCCATGGGCCAGGAGCCAGTGGG
CAGGCGGCAGCCAAGTGGCTGGCTGGATTTGGTCGAGGCCCAACCCCGCC
TACTTTGCTGGGCATCCGGCAGAACAGCAACGCAGCGGGCCGAGGCGTC
TACTGGTATTGGATGAATTCAAGACAGAGAAGAGGATTAGTAGGATGTTT
TACATCATGACGTTTTTCTTCTGCACTGTGGGGGCCCTATCTGGTAGC
CTGCTACTGGCGGGTGTGTTGCAAGGGGCCCGTAGTCCCTGGGGGCTACC
TGACGGCAGCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTC
ATCTGCATCTTCTCCAANNNNNNNGCCAAATCTCGCTTTCACCCCTGGCGTGGGGACT
GGTCTGGCACGGAGC---GCAGCGTCCCCTCGGCAACAGCTTGTATC
CCCGCAGCAAACCGAGGAGCCACTGTTGCCACCCCGCAGCGATGGT
TTGTCACCC---CTGCCAACAACCGACTGGACTTTGCTGCCACGGCATA
GACGCCGCC-----GATTTCCGCGGTAACGCGGCCACCTTGTGTC
CTACGCAGCGGCCGGAGTGAAGGCTC-----TTCCCCTGCCGACTGCAG
GCTGCTCCAACCGGCTCTTTGGCTATTACGCAGACCCGTCG---GCTGG
---GGAGGACGCACGCCCGCAGTACTGCGGCGTAAATAGCAAATCCAG
CTCGGTCTTTTCTGCTGGCC---TAACTCGATCGGTGGCAGAGCGGGCA
---CC---AACTACCTGG-----CCGAGGA---GGG---GACTC-
--CATAACCACAGAGAGATCACCG---AT---CGGCGGCTCGGAGGAG--
-GCCAAACCCAAAGACATGAC---ATCCGA---GTCGAGCTGGATAGAG-
--ACGCCGCTCCTCCATTAAGTCCATTGATTCCGAGCGATTCTGGTATCTTT
G---AACAGGCCAAAAGGAGGAGAAATCTCACCGTCTGCCACGCCA-----
----GTTTCAGAGACAGTGTCCCCGTTAAATCTGAGCATCACTCAACAG
GCGAAGTCACAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTTCCGCGGAT
GGGATGGGCGCCTTCAAATAAACACAGCTCCCACGATATTGGCTCCGG
---ACAGACGGCGTTTTCTCCAGGCG---CCCGGCTAC---GCAGCAG
CCGCCCTGGGA---CACCATCA-----CCACCCGACCCACGTTGGCTCT

CAAAGACCTGGAGGAGGACATTGTGGAGGGGCTGAGTAAGTACGGGCTCG
AAGACAGCGCCTGCACCTCGGGTTTCAGTGTTATGATCAAGGAGTCTTGC
GATGGCATGGGCGATGTCAGTGAGAAGCACGGCGGAGGCCCGCCATCCC
GGAGAAAGCTGTGCGCTTTTTCCTTCACCATCATGTCCATCTCTGTACTGG
CTGACGCAGAGCAG-----GAGGAA
GTGACTATCTTCAGGGAGCYAAAGCCAAATTCTGAACTGTCCTGTAAACC
TCTATGCTTGATATTCGTAGACGAGTCTGACCACGAGACCCTCACGGCCA
TCCTAGGGCCTGTGGTCACGGAGCGGAACGCCATGAAGCAGAGCCGACTC
ATCCTGTCCATGGGTGGGCTGCCTCGCTCCTTCCGCTTCCGCTTCCGAGG
CACAGGCTTGGATGAGAAGATGGTGCCTGAGATGGAAGGCCTGGAGGCCT
CGGGCTCCACCTACATCTGCACCTGTGTGACTCCACGAGGATGGAGGCC
TCTCAGAACATGGTGCTCCATTCCATCACGCGCAGCCACAGCGAGAACCT
GGAGCGCTATGAGATATGGAGGAGCAATCCCTTCTCCGAGTCTGCCGAGG
AGCTGCGAGACCGGGTCAAAGGAGTCTCGGCCAAGGCCTTCATGGAGACC
CAACCAACTCTGGATGCATTGCACTGTGACATCGGCAACGCCACCGAGTT
CTACAAAATCTTCCAGGACGAGATCGGAGAAGTGTTCAAGAGGCC---CA
AC---CCTACGCGGGAGGAGAGGCGAGGATGGAGAGCGGTCCTGGATAAG
CAGCTTAGGAAGAAGATGAAACTCAAGCCCGTGATGAGGATGAACGGAAA
CTATGCCAGGAGGCTGATGACCAAGGAGGCCGTGGATGTGGTGTGTGAGC
TGGTGGCCACAGCAGAGAGAAAGGAGGCCCTGAGGGAGCTCATGGAGCTC
TACCTGCAGATGAAACCTGTATGGCGGGCTACCTACCCTGCCAACGAATG
CCCTGATGAGCTGTGCCAGTACAGCTTCAACTCTCAGCGCTTTGCTGATC
TCCTATCCACTGCCTTTAAATACAGATATAATGGAAAGATCACCAATTAC
CTACACAAGACTCTGGCCACGTGCCCTGAAATTATCGAGAGAGATGGCTC
CATCGGAGCCTGGGCCAGCGAGGGCAACGAGTCAGCGAACAAATCCTACG
CCATAGAGATGAGTCCCAAGGGGCCCTGTGGAAGGACAGCCCCAGCCC
TTCTCCTGCTCCATCGAGGACCCACCAAGCAGACCAAGTTCAAGGGCAT
CAAGACGTACATATCCTACC CGCTCACGCCGAGCCACACGGGGCGGCCG
TCTACAGACGCTACAAACACTTTGACTGGCTCTACAACCGCCTGCTGCAC
AAGTTCACCGTTCATCTCTGTGCCCCACCTGCCGGAGAAGCAGGCCACAGG
CCGCTTTGAGGAGGACTTCATCGAGAAGCGAAAGCGACGSCTGATCCTGT
GGATGAACCACATGACCAGTCAACCAGTCCCTCTCCAGTATGAGGGCTTC
GAGCACTTCCCTGATGTGCGCCGATGACAAGCAGTGAAGCTGGGCAAGCG
GCGGGCAGAGAAGGACGAGATGGTGGGCGCACACTTCATGCTGACCTTCC
AGATCCCCAAYGAGCACCAGGACCTGCAGGACGTGGAGGAGCGGATCGAC
TCCTTCAAATCCTTTGCCAAGAAAATGGATGACAGCGTGTTCAGCTGAC
GCATGTGGCCTCAGAGCTGGTGCAGGACCTGGGGGGTTCCGGAAGG
AGTTCCAGCGGCTGGGGAATGCCTTCCAGTCCATCAGCCAGGCCTTCATG
CTGGACCCTCCCCACAGCTCGGAAAAGCTCAATAATGCCATCTCCCACNNNNNNNNNGT
TCCTCAAACCTGACCTCTCTGGGATTCATCATTGGAGTTGGCGTGGTTGGA
AACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCTTGCACCGYGC
RCCCTACTACTTCCCTGCTGGACCTGTGTGCCTCCGACATCCTGCGCTCAG
CCATCTGTTTCCCCTTYGTCTTCACTCCGTCAAGAATGGATCCACCTGG
ACCTACGGCACCCCTTACGTGCAAAGTGATCGCCTTCCCTGGGCGTGCCTC
CTGCTTCCACACGGCGTTCATGCTGTTCTGTGTGTCAGTGTCACTCGCTACC
TGGCCATCGCGCATCACCGCTTCTACACAAAGAGGCTCACCTTCTGGACT
TGCTTGGCTGTGATGTCATGGTGTGGACGTTGTCAGTAGCCATGGCCTT
CCCCCAGTGCTGGACGTAGGGACGTATTACTTTCATCCGAGAGGAGGACC
AGTGCAGGTTCCAGCACCGCTCCTTCAGGGCTAACGACTCGCTGGGCTTC
ATGCTCCTGCTGGCGCTCATCCTCCTCGCCACACAGCTGGTTTACCTCAA
GCTCATCTTCTTYGTTACGACCGCCGGAAGATGAAACCCGTCCAGTTTG
TGCCGGCTGTGAGCCAGAACTGGACCTTCCATGGACCRGGTGCCAGCGGG
CAGGCGGCAGCAAACCTGGTTGGCCGATTTGGGAGAGGCCCCACCCACC

-----NNNNNNNNNNNAACCTTCACCCATCTAATTGCCTTGGCATGCTGTTGCT
GTCTGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCTGGGCATGT
GCCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGACTTCTCCAAGT
CCCAAAGATATGGTGGTGCAGCTTTTGTGCATGAGGAGCTAGAGACTGA
AGATGAGAGACTGGTTTATGAAGCTGCCCTCAACTGGATCAACTATGACC
TGGAAAAGAGGCCTGCCACCTTCCAGAGCTCCTGAGAACAGTCCGTCTA
GCCCTTCTGCCTGCCATCTTTCTCATGGAGAATGTTTCTACAGAAGAGCT
CATCAACGCCAGGCCAAGAGCAAGGAGCTGGTGGATGAAGCTATCCGCT
GTAAGCTGAAGATCTGCAGAATGATGGTGTGTTAACAGCCCATGTGCT
CGACCAAGAAAGACCAGCCATGCCCTCTTTCTTCTGGGCGGGCAGACTTT
CATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCCAAAGAGATCATCC
CCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCCATT
GGCTGCAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAATGGTGT
GTCCAAAGATGTATGGGTCTACGACACCGTCCACGAGGAATGGTCGAAGG
CAGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCTGCAGAGCTGAAA
CACTGCCTCTACGTGGTAGGANNNGGATGAA
TACATTGTTGTGTTTCAGTCGTT
CAACAACGAGGCTGATACTGAATGAAGCAGAGCTAATTATGGCACTGGCC
CAGGAGTTCCAGATGAGAGTGGTTACGGTATCCCTGGAGGAACAGTCTTT
CCCCAGTATCGTCCAGGTGATCAGCAGTGTACCATATTAGTCAGTATGC
ATGGTGCTCAGTTTATCACCTCACTCTTCCCTCCCAGAGGAGCTGCTGTG
GTTGAACTGTTCCCTTTTGTGTGAACCCAGAGCAATACACCCCATATAA
AACCTTACCTCCCTTCCAGGTATGGACCTTCACTATATCTCCTGGAGGA
ACACTAAGGAGGAGAACCACATCACCCACCCAGACAGACCCTGGGAACAA
GGGGGCATTGCTCACTTGGAGAAGGAGGAGCAAGAGAGAATACTGGCGAG
CAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCAGAGTGGCTTTTCC
GGATCTACCAGGACACTTTGGTGGACATCACTTCTTCCCTGGAAGTACTC
AA---AGAGGGCTTGAAG---ACAAAGCCAGTTTGAAGAA---GTCAA
GCCAGCCAGTACACTMCACCCGGGCCGGGTGAGAGAACCTCAGTGTGAGA
CCTCAGTACAAACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCAGATC
CCATGGAATCTGAAATATCTGAAGTTAGAGAGGTGAAATATGAGGTATG
GATCCAGAAAAAAGACACCAGCAAGGGGACACTGGAGGATCAAATCATCC
AGGCGAACCTGCACTGGAGGCCTTCGGCAACGCCAAAACATTGAGAAAT
GACAACTCGTCTCGTTTTGGAAAATTCATCCGAATTCACTTTGGTACAAG
CGGCAAGCTGTCTATCTGCTGACATCGAGACGTACCTGCTGGAGAAGTAC
GTGTCACCTTTCAGCTCAAGGCTGAGAGAAATTACCACATCTTCTACCAG
ATCCTGTCCAATCAGAAGCCAGAGCTACTGGACATGCTGCTGATCACCAA
CAACCCGTACGACTACTCCTACATCTCCAAGGAGAGGTAACGGTTGCCT
CCATCAACGACTCGGAGGAGCTGATGGCCACGGACAGCGCCTTCGATGTG
CTCGGCTTCACTCCAGATGAGAAAAATGGGCGTCTATAAACTGACGGGCGC
CATCATGCACTATGGCAACATGAAGTTCAAACAGAAGCAGCGTGAAGAGC
AGGCCGAGCCAGATGGGACGGAGGCTGCTGATAAAATCGGCTTACCTAATG
GGGCTGAACTCTGCTGACCTGATCAAAGGGCTCTGCCACCCAGAGTCAA
GGTAGGAAATGAATATGTACCAAAGGCCAAAGTGTGGACCAAGTCTACT
ATCCTAACAAAGGAGGCCCTTCAAGTGTGAGGAATGTGGGAAGCACTACAAC
ACCAAGCTGGGATATAAGCGTCATGTGGCAATGCACTCTGCCACGGCAGG
TGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACGCCCCTAC
TCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTCAGGTGGCACCAG
GAGAAAAAACACCCGTGCGACCACTGTGACCGTCTGTTTCTACACACGGAA
GGATGTTAGACGTACATGGTGGTCCACACAGGCCGAAAGGACTTCCTGT
GCCAGTACTGTGCCAACGNTTTGGCAGGAAGGACCATCTGACACGGCATG
TGAAGAAGAGCCACTCGCAGGAGCTGCTGAAAAATCAAGACAGAGCCTCCT

GATATGTTAGGTCTTTTAGCTTCCGGCTCACCACCTTGCTCTGTGAAGGA
GGAGCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCCATGA
TGGGCAAACCGTTCCCCAGTGGAGCCTTTTTCCGATGGGCATGTACAAC
CCCCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGTCACCC
A-----CACCCGTCCCTGATGCCACTTCCTTGTCTGCAGCTATGGGCA
TGGGCTGTCACATGGAATATCTCATCTACGCATCTTTCTCGTTCATGGGA
TGTTTACAAATCAGTGATGGATCAAATATTGTGAACCTGTTGGCTAGTAA
CTCTCCAAGTGTTTCATATGCTGTGACCCAGCAAAAATACTTCAGTAACT
ATAGTCCTGTGATTGGGTTTTACATTTATGAGCCCATCGAGTACTGGAAC
TCGACGGTGCAGGAGCACCTGAAGACTCTGAGTCATGGCTTCAATAAGAT
CTCTGGATGGACAACTTTTTCCACTACCTGAGGGTGGTGAATGTGAGTG
CGTCAACCAAGAGTGACTTCATCACCATCCTCAAGGGCTCCTTCTGCGC
AGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCAAAGA---A
CCGTGAGACTG-----ATGAGTATGATATTATTGCCTCACGGATGTACC
TGGTGGCAGCKACAACAGAGAAGAAGCGCGAAGAGGTGGTGGAGCTTCTG
GAAAAGCTTCGTCCATTGATGCTGATCAACAGCATCAAGTTCATTGCCTT
CAATCCTACATTTGTGTTTCATGGACCGCTACAGTTCCTCTGTTCATCTCGC
CCATCCTGACCTCAGGATTCAGCGTACTCACAATCCTCATCCTCACTTTC
TTCTTGTTCATCAACCCCTTGGGTAACTTCTGGCTCATCCTCACTGTAAC
GTCCGTGGAGCTGGGCGTCTTGGGTTTGGATGNNNNNNNNNNNNNNNNNTGGCAGCCCGCTCTCAAGA
ATGTGTCTACATCTTGCAATGTTGGAATTATTAATGGGCTCTCTGGATGG
ACTTCTCAGTGGATGACTCCCCAGCTGACACCATCACTCGGCGGTTTCG
CTATGATGTGGCACTGGTGTGAGCATTAAGGATCTGGAGGAGGACATTA
TGAACGGGCTGAGAGAGAATGCGATGGAGGACAGCGTTGCACCTCGGGC
TTCAGTGTTCATGATCAAAGAATCTTGTGACGGCATGGGCGATATCAGCGA
GAAGCACGGTGGAGGACCACTTGTTCCTGAGAAGGCTGTACGTTTTTCTT
TCACTGTGATGTCTGTCTCTATCCTGGCAGACGGTGCAGAG-----
-----GATGAAGTTACCATCTACACGGAGTCAA
GCCAACTCAGAGCTGTCTGTAAGCCCTTTGCTGATGTTTGTGGATG
AGTCAGACCATGAGACACTCACAGCCATCCTGTGGCCCATCATTGCAGAG
CGTAATGCAATGAAAGAGAGCAGACTCATCCTATCCATCGGTGGACTCCC
TCGCTCCTTCCGCTTTCACTTCAGAGGCACAGGATACGATGAGAAGATGG
TGCGTGAGATGGAGGGCCTTGGAGCCTCTGGGTCCACCTACATCTGCACT
CTTTGTGACTCCAGTCGCACAGAGGCCTCTCAAAACATGGTGTACTACTC
CATCACTCGCAGTCATGAAGAGAACTTAGAACGTTATGAAATATGGAGAA
CCAACCCCTTTTCTGAGTCTGCAGATGAGCTGCGAGACAGAGTCAAAGGG
GTCTCTGCCAAGCCCTTCATGGAAACCCATCCAACGCTGGATGCACTACA
CTGTGACATAGGCAATGCCACAGAGTTTTACAAAATCTTCCAGGATGAGA
TCGGGGAGGTGTACCAAAGGT---CAAC---CCCAGCCGGGAGGAGCGC
CGCGGCTGGAGGGCAGCCCTAGATAAACAGCTGAGGAAGAAGATGAAGCT
CAAACCGTAATGAGGATGAATGGGAACATATGCCCGCCGGCTAATGACCC
TAGAGGCTGTGGAGGTGGTGTGTGAGTTGGTGCCTCAGAGGAGAGGAGG
GAGGCCCTGAGGGAGCTTATAATGCTCTACCTCCAGATGAAACCTGTGTG
GCGTGCCACCTGCCAGCCAAGGAGTGCCCGACCAGCTGTGCCGCTACA
GCTTTAACTCTCAGCGCTTTGCCGACCTCCTCTCTCTACCTTCAAATAT
AGGTACAATGGAAAGATAACCAATTACCTGCACAAGACCCTGGCCCATGT
GCCTGAAATNN
TCTTACACCATCGAGATGGGTCTGTGGGGCCCCGATGGWC
GGAGAGCCCACAGCCTTTCTCCTGCTCCATTGAAGACCCAACAAAACAGA
CAAAGTTTAAGGGCATCAAGACGTACATTTTCGTATCGGGTCACGCCGAGC
CACACMGGGCACCCCTGTCTACAGGCGCTACAAACACTTTGACTGGCTGTA
CAACCGCTTACTGCACAAGTTCACTGTGATCTCTGTGCCTCACCTGCCTG
AGAAGCAGGCCACGGGGCGATTTGAGGAAGACTTCATCGAGAAGCGCAAG

AGGCGACTGATACTGTGGATGAACCACATGACCAGTCACCCAGTCCTCTC
CCAGTATGAAGGCTTTGAGCACTTCTGATGTGTGCTGATGACAAGCAGT
GGAAATTTGGGCAAGAGACGGGCGGAGAAAGACGAGATGGTGGGTGCGCAT
TTCATGCTGACCCTCAGATCCCTAACGAGCACCAGGACCTTCAGGATGT
AGAGGAGCGGATCGACTCCTTCAAGTCCTTTGCTAAGAAAATGGATGACA
GCGTGATGCAGCTCACACATGTTGCCTCGGAGCTGGTGCCTAAGCACCTG
GGTGGGTTTCAGGAAGGAGTTCAGCGGCTGGGAAAATGCCTTCCAGTCTAT
CAGCCAGGCGTTCATGCTGGACCCTCCCCACAGCTCAGAGACCTTAAACA
GCGCCATCTCCCATNNNNNNNNNNCGTTCCTCAAACCTGACCTCTCTGGGTTTCATCATTG
GAGTCGGTGTGGTTGGAACCTCCTGATCTCCATCCTGCTGGTCAAAGAC
AAAAGCCTGCACCGAGCGCCCTACTATTTCCCTGCTGGACCTGTGCGCCTC
TGACATCCTTCGATCCGCCATCTGCTTCCCCTTTGTCTTACCTCGGTCA
AGAATGGATCTGCCTGGACGTACGGTACGCTGACCTGCAAAGTGATTGCC
TTCTGGGTGTGCTCTCCTGTTTCCACACAGCGTTCATGCTGTTCTGTGT
CAGTGTACGCGCTATCTGGCCATCGCACATCACCGTTTCTACACCAAGA
GGCTGACCTTCTGGACCTGTCTAGCTGTCTATCTGCATGGTGTGGACGTTG
TCAGTGGCAATGGCGTTCCCACCAGTGCTAGACGTAGGGACGTA CTCTTT
TATCCGGGAGGAGGACCAGTGCACGTTCCAGCACCGCTCCTTCAGGGCGA
ATGATTGCTGGGCTTCATGCTCCTGCTGGCGCTCATCCTCCTGGCCACA
CAGCTGGTTTACCTCAAGCTCATCTTTTTTCGTCCACGACCGTCGAAAGAT
GAAGCCCGTCCAGTTCGTGCCTGCTGTTAGCCAGA ACTGGACCTTCCATG
GGCCAGGCGCCAGCGGGCAGGCAGCCGCAACTGGCTGGCCGGATTCCGGT
CGAGGCCCCACCCCGCCACTTTGCTGGGCATCCGGCAGAACAGCAACGC
AGCGGGCCGAGGCGTCTACTGGTATTGGATGAATTCAAACAGAGAAGA
GGATTAGTAGGATGTTCTACATCATGACATTTTTTCTTCTGCGATTGTGG
GGCCCTATCTGGTCGCTGCTACTGGCGGGTGTGTTGCAAGGGGCCCTGT
GGTCCCTGGGGGTACCTGACGGCAGCCGTGTGGATGAGCTTTGCCCAGG
CTGGGGTCAATCCTTTCATCTGCATCTTCTCCAACAGGGAGGCCAAATCT
CGCTTTCACCCTGGCATGGGGACTGGTCTTGGCACGGAGC---GCAGCGT
CCCCTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTG
TTGCCACCCCGCAGCGATGGTTTGTACCC---CTGCCAACACCGA
CTGGACTTTGCTGCCCTCGGCATACGACGCCGCT-----GATTTGCG
CGGTAACGCGGCCACCTTGCTGTCTTACGCAGCGGCCGGAGTGAAGGCTC
-----TTCCCCTGCCGACTGCAGGCTGCTCCAACCGGCCCTCTTGTTAT
TACGCAGACCCGTCAG---GCTGG---GGAGGACGCACGCCCGCCAGTA
TTGTGGTGTGAACAGCAAACAGCTCGGTCTTTTCTGCTGGCCCTCTA
ACTCTATCGGAGGCAGAGCGGGCA---CC---AACTACCTGG-----
-CTGAGGA---GGGA---GACTC---CATGCCGACAGAGAGGTCACCG--
-AT---CGGCGGCTCCGAGGAG---ACCAAACCTAAAGACATAAC---AT
CAGA---ATCGAACTGGATAGAG---ACGCCGTCTCCATTAAATCCATA
GATTCGAGCGATTCTGGAATCTTTG---AACAGGCCAAACGGAGAAGGAT
CTCACCTTCTGCTACGCCA-----GTTTCAGAGACAGTGTCCCCGT
TAAAGTNNNNNNNNNNNNNNNNNNNGCGAAGTCTCAGAGAGAGAAGTGGCGTTGGGGATAAATCCGTT
CGCGGATGGGAGGGGCGCCTTCAAAAATAAACCACAGCTCCCACGATATTG
GCTCCGG---ACAAACGGCGTTTTCTCTCAGGCG---CCTGGCTACGCA
GCAGCAGCAGCCCTGGGA---CACCATCA-----CCATCCGACCCACGT
TGGCTCT---TACTCCACGGCAGCTTTCAACTCCACCAGGGACTTTCTCT
TCAGAAATCGGGGATTCGGGGACGCCACCGG-----TGCGCAG
CACAGTTTGTTCGCCCTC-----CGGAAGTTT---C-----GCAGG
GCCACATGGACACTCAGATGCAGCGGGGCACCTGCTCTTCCCGGGGCTCC
ACGAG---CAAGCGGCGAGCCACGCGTCTTCCAATGTGGTTAACAGTCAG
ATGCGCCTGGGCTTTTCGGGGGACATGTATGGACGGGCGGACCAGTACGG
CCACGTTACAAGCCCGCGGT---CCGACCACTATGCTTCGACCCAGCTGC

ACGGCTACGGCCCCATGAACATGAATATGGCCGCA---CACCACGGAGCA
GGGGCCTTCTTTTCGATACATGAGGCAGCCGATCAAACAAGAGCTCATCTG
CAAGTGGATCGAGCCGGAGCAGCTGACAAATCCCAAAAAGTCGTGCAACA
AAACTTTTAGCACGATGCACGAGCTCGTGACCCATCTGACGGTGGAGCAT
GTGGGGGGACCGGAGCAGACCAACCACATCTGCTTCTGGGAGGAATGCTC
CAGAGAAGGAAAGCCATTCAAAGCCAAATACAAACTTGTGAATCATATCA
GAGTACACACCGGAGAAAAGCCCTTCCCGTGTGCGNNNNNNNNNNNNNNNNNN

>Triacanthus biaculeatus

AGCCTTCTTATTTCGAGCAGAGCTTAGCCAGCCCCGGCGCTCTTCTGGGCGA
TGATCAGATTTACAATGTAATCGTCACAGCACATGCATTTGTAATAATTT
TCTTCATGGTCATACCTATCATAATTGGAGGGTTTGGAAACTGACTGATC
CCACTAATGATTGGGGCCCCCGATATGGCCTTCCCCCGAATAAATAATAT
GAGTTTTTACTACTTCCCTCCCTCTTCCCTTCTTACTCGCCTCCTCAG
GCGTAGAAGCGGGGGCCGGAAGTGGCTGAACAGTATATCCACCTTTAGCA
GGAAACCTGGCACATGCGGGGGCCTCTGTAGATCTGACCATCTTCTCCCT
GCATTTAGCAGGGGTGTCTCAATTTCTGGGGCTATTAATTTTATTACAA
CCATCATTAACATGAAACCCCCCGCCATTTTCGCAATATCAAACGCCCCTA
TTTGTGTGGGCAGTTCTAATCACGGCAGTTCTGCTTCTTCTATCCCTCCC
AGTTCTGGCCGCGGTATTACAATGCTCCTCACAGACCGAAATCTTAACA
CAACCTTCTTTGACCCGGCTGGGGGAGGAGATCCTATTCTATATCAACAC
TTA-----

-----TTCCTAGAGAGAAACCTCCACCCATCCAACCTGCCTCGG
CATGCTTTTTGCTGTCCGATGCCACCAGTGCACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGCCCTCAGCAACTTCCCGCCATTTGCAAGACAGAGGAC
TTCCCTCAATTGCCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTAGAGACTGAAGACGAGAGACTCGTTTATGAAGCTGCCCTCAACTGGA
TCAACTATGACCTTGAAAAGAGGCACCTGCCACCTTCCCGAGCTCCTAAGA
ACGGTCCGTCTCGCCCTTCTGCCGGCCATCTTCTCATGGAGAATGTTTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAATGATGGGGTGGTCAAC
AGCCCGTGTGCTCGACCAAGGAAAACCAGCCATGCCCTCTTCTCTGGG
TGGGCAGACTTTCATGTGTGACAAGTTGTACCTCGTGGACCAGAAAGCCA
AAGAGATCATCCCGAAGGCCGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGTAAGGTGTACATCACTGGTGGGA--GAGGCTC-
AGAGAACGGTGTGTCCAAGATGTTGGGTCTACGACACAGTACATGAGG
AATGGTCAAAGGCGGCACCCATGCTCATTGCCAGGTTTGGTTCATGGCTCT
GCAGAGCTGAAACACTGCCTCTACGTGGTGGGAGGTCACACTGCAGCAAC
TGGTTGCCCTCCAGCTTCTCCGTCTGGATGAATACATTGTTGTGTTAGT
CGCTCAACAACAAGGCTAATTCTGAATGAAGCAGAGCTCATAATGGCGCT
GGCCAAGAGTTCCAGATGAGAGTAGTTACAGTATCCCTAGAGGAACAGT
CTTTCCCCAGTATTGTCCAGGTGATCAGCAGTGCCACCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATTACTTCACTCTTCCCTCCCCAGAGGAGCCAC
TGTGGTTGAGCTGTTCCCTTTGCGGTGAACCCAGAGCAATACACCCCAT
ATAAAACCGTTACCTCCCTTCCAGGTATGGATCTTCACTATATCTCCTGG
AGAAACACTATGGAGGAGAACACCATCACCCACCCAGATAGACCCCTGGGA
ACAAGGGGGTATTGCTCATTTGGAGAAGGAGGAGCAAGAGAAAATACTGG
CAAGCAAGGATGTCCCCAGGCACCTATGTTGCCGCAACCCAGAGTGGCTT
TTCAGGATCTACCAGGATACTTTGGTTCGACATCCCCCTCCTTCCCTTGAAGT
CCTCAA---AGAAGGCTTGAAG---ACAAAGCCAGTTTGAAGAA---AT
CAAAGTCAGCAAGCACACTCCACCCAGGCCGGGTGAGAGAACCCTCAGTGT

CAGACCTCAGTACAAACCAGTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATTTGAAGTACCTAAAGGTCAGAGAAGTGAAATATGAGG
TATGGATCCAGAAAAAGATACAAGCAAAGGGACCCTGGAAGATCAAATC
ATCCAGGCGAACCCCTGCCCTGGAGGCCTTTGGCAATGCTAAAACAGTAAG
AAATGACAATTCATCTCGTTTTGGAAAATTCATTCGAATTCACCTTGGA
CAAGTGGCAAGTTGTCATCAGCTGACATTGAGACATATCTACTGGAGAAG
TCACGAGTCACTTTTCAGCTCAAGGCTGAGAGAAAATTACCACATCTTCTA
CCAGATCCTATCTAATCAGAAACCAGAGCTACTGGACATGCTGCTGATCA
CCAACAACCCATATGACTACTCCTATATTTCCCAAGGAGAGGTCACCGTT
GCCTCCATCAATGATTCAGAGGAGCTAATGGCAACAGACAGTGCCTTCGA
TGTAATTTGGCTTACGCCAGATGAGAAGATGGGTGCTATAAACTGACAG
GTGCCATCATGCACTATGGCAACATGAAGTTCAAACAGAAGCAGCGTGAG
GAGCAGGCTGAGCCGGATGGAACAGAGGCTGCTGATAAATCAGCCTACCT
CATGGGACTGAACTCAGCTGACCTTATCAAAGGGCTGTGCCACCCAGAG
TCAAAGTTGGAAATGAATATGTCACCAAAGGCCAAAAGTGTGGACCAAGTC
TACTATCCGAACAAGGAGGCCTTCAAGTGTGAAGAATGTGGGAAGCACTA
CAACACCAAGCTGGGTATAAGCGTCATGTGGCCATGCACTCTGCCACTG
CAGGTGACCTCACCTGTAAAGTGTGCATGCAGACCTATGAGAGCACAGCT
GTTCTCTTAGAGCACCTAAAGAGCCATTCTGGGAAGTCCCTCGGGTGGAA
CAAGGAAAAGAAAACATCCTTGCATCCTGTGACCGTCTGTTTTCTATACAC
GAAAGGATGTGAGACGGCACATGGTGGTCCACACAGGGCGAAAGGATTTT
CTGTGCCAGTATTGTGCCAACCGCTTTGGTAGAAAGGATCATTTGACACG
GCATGTGAAGAAGAGCCACTCACAGGAGTTGCTGAAAATCAAGACAGAGC
CTCCTGATATGTTAGGTCTTTTAGCTTCAGGGTCACCGCCTTGCTCCGTG
AAGGAGGAGCTCAGCCCATGATGTGCGGAATGGGTCCCAACAAAGACCC
CATGATGGGCAAACCATTCACAGTGGAGCGCCTTTTCCAATGGGAATGT
ACAACCCCAACCAT-----CTCCAGGCAATGTGCAATTCTGGGGTGGGT
CACCCA-----CATCCATCACTGATGCCCACTTCTTGTCTGCAGCTAT
AGGCATGGGCTGTCAATATGGAATATCTCATCTACGCATCTTCTCATTCA
TGGGATGTTTACAAATCAGCGATGGATCAAATATTGTGAACCTGTTGGCT
AGTAACCTCTCCTAGTGTTCATATGCTTTGACCCAGCAAAAATACTTCAG
CAACTATAGTCTGTGATTGGGTTTTATATTTATGAGCCATTGATTACT
GGAACCTCGACGGTGCAGGAGCACCTGAAGACTCTWAGTCATGGCTTCAAT
AAGATCTCTTGGATTGACAACTTTTTCCACTACCTGAAGGTGGTGAATGT
GAGTGCATCAACCAAGAGTGACTTCATCACCATCCTCAAGGACTCCTTCC
TGCGCAGCCCGAGTACCAGCACTTCACTGAGGACATCATATTCTCTAAA
A---ACCGTGAAACTG-----ATGAGTACAATATTATTGCTTCGAGGAT
GTACCTAGTGGCACGGACAACAGAGAAGAAACCGGAAGAGGTGGTGGAGC
TTTTGGAAAAGCTTCGTCCACTGATGCTTATCAACAGCATCAAGTTCATT
GCCTTCAACCCTACATTTGTGTACATGGACCGTTACAGCTCTTCTGTTCAT
CTCACCCATCCTGACCTCAGGATTCAGCGTACTACAATCCTCATCCTCA
CTTCTTCTTGGTCATCAACCCCTGGGTAACCTTCTGGCTTATTCTCACT
GTAACGTCGTGGAGCTAGGTGTCTTGGGTTTGTGNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNTCTTGCAATGTTGG
GATTATTAATGGGCTCTCTGGATGGACTTCCCTCAGTGGATGACTCCCCAG
CTGACACCATCACTCGGCGGTTTCGCTATGATGTGGCATTGGTGTGAGCG
TTAAAGGATCTGGAGGAGGATATCATGGATGGTCTGAGAGAGAATGGGAT
GGAAGACAGCATGTGCACCTCAGGCTTCAGTGTGATGATCAAAGAATCCT
GTGATGGCATGGGCGATGTGAGTGAAGCATGGCGGTGGACCACTTGT
CCTGAGAAGGACAGTTCGATTCTCTTCACTGTAATGTCTGTCTCTGTCCA
GGCAGATGGCACAGAG-----GAAA
AAGTAACCATATACACGGAGCCCAACCCAACTCAGAGTTGTCTGTGTAAG
CCCCTTGCTTGATGTTTGTGGATGAGTCAGACCATGAGACACTCACCAC

CATTCTATGGCCTATCATTGCAGAGCGCAATGCAATGAAAGAGAGCAGAC
TCATCGTATCCGTTGGTGGACTCCTTCGTTCCCTCCGCTTTCCTTCAGAG
GGCACAGGATATGATGAAAAGATGGTGCCTGAGATGGAGGGCCTGGAGGC
CTCTGGGTCAACCTTTATTTGTACTCTTTGTGACTCCAGCCGCACTGAAG
CCTCTCAAACATGGTGCTACACTCAATCACTCGCAGTCATGATGAAAAC
CTAGAACGTTATGAAATATGGAGAACCAACCCCTTTTCTGAGTCTGCAGA
CGAGCTGCGAGATAGGGTCAAAGGTGTCTCTGCCAAGCCCTTCATGGAAA
CCCACCCACGCTGGATGCCCTTCACTGTGACATAGGCAATGCAACTGAG
TTTTACAAAATCTTCCAGGACGAGATTTGGGGAGGTGTACCGAAAAGC---
CAAT---CCCAGCCGGGAGGAGCGGCGCAGCTGGAGGGCAGCCTTAGATA
AACAGCTGAGGAAGGAGATGAAGCTCAAACCAGTAATGAGGATGAATGGG
AACTATGCCCGCCGGCTAATGACCCTGGAGGCTGTGGAGGTGGTGTGTGA
GTTGGTGGCCTCAGAGGAGAGGAGGGAGGCCCTGAGGGAGCTTATGAGGC
TCTACCTCCAGATGAAGCCTGTGTGGCGAGCAACCTGCCAGCCAAGGAG
TGCCCTGACCAGCTGTGCCGCTATAGCTTCAACTCTCAGCGCTTTGCCGA
CCTCCTTTCTCTACCTTCAAATATAGGTACAATGGAAAAATAACCAATT
ACCTGCACAAGACCTTGGCTCATGTGCCTAGAATNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNTCTTATAACCATTGAGA
TGGGTCCCTTGGGGCCCCGGTGGAAAAGAGAGCCACAGCCTTTCTGCTGC
TCCATTGAGGACCCGACAAAACAGACGAAGTTCAAGGGCATCAAGACTTA
CATTTCATACCGGGTTACTCCAAGCCACACAGGGCATCCTGTCTACAGGC
GCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGTTCCT
GTGATCTCTGTGCCCTCACCTGCCTGAGAAGCAGGCCACGGGGCGATTTGA
GGAAGACTTCATCGAGAAGCGTAAGAGGCGACTGATACTGTGGATGAACC
ACATGACCAGTCACCCAGTCCTTCTCAGTATGAAGTTTTGAGCACTTT
CTGATGTGTGCTGATGACAAGCAGTGGAACTGGGCAAGAGGCGGGCAGA
GAAGGACGAGATGGTGGGTGCACATTTTATGCTGACCCTCCAGATCCCTA
ATGAACACCAGGACCTTTCAGGATGTAGAGGAGCGAATTGACTCCTTCAAG
GCCTTTGCTAAGAAAATGGATGACAGCGTGTGACAGCTCACACATGTGGC
CTCCGAGCTGGTGCAGCAAGCACCTGGGGGGATTTCAGGAAGGAGTTCAGC
GGCTTGAAAATGCCTTCCAGTCTATCAGCCAGGCATTTATGCTAGACCCT
CCCCACAGCTCAGAGACCTTGAACAATGCCATCTCCATNNNNNNNNNNCGTTCCCTCAA
CTGACCTCTCTGGGTTTCATCATTGGAGTCCGGTGTGGTTGGAAACCTACT
GATCTCCATCCTGCTGGTCAAAGACAAAAGCCTGCACCGAGCGCCCTACT
ATTTCTACTGGACCTGTGCGCCTCTGACATACTTCGGTCCGCCATCTGC
TTCCCTTTGTCTTTACCTCGGTCAAAGAATGGATCTGCCTGGACGTATAG
TACGCTGACCTGCAAAGTGATAGCCTTCCCTGGGTGTGCTCTCCTGTTTCC
ACACGGCGTTCATGCTGTTCTGCGTCAGTGTACGCGCTATCTGGCCATC
GCACATCACCGTTTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTAGC
TGTCATCTGCATGGTGTGGACGTTATCAGTGGCCATGGCCTTCCCACCAG
TGCTCGACGTAGGGACGTACTCTTTTATCCATCAGGAGGACCAATGCACG
TTCCAGCACCGCTCCTTTCAGGGTGAACGATTCGCTGGGCTTTATGCTCCT
GCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCT
TTTTCGTCCACGACCGTTCGAAAAGATGAAGCCCGTCCAGTTCGTGCCCTGCT
GTTAGCCAGAACTGGACCTTCCACGGGCCCCGGTGCAGTGGGCAGGCGGC
CGCCAACTGGTTGGCCGGATTTCGGGCGAGGCCCCACCCACCTACTCTGC
TGGGCATCCGGCAGAACAGCAATGCAGCGGGCCGAGGCGTCTACTGGTA
CTGGATGAATTCAAAACAGAGAAGAGGATTAGTAGGATGTTCTACATCAT
GACCTTTTTCTTCCCTGGCACTGTGGGGGCCTTATCTGGTGGCCTGCTACT
GGCGGTGTTTGCAGGGGGCCCCGCGGTCCCTGGGGGCTACCTGACGGCA
GCCGTGTGGATGAGCTTTGCCAGGCTGGGGTCAATCCTTTTCATCTNNNNNNNNNNNNNNNNNGCCA
AAACTCGCTTTACCCCTGGCATGGGGACTGGGCTGGCACGGAGC---GC
AGCGTCCCACTCGGCAACAGCTTGCTATCCCCGAGCAAACCGAGGAGCC

CACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACA
ACCGACTGGACTTTGCTGCCTCGGCATACGACGCCGT-----GAT
TTCGCCGTAACGCGGCCACCTTGCTGTCCACGCAGCGGCCGGAGTGAA
GGCTC-----TTCCCCTGCCGACTGCAGGCTGCTCCAACCGCCCTTG
GTTATTACGCAGACCCGTCAG---GCTGG---GGGGACGCACGCCCG
CAGTACTGTGGTGTGAATAGCAAATCCGCCTCGGCTTTTTCCTGCTGGCC
TTCTA ACTCTATTGGAGGCAGAGCGGGCA---CC---AACTACCTGG---
-----CTGAGGA---AGGA---GACTC---CATGCCGACAGAGAGGTCA
CCG---AT---CGGCGCTCCGAGGAG---ACCAAACCTAAAGACATAAC
---ATCAGA---ATCGA ACTGGATAGAG---ACGCCGTCTCCATTAAT
CCATAGATTTCGAGCGACTCTGGGATCTTTG---AACAGGCCAAACGGAGA
AGGATCTCACCTTCTGCCACGCCA-----GTTTCAGAGACAGTGTC
CCCGCTGAAGTCTGAGCATCACTCAACAGGCCAAGTAACAGAGAGAGAAG
TGGCGTTGGGGATAAATCCGTTTCGCCGATGGGATGGGCGCCTTCAAATA
AACCACAGCTCCCACGATATTGGCTCCGG---ACAGACGGCGTTTTCCTC
TCAGGCG---CCTGGCTACGCAGCAGCAGCCCTGGGA---CACCATC
A-----CCATCTACCCACGTTGGCTCT---TACTCCACGGCAGCTTTC
AACTCCACCAGGGACTTCTCTTTCAGAAATCGGGGATTCGGGGACGCCAC
CAG-----CGCGCAGCACAGTTTGTTCGCCTC-----CG
GAAGTTT---C-----GCAGGGCCACATGGACACTCAGATGCAGCGGG
CACCTGCTCTTCCCGGGGCTCCACGAG---CAAGCGCGAGCCACGCGTC
TTCCAATGTGGTTAACAGTCAGATGCGCCTGGGCTTTTCGGGGGACATGT
ATGGACGGGCGACCAATATGGCCACGTTACAAGCCCGCGGT---CCGAC
CACTATGCTTCGACCAGCTGCACGGCTACGGCCCCATGAACATGAATAT
GGCCGCT---CACCACGGAGCAGGGGCTTCTTTTCGATACATGAGGCAGC
CGATCAAACAAGAGCTCATCTGCAAATGGATCGAGCCTGAGCAGCTGACG
AATCCCAAAAAGTCATGCAACAAAACTTTTAGCACGATGCACGAGCTGGT
GACCCATCTGACGGTGGAGCATGTGGGGGACCCGAGCAGACCAACCACG
TCTGCTTCTGGGAGGACTGCTCCAGAGAAGGAAAGCCATTCAAAGCCAAA
TACAAACTTGTGAATCATATCAGAGTACACACCGNNNNNNNNNNNNNNNNNNNN
NNNNN

>Triphoturus mexicanus

AGCCTCTTAATTCGAGCTGAACCTCAGCCAACCTGGAGCCCTCCTGGGCGA
CGACCAGATTTATAACGTAATCGTAACAGCCCACGCTTTTGTGATAATCT
TCTTTATAGTAATGCCTATCATGATTGGAGGGTTTCGGCAACTGACTAATC
CCCTTAATAATCGGAGCCCCTGATATGGCCTTCCCCGAATGAATAACAT
GAGCTTCTGACTTCTCCACCATCATTCCTCCTTCTCCTAGCCTCATCCG
GGGTTGAGGCCGGGGCCGGAACACTGGTTGAACAGTCTATCCCCACTTGCG
GGGAATCTCGCCCACGCTGGAGCCTCTGTGACCTTACGATCTTCTCCCT
GCATCTTGCAGGTGTCTCATCCATCTAGGGGCCATTAACCTTTATTACAA
CCATCATTAACATGAAGCCCCCAGCAATTACTCAATACCAAACCCCTCTG
TTCGTCTGAGCAGTAATGATTACAGCCGTA CTCTGCTCCTATCCCTGCC
AGTCTTAGCGGCTGGAATTACAATACTTCTGACAGACCGAAATCTAAATA
CTACCTTCTTCGACCCCGCCGGAGGGGAGACCTATCTCTACCAACAC
TTATCTGATTCTTCGGGCACCCGGAAGTCTACATCTTATTCTTCCTGG
CTTCGGTATAATCTCCACATCGTTCGCGTACTACTCGGGTAAAAAGAGC
CTTTCGGGTACATGGGCATGGTCTGAGCAATGATGGCCATCGGGTTCCTT
GGCTTATTGTCTGAGCCACCACATATTTACCGTGGGAATAGACGTAGA
CACACGAGCATA-----

GGGATGTTTACAAATCAGCGATGGGTCAAACATCGTGAACCTGATGGCGA
GTAACTCTCCGAGCGTGTCTTTTCGCGCTCACCCAGCAGAAGTACTTCAGT
AACTACAGCCCCGTATTGGGTTCTACATTTACGAACCCATCGAGTACTG
GAACGCCACGGTGCAGGAGCACCTGAAGACGCTCAGTCACGGCTTCAACA
AGATCTCCTGGATCGACAACCTTCTTCCACTACCTGCGGGTGGTGAACGTG
AGCGCGTCGACCAAGAGCGACTTCATCAGCATCCTGAAGGGCTCCTTCTCCT
GCGCAGCCCCGAGTACCAGCACTTCAACGAGGACATCATCTTCTCCAAGA
---ATCGCGAGAGCG-----ACGAGTACGACATCATCGCCTCGCGCATG
TACCTGGTGGCGCGCACCACCGAGAAGAAGCGCGAGGAGGTGGTGGAGCT
GCTGGAGAAGCTGCGTCCGCTGATGCTGATCAACAGCATCAAGTTCATCG
CCTTCAACCCACCTTCGTCTTTCATGGACCGCTACAGCTCCTCGGTCATC
TCGCCCATCCTTACCTCAGGCTTTCAGCGTGCTCACCATCCTCATCCTCAC
GTTCTTTCTCGTCATCAACCCGCTGGGGAACCTTCTGGCTCATCCTGACGG
TCACGTCCGTGGAGCTGGGCGTGCTGGGTCTGATGGGCTACCACCCCTTT
GAGTGGCAGCCGGCCCTCAAGAGCGTGTCCCCCGCTGCCACGTGGGCAT
CATCAACGGGCTCTCTGGCTGGGCCGACTTGGTGGATGACTCACCGGCGG
ACACCATAAGCCGGAGGTATCGATATGACGTGGCCCTTGTGTCTGCCTTG
AAGGACCTGGAGGAGGAAGTAATGGAGGGACTGAAAGAGTGCGGGCTAGA
TGACAGCGCATGCACTTTCAGGCTTTCAGCGTGATGATCAAAGAGTCCTGCG
ATGGCATGGGAGACGTCAGCGAGAAGCATGGCGGGGGCCCGCAATCCCT
GAGAAAGCGGTCCGCTTCTCCTTTCACGATTATGTCCATCTCCGTGACGCC
GGACGGGAAAGCG-----GAGGCGG
TCACCATCTTACGGAGCCGAAGCCCAACTCTGAGCTGTCTGTAAGCCC
ATGTGCCTGATGTTTGTGGACGAGTCGGACCACGAGATGCTCACCGCCGT
CTTGGGGCCCGTGGTTCGAGAGCGGAAGGCGATGACGGAAGCCGACTCA
TCCTGTCCATGGGCGGCCTCCCCCGCTCGTTCCGCTTCTACTTCAGAGGC
ACTGGCTACGACGAGAAGATGGTGCAGGAGATGGAGGGCCTGGAGGCGTC
AGGCTCTACCTATGTCTGCACTCTGTGCGACTCCACCCGGGCGGAGGCCT
CCCACAACATGGTGTCTCCATTCCATCACCCGACGCCACAGCGAGAACCTG
GAGCGCTACGAGATATGGCGGAGCAACCCCTTCTCGGAGTCCGTGACGA
GCTGCGGGATCGGGTGAAGGGGGTCTCCGCCAAGCCCTTTCATGGAAACCC
AGCCACCCCTGGACGCGTTGCACTGTGACATCGGTAACGCCACGGAGTTC
TACAAAATCTTCCAGGACGAGATCGGGGAGGTGTTCCAGAGGGC---CAA
C---CCCAGCCGCGAGGAAAGGCGACGCTGGAGGGCCGCCCTCGACAAGC
AGCTGAGGAAAAAGCTCAAGCTCAAGCCGGTGTGCGGATGAACGGGAAC
TACGCCCGGAGGCTGATGTCCGAGGAGACCGTGGACGTGGTGTGCGAGCT
GGTGCCCTCGGAGGAACGGCGGGAGGCTCTGAGGGAGCTGATGGGGCTTT
ACCTCCAGATGAAGCCTGTGTGGCGCGCCAGCAACCCGGCCAAAGAATGC
CCCGACCAACTGTGCCGCTACAGCTTCAACTCCAGCGATTTGCGGACCT
CCTCTCCACCACCTTCAAATACAGGTACG-----
-----TCGTACAC
CATCGAGATGGGCCCCAAGGGGCTCCTGTGGAAGGAGAGCCCCCAGCCCT
TCTCCTGTTCCATTGAGGACCCCACTAAACAGACCAAGTTC AAGGGCATC
AAGACTTACATCTCTACCAGGTCACACCGAGCCACACGGGTACCCCGT
GTACAGACGCTACAAGCACTTTGACTGGCTGTACAACCGCTTGTCTGCACA
AGTTCACCGTGATCTCCGTCCCCACCTGCCGGAGAAGCAGGCGACGGGG
CGCTTCGAGGAGGACTTTATAGAAAAGCGCAAGAGGCGGCTGATCCTCTG
GATTAACCACATGACCAGCCACCTGTCTCTCCAGTATGAGGGCTTTG
AACACTTCTGATGTGTGGCGATGACAAGCAGTGGAAAGTTGGGCAAGCGG
CGAGCGGAGAAGGATGAAATGGTTCGGTGCACACTTCATGCTGACCTTCCA
GATCCCCAACGAGCACCAGGACCTCCAGGACGTAGAGGAGCGCGTTGACT
CCTTCAAGGCGTTTGCCAAGAAGATGGACGACAGTGTTCATGCAGCTGACA

CACGTAGCCTCGGAACTTGTGCGCAAGCACGTGGGCGGGTTCGCAAGGA
GTTCCAGCGGCTGGGGAACGCCTTCCAGAACATCAGCCAGGCCTTCATGC
TCGACCCACCTCATAGCTCAGATGGCCTCAACAACGCC-TCTCACAC---

-----GCCAAGTCCCGCTTTC
ACCCTGGCGTGGGGAGCGCTGCTGGCACGGAGC---GCAGCGTCCCCTC
AGCAACAGCTTGCTCTCTCCGCAACAAACCGAGGATCCCGCCGTCG---C
CTCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAACCGACTGGACT
TCGCAGCCTCGGCATACGACGCCGCT-----GATTTGCGCCGTAAC
GCGGCCACCTTGCTGTCGTACGCCGCGGCCGGAGTGAAGGCTC-----T
CCCCCTGCCGACCGCAGCTTGCTCCAACAGACCTCTGGGTTATTACGCGG
ACCCGTCGG---GCTGG---GGCGCGGCACGCCGCCAGTACTGT---
-----ACAAGTCGACCTCGGTCTTTCTTGCTGGCCACGAATCTGT
AGGGAGCAGAACGGGCA-----CAAACACTACCTAG-----TGGAGG
A---CGGATCGGACGC---CATCCAACGGAGAGG-----AT---T
AATGGCTCGGAGGAG---GCGAAAGCCAAAGACTT-----GTCTGA---
GTCTAGCTGGATAGAG---ACGCCATCTTCGATCAAATCAATTGACTCGA
GTGATTCTGGCATCTTTG---AGCAAGCAAAGCGGAGACGAATTCACCG
TCTGCCACACCA-----GTTACAGAAACGGTGTCTCCGTTGAAATC
TGAA-----TCAACAGCGAAGTCACGGAGCGAGAGGTGGCGTTGGGGA
TCAACCCGTTTCGCGGACGGCATGGGCGCCTTCAAGATCAACCACGGCTCC
CACGACATCGGCTCCGG---GCAGACGGCTTTCTCCTCGCAGGCG---CC
CGGCTAC---GCGGCGGCCGCCCTGGGG---CACCACCA-----CCACC
CGACGCACGTCAGCTCG---TACTCCACGGCCGCTTCAACTCCACCAGG
GACTTTCTGTTTCAAGAAACCGCGCTTCGGAGACGCCACGAG-----
CGCCGCGCAGCACAGCTTGTTTCGCTCCGC---CGCGGGGAGCTT---C-
-----GCGGGGCCACACGGACACTCGGATGCCGCGGGGCACCTGCTCTTC
CCCGGGCTCCACGAA---CAAGCCGCGAGCCACGCGTCTTCCAACGTCGT
CAACGGCCAGATGCGGCTGGGCTTTTCGGGGGACATGTACGGCCGCGCCG
ACCAGTACGGCCACGTCACGAGCCCGCGGT---CCGACCACTACGCGTCG
ACCCAGTTGCACGGCTACGGCCCCATGAACATGAACATGGCCGCGCATCA
CCACGGAGCCGGGGCCTTCTTTTCGGTACATGCGGCAGCCGATCAAGCAGG
AGCTCATCTGCAAGTGGGTGCGAGCCGGAGCAGCTGTCGAACCCCAAGAAG
GCGTGAACAAAACCTTTCAGCACGATGCACGAGCTCGTCACCCATCTGAC
GGTGGAGCATGTGGGGGGGCCCGAGCAGGCGAACACATCTGCGTCTGGG

AGGACTGCGCCCGGGAGGGCAAGCCGTTCAAAGCCAAATACAAACTTGTG
AATCATATCCGAGTGCACACTGGAGAAAAGCCCTTCCGTGTCCCTTCCC
CGGCTGTGGCAA

>Umbra limi

AGTCTCTTAATTTCGAGCCGAACCTCAGTCAACCAGGCGCCCTACTGGGGGA
TGACCAGATTTATAACGTTATCGTCACCGCCCACGCTTTTGTATAATTT
TCTTCATAGTTATAACCCATTATAAATTGGAGGGTTTGGTAATTGACTAATC
CCCCAATAAATTGGAGCCCAGACATGGCATTCCCTCGAATAAATAACAT
AAGCTTCTGGCTTCTCCTCCCTCCTCCTTCTTCTTTTAGCATCTTCAG
GGGTGAAGCTGGCGCCGGAACGGGGTGAACAGTTTATCCCCCCTGGCT
GGCAACCTCGCTCACGCCGGCGCCTCCGTAGACCTAACTATCTTTCCCT
CCACCTAGCTGGGGTCTCTTCCATTTTAGGGGCCATTAECTTCATCACAA
CAATCATTAACATAAAAACCCCCGCCATCTCCCAATATCAAACACCCTTA
TTCATCTGAGCTGTATTAATTAAGTGCCTCCTTCTACTTCTTTCCCTCCC
TGTTCTAGCTGCCGGAATTACAATACTTCTCACGGACCGAACTTAAATA
CCACCTTCTTTGACCCTGCAGGGGGAGGAGACCCCATTCTTTACCAACAC
CTCNN
NN
NN
NNTTCCCTGGAGCGGAACCTGCACCCGTCCAACCTGCCTGGGCATGCTGCT
GCTGTCCGATGCCACCAGTGCACCAAGCTGTCCGAGCTCTCCTGGGGAA
TGTGCCCTCAGCAACTTCCCAGCCATCTGCAAGACAGAGGAGTTCTGCAG
CTTCCCAAGGACATGGTGGTGAACCTCCTGTGCCACGAGGAGTTGGAGAC
AGACGACGAGAGGCTGGTCTACGAGGCCGCCCTCAACTGGGTGAACTACA
ACCTGGAGAGTAGGCACCTGCCACCTGCCTGAGCTGCTGCAGACCGTCCGC
CTGGCCCTCCTCCCGGCCATCTTTCTCATGGAGAACGTTTTCCACGGAGGA
GCTCATCAATGCCCAGCTGAAGAGCAAGGAGCTGGTGGATGAAGCGATT
GCTGCAAGCTGAAGATACTCCAGAATGACGGGGTGGTGAACAGCCCCTGC
GCCCCGCCCCGGAAGACCAGCCATGCCCTTTTCCCTCCTGGGAGGACAGAC
GTTTCATGTGCGACAAGCTGTACCTGGTTCGACCAGAAGGCCAAGGAGATCA
TCCCCAAGGCCGACATCCCCAGCCCCAGGAAGGAGTTCAGCGCCTGCGCC
ATTGGCTGTAAGGCTACGTGACCGGTGGTA--GGGGCTC-TGAGAATGG
CGTGTCAAAGATAACATGGGTGGAGACACAGNNNNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNGGATGAGTACATCGTAGT
GTTTCAGTCGCTCCGTTAACAGGCTCATCTTGAACGAAGCGGAGCTGATCA
TGGCATTATCGCAGGAGTTCCAGATGAGAACCATAACGGTATCTCTGGAA
GATCAGACCTTCCCAGCATTGTCAAGGTCATCAGCGGGCCTCCATGTT
GGTCAGCATGCACGGAGCACAGCTTGTCTCATCTCTTCTCCTTCCCCGGG
GGGCGGTTGTGGTGGAGCTTTTCCCCATGCAGTCAACCCAGAGCAGTAC
ACCCCTTACAGAACCCTGGCCTCTCTACCAGGCATGGAGCTGCAGTATGT
AGCCTGGAGGAACATGCTGGAGGAGAACTCTGTGGCCTACCCAGAGAGGC
CCTGGGAGCAGGGAGGCATTGCTCACCTGGAGAAGGACGAGCAGGATCGC
ATCCTTGCCAGTAAGGAAGTACCAGGCACCTGTGCTGCCGCAATCCTGA
ATGGCTGTATCGTATCTACCAGGACACTATAGTGGACATCCCTTCTTTAA
TGGAGGCTCTCAG---AGAAGCATTGAAA---ACCAGGCCAAAACCGACA
AA---GGCCAAGCCTTCCAGCACAGTGCACCCAGGCCGAGTCAGAGAGCC
TCAGTGCCAGACGTCGGTCCAGGCCACCAATGAAGCCAAGCTGACTGTTT
CCTGGCAAATCCCCCTGGAACCTCAAGTACCTAAAGGTCAGGGAGGTGAAG
TANNNNNNNNNNNNNNNNAAGGGATCCAAGCAAGGGGACCCTGGAAGATCAAA
TAAATCCAGGCT
AACCCAGCACTGGAGGCTTTTGGTAATGCCAAAACAATAAGGAATGACAA
CTCTTCGCGTTTTTGGTAATTCATCCGCATTCACTTTGGAACCAGCGGGA
AACTGTCTCTGCCGACATTGAGACTTACCTTCTTGAGAAGTCCCGTATC

ACCGGGTCAAAGGCGTCTCTGCGAAACCCTTCATGGAGATCCATCCCACC
CTGGACGCTCTGCACTGCGATATCGGCAATGCCACAGAGTTCTACAAAAT
CTTCCAGGATGAGATAGGGGAGGTCTACCAAATCC---CAAC---CCTA
GCAAAGAGCTGCGCCGAGCTGGCGGTCTGCCCTTGACAAGCAACTAAGA
ACAAAGATGAAGCTGAAGCCTGTGATGAGGAT-----

-----CCTCTCGCCAC
CTTTCTCAAACGACATCCCTGGGTTTTATCATCGGCGTCGGTGTGGTTG
GGAACCTCCTGATCTCCATCCTACTGGTCAAAGACAAAAGCCTGCACCGT
GCGCCCTACTACTTCCCTTGACCTGTGCGCCTCGGATATCCTGCGCTC
CGCCATCTGCTTTCTTTTGTCTTACCTCTGTCAAGAATGGTTCCACCT
GGACGTATGGCAGCTAACCTGCAAAGTGATAGCCTTCCTCGGGGTGCTG
TCTTGCTTTACACAGCATTTCATGCTGTTCTGTGTGAGCGTGACACGCTA
CCTGGCCATAGCCCACCATCGCTTCTACACCAAAGGCTCACCTTCTGGA
CGTGTCTGGCAGTCATCTGCATGGTGTGGACGTTGTCAGTGGCAATGGCC
TTTCCACCGGTGCTAGATGTGGGGACATACTCATTTATAAGGGAAGAGGA
CCAGTGTACGTTCCAGCACCGCTCGTTCCGAGCCAATGACTCCCTCGGCT
TCATGCTGCTACTAGCCCTCATTCTTCTGGCTACCCAGCTTGTCTACCTC
AAGCTAATTTTCTTTGTCCACGACCGGCGGAAGATGAAACCAGTCCAGTT
TGTGCCCTGCCGTACGCCAGAACTGGACCTTCCATGGCCCTGGGGCCAGCG
GCCAGGCGGGCGGCTAACTGGCTAGCAGGGTTCGGCAGGGGCCCCACCCCT
CCCCTCTGCTAGGCATCAGGCAGAACAGCAACGCAGCTGGCCGGCGACG
CCTGTTGGTGTGACGAGTTTAAAACGAAAAGAGGATAAGTAGAATGT
TCTACATCATGACCTTCTTTTCTCACTCTGTGGGGACCATACTGGTG
GCCTGCTATTGGAGGGTGTGTTGCCAGGGGCCAGCAGTCCCTGGAGGCTA
TCTGACCGCAGCAGTGTGGATGAGCTTTGCTCAGGCGGGAGTCAACCCCT
TCATCTGCATCTTCTCCAACAGAGAG-----

-----ACAGGCGAAGTCACAGAAAAGAGAAGTTGCTTTGGGGATAAACCCG
TTCGCAGACGGGATGGGCGCTTTTAAAATCAACCACAGTTCTCACGACCT
GGGCTCCGG---GCAGACGGCGTTTTCTTCCCAAGCT---CCCGGCTAC-
--GCTGCAGCTGCGTTGGGT---CACCACCA-----CCACCCAACACAC
GTTAGCTCA---TATTCACCCGAGCCTTCAATTCACCCGGGACTTTCT
CTTCAGAAACAGGGGCTTCGGAGATGCGGCCAG-----CGCAC
AGCACAGCCTGTTTGCCTCAGC---AGCGGGAAGTTT---T-----GCA
GGGCCACATGGACACTCAGATACCGCGGGGCACCTGCTTTTCCCGGGACT
CCACGAG---CAAGCCGCGAGCCATGCATCTTCGAATGTGGTCAACAGCC
AAATGCGACTGGGCTTTACCGGGGACATGTACGGCCGGCCTGACCAGTAT
GGCCACGTTACCAGTCCCCGCT---CTGATCACTATGCCTCCACTCAGCT
TCACGGTTACGGCCCCATGAACATGAATATGGCGGCT---CATCACGGAG
CAGGGGCCTTCTTCAGATACATGAGGCAGCCGATTAAACAAGAGCTTATC
TGCAAATGGGTGGAACAGAGCAGTTGTCAAACCCCAAAAAGTCTTGCAA
CAAAACCTTCAGCACAATGCACGAGTTGGTGACACACCTGACGGTTGAGC
ATGTCGGTGGACCGGAGCAGTCGAACCATATCTGTTTTTGGGAAGAATGT
GTGCGAGAAGGAAAGCCATTCAAAGCAAATACAACTTGTAAATCATAT
CAGAGTTCACACCGGAGAAAACCATTCCCATGTCCATTCCCAGGTTGTG
GCAAA

>Xenentodon cančila

AGCCTACTTATTTCGGGCTGAGCTAGCTCAGCCAGGGGCTTTGCTGGGCGA
TGATCAAATTTACAATGTCATTGTTACTGCCCATGCCTTCGTTATAATTT
TCTTTATAGTAATACCAATTATGATTGGGGGTTTCGGCAACTGACTTGTG
CCTCTAATAATTGGAGCCCCGACATAGCCTTCCCCGAATAAATAATAT
AAGCTTTTACTCCTCCCACCCTCTTTCCTCCTGCTTTTAGCCTCCTCTG
GCGTTGAAGCGGGGCGAGAACAGGTTGAACTGTTTATCCCCGACTCGCT
GGAAATTTAGCACACGCAGGAGCCTCTGTAGACCTAACTATTTTCTCCCT
CCACCTTGCGGGGGTTTCTTCTATTTTAGGGGCTATTAATTTCAATTACCA
CTATTATTAACATAAAACCCCGCAATTTACAAATATCAAACACCCCTG
TTTGTATGGGCTGTCTAATTACAGCAGTCCTTCTTCTACTATCACTACC
AGTACTAGCTGCCGGAATTACAATGCTCTTAACAAACCAAATCTTAAATA
CAACCTTCTTTGACCCGGCGGGAGGGGAAGACCCAATCCTTTACAAACAT
TTATTC-----

-----TTCTTGAAAGAAACCTTCACCCGTCCAACCTGCCTTGG
CATGCTGTTGCTGTCTGACGCCACCAGTGTACCAAGCTGTCAGAGCTCT
CCTGGGGCATGTGTCTAAGCAATTTCCCTGCGATCTGCAAGACAGAAGAC
TTCTCCAACCTGCCAAAGATATGGTGGTGCAGCTTTTGTACACGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTATGAAGCAGCTCTGAACTGGA
TCAACTACGACCTGGAAAGGAGACACTGCCATCTTCCAGAGCTCCTGAGA
ACAGTCCGCCTCGCCCTGCTTCCCGCTATCTTTTGTATGGAGAACGTTTC
AACAGAAGAGCTGATCAACGCCAAGCAAAGAGCAAGGAACTGGTGGATG
AAGCTATTGCTGTAAAGCTGAAGATCTTGCAGAAATGATGGCGTTGTTAAC
AGCCCTTGTGCTCGACCAAGAAAACAGTCATGCCCTTTTTCTTCTCGG

TGGGCAGACGTTTCATGTGTGACAAGCTGTATCTGGTGGACCAGAAGGCCA
AAGAGATCATTCCAAAAGCAGACATTTCCAGCCCCAGGAAGGAATTCAGC
GCATGTGCAATTGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGGTC-
AGAGAAATGGCGTGTCCAAAGATGTATGGGTCTACGACACGGTCCACGAAG
AATGGTCAAAGGCGGCCCATGCTCATCGCCAGGTTCCGGCCACGGCTCT
GCGGAGCTAAAGCATTGCCTCTACGTTGTAGGAGGGCACACTGCTGCAAC
CGGCTGCCTCCCGCTTCTCCGTCTGGATGAATATATTGTTGTATTTAGT
CGTTCAACAACGAGGCTCATTCTGAATGAAGCAGAGCTGGTCATGGCGAT
GGCCAGGAGTTCCAGATGAGAGTAGTCACAGTATCCTTGGAAGAACAAT
CTTTTTCTAGTATCATCCAGGTGGTCAGTGGTGCTTCCATGCTAGTCAGC
ATGCATGGAGCCCAGCTTATCACATCCCTGTTTCTCCCCAGAGGAGCTGC
AGTTGTGGAGTTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACGCCAT
ATAAAAACCTTGCTTCCCTTCCAGGCATGGATCTTCACTACATCTCCTGG
AGGAACATTAAGGAGGAAAACACAGTCACCCATCCAGACAGGCCATGGGA
GCAAGGAGGGATTAGTCACTTGGGAAAAGAAGAGCAGGAAAGAATTCTGG
CAAGCAAGGAGGTCTCCAGGCACCTGTGCTGCCGTAACCCAGAGTGGCTC
TTCAGGATCTACCAGGACACTTTGGTGGACATCCCATCTTTTTTGGAGGT
CCTCAG---AGAAGGCATGAAG---TCAAAGCCCAGTATGAAGAA---GA
CCAAGGCAGTCAGTATAGTCCACCCTGGTCCGGTCCAGAGAAGCCCAGTGT
CAGACTTCAGTACAAAACACTAATGAGGCTAAACTCACCGTGTTTTGGCA
GATCCCCTGGAATCTGAAATATCTGAAAGTGAGAGAGGTGAAGTATGAAG
TGTGGATCCAGAAAAAGACACCAATAAAGGAACGTTGGAGGATCAAATC
ATCCAGGCAAACCCAGCACTGGAAGCCTTTGGCAATGCCAAGACTGCGAG
AAATGACAACCTCGTCTCGCTTTGGAAAATTCATTCGAATTCATTTTGGAA
CAAGCGGGAAGYGTGTCATCTGCTGATATTGAGACATACTTGTGAAAAAG
TCACGTGTTACCTTTCAGCTCAAGGCTGAGAGGAACTACCACATCTTCTA
CCAGATCCTGTCCAATCAGAAGCCAGAGCWNNGNACTTGGTGTCTCATCACCA
ACAACCCCTATGACTACTCCTACATCTCCAAGGAGAGGTAACAGTGGCC
TCCATTAATGACTCTGAGGAACTGATGGCCACTGACAGCGCCTTCGATGT
GCTTGGTTTTACCTCTGATGAGAAGATGGGTGTCTACAAGCTGACTGGTG
CCATCATGCACTATGGCAACATGAAGTTTAAACAGAAGCAGCGTGAAGAG
CAGGCTGAACCTGACGGGACAGAGGCGGCTGATAAATCAGCTTACCTGAT
GGGCTGAACTCTGCAGACCTCATCAAAGGCTTGTGCCATCCCAGAGTCA
AGGTGGGAAATGAGTATGTCACCAAGGGCCAAAGCGTGGACCAAGTCTAC
TATCCCAACAAGGAGGCCTTCAAGTGTGATGAGTGTGGGAAGCACTACAA
CACCAAGCTGGGATACAAGCGCCATGTGGCCATGCACTCCGCAACCGCCG
GGGATTTAACATGCAAGGTGTGCATGCAGAGTTACGAGAGCACGCCGTT
CTCTTAGAGCACCTAAAGAGCCACTCGGGAAGTCTTCAGGTGGTGCCAA
AGAGAAAAGCACCCCTTGTGACCACTGTGACCGACGTTTCTACACTCGGA
AGGATGTGAGACGGCATATGGTGGTCCACACAGGCCGCAAGGACTTTCTC
TGCCAGTACTGTGCCACGCTTTGGCAGGAAGGACCACCTGACGCGGCA
TGTGAAGAAGAGCCACTCGCAGGAGTCCTAAAGATCAAGACGGAGCCCC
CGGATATGTTGGGCTTGTAGCGTCAGGGTCCCCGCCGTGCCCTGTCAAG
GAAGAGCTCAGCCCCATGATGTGTGGTATGGCGCCAACAAAGACCCCAT
GATGGGCAAGTCCTTCCCTAGTGGGGCACCATTTCCCATGAGCATGTACA
ACCCCAACCAT-----CTCCAGGCCATGTCCAATTCGGGGTGGCTCAC
CCG-----CACCCCTCCCTGATGCCAGTTCCCTGTCTGCAGCTATGGG
CATGGGCTGCCACATGGAATATCTCATCTATGCTTCTTTCTCATTCATGG
GATGTTTACAAATCAGTGTGGATCCAATATCGTTAACCTGTTGGCTAGT
AACTCTCCGAGTGTTCGTATGCTCTGACCCAGCAAAAATATTTTCAGTAA
TTATAGTCTGTTATTTGGTTTTTACATTTATGAGCCAATTGAGTACTGGA
ACTCCACAGTGCAGGAGCACCTCAAGACTCTGAGTCATGGCTTCAACAAG
ATCTCCTGGATGGACAACCTTTTTTCCACTACCTGCGGGTAGTAAATGTGAG

TGCATCAACCAAGAGTACTTCATCAACATCCTCAAGGGTTCCCTCCTAC
GAAGCCAGAGTACCAGCATTTACCCGAGGATATCATATTCTCTAAGA--
-ACGCGGAGACAG-----ACGAATATGACATCATAGCCTCACGGATGTA
CTTGGTCGCGCGGACCACTGAGAAGAAGCGAGAAGAGGTGGTGGAGCTTT
TAGAGAACTTCGCCCTTGATGCTGATCAACAGCATCAAATTCATTGCC
TTCAATCCCACGTTTGTTTTCATGGACCGCTATAGCTCCTCTGTTATCTC
GCCATCCTGACCTCAGGCTTACAGCTACTTACCATCCTCATTCTCACTT
TCTTCCGGTCATCAATCCATTGGGAACTTCTGGCTCATTCTCACGGTG
ACTTCCGTGGAGCTGGGCGTCTTGGGTTTGGATGNNNNNNNNNCAGTTGAGTGGCAGCC
AGCTCTCAAGAATGTGTCTACATCTTGCGGTGTGGCATTATTAACGGGC
TCTCTGGGTGGGCGTCTCAGTGGATGACTCCCCAGCTGACACTATCACT
CGTCGCTTTCGCTATGATGTTGCGCTGGTGGCAGCATTAAGGATCTGGA
AGAGGACATCATGGAGGGGCTGACACAGAATGGGATGGAAGACAGCGCTT
GCACCTCAGGCTTTAACGTCATGATCAAGGAATGCTGTGACGGCATGGGG
GATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGTTCCCTGAGAAAGCCGT
CCGCTTCTCTTTCAGTGTATGTCTATCTCTGTCCACGGAGAAGGTGACA
AT-----GAAGCGGTTACAATTTTC
ACTGAACCAAAGCCAACTCCGAGCTGTCTTGTAAACCGCTTTGCCCTGAT
GTTTGTAGACGAGTCAGACCACGAGACAGTCACAGCTGTTCTGGGGCCTA
TAGTTGCAGAGCGTAATGCAATGAAAGAGAGCCGGTTAATCCTATCCATG
GGAGGCTTGCCACGCTCCTTTCGCTTTCAGTTTACAGGGGTACAGGATATGA
TGAAAAGATGGTGCCTGAGATGGAGGGCCTGGAGGCCTCTGGGTCAACGT
ATGTCTGCACTCTGTGCGACTCAAGCCGTGCGGAGGCTGCTCAAAACATG
GTGTTACATTCCATCACACGCAGCCATGATGAGAATCTAGAACGTTATGA
AATATGGAGAACCAACCCATTTTCTGAGTCTGTGGAAGAGCTACGAGACA
GAGTCAAAGGAGTCTCTGCCAAGCCGTTCCCTGGAGACGCAGCCCACGCTA
GATGCATTACACTGCGACATTGGCAATGCCGTTGAATTCTACAAAATCTT
CCAGGACGAGATTGGAGAAGTTTACAAAAAGT---CAAC---CCCAGTC
GCGAAGAGCGACGCAGCTGGAGGGCAGCCTTAGATAAACACCTGAGGAAG
AAGATGAAGCTCAAACCAGTCATGAGGATGAATGGGAACCTATGCCCGAAG
ACTAATGACCCTGGAGTCTGTGGAGGTGGTGTGTGAGCTGGTGGCCCTCAG
AGGAGAGGAGAGAGGTCCTGAAAGAGCTTATGAAACTCTACCTCGAGATG
AAGCCTGTGTGGCGGCCACCTGCCCGCCAAGGAGTGTCCCGAGCAGCT
CTACGGCTACAGTTTAACTCACAGCGTTTTGCTGATCTCCTCTCCTCTG
CCTTTAAATATAGGTACAACGGAAAGATAACCAATTACCTGCACAAGACC
CTGGCTCACGTGCCTGAAATCATAGAGAGAGATGGATCTATTGGAGCCTG
GGCCAGCGAGGGGAACGAGTCAGCAAACAAATCATACACTATCGAGATGG
GTCTCTGGGGCCTCAATGGAAGGAGAACCCACAGCCTTTCACCTGCTCC
ATTGAAGACCCACCAAGCAGACCAAGTTCAAGGGTATCAAGACCTATAT
ATCGTACCGGGTGACACCGAGCCACACGGGGTGTCTGTTTACCGGCGCT
ACAAACACTTTGACTGGCTGTACAATCGACTGCTGCACAAGTTCACTGTG
ATCTCTGTGCCTCACCTGCCCCGAGAAGCAGGCCACAGGGCGATTTCGAGGA
AGACTTCATCGAGAAGCGGAAAAGGCGTCTGATACTGTGGATGAACCACA
TGACTAGTCACCCAGTCTCTCGCAGTACGAAGGCTTTGAACACTTTCTG
ATGTGTGCAGACGATAAGCAGTGGAAAGCTGGGCAAGAGGCGGGCAGAAAA
GGATGAAATGGTGGGCGCCATTTTCATGCTGACCCCTCAAATCCCAGTG
AGCACCAAGATCTGCAGGATGTTGAGGAGAGGGTTGACAACCTCAAGGCC
TTTGCCAAGAAGATGGATGACAGCGTGTGATGCAGCTTACTCATGTTGCCTC
GGAGCTAGTGCCTAAACACCTGGGTGGATTACAGGAAAGAGTTCCAGCGAC
TAGGACATGCCTTCCAGTCTATAAGCCACGCATTCCAAGTGGATCCCTCCC
TATAGGTCAGAAACCTCAACAGCGCCATCTCTCATNNNNNNNNNCAGTTCCCTCAAAC
TGACCTCTCTGGGTTTCATCATTGGAGTCCGGTGTGGTAGGGAACTCCTG
ATCTCCATCTTGCTGGTTAAAGACAAGAGCCTGCATCGAGCACCTACTA

TTTTTTGCTGGATCTGTGCGCCTCTGACATCCTGCGCTCTGCCATCTGCT
TCCCCTTTGTCTTCACCTCAGTAAAGAATGGTTCTGCCTGGACCTACGGC
ACACTGACCTGCAAAGTGATTGCCTTCCTGGGTGTGCTTTCGTGTTCCA
CACAGCATTCATGCTGTTCTGTGTCAGCGTCACCCGCTACCTGGCCATTG
CTCATCACCGTTTTCTACACCAAGAGGCTGACTTTCTGGACGTGTCTTGCG
GTCATCTGCATGGTGTGGACGTTGTCAGTGGCTATGGCGTTCCCGCCTGT
GCTCGATGTAGGGACGTACTCATTTATCCGGGAGGAGGACCAGTGCACGT
TTCAGCACCGTTCCCTCAGGGCGAATGATTTCGCTGGGCTTCATGCTACTG
CTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAAACCTCATTTT
CTTCGTCCATGACCGTCGAAAGATGAAGCCTGTCCAGTTCGTGCCTGCCG
TTAGCCAGAACTGGACCTTCCACGGACCCGGCGCCAGTGGACAGGCGGCG
GCTAACTGGCTGGCTGGATTTGGTCGAGGCCCCACCCCGCCTACTTTGCT
GGGCATCCGACAGAACAGCAATGCAGCAGGCCGAGGCGTCTACTTGTAT
TGGATGAATTCAAAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATG
ACGTTTTTCTTCCCTGGCTTTGTGGGGGCCCTACCTGGTCGCCTGCTACTG
GCGAGTGTGTTGCAAGGGGCCCGTGGTCCCTGGAGGCTACCTGACAGCAG
CTGTGTGGATGAGCTTTGCCAGGCTGGGGTCAACCCTTTTATCTGCATC
NNNNNNNNNNNNNNNGCCAAAACCTCGCTTTCACCCCTGGCATGGGGACTGGTCCCTGGCACGGAGC-
--GCAGCGTCCCACTCGGCAACAGCTTGCTGTCCCCGCAGCAAACCGAGG
AGCCCACTGTTGCCACCCCCCGCAGCGATGGTTTGTACCC---CTGCC
AACAACCGACTGGACTTTGCAGCCTCGGCATACGACGCCGCC-----
-GATTTCCGCGGTAACGCAGCCACCTTGCTGTCCCTACGCAGCGGCCGGAG
TGAAAGCTC-----TTCCCCTGCCGACTGCGGGCTGCTCCAACCGGCCT
CTTGGCTATTACGCAGACCCGCTCTG---GCTGG---GGAGGACGCACGCC
GCCGCAATACTGCGGCGTAAATAGTAAATCCAGCTCGGTGTTTTCTGCT
GGCCTGCCAACTCCATCGGTGGCAGAGCCGGCA---CC---AACTACCTG
T-----CCGAGGA---GGGA---GAGTC---CCTCGCCACGGAGAG
GTCGCC---AT---CGGCGGCTCGGAGGAG---ACAAAAGCCAAGGACA
TGAC---ATCCGA---GTCGAGCTGGATAGAG---ACGCCGTATCCATT
AAGTCCATCGATTGAGCGATTCTGGGATCTTTG---AGCAAGCCAAACG
GAGAAGAATCTCACCTTCTGCCACACCG-----GTTTCAGAGACAG
TGTCCCCGCTAAAATCCGAGCATCACTCAACAGGCGAAGTCACAGAGAGA
GAAGTGGCGCTGGGGATAAACCCTGTCGCGGATGGGATGGGCGCCTTCAA
AATAAACACAGCTCCCACGACATCGGCTCCGG---ACAGACGGCGTTCT
CCTCCCAGGCG---CCCGGCTAC---GCGGCGGCGGCYCTGGGA---CAC
CACCA-----CCACCCGACCCACGTTGGCTCC---TACTCCACGGCGGC
GTTCAACTCCACCAGGGACTTTCTTTTCAGAAACAGGGGCTTTGGGGATG
CCGCCG-----GGCGCAGCACAGCCTGTTTGCCTC-----
--CGGAAGTTT---C-----GCAGGGCCACATGGACACTCAGATGCGGC
GGGGCACCTGCTCTTCCCGGACTCCACGAG---CAAGCAGCCAGCCACG
CATCTTCCAACGTGGTCAACGGTCAGATGAGGCTGGGCTTCTCGGGGGAC
ATGTACGGGCGGGCCGAGCAGTACGGCCACGTTACAAGCCCACGAT---C
CGACCACTATGCTTCCACTCAGCTGCACGGCTACGGCCCCATGAACATGA
ATATGGCCGCG---CACCACGGAGCGGGGCCTTCTTCAGATACATGAGG
CAGCCCATCAAACAGGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCT
GACGAATCCAAAAAGTCGTGCAACAAAACCTTTCAGCACGATGCACGAGC
TCGTGACCCACCTGACTGTTGAGCATGTGGGGGGACCGGAGCAGACCAAC
CACGTCGCTTCTGGGAGGACTGCTCCAGAGAAGGGAAGCCCTTCAAAGC
CAAATACAACTCGTGAATCATATCAGAGTACACACCCGGAGAAAAACCCT
TTCCGTGTCCGTTTCCCTGGTTGTGGCAA
>Xenodermichthys copei
AGCCTTCTAATCCGCGCCGAGCTATCGCAACCGGGTGCCCTTCTAGGCGA
TGATCAAATTTATAATGTCATCGTTACAGCACACGCCTTCGTAATAATCT

-----GAAGTCAC
AGACAGAGAAGTGGCTTTGGGGATAAATCCGTTGCGCGACGGGATGGGCG
CTTTCAAATCAACCACAGCTCCCACGATCTTGGCTCGGG---GCAAACG
GCGTTTGCCTCGCAGGCG---CCCGGTAC---GCAGCCGCTGCCCTGGG
A---CACCATCA-----CCACCCTACCCATGTCAGCTCC---TACTCCA
CCGCGGCGTTCAATTCTACCCGGGACTTTCTCTTTCGGAATCGGGGATTC
GGAGACGCCACTAG-----CGCGCAGCACAGTCTCTTCGCCTC
AGC---TGCGGGAAGTTT---C-----GCAGGGCCACATGGACACACCG
ATGCCACGGGACACCTGCTCTTCTCGGGACTGCACGAG---CAAGCGGCG
ACCCACGCGTCTTGAACGTGGTGAACAGTCAGATGCGCCTGGGCTTTTC
GGGGACATGTACGGCAGAGCCGAGCAGTACGGTCATGTAACGAGCCCC
GGT---CCGAGCACTACGTTTCGACTCAGTTGCACGGCTATGGCCCTATG
AACATGAATATGGCTGCC---CATCACGGGGCAGGGGCCTTCTTCCGTTA
CATGAGGCAGCCGATCAAACAAGAGCTCATCTGCAAGTGGGTGCAACCAG
AGCAGCTGTGCAATCCGAAAAAGTCTGCAACAAAACTTTCAGCACGATG
CACGAGCTCGTGACCACCTCACGGTGGAAACAGTCGGGGGACCGGAACA
GTCGAATCACATTTGCTTTTGGGAAGAGTGTCCGCGAGAAGGGAAACCGT
TTAAAGCCAAGTACAAACTTGTAATCATATTAGAGTGCACACCCGAGAG
NN

>Xiphias gladius

-----NNNNNNNGAGAAACCTTACCCTTCTAACTGTCTTGGCATGCTGT
TGCTGTCCGACGCCACCAGTGCACCAAGCTGTCAGAGCTCTCCTGGGGC
ATGTGCCTCAGCAATTTCCCTGCTATTTGCAAGACAGAGGACTTCTCCA
ACTGCCCAAAGATATGGTGGTGCAGCTTTTGTGCGCATGAGGAGCTAGAGA
CGGAAGATGAGAGACTGGTTTTATGAAGCTGCCCTTAACTGGATCAATTAT
GACCTGGAAAGGAGGCATTGCCACCTTCCAGAGCTTCTGAGAACGGTCCG
CCTCGCCCTGCTACCTGCCATCTTCTGATGGAGAATGTCTCGACAGAAG
AGCTGATCAACGCCCAGGCCAAGAGCAAGGAAGTGGTGGATGAAGCCATC
CGCTGTAAGCTGAAAATCCTGCAGAAAGTGCAGGCGTTGTTAACAGCCCGTG
TGCTCGACCAAGAAAACCAGCCATGCCCTCTTCTTCTGGGAGGGCAGA
CTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAGGCCAAAGAGATC
ATCCCCAAAGCTGACATCCCAAGCCCCAGGAAGGAGTTCAGCGCCTGCGC
CATCGGCTGCAAGGTGTACATCACTGGTGGGA--GAGGCTC-AGAGAACG
GTGTGTCCAAAGATGTATGGGTGTACGACACCGTCCACGAAGAATGGTCC
AAAGCAGCTCCCATGCTCATCGCCAGGTTTGGCCATGGCTCTGCGGAGCT
GAAACACTGCCTTTACGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTGA

TGATTACATTGTTGTTTTTCAGTCGTTCAAC
AACAAAGGCTGATACTTAACGAAGCAGAGCTTATCATGGTGTGGCCAGG
AGTTCCAGATGAGAGTGGTCACACTATCCCTGGAGGAACAGTCTTCCCT
AGTATCGTCCAGGTGATCAGTGGTGTTCATGTTAGTCAGCATGCACGG
AGCTCAGCTTATCACCTCACTCTTCCCTCCCAGAGGAGCTGCTGTGGTGG
AACTGTTCCCTTTGCTGTGAACCCAGAGCAGTACACACCATATAAAACC
CTTGCCCTCCCTTCCAGGCATGGACCTTATTATATCTCCTGGAGGAACAC
TAAGGAGGAAAACACGATCACTCACCCAGACAGACCCTGGGAACAAGGAG
GCATTGCTCACTTGGAGAAGGAGGAGCAGGAGCGAATACTGGCCAGTAAG
GACGTCCCTAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTTTTCCGGAT
CTACCAGGACACTTTGGTGGACATCCCTTCTTTCTGGAAGTCATCAA--
-AGAGGGCATGAAG---ACCAAGCCCAGCTTGAAGAA---GTCAAAACCG
GCCAGCACTGTCCACCCAGGCCGAGTCAGAGAACCCTAAATGTCAGACCTC
AGTACAAAACCAATAATGAGGCTAAACTCACAGTCTCCTGGCAGATCCCCT
GGAATCTGAAATACCTGAAGGTAAGAGAGGTGAAGTATGAGGTGTGGATC
CAGAAAAAAGACACCAGCAAGGGGACGCTTGAGGATCAAATCATCCAGGC
GAACCTGCGCTGGAGGCATTCCGGCAACGCCAAAAACATTAAGAAACGACA
ACTCGTCTCGTTTTGGAAAATTCATTTCGAATTCACCTCGGTACGAGTGGC
AAACTGTCTCTGCCGAYATTGAGACGTACCTGCTGGAGAAGTCACGTGT
CACCTTTCAGCTCAAGGCTGAGAGGAACCTACCACATCTTCTACCAGATCC
TGTTCAATCAGAAGCCAGAGCTTCTGGACATGCTGCTGATCACCAACAAC
CCGTACGACTACTCCTACATCTCCAAGGAGAGGTAACAGTCGCCCTCCAT
CAACGACTCGGAGGAGCTGATGGCCACCGACAGCGCTTTTGATGTGCTCG
GTTTTACTCCAGAGGAGAAGATGGGCGTCTATAAACTGACTGGTGCCATC
ATGCACCTACGGCAACATGAAGTTCAAACAGAAGCAGCGGGAGGAGCAGGC
TGAACCTGATGGGACGGAGGCTGCTGATAAATCAGCTTACCTAATGGGGC
TGAACCTGTCAGACCTCATCAAAGGCCTGTGCCATCCAGAGTCAAGGTA
GGAAATGAATATGTTACCAAAGGCCAAAGTGTGGACCAAGTCTACTACCC
CAACAAGGAGGCCTTTAAATGTGAGGAGTGTGGGAAGCACTACAACACCA
AGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACAGCAGGGGAT
CTCACCTGCAAAGTGTGCATGCAGAGCTATGAGAGTACACCTGTCTCCT
GGAGCACCTCAAGGCCACTCTGGGAAGTCTTCGGGTGGTGCCAAGGAGA
AAAAACACCCGTGCGACCACTGTGACCGTTCGTTTACACACGGAAGGAT
GTGAGACGGCACATGGTGGTCCACACGGGCCGAAAGGACTTCTGTGCCA
GTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACACGGCACGTGA
AGAAGAGCCACTCACAGGAGCTGCTGAAGATCAAGACGGAGCCTCCGGAT
ATGTTAGGTCTTTTAGCTTCTGGATCCCCACCTTGCTCTGTGAAAGAGGA
GCTCAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCCCATGATGG
GCAAACCTTTCCCTAGTGGGGCCCCCTTTCCAATGGGCATGTACAACCC
CACCAT-----CTCCAGGCATGTCCAATACTGGGGTGGGTCACCCA--
----CACCCGTCCCTAATGCCAGTTCCTTGTCTGCAGCTATGGGCATGG
GCTGTCACATGGAATATCTCATCTACGCCTCTTTCATTTCATGGGATGC
TTACAAATCAGTGATGGATCAAATATCGTCAACCTGCTGGCTAGTAACTC
TCCGAGTGTTTTCGTATGCTCTGACCCAGCAGAAATACTTCAGTAACTACA
GTCTGTGATCGGGTTTTACATTTACGAGCCCATCGATTACTGGAACCTCC
ACGGTGCAGGACCACCTTAAGACTCTGAGTCATGGCTTCAACAAGATCTC
CTGGATGGACAACCTTTTCCATTACCTGCGGGTGGTGAATGTGAGTGCAT
CAACCAAGAGTGACTTCATCACCATCCTTAAAGGCTCTTTCCTGCGCAGC
CCAGAGTACCAGCACTTCACTGAGGACATCATATCTCCAAGA---ATCG
TGAGACTG-----ACGAGTACGATATTATTGCCTCACGGTTGTACTTGG
TGGCGCGGACGACTGAGAAGAAGCGAGAAGAGGTGGTTGAGCTATTGGAA
AAGCTTCGTCCATTGATGCTAATCAACAGCATCAAGTTCATTGCCTTCAA
TCCCACATTTGTGTTTCATGGACCGCTACAGCTCCTCTGTAATCTCACCCA

TTCTCACCTCAGGCTTCAGCATACTCACTATGCTCATTCTCACTTTTTTC
CTGGTCATCAACCCCTTGGGGAACCTCTGGCTCATCCTCACGGTTACGTC
TGTAGAGCTGGGCGTCTTGGGTTTGATGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGAG
TGTCACCTTTGCAATGTTG
GCATTATTAATGGGCTCTCTGGATGGGCTTCCTTGGTGGATGAACCCCT
GCTGACACCATCACTCGGCGGTTTCGATATGATGTAGCTCTGGTGTGAGC
ATTAAGGATCTGGAGGAGGACATCATTGAGGGCTGAGAGAGAGTGGGA
TGGAAGACAGTGTCTGCACTTCAGGCTTTACTGTCATGATCAAGGAATGT
TGTGATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGCTGT
TCCCGAGAAGGCTGTGCGTTTTCTCTTCACTGTTATGTCTGTCTCTGTCC
AAGCAGACGATGAGGAG-----GAG
GAGGTTACCATCTTCACTGAGCCAAAACCAAACCTCAGAAGTGTCTGTAA
GCCCCTTTGCCTGATGTTTGTGGATGAGTCAGACCATGAGACGCTCACAG
CTGTCTGGGGCTATAGTTGCAGAGCGTAATGCGATGATAGAGAGCAGG
CTCATCCTGTCCATGGGCGGCTGCTTCGCTCCTTCCGCTTCCGCTTCAG
AGGCACGGGATACGATGAGAAGATGGTGCAGAGATGGAAGGCTGGAGT
CCTCGGGTTCCACATATATCTGCACTCTGTGTGACTCCACTCGGGCAGAG
GCCTCTCAAAACATGGTGTACTACTCCATAACCCGCTGTCATGAAGAGAA
CCTGGAACGTTACGAAATATGGAGATCCAATCCCTTCTCTGAGTCTGTAG
ACGAGCTGCGAGACAGAGTCAAAGGGTCTCTGCCAAGCCCTTCATGGAG
ACCCAGCCCACACTAGATGCATTACACTGTGACATTGGCAATGCCACTGA
GTTCTACAAAATCTTCCAGGACGAGATTGGGGAGGTGTACCAAAAGGT--
-CAAC--CCTAGCCGGGAAGAGCGGCGCAGCTGGAGGGCAGCCCTAGAT
AAAGAGCTGAGGAAGACGATGAAGCTTAAACCGGTAATGAGGATGAATGG
GAACTATGCCCGCAGGCTAATGACCCTGGAAGCTGTGGAGGTGGTATGTC
AGCTGGTGCCTTCAGAGGAGCGGAGGGAGGCCCTGAGGGAGCTTATGAGG
CTCTACCTCCAGATGAGGCTGTGTGGCGGCCACCTGCCAGCCAAAGA
ATGCCCTGACCAGCTGTGCCGCTACAGCTTTAACTCCAGCGCTTTGCCG
ACCTCCTCTCCTCTACCTTCAAATACAGGTACAACGAAAGATAACCAAT
TACCTTACAAAGACCCTGGCCCATGTGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNTCGTACACCATTGAGATGGGT
CCCTTGGGGCCCCGGTGAAGGAGAACCACAGCCTTTCTCCTGCTCCAT
TGAAGACCCACAAAACAGACAAAGTTCAAGGGCATCAAGACCTACATTT
CGTACCGGGTCACGCCGAGTCACACAGGGCGTCCCGTCTACAGGCGTTAC
AAACACTTTGACTGGCTGTACAACCGCTTACTGCACAAGTTCACTGTGAT
CTCTGTGCCTCACCTGCCTGAGAAGCAGGCTACGGGGCGATTTGAGGAAG
ACTTCATCGAGAAGCGTAAGAGACGACTGATACTGTGGATGAACCACATG
ACCAGTCACCCAGTCTTTCCAGTATGAAGGCTTTGAGCACTTTCTGAT
GTGTGCTGACGACAAGCAGTGGAAACTGGGAAAGAGACGGGCTGAGAAGG
ACGAGATGGTGGGCGCCATTTTCATGCTGACCCTCCAGATCCCTAACGAG
CACCAGGACCTTACAGGACGTAGAGGAGCGGGTTGACTCCTTCAAGTCCTT
TGCTAAAAAATGGACGACAGCGTGATGCAGCTCACACATGTTGCCCTCAG
AGCTGGTGCCTAAACACCTAGGTGGGTTTCCAGGAAGGAGTTTCCAGCGGCTG
GGAATGCTTTCCAGTCTATCAGCCAGGCATTCATGCTGGACCCTCCCCA
CAGCTCAGACACCTTCAACAACGCCATATCCCATNNNNNNNNNNNNNNNNNNNNCAAACCTGACCTCTCTG
GGTTTCATCATTGGAGTCGGTGTGGTTGGAAACCTCCTGATCTCCATCCT
GCTGGTCAAAGACAAGAGCCTGCACCGAGCGCCCTACTATTTCTCTGCTGG
ACCTGTGTGCCTCTGATATCCTGCGCTCTGCCATCTGCTTCCCTTTGTC
TTCACCTCGGTCAAGAAATGGATCTGCCTGGACCTATGGCACGCTGACCTG
CAAAGTGATCGCCTTCCCTGGGTGTGCTCTCCTGTTCCACACGGCGTTCA
TGCTATTCTGTGTGCTGACTCGCTATCTGGCCATCGCACATCACCGT
TTCTACACCAAGAGGCTGACCTTCTGGACCTGTCTGGCTGTGATCTGCAT
GGTGTGGACGTTGTCAGTGGCCATGGCATTCCCGCGGCTGCTAGACGTAG

GGACGTACTCTTTTCATCCGGGAGGAGGACCAGTGCACATTCCAGCACCGT
TCCTTCAGGGCAAATGATTTCGCTGGGCTTCATGCTCCTGTTGGCTCTCAT
CCTCCTGGCCACACAGCTGGTTTACCTCAAGCTCATCTTTTTTTGTCCACG
ACCGTCGAAAGATGAAGCCTGTACAGTTCGTGCCTGCTGTGAGCCAGAAC
TGGACCTTCCACGGGCCAGGCGCCAGTGGTCAGGCGGCAGCCAACTGGCT
GGCTGGATTTGGTCGAGGCCCCACCCACCTACTTTGCTGGGCATCCGGC
AGAATAGCAACGCAGCGGGCCGAGGCGTCTACTGGTATTGGATGAATTC
AAAACGGAGAAGAGGATTAGTAGGATGTTCTACATCATGACGTTTTTCTT
CCTGGCACTGTGGGGGCCCTATCTGGTTGCCTGCTACTGGCGGGTGTG
CAAGGGGCCCGTAGTCCCTGGGGCTACCTGACGGCAGCCGTGTGGATG
AGCTTTGCCAGGCTGGGGTCAATCCTTTTCATCTGCATNNNNNNNNNNNNNNNNNGCCAAATCTCGC
TTTCACCCTGGCGTGGGGACTGGTCTGGCACGGAGC---GCAGCGTCCC
ACTCGGCAACAGCTTGCTATCCCCGCAGCAAACCGAGGAGCCCACTGTTG
CCACCCCCCGCAGCGATGGTTTGTACCC---CTGCCAACAAACCGACTG
GACTTTGCTGCCTCGGCATACGACGCCGCC-----GATTTTCGCCGG
TAACCGCGCCACCTTGCTGTCTACGCAGCGCCGGAGTGAAGGCTC---
---TTCCCTGCCGACTGCAGGCTGCTCCAACCGGCTCTTGGCTATTAC
GCAGACCCGTCAG---GCTGG---GGAGGACGCACGCCCGCCGAGTACTG
TGGCGTGAATAGCAAATCCAGCTCGGTCTTTTTCCTGCTGGCCCGCTAACT
CCATCGGTGGCAGAGCGGGCA---CC---AACTACCTGG-----GC
GAGGA---GGGA---GACTC---TATCCCGACAGAGAGATCACCG---AT
---CGGCGGCTCGGAGGAG---ACCAAACCAAGGACATGAC---ATCTG
A---GTCGAGCTGGATAGAG---ACGCCGTCTCCATTAAGTCCATCGAT
TCAAGCGATTCCGGTATCTTTG---AACAGGCCAAAAGAAGGCGAATCTC
ACCTTCTGCCACGCCG-----GTTTCAGAGACAGTGTCCCGTTAA
AATCGGAGCATCACTCAACAGGCGAAGTACAGAGAGAGAAGTGGCGTTG
GGGATAAATCCATTTCGCGGATGGGATGGGCGCCTTCAAATCAACCACAG
CTCCCACGATATCGGCTCCGG---ACAGACGGCGTTTTCTCCCAGGCG-
--CCCGGCTAC---GCAGCAGCCGCCCTGGGA---CACCATCA-----C
CACGCGACCCACGTTGGCTCT---TACTCCACCGCGGCTTTCAACTCCAC
CAGGGACTTTCTCTTCAGAAATCGGGGTTTTCGGGGACGCCACCGG-----
-----GGCGCAGCACAGTTTTGTTTCGCTC-----TGGAAGTTT-
--C-----GCAGGGCCACATGGACACTCAGATGCAGCGGGTACCTGCT
CTTCCCAGGGCTCCACGAG---CAAGCGGCAGCCATGCCTCTTCCAACG
TGGTCAACAGCCAGATGCGGCTGGGCTTCTCGGGGACATGTACGGACGG
GCMGACCAGTATAGCCACGTTACAAGCCACGGT---CCGACCACTATGC
YTCGACCCAGCTGCACGGCTATGGCCCCATGAACATGAATATGGCCGCA-
--CACCACGGTGCAGGGGCCCTTCTTTCGGTACATGAGGCAGCCCATCAA
CAAGAGCTCATCTGCAAGTGGATCGAGCCGGAGCAGCTGACAAATCCCAA
AAAGTCGTGTAACAAAACCTTTTAGCACGATGCACGAGCTTGTGACCCATC
TGACGGTGGAGCATGTGGGGGGACCAGAGCAGACCAACCACGTCTGCTTC
TGGGAAGATTGCTCCAGAGAAGGAAAGCCTTTCAAAGCCAAATACAACT
TGTAATCATATCAGAGTACACACCGGAGAAAAGCCCTTTCCGTGTCCGT
TCCCCGGCTGTGGCAA

>Yarrella blackfordi

AGCCTGCTTATCCGAGCGGAGTTAAACCAACCCGGTGCCCTTCTAGGCGA
CGACCAAATTTATAATGTCATTGTTACGGCACATGCCTTCGTAATAATTT
TCTTTATAGTAATAACCAATTATAATCGGAGGCTTTGGAACTGACTAATT
CCTCTCATAATTGGCGCCCCCGACATAGCATTCCCCGAATAAACAACAT
AAGCTTTTGGCTCCTCCCTCCCTCCTTTCTTCTCTACTTGCTCCTCCG
GAGTTGAAGCCGGGGCCGGAACCTGGCTGAACAGTCTACCCCTCTCGCC
GGCAATTTAGCCCACGCAGGAGCTTCGGTCGACCTGACCATTTTCTCCCT
CCATCTTGACAGGAGTTCTTCAATCCTCGGATCAATCAACTTTATTACCA

CTATTATTAATATAAAAACCCCCAGCCATCTCCCAATATCAGACACCCCTC
TTCATCTGAGCCACTCTTGTTACCACTGTTCTTCTTCTTTTGTCCTCCC
GGTTCTAGCTGCTGGAATTACTATGCTTCTAACAGACCGAAACCTAAACA
CAACCTTCTTCGACCCGGCAGGGGGAGGAGACCCATTTCTCTACCAACAC
CTTTTCTGATTCTTTGGGCACCCGGAAGTATATATTTCTAATTCTTCCAGG
CTTCGGCATAAATTTCCCATATTGTCGCCTATTATTCAGGAAAGAAAAGAGC
CCTTTGGTTATATGGGGATGGTCTGAGCTATAATAGCCATCGGACTTCTA
GGCTTTATTGTTTGGAGCCATCACATGTTTACAGTCGGAATAGATGTAGA
CACCCGAGCCTA---CTGGAGAGGAACCTGCACCCGTCCAACCTGTCG
AATGCTGCTCCTCTCAGACGCCACCAGTGCRCOAAGCTGTCGGAGCTGT
CCTGGGGCATGTGCCCTCAGCAACTTCCCCGCCATCTGCAAGACGGAGGAC
TTCTTGCAGCTGCCCAAAGACATGGCGGTCCAGCTGCTGTCCCACGAGGA
GCTGGAGACGGAGGACGAGAGGCTGGTCTACGAGGCCGCCCTCAACTGGG
TCAACTACGACCTGGAGAGGCGGCCTGCCACTTGCCAGAGCTGCTGAGA
ACCGTTCGTCTGGCCCTGCTGCCCGCCATCTTCCCTCATGGAGAACGTCTC
CACGGAGGAGCTGATCAACGCCAGACCAAGAGCAAGGAGCTGGTGGACG
AGGCCATCCGCTGCAAGCTGAGGATCCTGCAGAACGAGGGCGTGGTCAAC
AGCCCGCTGGCCCCGGCCAGGAAGACCAGCCACGCCCTCTTCCCTGCTGGG
CGGGCAGACCTTTCATGTGTGACAAGCTGTACCTGGTGGACCAGAAGGCCA
AGGAGATCATCCCCAAGGCGGACATCCCCAGCCCCAGGAAGGAGTTCAGC
GCCTGTGCCATCGGCTGCAAGGTCTACATCACCGGAGGCA--GGGGCTC-
TGAGAACGGGTCTCCAAAGATGTTTGGGTCTACGACACGTCTCATGAGG
AGTGGTCGAAGGCGGCTCCCATGCTCATCGCCCCGTTTCGGCCACGGTTCT
GCAGAACTCAAACACTGCCTCTACGTGGTGGGCGGACACACGGCCGGCAC
GGGCTGCCTCNNNNNNNNNNNNNNNN--

-----AAGA
GGGATACCAGCAAGGGAACCTTGGAGGATCAAATCATCCAGGCTAACCT
GCCCTGGAGGCTTTCGGTAACGCCAAAACATTGAGAAATGACAACTCGTC
ACGCTTTGGCAAATTCATCCGGATTCACCTTGGAAAAGTCACGTGTACCTT
CCTCTGCAGACATAGAGACTTACCTTCTGGAAAAGTCACGTGTACCTT
CAGCTCAAGTCAGAGAGGAACCTACCATATCTTCTTCCAGATCTTGTCCAA
TCAAAAGCCAGAGCTGTTGGACATGCTTCTAATCACCAACAATCCATATG
ACTACTCCTACATCTCCCAAGGAGAGGTAACAGTAGCATCCATCAACGAT
TCTGAGGAGTTGATCGCCACTGACAGTGCATTTCGATGTGCTTGGCTTAC
TCAAGAGGAGAAAATGGGGGTCTACAAGTTGATAGGTGCAATCATGCATT
ACGGCAACATGAAGTCAAGCAGAAGCAGCGGAGGAGCAGGCAGAGGCT
GACGGCACCCGAGGCTGCTGACAAGTCAGCTTACCTAATGGGGCTGAACTC
TGCAGATCTAGTGAAGGACTGTGCCATCCCAGGGTTAAGGTTGGCAATG
AGTTTGTCACTAAAGGGCAGGGTGTAGACCAAGTCTACTAC-----

CAACACAGTCTCTTCGCATCCGC---AGCGGGAAGTTT---T-----GC
AGGGCCACATGGACACTCAGATGCCGCGGGACACCTGCTCTTCCCAGGAC
TTCACGAG---CAAGCCGCAAGCCATGCGTCCTCAAATGTTGTTAACAGT
CAGATGCGGTTGGGCTTTTTCGGGGACATGTACGGGCGGGCCGACCAGTA
TGGCCACGTTACCAGCCCGCGGT---CCGACCACTATGCTTCGACCCAGT
TGCATGGCTATGGCCCTATGAACATGAATATGGCCGCA---CATCATGGA
GCAGGGGCCTTCTTCCGTTACATGAGGCAGCCGATAAAACAAGAGCTGAT
CTGCAAGTGGATCGAACCAGAGCAACTAACGAATCCGAAAAAGTCGTGCA
ACAAAACTTTTAGCACGATGCACGAGCTGGTGACCCATTTGACGGTGGAA
CATGTGGGGGGACCGGAGCAGTCGAACCATATTTGCTTCTGGGAAGAGTG
TGCCCGAGAAGGAAAACCATTCAAAGCCAAATACAAAACCTTGTGAACCACA
TCAGAGTGCACACCGGAGAG-----

>*Zanclus cornutus*

AGCCTTCTAATTCGGGCTGAACTCAGTCAACCGGGAGCCCTTCTAGGGGA
TGATCAAATCTATAACGTAATTGCAACTGCACATGCGTTTTGTAATAATTT
TCTTTATGGTAATGCCGATTATAATCGGAGGGTTTCGGAACTGACTAATC
CCACTTATGATTGGGGCCCTGATATGGCATTCCCCCGTATAAAATAATAT
GAGCTTTTACTCCTGCCTCCTTCCCTCCTCCTCCTGGCTTCCCTCTG
GTGTTGAAGCAGGGGCGGGACAGGGTGAACAGTCTACCCGCCTCTGGCT
GGCAACCTAGCACATGCGGGAGCCTCTGTTGATTTAACCATCTTTTCTCT
GCACCTCGCAGGTATTTCTTCAATTTTAGGGGCCATTAATTTTATCACA
CCATTATCAACATGAAACCTCCCGCTATTTCCCAATATCAAACCCCTTTA
TTTGTATGAGCAGTCTTAATCACTGCCGTCTCCTTCTTCTCTCCCTCCC
AGTGCTCGCCGCCGTATTACTATGCTCCTCACAGACCGAAATCTAAATA
CTACTTTCTTTGACCCTGCAGGAGGAGAGACCCCATCCTCTACCAGCAC
CT-----

-----TTCCTAGAGAGAAACCTTACCCAACCTAACTGCCTTGG
CATGCTGTTGCTGTCTGATGCCACCAATGCACCAAGCTGTCAGAGCTCT
CCTGGGGAATGTGTCTCAGCAACTTTCCCGCTATTTGCAAGACAGAGGAT
TTCTCCAGCTGCCCAAAGATATGGTGGTGCAGCTTCTGTCACATGAGGA
GCTAGAGACAGAAGATGAGAGACTGGTTTACGAAGCTGCCCTCAATTGGA
TCAACTATGACCTGGAAGAGGCACTGCCACCTTCCAGAGCTCCTGAGA
ACRGTCGACTGGCCCTGCTGCCTGCCATCTTTCTCATGGAGAACGTTTC
TACAGAAGAGCTGATCAATGCCAGGCCAAGAGCAAGGAGCTGGTGGATG
AAGCCATCCGCTGTAAGCTGAAGATCCTGCAGAAATGATGGTGTGCTTAAC
AGCCCGTGTGCTCGACCAAGGAAAACCAGCCATGCCCTCTTTCTCTGGG
AGGRCAGACTTTCATGTGTGACAAGTTGTACCTGGTGGACCAGAAAGCAA
AAGAGATCATCCCCAAGGCTGACATTTCCAGCCCCAGGAAGGAGTTCAGC
GCCTGCGCCATCGGCTGTAAGGTGTACATCACTGGTGGAA--GAGGCTC-
AGAGAATGGTGTGTCCAAAGATGTATGGGTCTACGACACYGTCCAYGAGG
AATGGTCAAAGGCGGCACCCATGCTCATTGCCAGGTTTGGCCATGGCTCY
GCAGAGCTGAAACACTGCCTCTATGTGGTAGGAGGTCACACCGCCGCAAC
TGGCTGCCTCCCGCCTCCCCGTCTGGATGAATACATTTGTTGTGTTAGT
CGTTCACAACAAGACTGATCCTGAATGAAGCGGAGCTGATCATGGCGCT
GGCCAGGAGTTCCAGATGAGAGTGGTCACCGTATCCCTGGAGGAACAGT
CTTTCCCCAGTATCATTCAGGTGATCAGCGGTGCTACCATGTTAGTCAGT
ATGCATGGAGCTCAGCTTATCACCTCACTCTTCCCTCCCCAGAGGGGCTGT
TGTGGTGGAGCTGTTCCCTTTGCTGTGAATCCAGAGCAGTATACTCCAT
ATAAAACCTTGCCTTTCTTCCAGGCATGGACCTTCACTATGTCTCCTGG

AGGAACACTAAGGAGGAGAACACTGTCACCCACACAGACAGACCCTGGGA
ACAAGGGGGCATCGCTCACTTGGACAAGGAAGAGCAAGAGCGAATACTGG
CGAGCAAAGATGTCCCAGGCACCTGTGCTGCCGCAACCCAGAGTGGCTC
TTCAGGATCTATCAGGACACTTTGGTGGACATCCCCCTCTTTTCTGGAAGT
CCTCAA---AGAGGGCATGAAG---ACAAAGCCCAGCTTGAAGAA---GT
CAAAGCCAGCCACCACAGTCCACCCGGGCGGGTCAGAGAACCCAGTGT
CAGACCTCAGTACAAACACTAATGAGGCTAAACTCACAGTCTCCTGGCA
GATCCCATGGAATCTGAAATACCTGAAGGTGAGAGAGGTGAAATATGAGG
TGTGGATCCAGAAAAAGACTCCAGCAAGGGGACACTGGAGGATCAAATC
ATTCAGGCGAACCTGCACTGGAGGCCTTCGAAAACGCAAAAACATTAAG
AAATGACAACCTCATCTCGGTTTGGAAAATTCATCCGTATTCACCTTTGGTA
CGAGTGGCAAGCTGTGCTGCTGACATCGAGACATACCTGCTGGAGAAG
TCACGTGTTACCTTTCAGCTCAAGGCTGAAAGGAATTATCACATCTTCTA
CCAGATCCTGTCAAAATCAGAAGCCAGAGCTGCTAGACATGCTGCTGATCA
CTAAACAACCCATACGATTACTCCTACATCTCACAAAGGAGAGGTTACAGTC
GCTTCCATCAATGACTCTGAGGAACTGATGGCCACAGACAGCGCCTTTGA
TGTGCTCGGCTTACCACAGACGAGAAGATGGGTGTCTACAAATTGACAG
GGGCCATCATGCACTATGGCAACATGAAGTTCAAAACAGAAGCAGCGTGAG
GAGCAGGCTGAACCGGATGGGACGGAGGCTGCTGATAAATCAGCTTACCT
AATGGGGCTGAACTCTGCTGACCTCATCAAAGGGCTGTGCCATCCCAGAG
TCAAAGGTAGGAAATGAATATGTCACCAAAGGCCAAAGTGTGGACCAAGTC
TACTACCCCAACAAGGAGGCCTTCAAGTGTGAGGAGTGTGGGAAGCCTA
CAACACCAAGCTGGGATATAAGCGCCATGTGGCCATGCACTCTGCCACGG
CAGGGGATCTCACCTGTAAAGTGTGCATGCAGACCTACGAGAGCACGCCC
GTGCTCTTGGAGCACCTCAAGAGCCACTCCGGGAAGTCTTCAGGTGGCAC
CAAGGAGAAAAACACCCATGCGACCACTGTGACCGTCGTTTCTACACAC
GGAAGGATGTGAGAAGACACATGGTGGTCCACACGGGTGAAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTTGGCAGGAAAGACCATCTGACACG
TCATGTGAAGAAGAGCCACTCGCAGGAGCTGCTGAAGATCAAGACGGAGC
CTCCTGATATGTTAGGCCTTTTAGCTTCTGGTTCACCACCTTGCTCTGTG
AAGGAGGAGCTCAGCCCTATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAAAACGTTCCCCAGTGGTGCCCTTTTCCGATGGGTATGT
ACAACCCTCACCAT-----CTCCAGGCCATGTCTAATTCTGGGGTGGGT
CACCT-----CACCCATCCCTGATGCCAGTTCCTTGTCTGCAGCTAT
GGGCATGGGCTGTACATGGAATATCTCATCTATGCGTCTTTCTCATTCA
TGGGATGTTTACAAATTAGTGATGGATCAAATATTGTGAACCTGCTGGCT
AGTAACTCTCCAAGTGTTCATATGCTGTGACCCAGCAAAAATACTTCA
TAACTACAGTCCCGTGATTGGATTTTACATTTATGAGCCCATCGAATACT
GGAATCCACAGTACAGGAGCACCTGAAGACTCTAAGTCATGGCTTTAAC
AAGATCTCCTGGATGGACAACCTTTTCCACTACCTTCGGGTAGTGAATGT
AAGTGCGTCAACCAAGAGCGACTTCATCACAATCCTCAAGGGCTCCTTCC
TGCGTAGCCCGGAGTACCAGCACTTCACTGAGGACATCATATTCTCTAAG
A---ACCGTGAGACTG-----ATGAGTATGACATTATTGCCTCACGGAT
GTACTTGGTGGCAAGGACGACAGAGAAGAAGCGAGAAGAGGTGGTGGAGC
TTCTGGAAAAGCTTCGTCTTTGATGCTGATCAACAGCATCAAGTTCATT
GCCTTCAATCCTACATTTGTGTTTATGGATCGCTACAGCTCCTCCGTCAT
CTCGCCATCCTGACCTCAGGATTCAGCGTACTACAATCCTCATCCTCA
CTTTCTTCCCTGGTCATCAACCCCTTGGGAAATTTCTGGCTCATCCTCACT
GTAACATCTGTGGAGCTGGGTGTCTTGGGTTTGTGAGGCTTTTACCAGTT
TGAATGGCAGCCAGCACTAAAAATGTGTCTACATCTTGCAATGTTGGCA
TTATTAATGGACTTTCTGGACTGGCTTCCTTAGTGGATGACTCCCCAGCT
GACACCATACCCGGCGGTTTCCGCTACGATGTGGCACTGGTGTGAGCATT
AAAGGATATGGAGGAGGACATCATGGAGGGGCTGAGAGAGAATGGGATGG

AAGACAGTGCTTGTACCTCAGGTTTCAGTGTACGATCAAAGAATCTTGT
GATGGCATGGGCGATGTCAGCGAGAAGCACGGTGGAGGACCAGTTGTTCC
TGAGAAGGCTGTGCGTTTCTCTTTTACTGTTATGTCCTGTCTCTGTCCTGG
CAGATGGCGAGGAG-----GAAGAG
GTTGCCGTCTTCACAGAGCCAAAGCCAAACTCAGAAGTGTCTGTAAAGCC
CCTCTGCCTGATGTTTGTGGATGAGTCAGACCGGAGACACTCACGGCCA
TCCTATCACCTATAATTGCAGAGCGTAATGCAATGAAAGAGAGCAGGCTC
ATCCTATCCATTGGTGGGCTATCTCGCTCATTCCGCTTTCATTTTAGAGG
CACGGGATACGATGAGAAGATGGTACGTGAGATGGAGGGACTCGAGGCCT
CAGGGTCCACCTTTATCTGCACTCTTGTGACTCCAGCCGGGCAGAAGCA
TCTCAAACATGGTGCTACACTCCATCACCCGAGTCATGAAGAGAACCT
TGAACGTTATGAAATATGGAGAACGAACCCCTTTTCTGAGTCTGTAGATG
AACTGCGAGACAGAGTCAAAGGGGTCTCTGCCAAGCCCTTCATGGAGACC
CATCCACACTGGATGCATTACACTGTGACATAGGCAATGCCACTGAGTT
CTACAAAATCTTTCAGGATGAGATTGGGGAGGTGTACCAAAGGC---CA
AC---CCCAGCCGGGAGGAACGGCGCAGCTGGAGGGCAGCCCTAGATAAA
CAGCTGAGGAAGAAACTGAAGCTTAAACCGGTGATGAGGATGAATGGGAA
CTATGCCCGCCGGCTAATGACCATGGAGGCTGTAGACGTAGTGTGTGAGC
TGGTGCCCTCAGAGGGAAGGAGAGAGGCCCTGAGGGAGCTTATGAGGCTT
TACATCCAGATGAAGCCTGTGTGGCGGCCACCTGCCAGCAAAGGAGTG
CCCCGACCAGCTGTGCCGCTACAGCTTTAACTCCCAGCACTTTGCCGACC
TCCTGTCTCTACCTTTAAATATAGGTACAATGGAAAGTTACCCAATTAC
CTGCATAAGACCATAGCCCATGTTCCCTGAAATCATAGAGAGAGATGGATC
CATAGGAGCCTGGGCCAGCGAAGGGAACGAGTCGGCAAACAAATCATACA
CCATCGAGATGGGTCCCTTGGGGCCCAGGTGGAAGGAGAGCCACAGCCC
TTCTCCTGCTCCATTGAAGACCCCCACAAAACAGACAAAGTTCAAGGGCAT
CAAGACGTACATTTTCATACCGGGTCACGCCGAGCCACACGGGGCATCCTG
TCTATAGGCGCTACAAACACTTTGACTGGCTGTACAACCGCTTACTGCAC
AAGTTCACTGTGATCTCTGTGCCTCACCTGCCTGAGAAGCAGGCCACAGG
GCGATTTGAGGAAGACTTTATCGAGAAGCGCAAGAGGGCGACTGATACTGT
GGATGAACCACATGACCAGTCAACCAGTCCTCTCCCAATATGAAGCCTTT
GAGCACTTTCTGATGTGTGCCGATGACAAGCAGTGGAAGTGGGCAAGAG
ACGTGCGGAGAAGGACGAGATGGTGGGGGCCACTTCATGCTGACCCTCC
AGATCCCAAACGAGCACCAGGACCTTCAGGATGTAGAAGAGCGGATCGAC
TCCTTCAAGGCCTTTGCTAAGAAAATGGATGACAGTGTGATGCAGCTCAC
ACATGTTGCGTCGGAACGGTGCCTAAGCACCTGGGTGGATTTCAGGAAGG
AGTTTCAGCGGCTGGGAAATGCCTTCCAGTCTATCAGCCAGGCATTCATG
CTGGACCCTCCTCACAGCTCAGAGACCTTCAACAACGCCATCTCCCATNNNNNNNNNGT
TCCTCAAACCTGACCTCTCTGGGTTTCATCATTGGAGTTCGGTGTGGTTGGA
AACCTCCTGATCTCCATCCTGCTGGTCAAAGACAAGAGCCTGCACCGAGC
GCCCTACTATTTCTGCTGGACCTGTGCGCCTCCGATATCTTGCCTCCG
CCATCTGCTTCCCCTTTGTCTTCACTTCGGTCAAGAATGGATCTGCCTGG
ACGTACGGCACGCTGACCTGCAAAGTGATCGCCTTCCCTGGGTGTGCTCTC
CTGTTCCACACGGCGTTTATGCTGTTCTGTGTGTCAGTGTACGCGCTACC
TGGCCATTGCACATCACCGTTTCTACACCAAGAGGTTGACCTTCTGGACC
TGTCTAGCTGTCTGATGCTGGTGGACGTTGTCAGTGGCAATGGCGTT
CCCGCCGGTGTAGATGTAGGGACGTACTCTTTTATCCGCGAGGAGGACC
AGTGCAGGTTCCAGCACCGTTCCCTCAGGGCGAATGATTTCGCTGGGCTTT
ATGCTCCTGCTGGCGCTCATCCTCCTGGCCACACAGCTGGTTTACCTCAA
GCTCATCTTCTTCGTCCATGACCGTCGAAAGATGAAACCTGTCCAGTTTCG
TGCTGCTGTGAGCCAGAACTGGACCTTCCACGGGCCAGGCGCCAGCGGG
CAGGCGGCGGCAACTGGCTGGCTGGTTTCGGTTCGAGGCCCAACCCCGCC
GACTTTGCTGGGCATCCGACAGAACAGCAACGCAGCGGGCCGAGGCGTC

-----TTTCTAGAGCGGAACCTTCACCCATCCAATTGCTAGG
CATGCTATTGTTGCTGATGCCCACCAGTGTACCAAGCTGTCAGAGCTGT
CATGGAGTATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAT
TTTCTCCAACCTGCCCAAGGACATGGTTGTGCAGCTTCTGGCCCATGAGGA
ACTGGAGACAGAAGATGAAAGACTGGTTTACGAGGCTTCACTCAATTGGG
TGAACATATGATCTTGAAAGAAGGCAC TGCCACTTGCCAGAGCTGCTGAAA
ACTGTCCGTTTGGCACTGCTTCCCTGCCATCTTCTAATGGAGAATGTCTC
CACAGAAGAGCTGATAAATACCCAGGACAAGAGCAAGGAGCTAGTGGATG
AGGCCATTTCGCTGCAAACCTCAAGATCTTGCAGAACGATGGTGTGGTTAAC
AGCCCATGCGCCCGTCCACGAAAACTAGCCATGCAC TATTTCTGCTAGG
TGGGCAGACCTTTATGTGTGACAAGCTATACCTGGTGGACCAGAAGGCCA
AAGAGATCATCCCCAAGGCAGACATCCCAAGTCCCAGGAAGGAGTTCAGT
GCCTGCGCCATTGGCTGTAAAGTTTACATAACAGGTGGGA--GAGGCTC-
TGAAAAATGGCGTTTCCAAAGATGTATGGGTGTACGATACAGTACACGAGG
AATGGTCCAAGGCAGCCCCCATGCTCATAGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTGTACGTGGTTGGAGGTCACACAGCAGCAAC
GGGATGCCCTTCCAGCCTCCCCTTCCAGATGAATATATTGTAGTGTTCAGT
CGCTCCATGACCAGACTGATCCTGAATGAAGCTGAGCTAATCATGGTGTCT
GGCTCAGGAGTTTTCAGATGAGAGTTGTACGGTATCCCTGGAGGACCAAT
CTTTCCCCAGCATAGCTCAGGTGATCAGTGGAGCCTCCATCTTGGTCAGC
ATGCATGGGGCTCAGCTTGTTCCTCGCTTTTCCCTGCCAGAGGAGCTGC
CGTGGTGGAACTATTCCCCTATGCTGTAAACCCAGAACAGTACACTCCAT
ATAAAAACCTGGCATCCCTGCCAGGTATGGACCTCTACTATGTGTCTGTGG
AGGAATACTTTGGAGGAGAACACAGTCACTCACCCAGACAGACCCCTGGGA
CCAAGTGGCATCGTCCACTTGGAGAAGGAAGAGCGAGAGCGAATACTGG
CTAGCAAGGACGTCCCCAGGCACCTGTGCTGCCGGAACCCTGAGTGGCTC
TTCAGGATCTACCAGGACACTTTGGTGGACATCCCTTCACTCCTCAAAGT
CCTCAG---AGAGGGTCTGAAA---ACCAGGCCAGCTTGAGGAA---GG
CCAAGCCAGCCAGCACAGTTCATCCGGGCCGGGTCAGAGAGGCCCAATGC
CAAACCTCAGTCCAAGCTGCCAATGAGGCCAAGCTCACAGTCTCCTGGCA
AATCCCCTGGAATCTGAAATATCTCAAGGTGAGAGAAGTGAAGTATGAGG
TGTGGATCCAGAAGAAGGATGCAAGCAAAGGAACCCTGGAGGATCAAATC
ATCCAAGCCAACCCTGCGCTAGAGGCCTTTGGTAATGCCAAAACAGTGAG
GAATGACAACCTTCCCCTTTTGGAAAATTCATCCGAATTCACTTTGGAA
CAAGTGGTAAGCTCAGTCTGTGTGACATAGAGACTTACCTGTGTGAAAAG
TCCAGAGTCACTTCCAGCTAAAGGCTGAGAGGAACTACCACATCTTCTT
CCAGATCTTGTCCAATCAAAGCCAGAGCTGCTGGACATGATGTTGATCA
CCAACAACCCGTACGACTATTGCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAACGACTCTGAGGAGCTGATGGCCACTGACAGTGCCCTTCGA
TGTGCTTGGCTTCACTCATGAGGAGAAGATGGGAGTGTACAAGCTGATCG
GGGCCATAATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAACGTGAG
GAGCAGGCCGAGCCCAGTGGAACTGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAACTCTGCAGACCTCATCAAAGGACTTTGCCACCCCAGGG
TCAAAGTGGGAAATGAATATGTACCAAAGGTCAAAGGGTAGACCAAGTC
TACTACCCCAACAAAAGAGGCCTTCAAGTGCAGGAGTGCAGGCAAGCATT
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCCGCCACGT
CGGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCCG
GTGCTACTGGAACACCTCAAGAGCCACTCGGGGAAGTCCCTCGGGCGGCGC
CAAGGAGAAGAAGCACCCGTGCGACCCTGCGACC CGCCGCTTCTACACCC
GCAAAGATGTGAGACGGCACATGGTGGTCCACACGGGCGCAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACGCG
CCACGTCAAAAAGAGCCACTCGCAGGAGCTGATGAAGATCAAGACGGAGC

CTCCCGATATGCTGGGGCTCCTGGGCTCCGGCTCGCCGCCTTGCTCCGTC
AAGGAGGAGCTGAGCCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCCAGCGGCACTCCCTTCCCAATGGGCATGT
ACAACCCTCACCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGC
CACCCG-----CACCCCTCCCTGATGTCCAGCTCGCTGTCTGCAGCCAT
GGGCATGGGCTGTACANNNNTACCTCATCTATGCTTCCTTCTCTTTTCATGGGA
TGTTTACAAATTAGCGACGGTTCAAACATTGTGAATTTGCTGGCCAGCAA
CTCCCCGAGTGTTTCTACGCTCTGACCCAGCAGAAGTACTTCAGCAACT
ATAGTCCCGTGATCGGGTCTACATTTATGAGCCCATCGAGTACTGGAAT
GCGACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAACAAGAT
CTCTGGATGGACAACCTTTTTTCCACTACCTGCGGGTGGTGAACGTGAGTG
CCTCCACCAAGAATGACTTCATCAACATCCTCAAGGGCTCCTTCTGCGC
AGCCCGGAGTACCAGCACTTCACAGAGGACATCATATTCTCCAAGA---T
CCGGGAGAGCG-----ACGAATACGACATCATTGCCTCACGCATGTACC
TCGTGGCACGGACCACAGAGAAGAAGCGGGAGGAGGTGGTGGAGCTTCTG
GAGAAGCTGCGACCGCTGATGCTGATCAACAGCATCAAGTTCATCGCTTT
CAACCCGACTTTTCGTATATATGGACCGTTACAGTTCCTTCTGTGATCTCAC
CCATCCTTACCTCAGGCTTCAGCGTCTCACCATCCTCATCCTCACTTTC
TTCTGGTTCATCAACCCCTTGGGTAACCTTGGCTAATCCTGACTGTCAC
CTCAGTGGAGTTGGGCGTGCTAGGTTTGATGGGCCATCACACATTTGAGT
GGCAGCCCGCCCTCAAAAATGTGTCCCGTTCTGCCACTTGGGTATCATC
AACGGGCTTTTCTGGGTGGGCGACCTCTGTGGACGATGCCCTGCTGAAAC
CATTGCCCGCGTTTTCGCTATGACGTTGCCCTAGTGTCCGCCTTGAAGG
ATCTGGAAGAGGACATCATGGAGGGGCTGAGGGAAAGGGGGCTCGAAGAC
AGCACTTGTACCTCGGGCTTCACTGTTATGATAAAAAGAATCATGTGACGG
CATGGGAGATGTCAGTGAGAAGCACGGTGGAGGCCCGGTGGTGGCAGAGA
AGGCTGTGCGCTTCTCATTTACTGTGTCATGTGAGTGTCTGTGCTGGCAGAT
GGAGAGGAR-----AAGGTGGTATC
TGCTTTCAGTGAGCCAAAACCCAACTCTGAGCTGTCTGTAAGCCCCTGT
GCATCATGTTTGTGCGACGAGTCCGACCGCGAGACTCTCACCGCCGTCCTG
GGCCCTTTGGTGGCGGAGCGGGAGGCGATGAAGCGGAGCCAACTCATCCT
CTCCATCGGTGGCCTCCCTCGCTTGTCTGCTTCCAATTCAAAGGCACTG
GCTATGATGAGAAGATGGTGCCTGAGTTTGAGGGCCTGGAGGCCCTCCGGG
TCAACCTATATCTGCACCCTCTGCGATTCTACTCGAGCAGAGGCCTCTCA
GAACATGGTGGTTCACTCCGTCACCCGCAGCCACGATGAGAATCTAGAGC
GCTATGAGATGTGGAGGACCAATCCCTTCTCAGAGTCTGCCGACGAGCTG
CGAGACAGAGTGAAAGGGATCTCCGGCAAGCCTTCTGGAACCCATCC
CACTCTGGATGCGTTACACTGTGAAATTGGCAATGCCACGGAGTCTACA
AAATCTTCCAAGACGAGATCGGGGAGGTGTTTCAGAAAGG---CAAC---
CCACCACGGGAAGAGCGGCGCCGCTGGCGGGCGGCCCTCGATAAGCAGCT
GAGGAAGAAGCTGAAGCTTAAACC GGTAATGAGGATGAACGGGAAC TACG
CTCGGAAGTTGATGACCCAGGAGACCGTGGACGTGGTGTGTGAGTTGGTG
CCTTCGGAGGAGCGACGGGAGGCCCTCAGGGCCCTCATGCGGCTCTACCT
CGAGATGAAGCCGGTGTGGCGCAGCACCTGCCCCGCCAAGGAATGTGCCG
ATCAGCTGTGTGCTTTCAGCTTCAACTCCCAGAGCTTCGCCGAGCTCCTC
TCCACCAGCTTCAAGTATAGATAACAACGGAAAGATCACAAATTACCTGCA
CAAGACCCTCGCTCACGTCCCGGAAATCATAGAAAAGAGATGGCTCCATTG
GAGCCTGGGCGAGCGAGGGGAATGAGTCCGCGAACAAATCATAACCAATT
GAGATCGGCCCCAAAGGGCCGAATGGAAGGAGAGTCCGCAGCCCTTCTC
TTGCTCCATCGAAGACCCCAAAAGCAAACCTAAGTTCAAGGGCATCAAGA
CGTACATTTTCATACAGGGTGACCCCGAGCCACACGGGGCAACCCGTCTAC
AGACGCTACAAACACTTTGACTGGCTGTACAACCGCTTGCTGCACAAGTT
CACTGTGATCTCGGTGCCCCACCTGCCCGAGAAGCAGGCCACAGGCCGCT

>Zeus faber

AGCCTTCTTATTTCGAGCTGAACTTAGTCAACCAGGGGCCCTCCTTGGAGA
CGATCAAATTTATAATGTCATCGTTACAGCTCACGCTTTTGTATAATCT
TTTTTATAGTTATAACCAATCATAATTGGAGGCTTTGGAACTGACTAATT
CCACTTATAATCGGGGCCCTGACATAGCCTTCCCCCGCATAAAATAATAT
AAGCTTTTACTCCTCCCCCCTCCTTTTTACTTCTGCTTGCCTCTTCGG
GAGTTGAAGCCGGAGCTGGGACAGGATGAACAGTCTACCCCTTTAGCA
GGCAATCTAGCCCATGCCGGGGCTCCGTAGATCTAACTATTTTTTCCCT
CCACTTAGCAGGGATTTTCATCTATCTTGGGCGCAATTAATTTTATTACCA
CCATTATTAACATAAAAACCCCTGCCATTTTACAGTACCAGACCCCTTA
TTTGTGTGGTCACTCCTGATTACAGCAGTCTACTGCTTTTATCACTACC
AGTACTAGCGGCTGGAATTACAATACTTCTTACTGACCGAACTTAAACA
CCTCTTTCTTTGATCCTGCAGGCGGAGGAGACCTATTTTATAACCAACAC
CTA-----

-----TTTCTAGAGCGGAACCTTCACCCATCCAATTGTCTAGG
CATGCTATTGTTGTCTGATGCCACCAGTGTACCAAGCTGTCAGAGCTGT
CATGGAGTATGTGCCCTCAGCAACTTCCCTGCTATTTGCAAGACAGAGGAT
TTTCTCCAACTGCCCAAAGACATGGTTGTGCAGCTTTTGGCCCATGAGGA
ACTGGAGACCGAAGATGAAAGACTGGTTTACGAGGCTTCACTCAATTGGG
TGAATATGATCTTGAAAGAAGGCACCTGCCACTTCCAGAGCTACTAAAA
ACTGTCCGTTTGGCACTGCTTCCCTGCCATCTTCCCTAATGGAGAATGTCTC
TACAGAAGAGCTGATAAATTTCCAGGACAAGAGCAAGGAGCTAGTGGATG
AGGCCATTTCGCTGCAAACTCAAGATCTTGCAGAATGATGGTGTGGTTAAC
AGCCCATGTGCACGTCCAAGAAAACTAGCCATGCACTATTTCTGCTAGG
TGGGCAGACCTTTATGTGTGACAAGCTATACCTGGTGGACCAGAAAGCCA
AAGAGATCATTCCAAGGCAGACATCCCCAGTCCCAGGAAGGAGTTCAGT
GCTTGTGCCATTGGCTGTAAAGTTTACATAACAGGTGGAA--GAGGCTC-
CGAAAAATGGCGTTTCCAAGATGTATGGGTGTATGATAACAATACACGAGG
AATGGTCCAAGGCAGCCCCATGCTCATAGCCAGGTTTGGCCATGGCTCT
GCAGAGCTGAAACACTGCCTGTACGTTGTTGGAGGTCACACAGCAGCAAC
GGGCTGTCTTCCAGCTTCCCCTTCTAGATGAATACATTGTAGTGTTCAGT
CGCTCCATGACCAGACTGATCCTGAACGAAGCCGAGCTAATCTTGGTGCT
GGCTCAGGAGTTTCAGATGAGAGTTGTTACGGTATCCCTGGAGGACCAGT
CTTTCCCAGCATAGTTTCCAGGTGATCAGTGGAGCCTCCATCTTGGTCAGC
ATGCACGGGGCTCAGCTTGTGCTCGCTTTTCCCTGCCAGAGGAGCTGC
CGTGGTGGAACTGTTCCCCTATGCTGTAAACCCAGAACAGTACACTCCAT
ATAAAAACCTGGCTTCCCCTGCCAGGTATGGACCTCCACTACTTGTCCCTGG
AGGAACACTTTGGAGGAGAACACAGTCACTCACCCAGACAGACCCCTGGGA
ACAAGGTGGCATCGCCCACTTGGAGAAGGAAGAGCGAGAGAGAATACTGG
CCAGCAAGGACGTCCCAGGCACCTATGCTGCCGGAACCCTGAGTGGCTC
TTCAGGATCTACCAGGACACTTTGGTGGACATCCCTTCACTCCTCAAAGT
CCTCAG---AGAGGGTCTGAAA---ACCAGGCCAGCTTGAGGAA---GG

CCAAGCCAGCCAGCACAGTTCATCCGGGCCGGGTCAGAGAGGCCAGTGC
CAAACCTCAGTCCAAGCTGCCAATGAGGCCAAGCTCACAGTCTCCTGGCA
AATCCCCTGGAATCTGAAATATCTCAAGGTGAGAGAAGTGAAGTATGAGG
TGTGGATCCAGAAAAAGGACGCAAGCAAAGGAACCTGGAGGATCAAATC
ATCCAAGCCAACCCTGCGCTAGAGGCCTTTGGTAATGCCAAAACCTGAG
GAATGACAACCTCTCCCGTTTTGGAAAATTCATTCGAATTCACTTTGGAA
CGAGTGGTAAGCTGAGCTCTGCTGACATAGAGACTTACCTGCTGGAAAAG
TCCAGAGTCACCTCCAGTTGAAGGCTGAGAGGAACTACCCATCTTCTT
CCAGATCTTGTCCAAATCAGAAGCCAGAGCTGCTGGACATGATGTTGATCA
CCAATAACCCGTACGACTATTGCTACATCTCCCAAGGAGAGGTAACAGTA
GCATCCATCAACGACTCTGAGGAGCTGATGGCCACTGACAGTGCC TTCGA
TGTGCTTGGCTTCACTCATGAGGAGAAGATGGGAGTGTACAAGCTGATCG
GGGCAATAATGCACTATGGCAACATGAGGTTCAAGCAGAAGCAACGTGAG
GAGCAGGCGGAGCCCAGTGGAACTGAGGCTGCTGATAAGTCAGCTTATCT
AATGGGGCTGAACTCTGCAGACCTCATCAAAGGACTTTGCCACCCCAGGG
TCAAAGTGGGAAATGAATATGTCACCAAAGGTCAAAGGGTAGACCAAGTC
TACTACCCCAACAAAAGAGGCCTTCAAAGTGCAGAGAGTGCAGGAAAGCACTA
CAACACCAAGCTGGGCTACAAGCGCCATGTGGCCATGCACTCCGCCACGT
CGGGGGACCTCACCTGCAAGGTGTGCATGCAGAGCTACGAGAGCACGCC
GTGCTGCTGGAACACCTCAAGAGCCACTCGGGGAAGTCCCTCAGGCGGCGC
CAAGGAGAAGAAGCACCCATGCGACCACTGCGACCGCCGCTTCTACCCC
GCAAAGATGTGAGACGGCACATGGTGGTCCACACGGGCCGCAAGGACTTC
CTGTGCCAGTACTGTGCCAGCGCTTCGGCAGGAAGGACCACCTGACCCG
CCACGTCAAAAAGAGCCACTCGCAGGAGCTGATGAAGATCAAGACAGAGC
CTCCCGATATGCTGGGACTCCTGGGCTCCGGCTCGCCGCTTGCTCCGTC
AAGGAGGAGCTGAGCCCATGATGTGCGGCATGGGTCCCAACAAAGACCC
CATGATGGGCAAGCCCTTCCCAGCGGCACTCCCTTCCCATGGGCATGT
ACAACCTCACCCAC-----CTCCAGGCCATGTCCAATTCTGGGGTGGGC
CACCCG-----CACCCCTCCCTGATGTCCAGCTCGCTGTCTGCAGCCAT
GGGCATGGGCTGTACATGGAGTACCTCATCTACGCTTCCTTCTCCTTCA
TGGGATGTTTTACAAATTAGCGACGGTTCAAACATTGTAAATTTGCTGGCC
AGCAACTCTCCGAGTGTTCCTACGCTCTGACCCAGCAGAAGTACTTCAG
CAACTACAGTCCCGTGATCGGGTCTACATTTATGAGCCCATCGAGTACT
GGAATGCCACGGTGCAGGAGCACCTGAAGACGCTGAGCCACGGCTTCAAC
AAGATATCCTGGATGGACAACTTTTTCCACTACCTGCGGGTGGTGAACGT
GAGTGCCCTCCACCAAGAACGACTTCATCAACATCCTCAAGGGCTCCTTCT
TGCGCAGCCCGGAGTACCAGCACTTACAGAGGACATCATCTTCTCCAAG
A---ACCGGGAGAACG-----ACGAGTACGACATCATCGCCTCACGCAT
GTACCTTGTGGCACGGACCACGGAGAAGAAGCGGGAGGAGGTGGTGGAGC
TTCTGGAGAAGCTGCGACCGCTGATGCTGATCAACAGCATCAAGTTCATC
GCTTTCACCCGACTTTCGTGTATATGGACCGTTACAGTTCCTCTGTGAT
TTCACCTATCCTTACCTCAGGCTTCAGTGTCTCACCATCCTCATCCTCA
CTTTCTCCTGGTCAACCCCTTGGGTAACCTTCTGGCTCATCCTGACC
GTCACCTCAGTGGAGTTGGGTGTGCTAGGTTTGATGNNNNNNNNNNNNNNNNNNNNN
NN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAATGGGCTTTC TG
GAGGGCGACCTCTGTTGATGATGCCCCTGCTGAAACCATCACTCACCGTT
TTCGCTATGATGTTGCCCTGGTGTCCGCCTTAAAGGATCTGGAAGAGGAC
ATCGTGGAGGGGCTGAGGAAAAGGGCTCTCGAAGACAACACTTGTACCTC
GGGCTTCACTGTTATGATAAAAGAATCATGTGATGGCATGGGAGATGTCA
GTGAGAAGCACGGTGGAGGGCCAGCGGTGCCAGAGAAAGCTGTGCGCTTC
TCGTTTACTATCATGTCTGTGTCTGTGCTGGCAGATGGAGAGGAG-----
-----AAGGCAGTAACCGTCTTCAGAGAGC
CAAACCAAACTCCGAGCTGTCTGTAAAGCCCTGTGTATCATGTTTGTGTC

GATGAGTCAGACCGGAGACTCTCACCACCGTGCTGGGCCCTTTGGTGGC
GGAGCGGGATGCGATGAAGCAGAGCCAACCTCATCCTCTCGATTGGTGGTC
TTTCTCGCTCGTTCTGCTTCCAATCAAAGGCACTGGCTATGATGAGAAG
ATGGTGCCTGAGCTTGAGGGCCTGGAGGCCTCCGGGTCAGCTTATATCTG
CACTCTCTGCGATACTACTCGAGCAGAGGCCTCTCAAACATGGTGCTTC
ACTCAGTCACCCGCAGCCATGATGAGAATCTAGAGCGCTATGAGTTGTGG
AGGACCAATCCATTCTCAGAGTCTGCCGAAAGAGCTGCGAGACAGAGTGAA
AGGGATCTCTGCCAAGCCATTCTGAAACCCATCCCCTCTGGATGCGT
TACACTGTGAAATTTGGCAATGCCACAGAGTTCTACAAAATTTTCCAAGAT
GAGATCGGGGAGGTGTATCGGAAAGA---CAAC---CCACCTCGGGAAGA
ACGGCGTCGCTGGCGGGCGGCCCTTGATAAGCAGCTGAGGCAGAAGTTAA
AGCTTAAACCATAATGAGGATGAATGGGAACTATGCTCGGAAGTTGATG
ACCCAGGAGACTGTGGATGTGGTGTGTGAGTTGGTGCCTTCAGAGGAGCG
ACGGGAGGCCCTGAGGAGGCTCATGCGGCTCTACCTGGAGATGAAGCCCG
TGTGGCGCAGCACCTGTCCAGCCAAAAGAATGTCGCGATCAGCTGTGCCGC
TTCAGCTTCAACTCCCAAAGCTTTGCTGAGCTCCTCTCCACAAGCTTCAA
ATATAGATAACAACGGAAAGATCACCAATTAATTGCACAAGACCCCTGGCTC
ACGTCCCGGAAATCATAGAAAGAGATGGCTCTATTGGAGCCTGGGCGAGT
GAGGGTAACGAGTCAGCAAACAAATCGTACACCATGAGATCGGCCCCAA
AGGGCCGAATGGAAGGAGAGTCCGCAGCCCTTCTTTGCTCCATCGAAG
ACCCACAAAACAAACCAAGTTCAAGGGCATCAAGACGTACATTTTCATAC
AGGGTGACCCCGAGCCACACGGGACAACCCGCTTACAGACGCTACAAACA
CTTTGACTGGTTGTACAACCGCTTGCTGCACAAGTTCACTGTGATCTCGG
TGCCCCACCTGCCCGAGAAGCAGGCCACAGGCCGCTTCGAGGAGGACTTC
ATTGAGAAACGTAAGAGACGCCTAGTCCTGTGGATGAACCACATGACCAG
CCACCCGGTCTCTCCAGTATGAGGGATTTGAACTTCCTCATGTGTG
GCGATGACAAGCAGTGAAGCTGGGGAAGAGGCGGGGAGAGAAGGACGAG
ATGGTGGCGCCCACTTCATGCTGACCTTCCAGATTCCAGTAGTGACCA
GGACCTCCAGGACGTCGAGGAGCGGGTGGACTCCTTCAAGTCCTTCGCCA
AGAAGATGGACGACAGCGTCATTCAGCTCAGCAGCTCGCTTCGGAGATG
GTCCGGAAGCACCTCGGAGAATTCAGGAAGGAGTTCCAGCGAATGGGGAA
CGCCTTTCATCTTTGAGCCAGGCGTTTCATGCTGGACCCGCCCCACAGCT
CAGAGGCCCTCAACAACGCCATCTCGCAC-----

-----GCCAAATCTCGCTTTACCCTGGCGTGGGGACTG

