Resolving the phylogenetic position of Darwin's extinct ground sloth (*Mylodon darwinii*) using mitogenomic and nuclear exon data

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Table S1. Detailed taxonomic sampling and corresponding sequence accession numbers of the mitochondrial and nuclear datasets. Newly acquired sequences from this study are indicated in bold.

Species	**Common name**	**Mitogenomes**	**ADORA3**	**APOB**	**BCHE**	**BRCA1**	**BRCA2**	**RAG2**	**TTN**
*_Bradypus pygmaeus_	Pygmy sloth	KT818523	**LT852562**	**LT852583**	**LT852604**	**LT852627**	**LT852645**	**LT852662**	**LT852684**
*_Bradypus torquatus_	Maned sloth	KT818524	**LT852563**	**LT852584**	**LT852605**	**LT852628**	**LT852646**	**LT852663**	**LT852685**
*_Bradypus tridactylus_	Pale-throated three-toed sloth	KT818525	**LT852564**	**LT852585**	**LT852606**	**LT852629**	**LT852647**	**LT852664**	**LT852686**
*_Bradypus variegatus_	Brown-throated three-toed sloth	NC_006923	**LT852565**	**LT852586**	**LT852607**	**LT852630**	**LT852648**	**LT852665**	**LT852687**
*_Choloepus didactylus_	Southern two-toed sloth	NC_006924	**LT852570**	**LT852591**	**LT852613**	**LT852634**	**LT852651**	**LT852671**	**LT852693**
*_Choloepus hoffmanni_	Hoffmann's two-toed sloth	KT818538	**LT852571**	**LT852592**	**LT852614**	**LT852635**	**LT852652**	**LT852672**	**LT852694**
*_Mylodon darwinii_	Darwin's ground sloth	**MF061314**	**LT852575**	**LT852596**	**LT852619**	**LT852639**	**LT852656**	**LT852676**	**LT852698**
*_Cyclopes didactylus_	Pygmy anteater	KT818539	**LT852572**	**LT852593**	**LT852615**	**LT852636**	**LT852653**	**LT852673**	**LT852695**
*_Myrmecophaga tridactyla_	Giant anteater	KT818549	**LT852576**	**LT852597**	**LT852620**	**LT852640**	**LT852657**	**LT852677**	**LT852699**
*_Tamandua mexicana_	Northern tamandua	KT818551	**LT852578**	**LT852599**	**LT852622**	**LT852641**	**LT852659**	**LT852679**	**LT852701**
*_Tamandua tetradactyla_	Southern tamandua	NC_004032	**LT852579**	**LT852600**	**LT852623**	**LT852642**	**LT852660**	**LT852680**	**LT852702**
*_Dasypus kappleri_	Greater long-nosed armadillo	KT818541	**LT852574**	**LT852595**	**LT852617**	**LT852638**	**LT852655**	**LT852675**	**LT852697**
*_Dasypus hybridus_	Southern long-nosed armadillo	KT818540	**LT852573**	**LT852594**	**LT852616**	**LT852637**	**LT852654**	**LT852674**	**LT852696**
Dasypus septemcinctus	Seven-banded armadillo	KT818546	-	-	-	-	-	-	-
Dasypus novemcinctus US	Nine-banded armadillo	NC_001821	XM_004473603	JN413957	XM_012519796	AF484222	XM_012519803	XM_004483174	XM_012518926
Dasypus novemcinctus FG	Nine-banded armadillo	KT818542	-	-	-	-	-	-	-
Dasypus pilosus	Hairy long-nosed armadillo	KT818544	-	-	-	-	-	-	-

Dasypus sabanicola	Northern long-nosed armadillo	KT818545	-	-	-	-	-	-	-
Dasypus yepesi	Yunga's long-nosed armadillo	KT818547	-	-	-	-	-	-	-
**Chaetophractus vellerosus*	Screaming hairy armadillo	KT818533	**LT852568**	**LT852589**	**LT852611**	**LT852632**	NA	**LT852669**	**LT852691**
**Chaetophractus villosus*	Large hairy armadillo	KT818535	**LT852569**	**LT852590**	**LT852612**	**LT852633**	NA	**LT852670**	**LT852692**
**Euphractus sexcinctus*	Six-banded armadillo	KT818548	AY011193	NA	**LT852618**	AF484224	NA	AY011922	NA
**Zaedyus pichiy*	Pichi	KT818555	**LT852582**	**LT852603**	**LT852626**	**LT852644**	NA	**LT852683**	**LT852705**
**Calyptophractus retusus*	Greater fairy armadillo	KT818532	**LT852567**	**LT852588**	**LT852610**	FR821709	**LT852650**	**LT852668**	**LT852690**
Chlamyphorus truncatus	Pink fairy armadillo	KT818536	-	-	-	FR821708	-	-	-
**Priodontes maximus*	Giant armadillo	KT818550	**LT852577**	**LT852598**	**LT852621**	AF484225	**LT852658**	**LT852678**	**LT852700**
**Tolypeutes matacus*	Southern three-banded armadillo	KT818553	**LT852580**	**LT852601**	**LT852624**	AF484227	**LT852661**	**LT852681**	**LT852703**
**Tolypeutes tricinctus*	Brazilian three-banded armadillo	KT818554	**LT852581**	**LT852602**	**LT852625**	**LT852643**	NA	**LT852682**	**LT852704**
**Cabassous chacoensis*	Chacoan naked-tailed armadillo	KT818528	NA	NA	**LT852608**	**LT852631**	NA	**LT852666**	**LT852688**
**Cabassous unicinctus*	Southern naked-tailed armadillo	KT818531	**LT852566**	**LT852587**	**LT852609**	AF484228	**LT852649**	**LT852667**	**LT852689**
Cabassous centralis	Northern naked-tailed armadillo	KT818527	-	-	-	-	-	-	-
Cabassous tatouay	Greater naked-tailed armadillo	KT818529	-	-	-	-	-	-	-
Dugong dugon	Dugong	NC_003314	JN633415	KR827337	KR827307	AF284019	JN414242	JN633302	JN632896
Loxodonta africana	African elephant	NC_000934	AY011204	JN413956	XM_010596053	AF284021	JN414245	AY011932	XM_010586379
Orycteropus afer	Aardvark	NC_002078	AY011206	JN413950	XM_007948719	AF284030	JN414239	AY011935	JN632894

Notes -- *: Libraries selected for nuclear capture; NA: Not available because capture failed to provide enough coverage.

Table S2: Detailed results of the PartitionFinder analysis for the mitogenomic dataset.

Subset	Best Model	Subset Partitions
1	GTR+I+G	ATP6_p1, ATP8_p1, ATP8_p2, ATP8_p3, CYTB_p1, ND1_p1, ND2_p1, ND3_p1, ND4L_p1, ND4_p1, ND5_p1, ND6_p2, ND6_p3, rRNA_12S, rRNA_16S, tRNAs
2	GTR+I+G	ATP6_p2, COX1_p1, COX1_p2, COX2_p1, COX2_p2, COX3_p1, COX3_p2, CYTB_p2, ND1_p2, ND2_p2, ND3_p2, ND4L_p2, ND4_p2, ND5_p2
3	GTR+I+G	ATP6_p3, COX1_p3, COX2_p3, COX3_p3, CYTB_p3, ND1_p3, ND2_p3, ND3_p3, ND4L_p3, ND4_p3, ND5_p3, ND6_p1

Settings used
alignment : ./mylo_35mitos_concat_seqCat.phylip
branchlengths : unlinked
models : GTR+I+G, GTR+G
model_selection : bic
search : greedy

Best partitioning scheme
Scheme Name : step_39
Scheme lnL : -169349.5486
Scheme BIC : 340923.742014
Number of params : 231
Number of sites : 15222
Number of subsets : 3

RaxML-style partition definitions
DNA, p1 = 1-681\3, 682-876\3, 683-876\3, 684-876\3, 3883-5022\3, 5023-5976\3, 5977-7020\3, 7021-7365\3, 7366-7662\3, 7663-9039\3, 9040-10842\3, 10844-11367\3, 10845-11367\3, 11368-12305, 12306-13766, 13767-15222
DNA, p2 = 2-681\3, 877-2415\3, 878-2415\3, 2416-3099\3, 2417-3099\3, 3100-3882\3, 3101-3882\3, 3884-5022\3, 5024-5976\3, 5978-7020\3, 7022-7365\3, 7367-7662\3, 7664-9039\3, 9041-10842\3
DNA, p3 = 3-681\3, 879-2415\3, 2418-3099\3, 3102-3882\3, 3885-5022\3, 5025-5976\3, 5979-7020\3, 7023-7365\3, 7368-7662\3, 7665-9039\3, 9042-10842\3, 10843-11367\3

Table S3: Detailed results of the PartitionFinder analysis for the seven nuclear exons dataset.

Subset	Best Model	Subset Partitions
1	GTR+G	ADORA3_pos1, ADORA3_pos2, APOB_pos2
2	GTR+G	ADORA3_pos3, APOB_pos3, RAG2_pos3
3	GTR+G	APOB_pos1, BRCA1_pos1
4	GTR+G	BCHE_pos1, RAG2_pos1, TTN_pos1
5	GTR+I+G	BCHE_pos2, RAG2_pos2, TTN_pos2
6	GTR+G	BCHE_pos3, BRCA2_pos3
7	GTR+G	BRCA1_pos2, BRCA2_pos2
8	GTR+G	BRCA1_pos3, TTN_pos3
9	GTR+G	BRCA2_pos1

Settings used

alignment : ./Mylo_7exons_seqCat.phylip
branchlengths : linked
models : GTR+I+G, GTR+G
model_selection : bic
search : greedy

Best partitioning scheme

Scheme Name : step_12
Scheme lnL : -61830.71542
Scheme BIC : 125038.535538
Number of params : 143
Number of sites : 15216
Number of subsets : 9

RaxML-style partition definitions

DNA, p1 = 1-312\3, 2-312\3, 314-2724\3
DNA, p2 = 3-312\3, 315-2724\3, 10374-10797\3
DNA, p3 = 313-2724\3, 3706-6483\3
DNA, p4 = 2725-3705\3, 10372-10797\3, 10798-15216\3
DNA, p5 = 2726-3705\3, 10373-10797\3, 10799-15216\3
DNA, p6 = 2727-3705\3, 6486-10371\3
DNA, p7 = 3707-6483\3, 6485-10371\3
DNA, p8 = 3708-6483\3, 10800-15216\3
DNA, p9 = 6484-10371\3

Table S4: Detailed comparisons between our *Mylodon* mitogenome and the one produced by Slater et al. (2016).

Annotated regions	**Length (bp)**	**Identity (%)**	**Problems in Slater et al. (2016) sequence (KR336794)**
tRNA-Phe	70	100	None
12S rRNA	963	99.2	1 divergent region (12 bp) including a 4 bp insertion
tRNA-Val	68	100	None
16S rRNA	1575	98.7	1 substitution + 1 divergent region (26 bp) + 3 Ns
tRNA-Leu	75	100	None
ND1	957	88.7	4 substitutions + 3 divergent regions (26 bp, 14bp, 19bp) including missing start codon + 60 Ns (7 stop codons)
tRNA-Ile	69	100	None
tRNA-Gln	73	100	None
tRNA-Met	69	100	None
ND2	1044	91.0	2 substitutions + 4 divergent regions (88 bp, 41 bp, 51 bp, 6 bp) + 3 deletions + 1 insertion + 4 Ns (8 stop codons)
tRNA-Trp	69	100	None
tRNA-Ala	69	100	None
tRNA-Asn	73	100	None
Origin of L-strand replication	34	100	None
tRNA-Cys	67	100	None
tRNA-Tyr	66	100	None
COX1	1542	90.5	3 substitutions + 43 Ns
tRNA-Ser	69	100	None
tRNA-Asp	68	97.1	1 substitution + 1 insertion
COX2	684	94.2	21 substitutions + 2 divergent regions (10 bp, 19 bp)
tRNA-Lys	69	100	None
ATP8	204	52.5	3 substitutions + 94 gaps (1 stop codon)
ATP6	681	41.8	13 substitutions + 3 divergent regions (39 bp, 29 bp, 34 bp) + 175 Ns + 259 gaps (1 stop codon)
COX3	784	96.4	2 substitutions + 1 divergent region (23 bp) + 1 insertion (10 stop codons)
tRNA-Gly	70	100	None
ND3	346	54.3	7 substitutions + 151 Ns
tRNA-Arg	70	100	None
ND4L	297	59.1	1 divergent region (14 bp) + 110 Ns
ND4	1378	85.7	187 Ns + 2 insertions (29 stop codons)
tRNA-His	69	100	None
tRNA-Ser	60	100	None

tRNA-Leu	70	100	None
ND5	1824	53.5	13 substitutions + 2 divergent regions (10 bp, 3 bp) + 809 gaps + 16 Ns (9 stop codons)
ND6	528	72.2	6 substitutions + 1 divergent region (13 bp) + 4 gaps + 126 Ns (2 stop codons)
tRNA-Glu	69	100	None
CYTB	1140	98.9	11 substitutions + 2 insertions (27 stop codons)
tRNA-Thr	67	29.4	22 gaps + 26 Ns
tRNA-Pro	70	0	70 Ns
Control Region	993	60.0	48 gaps + 310 Ns

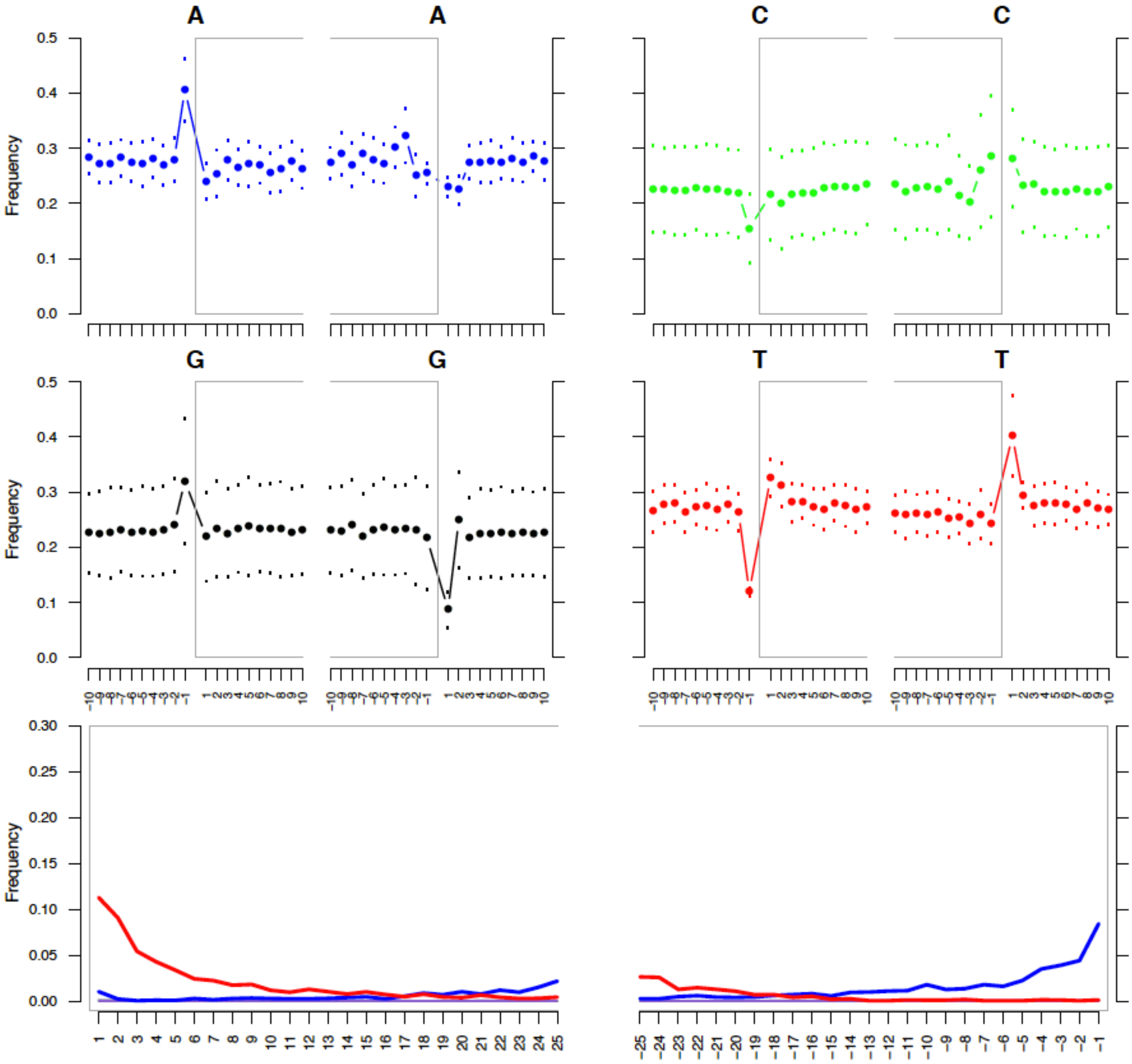


Figure S1. mapDamage DNA fragmentation and nucleotide mis-incorporation plots of the 53,550 cleaned shotgun Illumina reads mapping to the *Mylodon darwinii* SP57 mitogenome. 1st and 2nd rows: DNA fragmentation patterns for the 10 bp preceding read starts (positions -1 to -10 on the left panels of each base composition profile) and the 10 bp following read ends (positions 1 to 10 on the right panels of each base composition profile). 3rd row: Nucleotide mis-incorporation patterns for the first 25 nucleotides and the last 25 sequenced, respectively, with C=>T substitution frequencies (red) and G=>A substitution frequencies (blue).

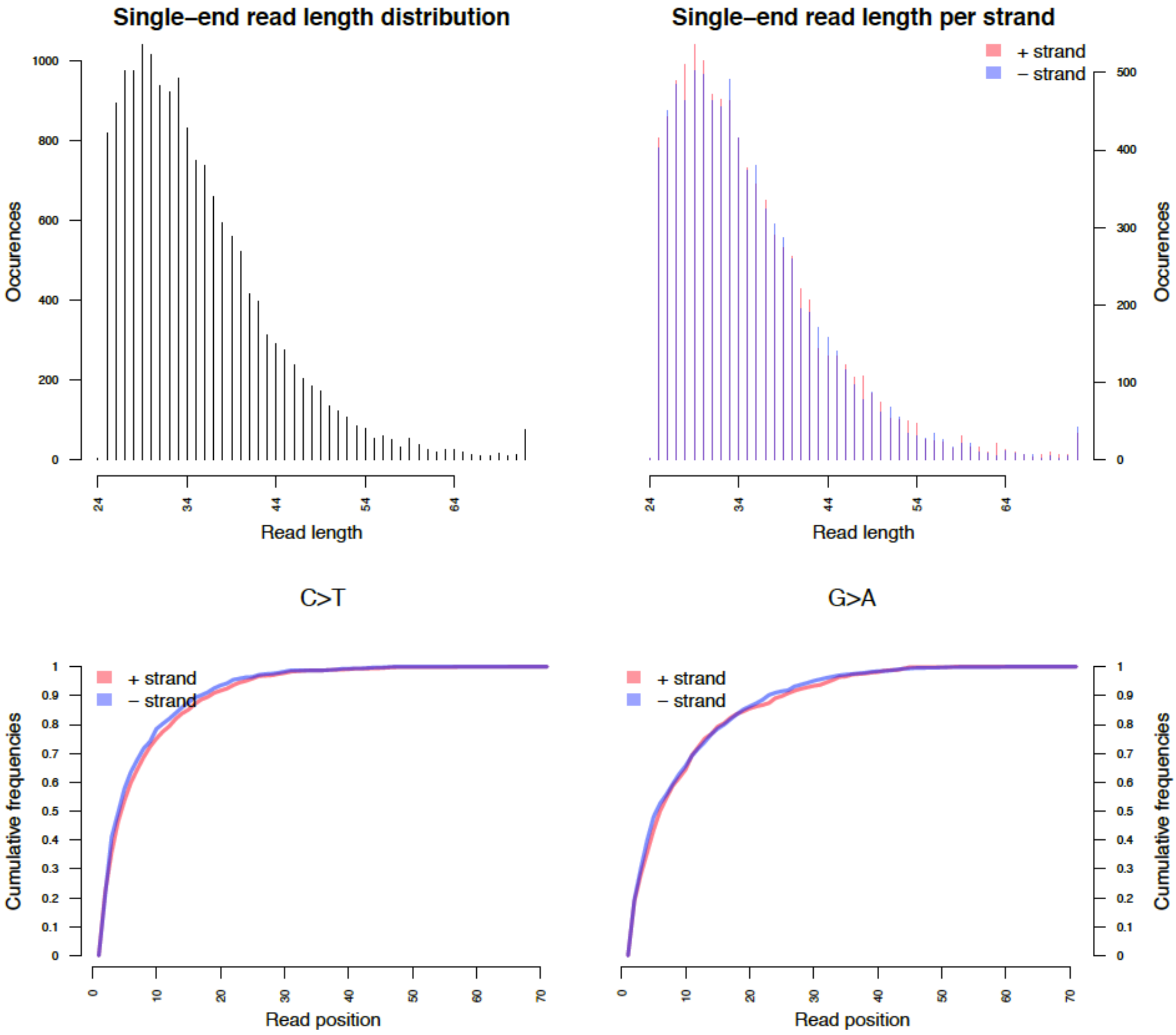


Figure S2. mapDamage fragment length distribution of the 53,550 shotgun cleaned Illumina reads mapping to the *Mylodon darwinii* SP57 mitogenome. Mean fragment length was 30 base pairs.

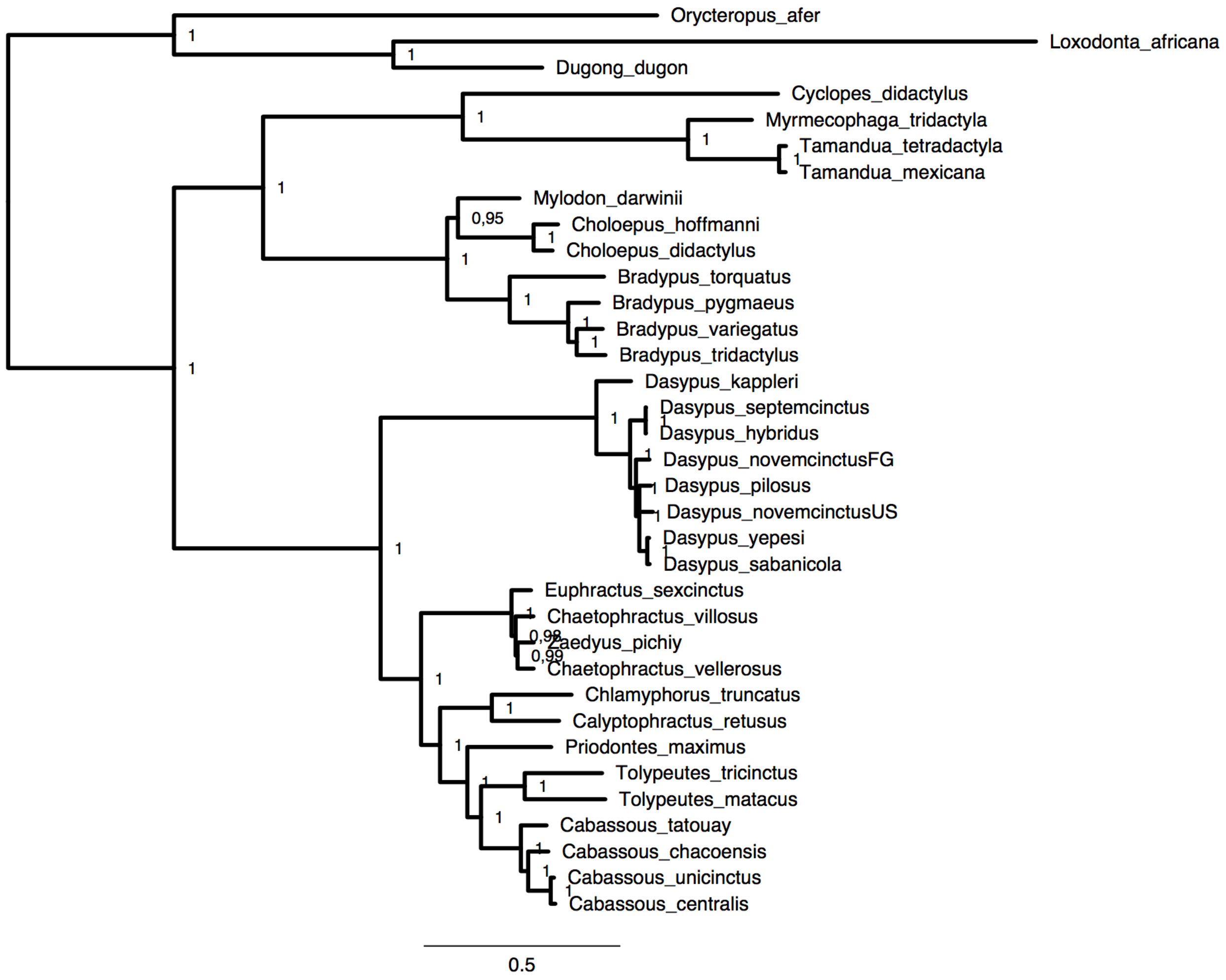


Figure S3: Bayesian consensus mitogenomic tree obtained with PhyloBayes under the CAT-GTR+G_4 mixture model. Bayesian posterior probabilities are indicated at nodes. Branch lengths represent mean number of substitutions per site.

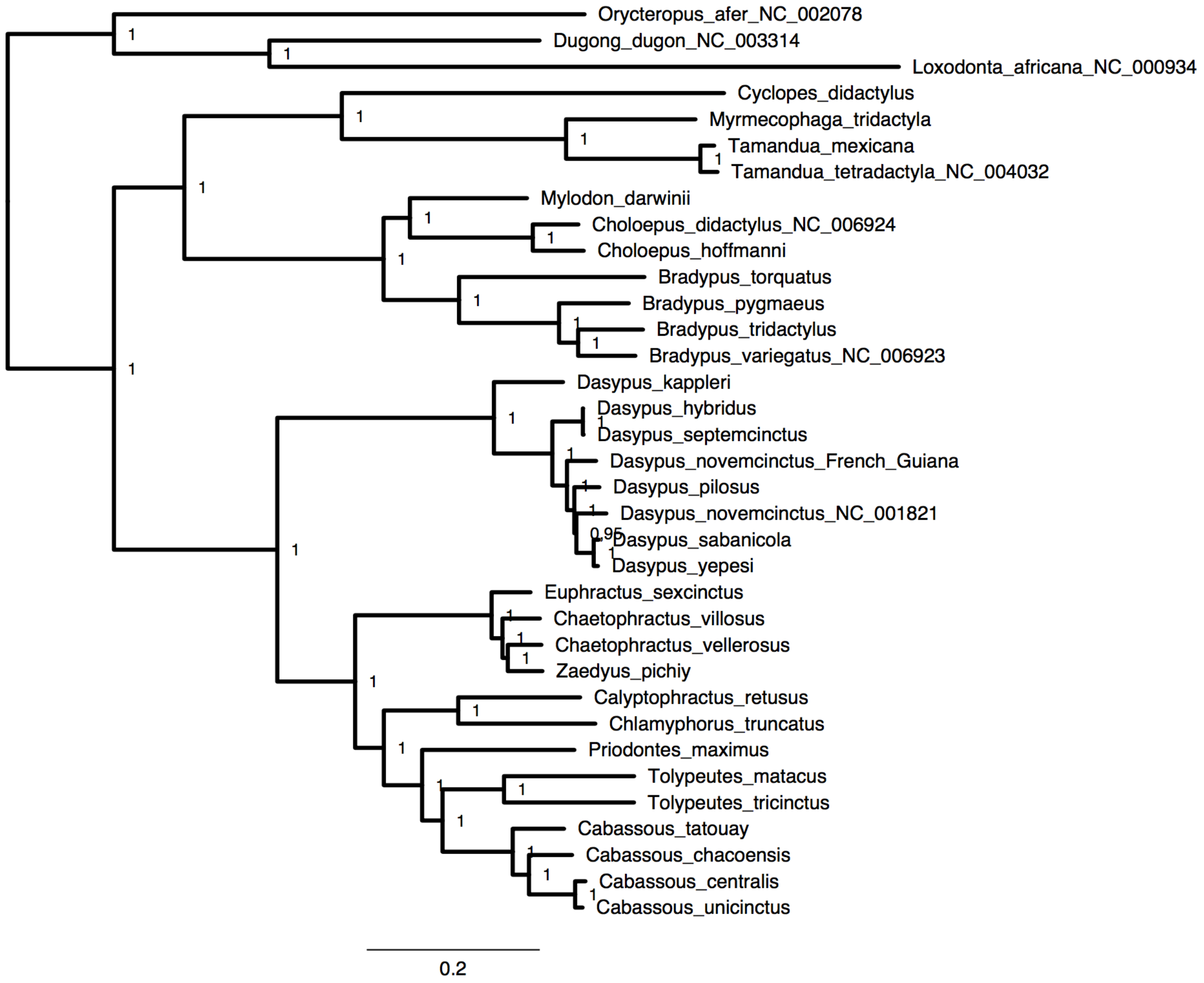


Figure S4: Bayesian consensus mitogenomic tree obtained with MrBayes under a mixed model for each best-fitting partition as estimated by PartitionFinder. Bayesian posterior probabilities are indicated at nodes. Branch lengths represent mean number of substitutions per site.

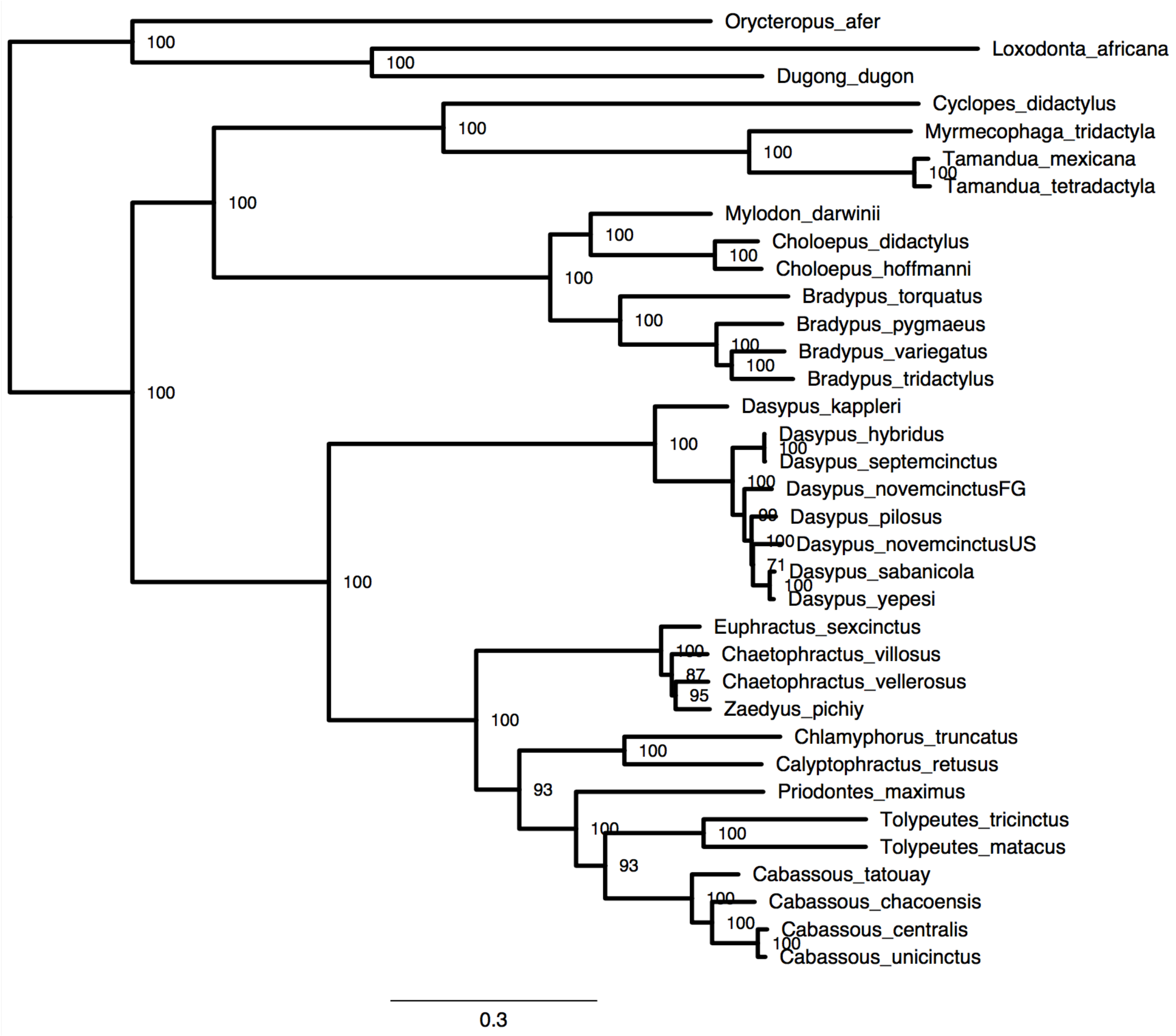


Figure S5: Maximum likelihood mitogenomic tree obtained with RAxML under a GTR+G+I mixed model for each best-fitting partition as estimated by PartitionFinder. Bootstrap percentages are indicated at nodes. Branch lengths represent mean number of substitutions per site.

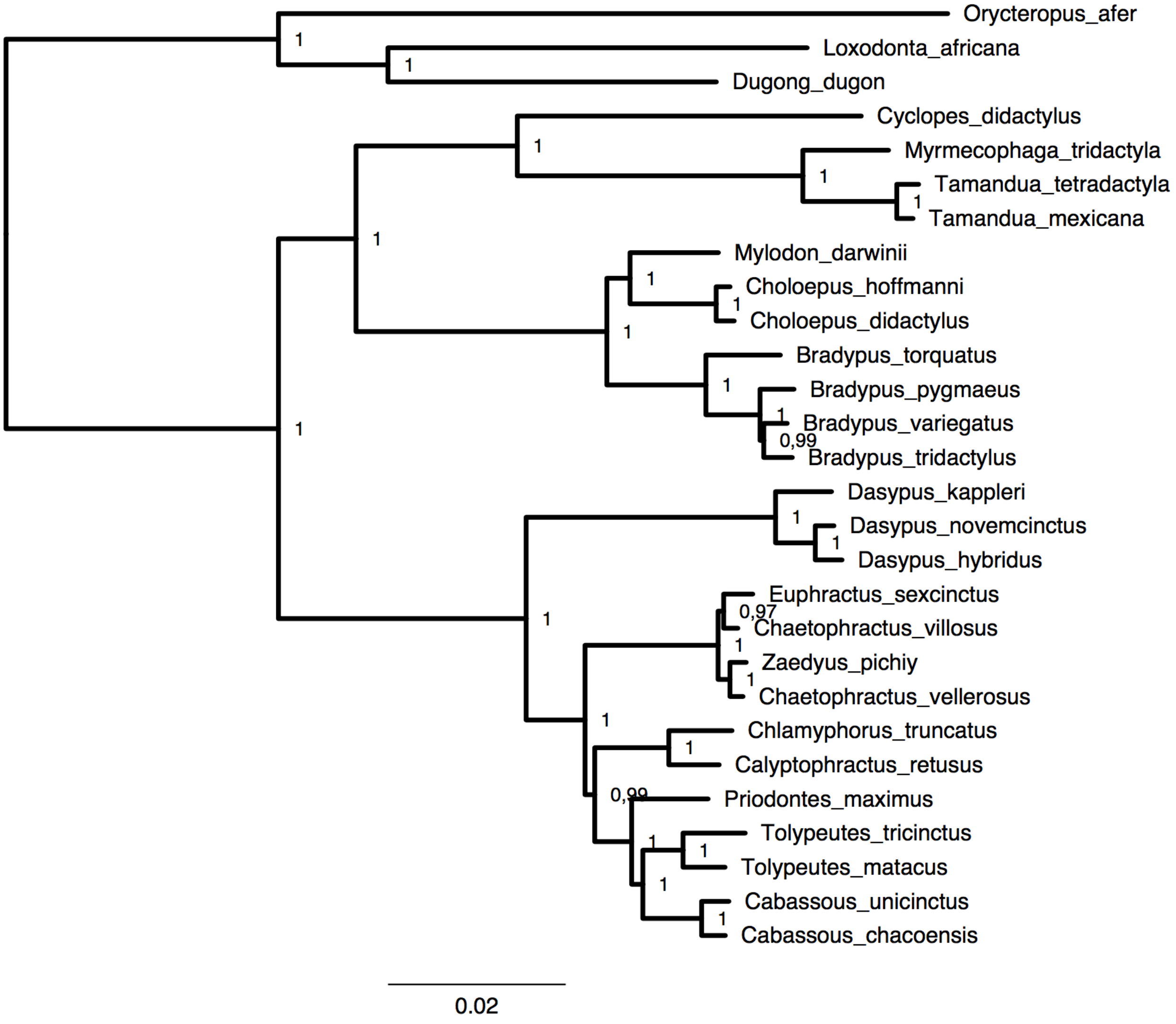


Figure S6: Bayesian consensus nuclear tree (concatenation of 7 exons) obtained with PhyloBayes under the CAT-GTR+G_4 mixture model. Bayesian posterior probabilities are indicated at nodes. Branch lengths represent mean number of substitutions per site.

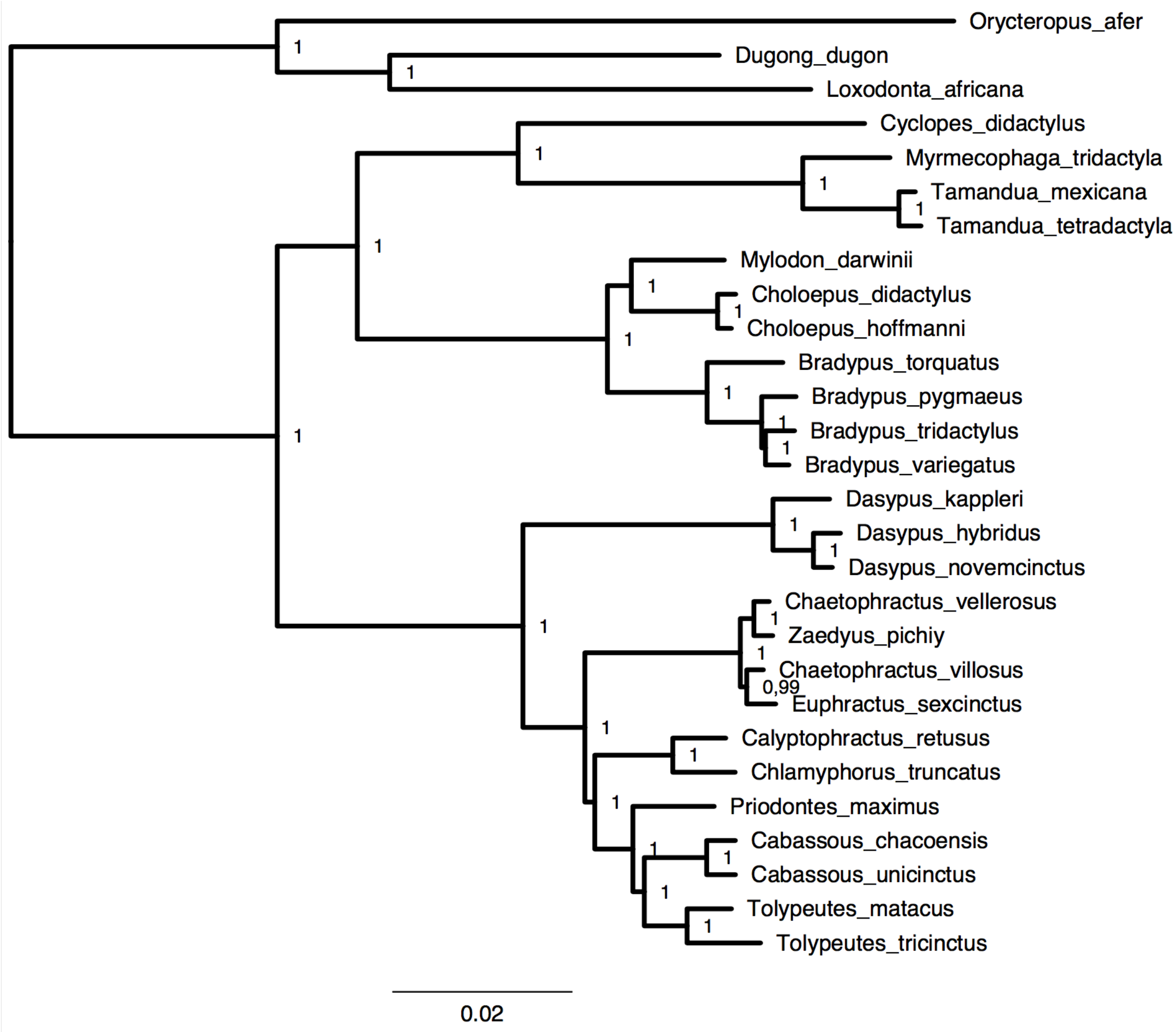


Figure S7: Bayesian consensus nuclear tree (concatenation of 7 exons) obtained with MrBayes under a mixed model for each best-fitting partition as estimated by PartitionFinder. Bayesian posterior probabilities are indicated at nodes. Branch lengths represent mean number of substitutions per site.

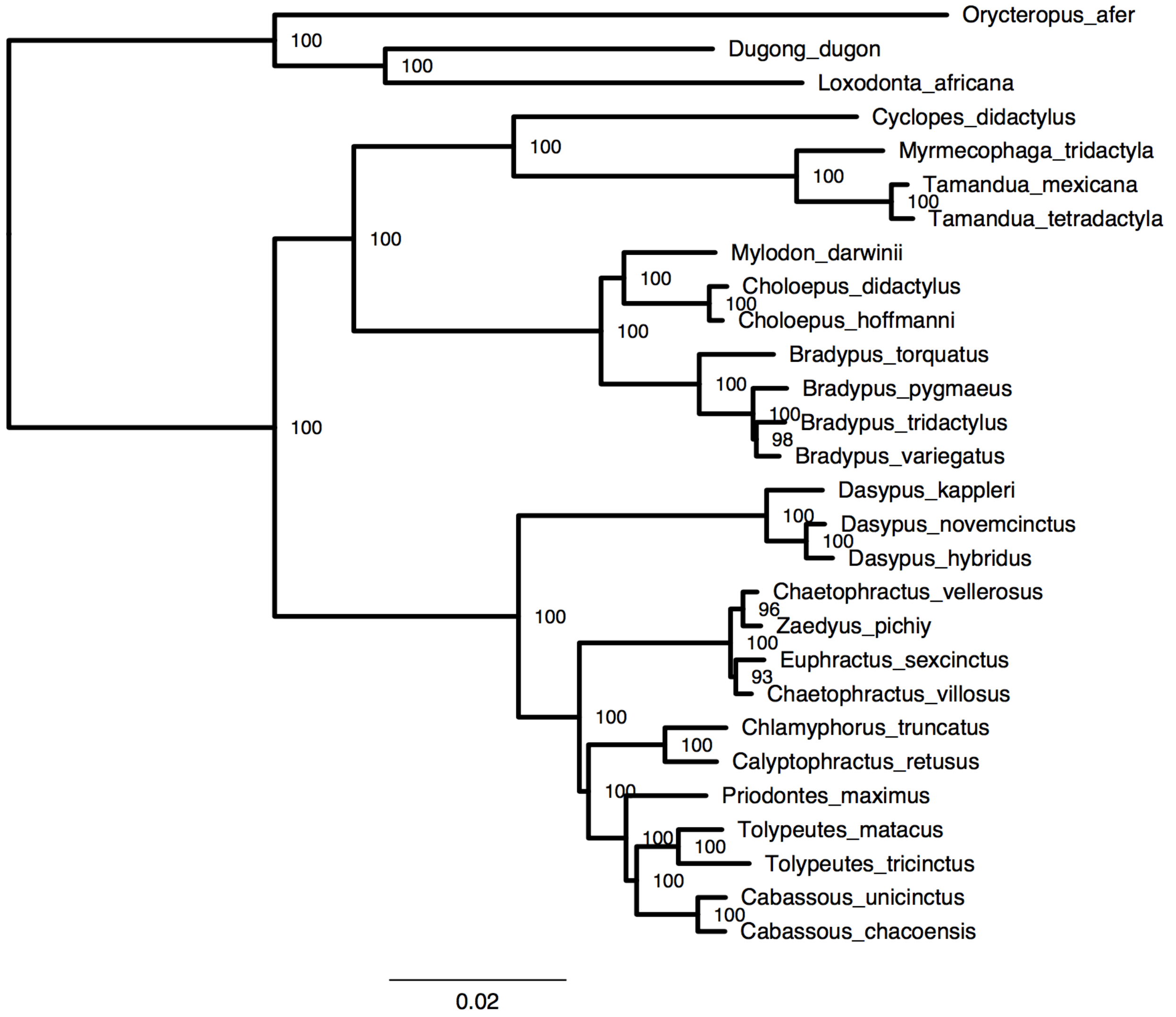


Figure S8: Maximum likelihood nuclear tree (concatenation of 7 exons) obtained with RAxML under a GTR+G mixed model for each best-fitting partition as estimated by PartitionFinder. Bootstrap percentages are indicated at nodes. Branch lengths represent mean number of substitutions per site.

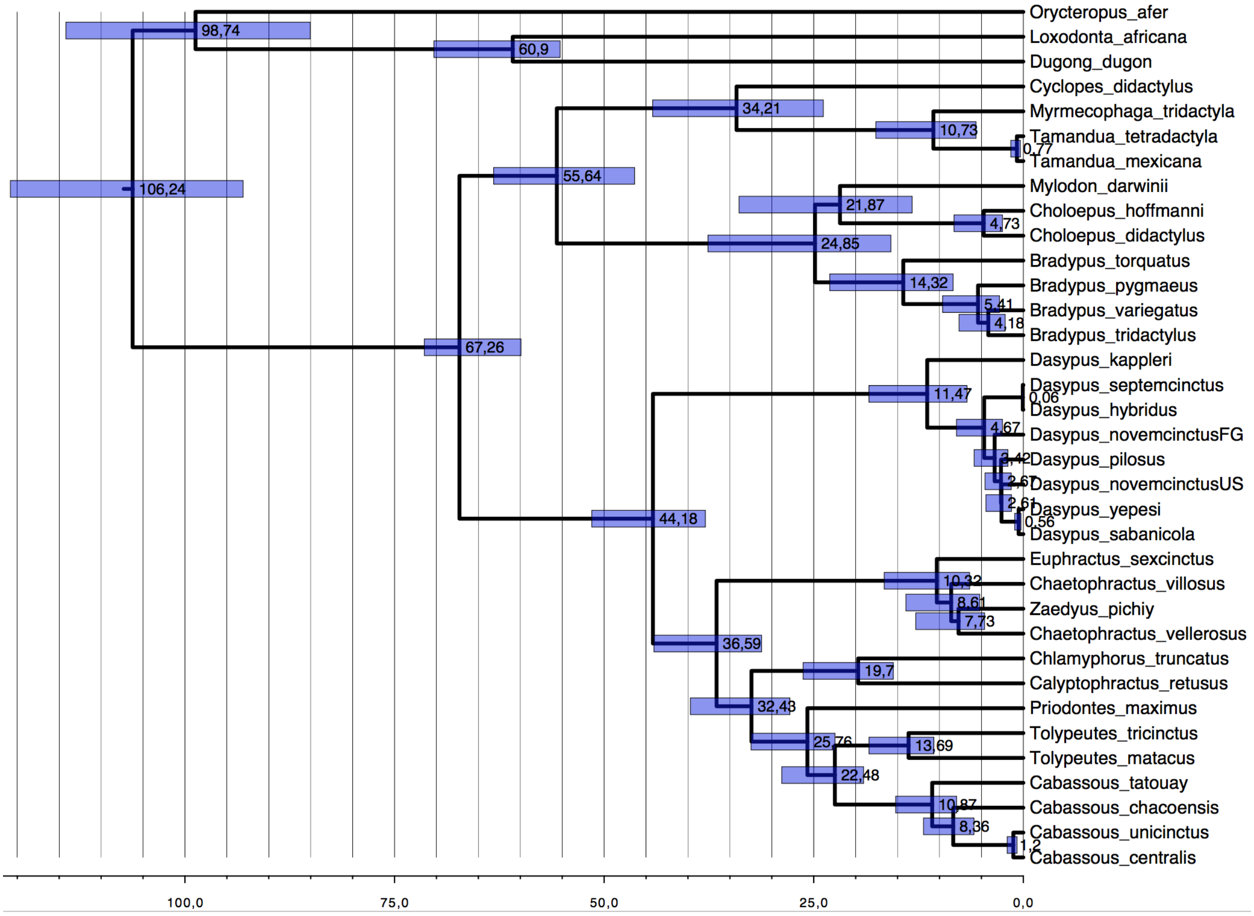


Figure S9: Bayesian mitogenomic chronogram obtained with PhyloBayes under the CAT-GTR+G_4 mixture model and an autocorrelated lognormal model of clock relaxation. Timescale is in million years ago.

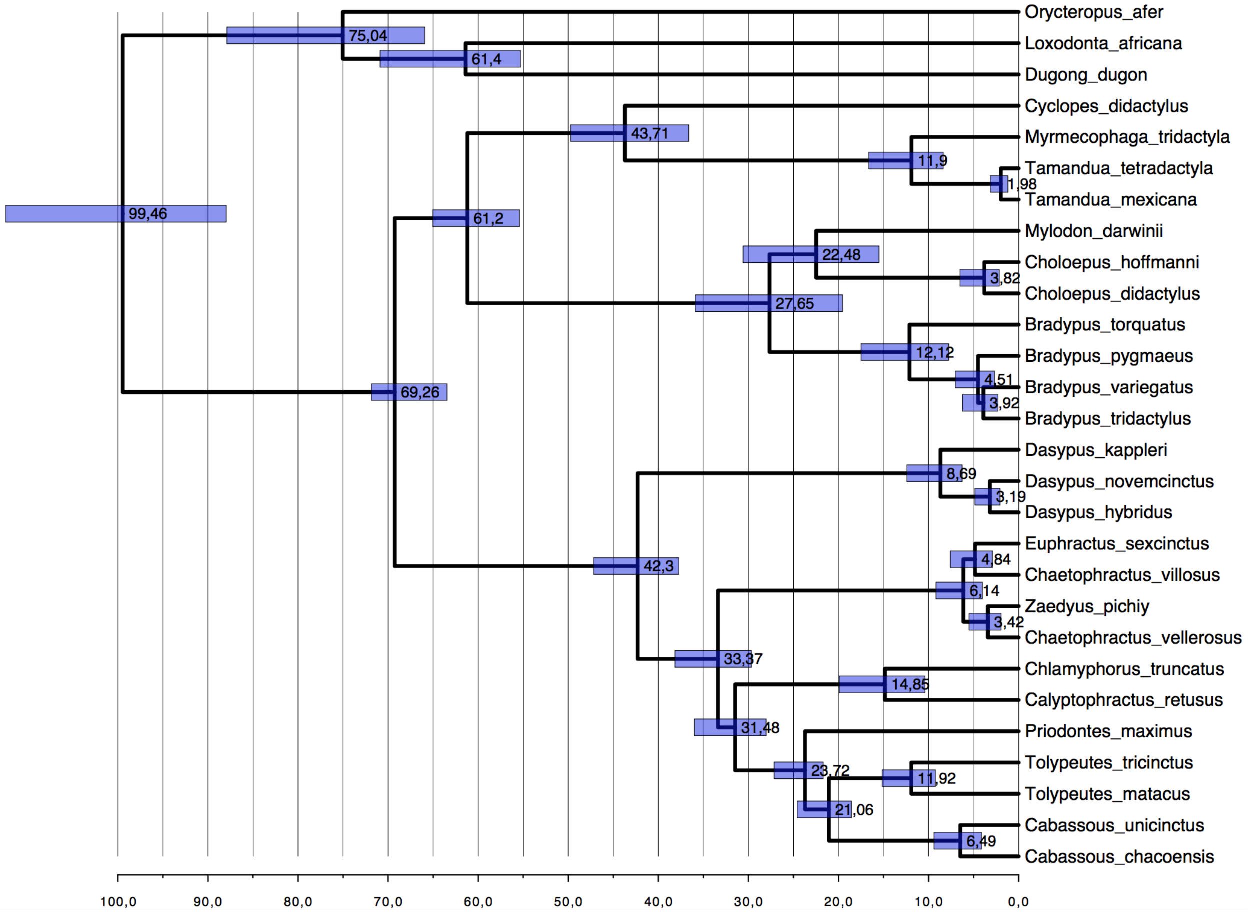
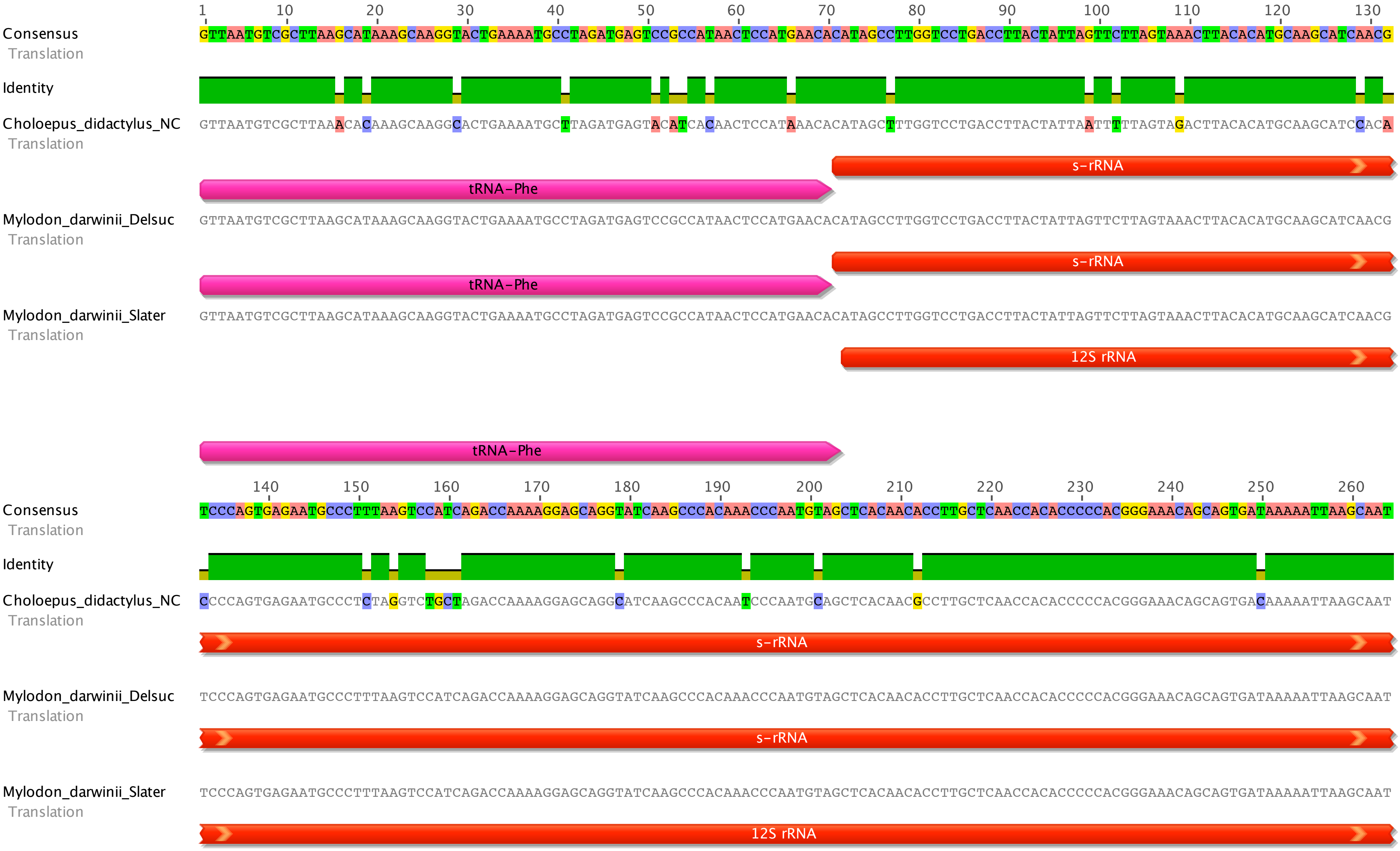


Figure S10: Bayesian nuclear chronogram (concatenation of 7 exons) obtained with PhyloBayes under the CAT-GTR+G_4 mixture model and an autocorrelated lognormal model of clock relaxation. Timescale is in million years ago.

Figure S11: Comparison of available *Mylodon* mitogenomes with the *Choloepus didactylus* reference mitogenome.



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Choloepus_didactylus_NC GTTAATGTCGCTTAAACACAAAGCAAGGCACTGAAAATGCTTAGATGAGTACATCACAACTCCATAAACACATAGCTTTGGTCCTGACCTTACTATTAATTTTTAGTAGACTTACACATGCAAGCATCCACA

Mylodon_darwinii_Delsuc GTTAATGTCGCTTAAGCATAAAGCAAGGTACTGAAAATGCCTAGATGAGTCCGCCATAACTCCATGAACACATAGCCTTGGTCCTGACCTTACTATTAGTTCTTAGTAAACTTACACATGCAAGCATCAACG

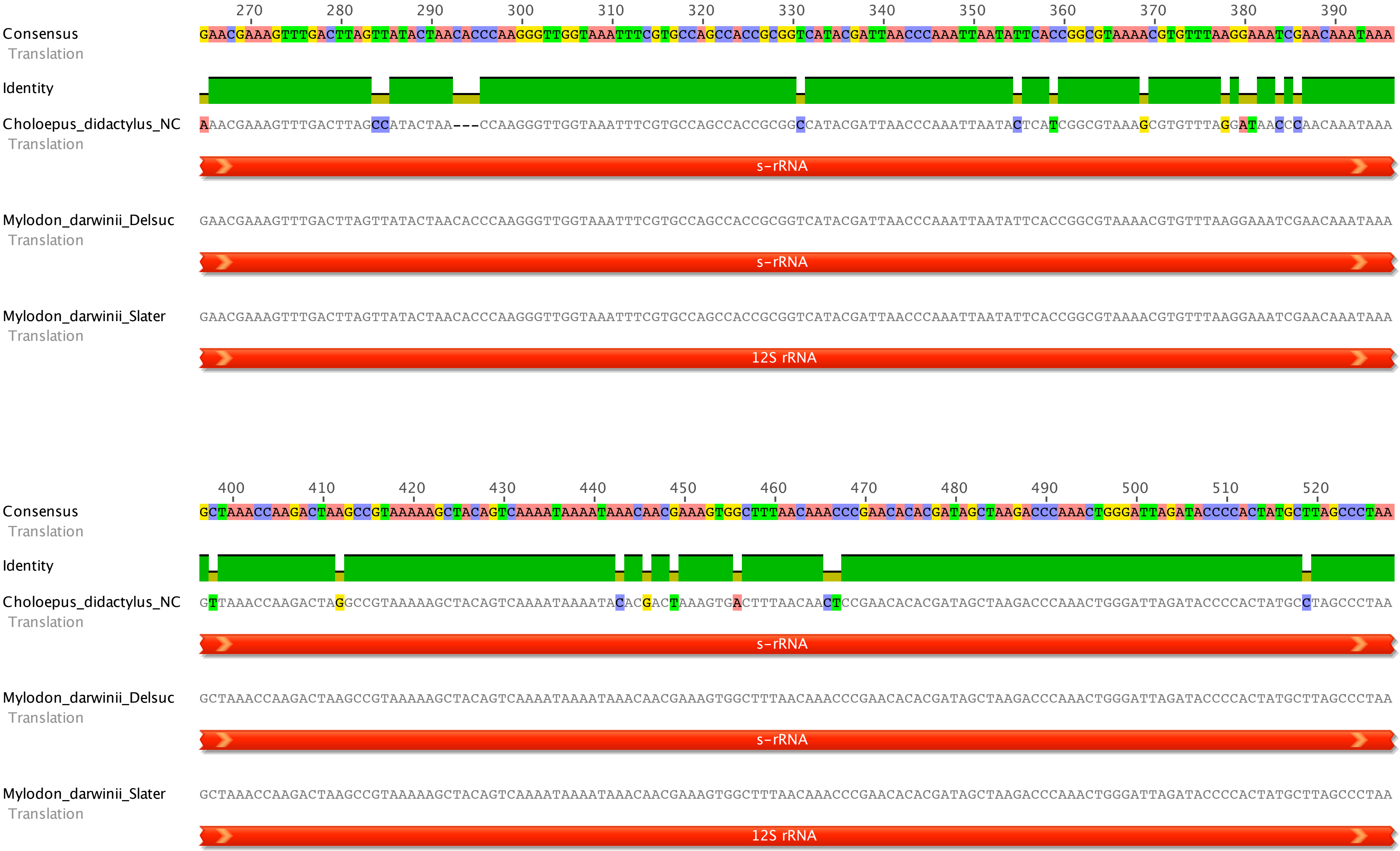
Mylodon_darwinii_Slater GTTAATGTCGCTTAAGCATAAAGCAAGGTACTGAAAATGCCTAGATGAGTCCGCCATAACTCCATGAACACATAGCCTTGGTCCTGACCTTACTATTAGTTCTTAGTAAACTTACACATGCAAGCATCAACG

Consensus TCCCAGTGAGAATGCCCTTTAAGTCCATCAGACCAAAAGGAGCAGGTATCAAGCCCACAAACCCAATGTAGCTCACAACACCTTGCTCAACCACACCCCCACGGGAAACAGCAGTGATAAAAATTAAGCAAT

Choloepus_didactylus_NC CCCCAGTGAGAATGCCCTCTAGGTCTGCTAGACCAAAAGGAGCAGGCATCAAGCCCACAATCCCAATGCAGCTCACAACGCCTTGCTCAACCACACCCCCACGGGAAACAGCAGTGACAAAAATTAAGCAAT

Mylodon_darwinii_Delsuc TCCCAGTGAGAATGCCCTTTAAGTCCATCAGACCAAAAGGAGCAGGTATCAAGCCCACAAACCCAATGTAGCTCACAACACCTTGCTCAACCACACCCCCACGGGAAACAGCAGTGATAAAAATTAAGCAAT

Mylodon_darwinii_Slater TCCCAGTGAGAATGCCCTTTAAGTCCATCAGACCAAAAGGAGCAGGTATCAAGCCCACAAACCCAATGTAGCTCACAACACCTTGCTCAACCACACCCCCACGGGAAACAGCAGTGATAAAAATTAAGCAAT



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Choloepus_didactylus_NC AAACGAAAGTTTGACTTAGCCATACTAA---CCAAGGGTTGGTAAATTTCGTGCCAGCCACCGCGGCCATACGATTAACCCAAATTAATACTCATCGGCGTAAAGCGTGTTTAGGATAACCCAACAAATAAA

Mylodon_darwinii_Delsuc GAACGAAAGTTTGACTTAGTTATACTAACACCCAAGGGTTGGTAAATTTCGTGCCAGCCACCGCGGTCATACGATTAACCCAAATTAATATTCACCGGCGTAAAACGTGTTTAAGGAAATCGAACAAATAAA

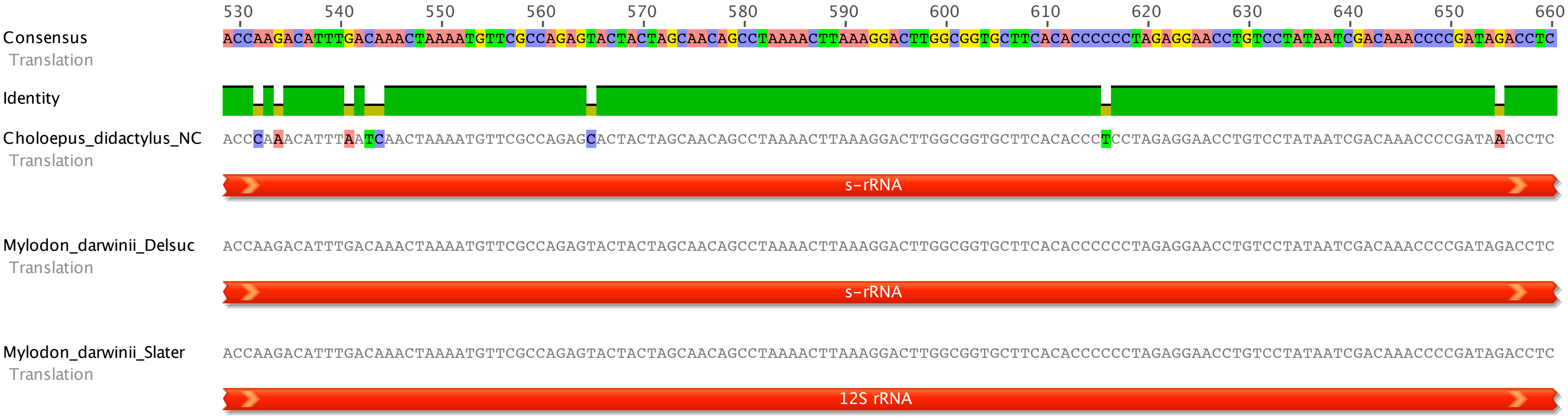
Mylodon_darwinii_Slater GAACGAAAGTTTGACTTAGTTATACTAACACCCAAGGGTTGGTAAATTTCGTGCCAGCCACCGCGGTCATACGATTAACCCAAATTAATATTCACCGGCGTAAAACGTGTTTAAGGAAATCGAACAAATAAA

Consensus GCTAAACCAAGACTAAGCCGTAAAAAGCTACAGTCAAAATAAAATAAACAACGAAAGTGGCTTTAACAAACCCGAACACACGATAGCTAAGACCCAAACTGGGATTAGATACCCCACTATGCTTAGCCCTAA

Choloepus_didactylus_NC GTTAAACCAAGACTAGGCCGTAAAAAGCTACAGTCAAAATAAAATACACGACTAAAGTGACTTTAACAACTCCGAACACACGATAGCTAAGACCCAAACTGGGATTAGATACCCCACTATGCCTAGCCCTAA

Mylodon_darwinii_Delsuc GCTAAACCAAGACTAAGCCGTAAAAAGCTACAGTCAAAATAAAATAAACAACGAAAGTGGCTTTAACAAACCCGAACACACGATAGCTAAGACCCAAACTGGGATTAGATACCCCACTATGCTTAGCCCTAA

Mylodon_darwinii_Slater GCTAAACCAAGACTAAGCCGTAAAAAGCTACAGTCAAAATAAAATAAACAACGAAAGTGGCTTTAACAAACCCGAACACACGATAGCTAAGACCCAAACTGGGATTAGATACCCCACTATGCTTAGCCCTAA

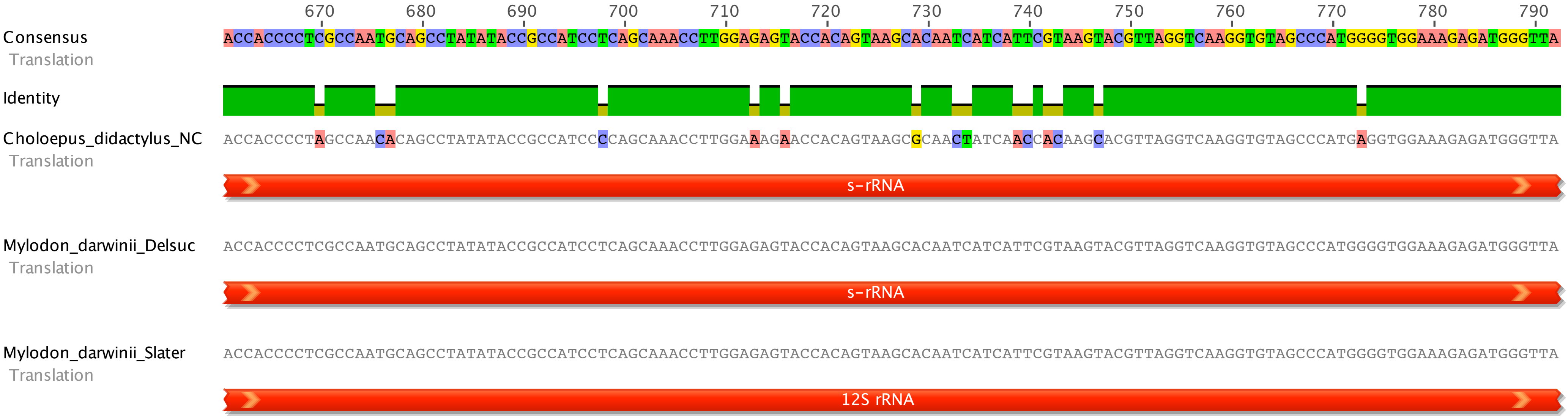


Consensus ACCAAGACATTTGACAAACTAAAATGTTCGCCAGAGTACTACTAGCAACAGCCTAAAACTTAAAGGACTTGGCGGTGCTTCACACCCCCCTAGAGGAACCTGTCCTATAATCGACAAACCCCGATAGACCTC

Choloepus_didactylus_NC ACCCAAACATTTAATCAACTAAAATGTTCGCCAGAGCACTACTAGCAACAGCCTAAAACTTAAAGGACTTGGCGGTGCTTCACACCCTCCTAGAGGAACCTGTCCTATAATCGACAAACCCCGATAAACCTC

Mylodon_darwinii_Delsuc ACCAAGACATTTGACAAACTAAAATGTTCGCCAGAGTACTACTAGCAACAGCCTAAAACTTAAAGGACTTGGCGGTGCTTCACACCCCCCTAGAGGAACCTGTCCTATAATCGACAAACCCCGATAGACCTC

Mylodon_darwinii_Slater ACCAAGACATTTGACAAACTAAAATGTTCGCCAGAGTACTACTAGCAACAGCCTAAAACTTAAAGGACTTGGCGGTGCTTCACACCCCCCTAGAGGAACCTGTCCTATAATCGACAAACCCCGATAGACCTC

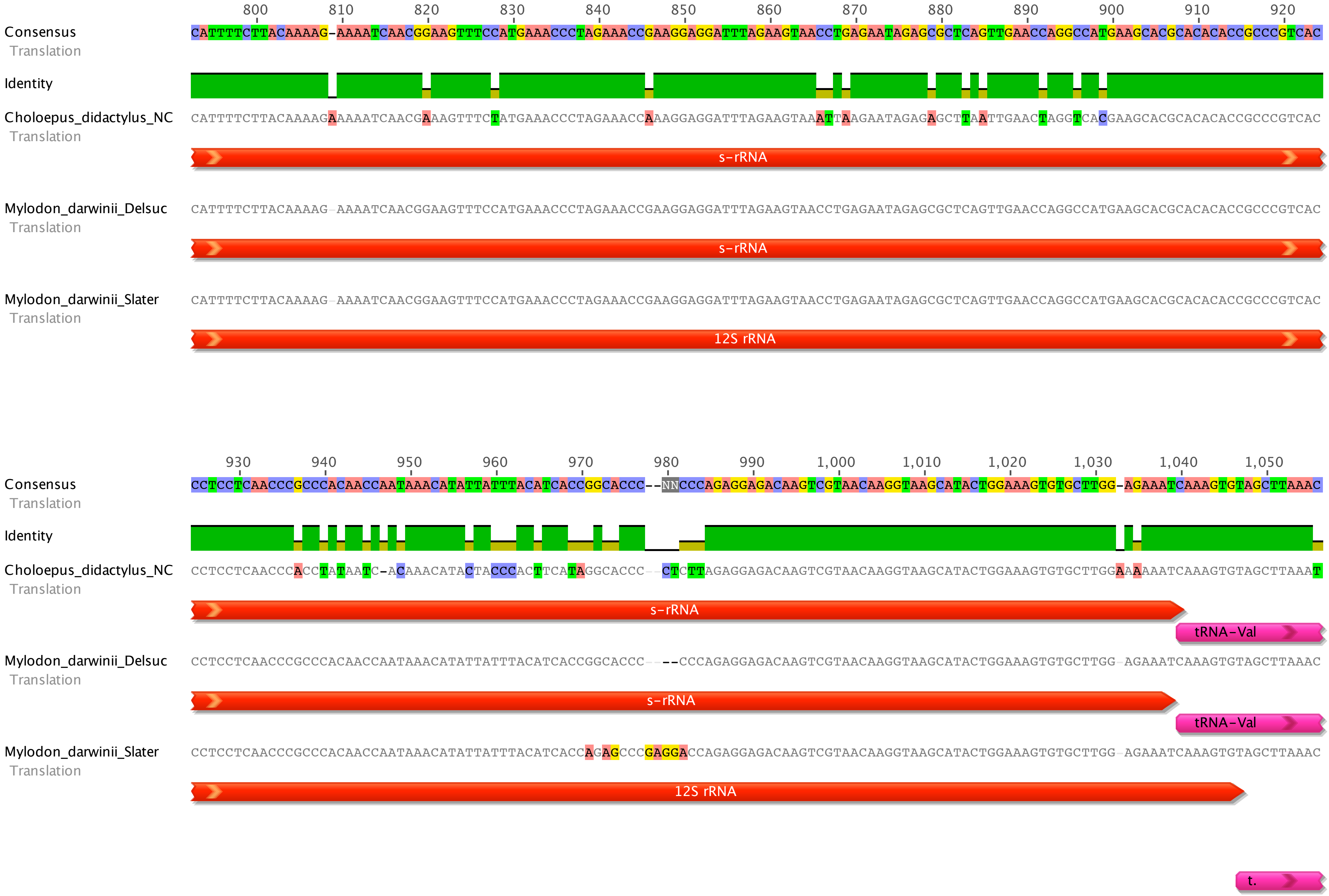


Consensus ACCACCCCTCGCCAATGCAGCCTATATACCGCCATCCTCAGCAAACCTTGGAGAGTACCACAGTAAGCACAATCATCATTCGTAAGTACGTTAGGTCAAGGTGTAGCCCATGGGGTGGAAAGAGATGGGTTA

Choloepus_didactylus_NC ACCACCCCTAGCCAACACAGCCTATATACCGCCATCCCCAGCAAACCTTGGAAAGAACCACAGTAAGCGCAACTATCAACCACAAGCACGTTAGGTCAAGGTGTAGCCCATGAGGTGGAAAGAGATGGGTTA

Mylodon_darwinii_Delsuc ACCACCCCTCGCCAATGCAGCCTATATACCGCCATCCTCAGCAAACCTTGGAGAGTACCACAGTAAGCACAATCATCATTCGTAAGTACGTTAGGTCAAGGTGTAGCCCATGGGGTGGAAAGAGATGGGTTA

Mylodon_darwinii_Slater ACCACCCCTCGCCAATGCAGCCTATATACCGCCATCCTCAGCAAACCTTGGAGAGTACCACAGTAAGCACAATCATCATTCGTAAGTACGTTAGGTCAAGGTGTAGCCCATGGGGTGGAAAGAGATGGGTTA



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              800       810       820       830       840       850       860       870       880       890       900       910       920
Consensus                 CATTTTCTTACAAAAG-AAAATCAACGGAAGTTTCCATGAAACCCTAGAAACCGAAGGAGGATTTAGAAGTAACCTGAGAATAGAGCGCTCAGTTGAACCAGGCCATGAAGCACGCACACACCGCCCGTCAC
 Translation
Identity
Choloepus_didactylus_NC   CATTTTCTTACAAAAGAAAAATCAACGAAAGTTTCTATGAAACCCTAGAAACCAAAGGAGGATTTAGAAGTAAATTAAGAATAGAGAGCTTAAATTGAACTAGGTCACGAAGCACGCACACACCGCCCGTCAC
 Translation
                          s-rRNA
Mylodon_darwinii_Delsuc   CATTTTCTTACAAAAG-AAAATCAACGGAAGTTTCCATGAAACCCTAGAAACCGAAGGAGGATTTAGAAGTAACCTGAGAATAGAGCGCTCAGTTGAACCAGGCCATGAAGCACGCACACACCGCCCGTCAC
 Translation
                          s-rRNA
Mylodon_darwinii_Slater   CATTTTCTTACAAAAG-AAAATCAACGGAAGTTTCCATGAAACCCTAGAAACCGAAGGAGGATTTAGAAGTAACCTGAGAATAGAGCGCTCAGTTGAACCAGGCCATGAAGCACGCACACACCGCCCGTCAC
 Translation
                          12S rRNA

            930       940       950       960       970       980       990       1,000     1,010     1,020     1,030     1,040     1,050
Consensus                 CCTCCTCAACCCGCCCACAACCAATAAACATATTATTTACATCACCGGCACCC--NNCCCAGAGGAGACAAGTCGTAACAAGGTAAGCATACTGGAAAGTGTGCTTGG-AGAAATCAAAGTGTAGCTTAAAC
 Translation
Identity
Choloepus_didactylus_NC   CCTCCTCAACCCACCTATAATC-ACAAACATACTACCCACTTCATAGGCACCC--CTCTTAGAGGAGACAAGTCGTAACAAGGTAAGCATACTGGAAAGTGTGCTTGGAAAAAATCAAAGTGTAGCTTAAAT
 Translation
                          s-rRNA
                          tRNA-Val
Mylodon_darwinii_Delsuc   CCTCCTCAACCCGCCCACAACCAATAAACATATTATTTACATCACCGGCACCC----CCCAGAGGAGACAAGTCGTAACAAGGTAAGCATACTGGAAAGTGTGCTTGG-AGAAATCAAAGTGTAGCTTAAAC
 Translation
                          s-rRNA
                          tRNA-Val
Mylodon_darwinii_Slater   CCTCCTCAACCCGCCCACAACCAATAAACATATTATTTACATCACCAGAGCCCGAGGACCAGAGGAGACAAGTCGTAACAAGGTAAGCATACTGGAAAGTGTGCTTGG-AGAAATCAAAGTGTAGCTTAAAC
 Translation
                          12S rRNA
                          t.
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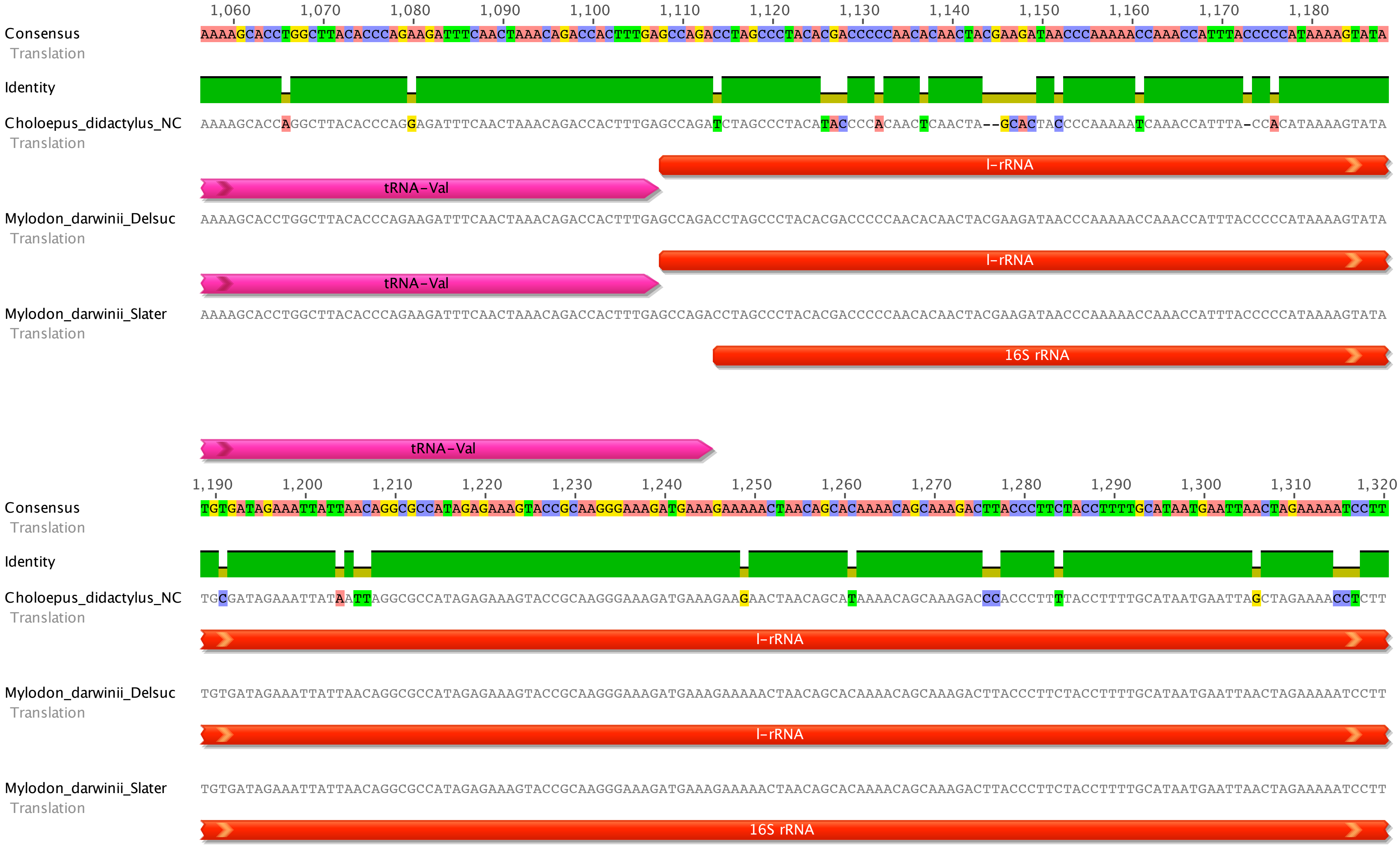

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                          1,060     1,070     1,080     1,090     1,100     1,110     1,120     1,130     1,140     1,150     1,160     1,170     1,180
Consensus                 AAAAGCACCTGGCTTACACCCAGAAGATTTCAACTAAACAGACCACTTTGAGCCAGACCTAGCCCTACACGACCCCCAACACAACTACGAAGATAACCCAAAAACCAAACCATTTACCCCCATAAAAGTATA
 Translation
Identity
Choloepus_didactylus_NC   AAAAGCACCAGGCTTACACCCAGGAGATTTCAACTAAACAGACCACTTTGAGCCAGATCTAGCCCTACATACCCCACAACTCAACTA--GCACTACCCCAAAAATCAAACCATTTA-CCACATAAAAGTATA
 Translation
                                                                                     l-rRNA
                                        tRNA-Val
Mylodon_darwinii_Delsuc   AAAAGCACCTGGCTTACACCCAGAAGATTTCAACTAAACAGACCACTTTGAGCCAGACCTAGCCCTACACGACCCCCAACACAACTACGAAGATAACCCAAAAACCAAACCATTTACCCCCATAAAAGTATA
 Translation
                                                                                     l-rRNA
                                        tRNA-Val
Mylodon_darwinii_Slater   AAAAGCACCTGGCTTACACCCAGAAGATTTCAACTAAACAGACCACTTTGAGCCAGACCTAGCCCTACACGACCCCCAACACAACTACGAAGATAACCCAAAAACCAAACCATTTACCCCCATAAAAGTATA
 Translation
                                                                                          16S rRNA

                                           tRNA-Val
                          1,190     1,200     1,210     1,220     1,230     1,240     1,250     1,260     1,270     1,280     1,290     1,300     1,310     1,320
Consensus                 TGTGATAGAAATTATTAACAGGCGCCATAGAGAAAGTACCGCAAGGGAAAGATGAAAGAAAAACTAACAGCACAAAACAGCAAAGACTTACCCTTCTACCTTTTGCATAATGAATTAACTAGAAAAATCCTT
 Translation
Identity
Choloepus_didactylus_NC   TGCGATAGAAATTATAATTAGGCGCCATAGAGAAAGTACCGCAAGGGAAAGATGAAAGAAGAACTAACAGCATAAAACAGCAAAGACCCACCCTTTTACCTTTTGCATAATGAATTAGCTAGAAAACCTCTT
 Translation
                                                                 l-rRNA
Mylodon_darwinii_Delsuc   TGTGATAGAAATTATTAACAGGCGCCATAGAGAAAGTACCGCAAGGGAAAGATGAAAGAAAAACTAACAGCACAAAACAGCAAAGACTTACCCTTCTACCTTTTGCATAATGAATTAACTAGAAAAATCCTT
 Translation
                                                                 l-rRNA
Mylodon_darwinii_Slater   TGTGATAGAAATTATTAACAGGCGCCATAGAGAAAGTACCGCAAGGGAAAGATGAAAGAAAAACTAACAGCACAAAACAGCAAAGACTTACCCTTCTACCTTTTGCATAATGAATTAACTAGAAAAATCCTT
 Translation
                                                                 16S rRNA
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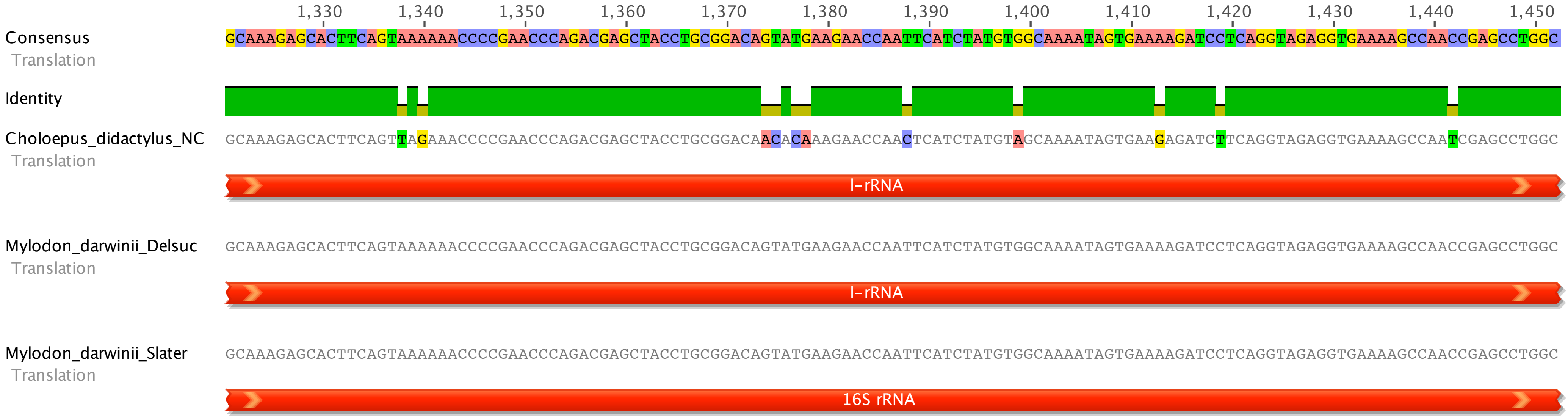
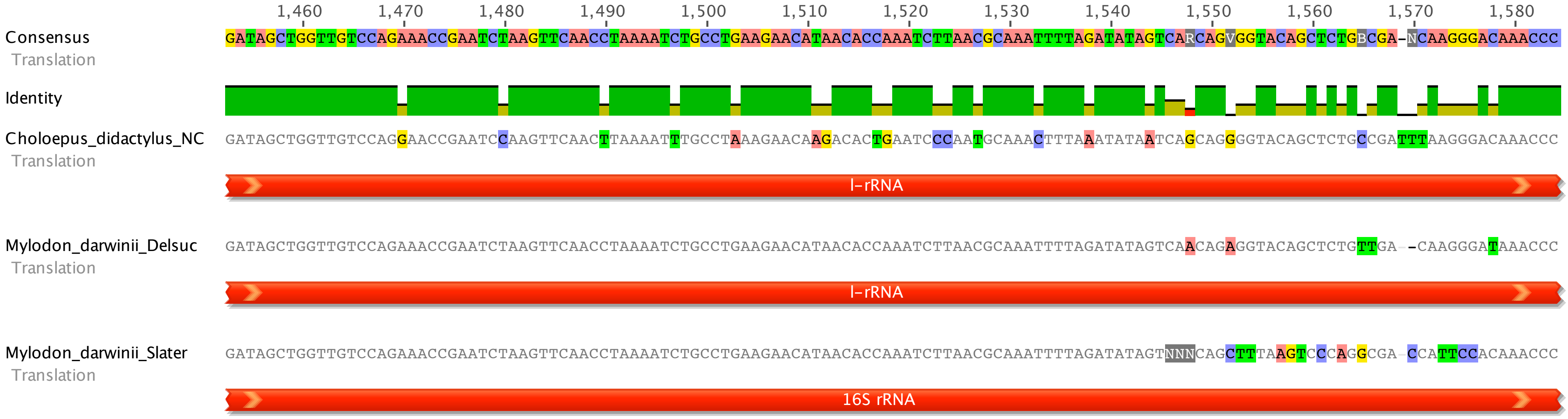


Consensus GCAAAGAGCACTTCAGTAAAAAACCCCGAACCCAGACGAGCTACCTGCGGACAGTATGAAGAACCAATTCATCTATGTGGCAAAATAGTGAAAAGATCCTCAGGTAGAGGTGAAAAGCCAACCGAGCCTGGC
Translation
Identity
Choloepus_didactylus_NC GCAAAGAGCACTTCAGTTAGAAACCCCGAACCCAGACGAGCTACCTGCGGACAACACAAAGAACCAACTCATCTATGTAGCAAAATAGTGAAGAGATCTTCAGGTAGAGGTGAAAAGCCAATCGAGCCTGGC
Translation
l-rRNA

Mylodon_darwinii_Delsuc GCAAAGAGCACTTCAGTAAAAAACCCCGAACCCAGACGAGCTACCTGCGGACAGTATGAAGAACCAATTCATCTATGTGGCAAAATAGTGAAAAGATCCTCAGGTAGAGGTGAAAAGCCAACCGAGCCTGGC
Translation
l-rRNA

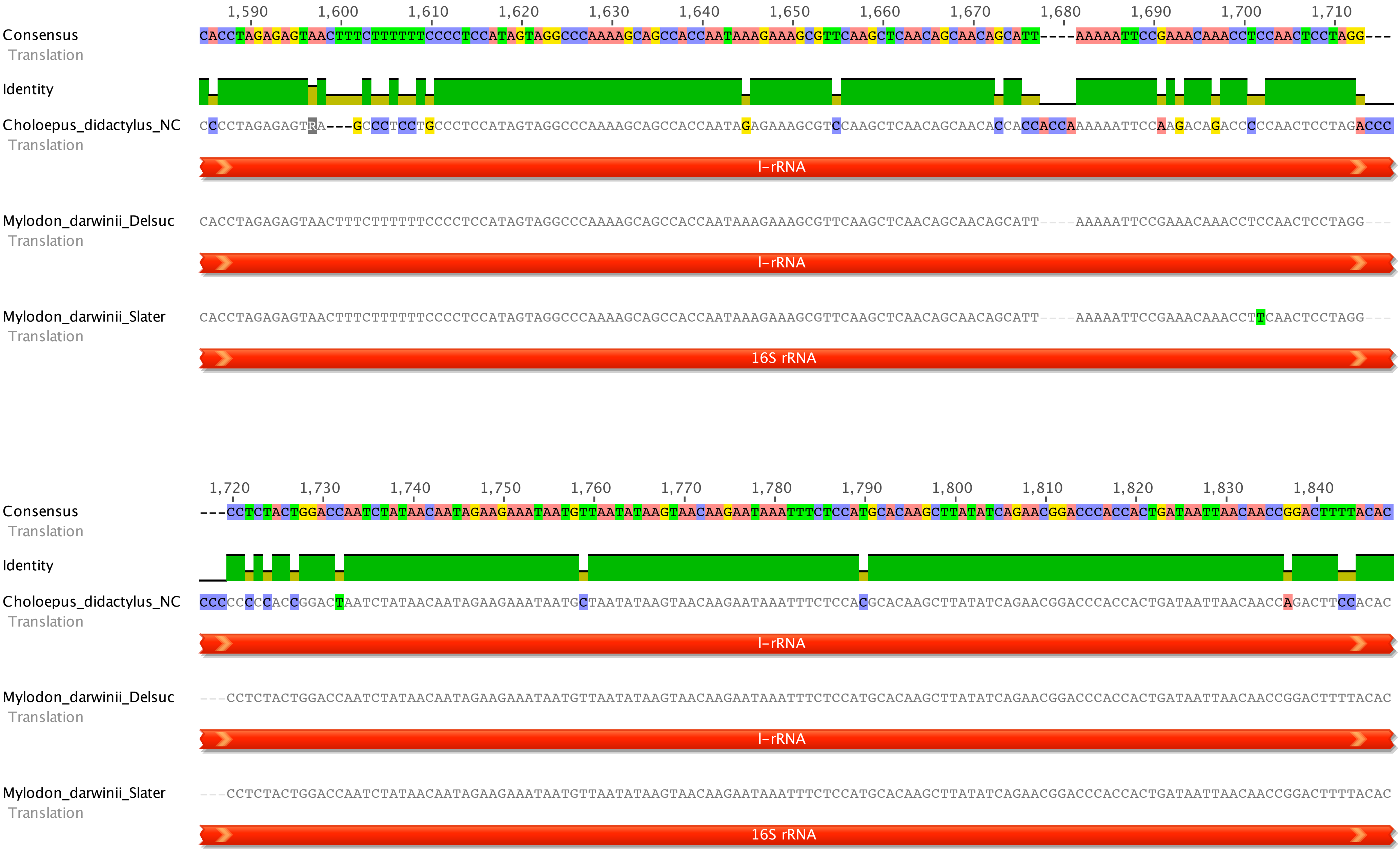
Mylodon_darwinii_Slater GCAAAGAGCACTTCAGTAAAAAACCCCGAACCCAGACGAGCTACCTGCGGACAGTATGAAGAACCAATTCATCTATGTGGCAAAATAGTGAAAAGATCCTCAGGTAGAGGTGAAAAGCCAACCGAGCCTGGC
Translation
16S rRNA



Consensus GATAGCTGGTTGTCCAGAAACCGAATCTAAGTTCAACCTAAAATCTGCCTGAAGAACATAACACCAAATCTTAACGCAAATTTTAGATATAGTCARCAGVGGTACAGCTCTGBCGA-NCAAGGGACAAACCC
Translation
Identity
Choloepus_didactylus_NC GATAGCTGGTTGTCCAGGAACCGAATCCAAGTTCAACTTAAAATTTGCCTAAAGAACAAGACACTGAATCCCAATGCAAACTTTAAATATAATCAGCAGGGGTACAGCTCTGCCGATTTAAGGGACAAACCC
Translation
l-rRNA

Mylodon_darwinii_Delsuc GATAGCTGGTTGTCCAGAAACCGAATCTAAGTTCAACCTAAAATCTGCCTGAAGAACATAACACCAAATCTTAACGCAAATTTTAGATATAGTCAACAGAGGTACAGCTCTGTTGA -CAAGGGATAAACCC
Translation
l-rRNA

Mylodon_darwinii_Slater GATAGCTGGTTGTCCAGAAACCGAATCTAAGTTCAACCTAAAATCTGCCTGAAGAACATAACACCAAATCTTAACGCAAATTTTAGATATAGTNNNCAGCTTTAAGTCCCAGGCGA CCATTCCACAAACCC
Translation
16S rRNA



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Consensus                CACCTAGAGAGTAACTTTCTTTTTTCCCCTCCATAGTAGGCCCAAAAGCAGCCACCAATAAAGAAAGCGTTCAAGCTCAACAGCAACAGCATT----AAAAATTCCGAAACAAACCTCCAACTCCTAGG---
Choloepus_didactylus_NC  CCCCTAGAGAGTRA---GCCCTCCTGCCCTCCATAGTAGGCCCAAAAGCAGCCACCAATAGAGAAAGCGTCCAAGCTCAACAGCAACACCACCACCAAAAAATTCCAAGACAGACCCCCAACTCCTAGACCC
Mylodon_darwinii_Delsuc  CACCTAGAGAGTAACTTTCTTTTTTCCCCTCCATAGTAGGCCCAAAAGCAGCCACCAATAAAGAAAGCGTTCAAGCTCAACAGCAACAGCATT----AAAAATTCCGAAACAAACCTCCAACTCCTAGG---
Mylodon_darwinii_Slater  CACCTAGAGAGTAACTTTCTTTTTTCCCCTCCATAGTAGGCCCAAAAGCAGCCACCAATAAAGAAAGCGTTCAAGCTCAACAGCAACAGCATT----AAAAATTCCGAAACAAACCTTCAACTCCTAGG---

Consensus                ---CCTCTACTGGACCAATCTATAACAATAGAAGAAATAATGTTAATATAAGTAACAAGAATAAATTTCTCCATGCACAAGCTTATATCAGAACGGACCCACCACTGATAATTAACAACCGGACTTTTACAC
Choloepus_didactylus_NC  CCCCCCCCACCGGACTAATCTATAACAATAGAAGAAATAATGCTAATATAAGTAACAAGAATAAATTTCTCCACGCACAAGCTTATATCAGAACGGACCCACCACTGATAATTAACAACCAGACTTCCACAC
Mylodon_darwinii_Delsuc  ---CCTCTACTGGACCAATCTATAACAATAGAAGAAATAATGTTAATATAAGTAACAAGAATAAATTTCTCCATGCACAAGCTTATATCAGAACGGACCCACCACTGATAATTAACAACCGGACTTTTACAC
Mylodon_darwinii_Slater  ---CCTCTACTGGACCAATCTATAACAATAGAAGAAATAATGTTAATATAAGTAACAAGAATAAATTTCTCCATGCACAAGCTTATATCAGAACGGACCCACCACTGATAATTAACAACCGGACTTTTACAC
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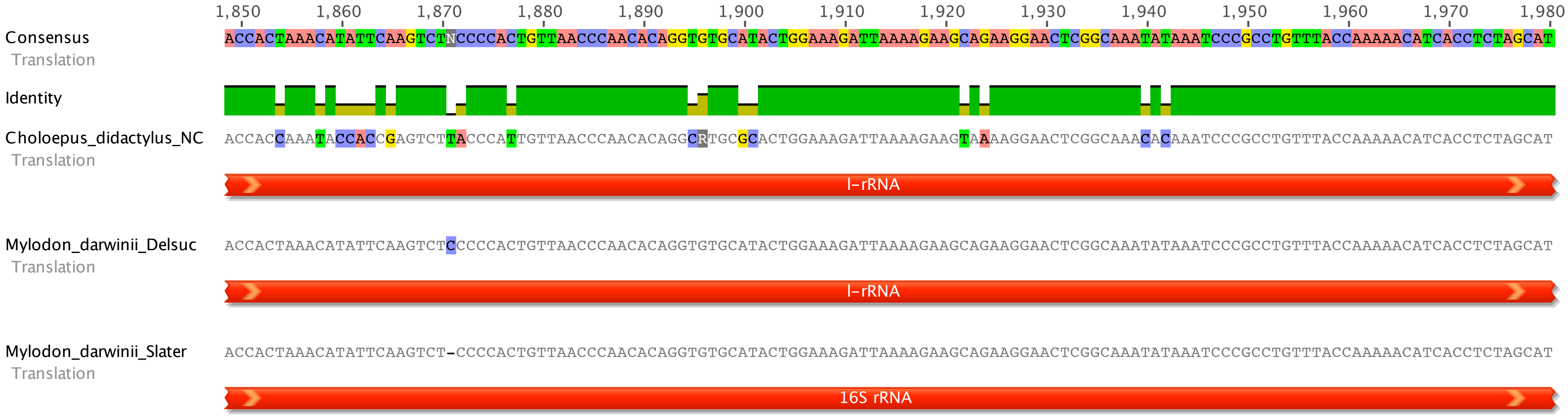

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           1,850     1,860     1,870     1,880     1,890     1,900     1,910     1,920     1,930     1,940     1,950     1,960     1,970     1,980
Consensus                 ACCACTAAACATATTCAAGTCTNCCCCACTGTTAACCCAACACAGGTGTGCATACTGGAAAGATTAAAAGAAGCAGAAGGAACTCGGCAAATATAAATCCCGCCTGTTTACCAAAAACATCACCTCTAGCAT
 Translation
Identity
Choloepus_didactylus_NC   ACCACCAAATACCACCGAGTCTTACCCATTGTTAACCCAACACAGGCRTGCGCACTGGAAAGATTAAAAGAAGTAAAAGGAACTCGGCAAACACAAATCCCGCCTGTTTACCAAAAACATCACCTCTAGCAT
 Translation
                          l-rRNA
Mylodon_darwinii_Delsuc   ACCACTAAACATATTCAAGTCTCCCCCACTGTTAACCCAACACAGGTGTGCATACTGGAAAGATTAAAAGAAGCAGAAGGAACTCGGCAAATATAAATCCCGCCTGTTTACCAAAAACATCACCTCTAGCAT
 Translation
                          l-rRNA
Mylodon_darwinii_Slater   ACCACTAAACATATTCAAGTCT-CCCCACTGTTAACCCAACACAGGTGTGCATACTGGAAAGATTAAAAGAAGCAGAAGGAACTCGGCAAATATAAATCCCGCCTGTTTACCAAAAACATCACCTCTAGCAT
 Translation
                          16S rRNA
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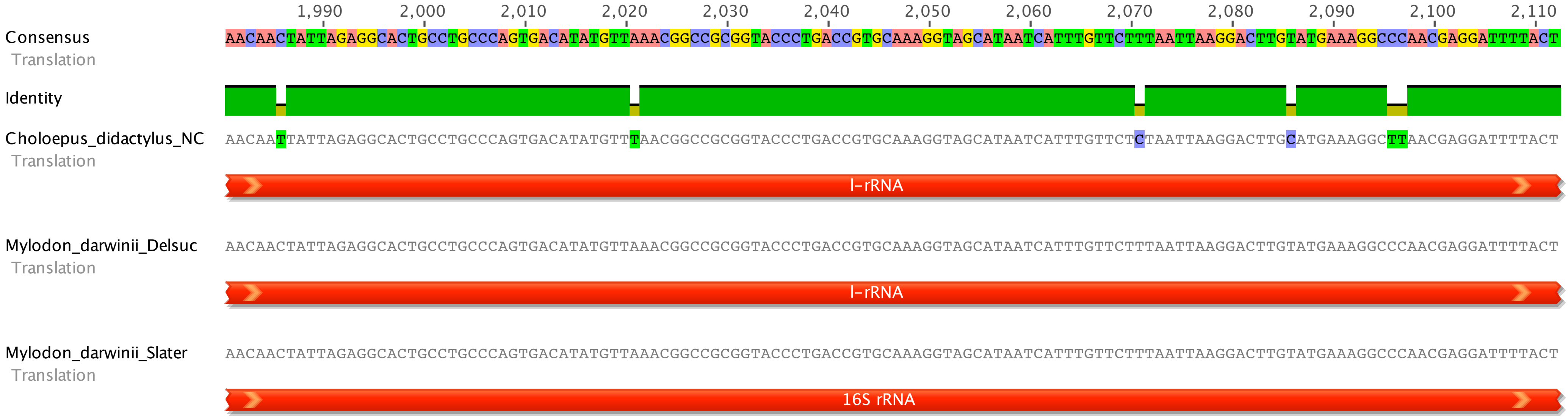

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           1,990     2,000     2,010     2,020     2,030     2,040     2,050     2,060     2,070     2,080     2,090     2,100     2,110
Consensus                 AACAACTATTAGAGGCACTGCCTGCCCAGTGACATATGTTAAACGGCCGCGGTACCCTGACCGTGCAAAGGTAGCATAATCATTTGTTCTTTAATTAAGGACTTGTATGAAAGGCCCAACGAGGATTTTACT
 Translation
Identity
Choloepus_didactylus_NC   AACAATTATTAGAGGCACTGCCTGCCCAGTGACATATGTTTAACGGCCGCGGTACCCTGACCGTGCAAAGGTAGCATAATCATTTGTTCTCTAATTAAGGACTTGCATGAAAGGCTTAACGAGGATTTTACT
 Translation
                          l-rRNA
Mylodon_darwinii_Delsuc   AACAACTATTAGAGGCACTGCCTGCCCAGTGACATATGTTAAACGGCCGCGGTACCCTGACCGTGCAAAGGTAGCATAATCATTTGTTCTTTAATTAAGGACTTGTATGAAAGGCCCAACGAGGATTTTACT
 Translation
                          l-rRNA
Mylodon_darwinii_Slater   AACAACTATTAGAGGCACTGCCTGCCCAGTGACATATGTTAAACGGCCGCGGTACCCTGACCGTGCAAAGGTAGCATAATCATTTGTTCTTTAATTAAGGACTTGTATGAAAGGCCCAACGAGGATTTTACT
 Translation
                          16S rRNA
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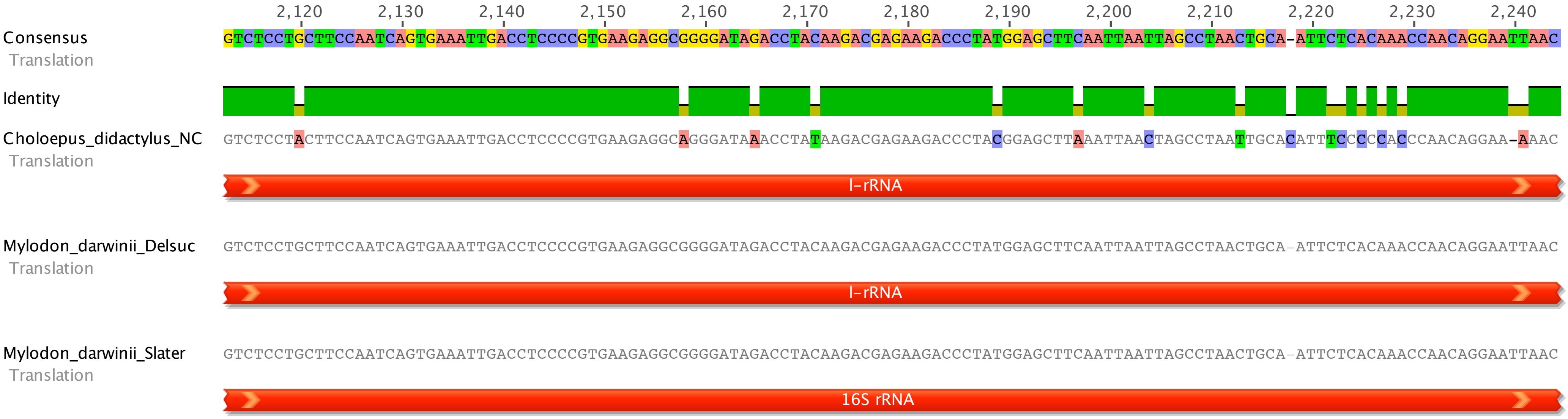


Consensus GTCTCCTGCTTCCAATCAGTGAAATTGACCTCCCCGTGAAGAGGCGGGGATAGACCTACAAGACGAGAAGACCCTATGGAGCTTCAATTAATTAGCCTAACTGCA-ATTCTCACAAACCAACAGGAATTAAC

Translation

Choloepus_didactylus_NC GTCTCCTACTTCCAATCAGTGAAATTGACCTCCCCGTGAAGAGGCAGGGATAAACCTATAAGACGAGAAGACCCTACGGAGCTTAAATTAACTAGCCTAATTGCACATTTCCCCCACCCAACAGGAA-AAAC

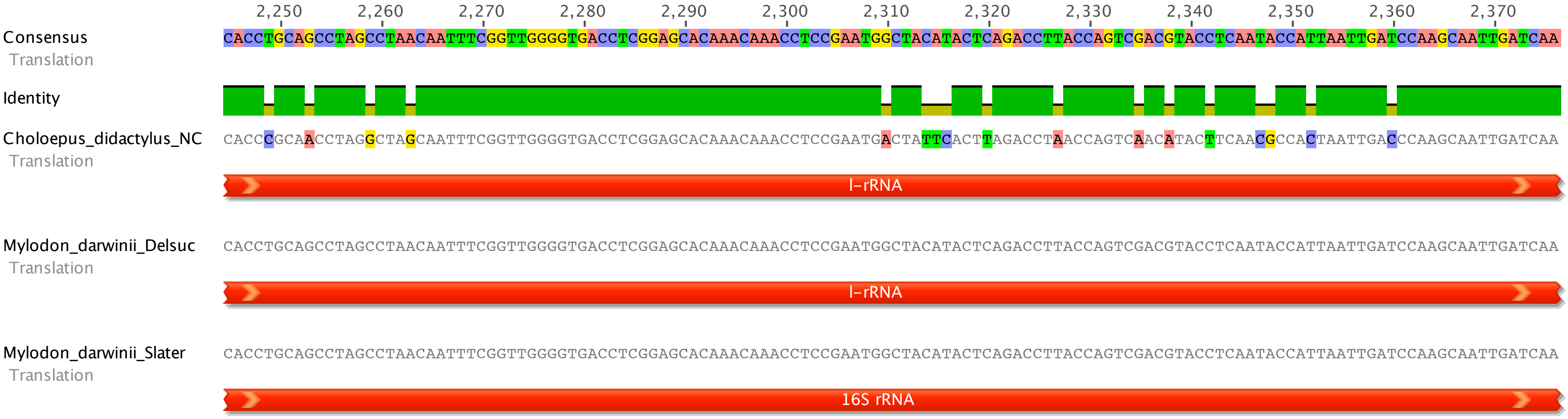
Translation

Mylodon_darwinii_Delsuc GTCTCCTGCTTCCAATCAGTGAAATTGACCTCCCCGTGAAGAGGCGGGGATAGACCTACAAGACGAGAAGACCCTATGGAGCTTCAATTAATTAGCCTAACTGCA-ATTCTCACAAACCAACAGGAATTAAC

Translation

Mylodon_darwinii_Slater GTCTCCTGCTTCCAATCAGTGAAATTGACCTCCCCGTGAAGAGGCGGGGATAGACCTACAAGACGAGAAGACCCTATGGAGCTTCAATTAATTAGCCTAACTGCA-ATTCTCACAAACCAACAGGAATTAAC

Translation



Consensus CACCTGCAGCCTAGCCTAACAATTTCGGTTGGGGTGACCTCGGAGCACAAACAAACCTCCGAATGGCTACATACTCAGACCTTACCAGTCGACGTACCTCAATACCATTAATTGATCCAAGCAATTGATCAA

Translation

Choloepus_didactylus_NC CACCCGCAACCTAGGCTAGCAATTTCGGTTGGGGTGACCTCGGAGCACAAACAAACCTCCGAATGACTATTCACTTAGACCTAACCAGTCAACATACTTCAACGCCACTAATTGACCCAAGCAATTGATCAA

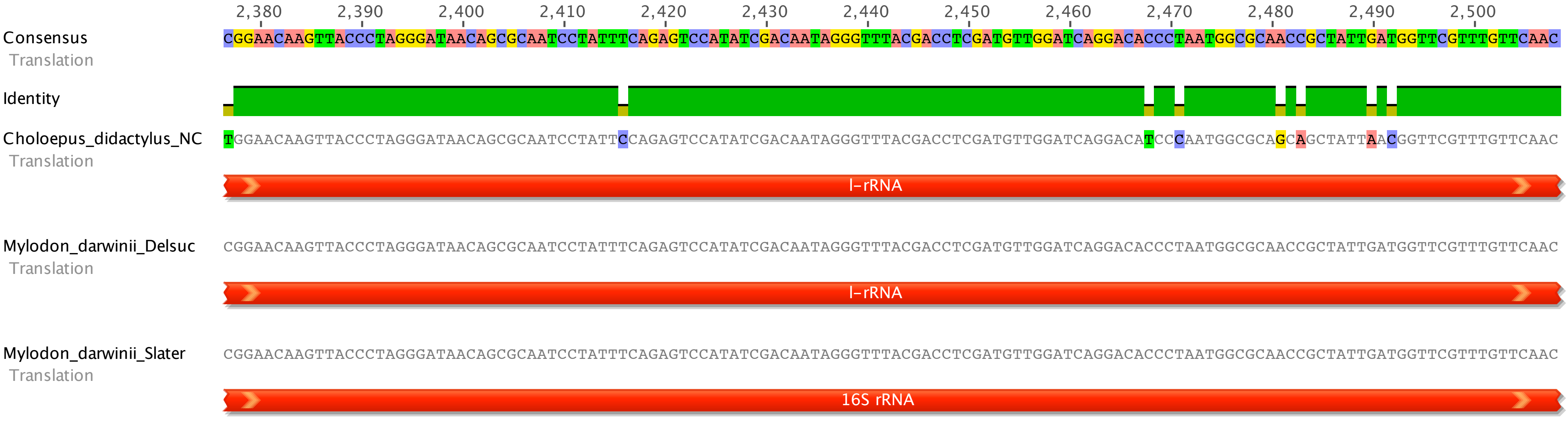
Translation

Mylodon_darwinii_Delsuc CACCTGCAGCCTAGCCTAACAATTTCGGTTGGGGTGACCTCGGAGCACAAACAAACCTCCGAATGGCTACATACTCAGACCTTACCAGTCGACGTACCTCAATACCATTAATTGATCCAAGCAATTGATCAA

Translation

Mylodon_darwinii_Slater CACCTGCAGCCTAGCCTAACAATTTCGGTTGGGGTGACCTCGGAGCACAAACAAACCTCCGAATGGCTACATACTCAGACCTTACCAGTCGACGTACCTCAATACCATTAATTGATCCAAGCAATTGATCAA

Translation

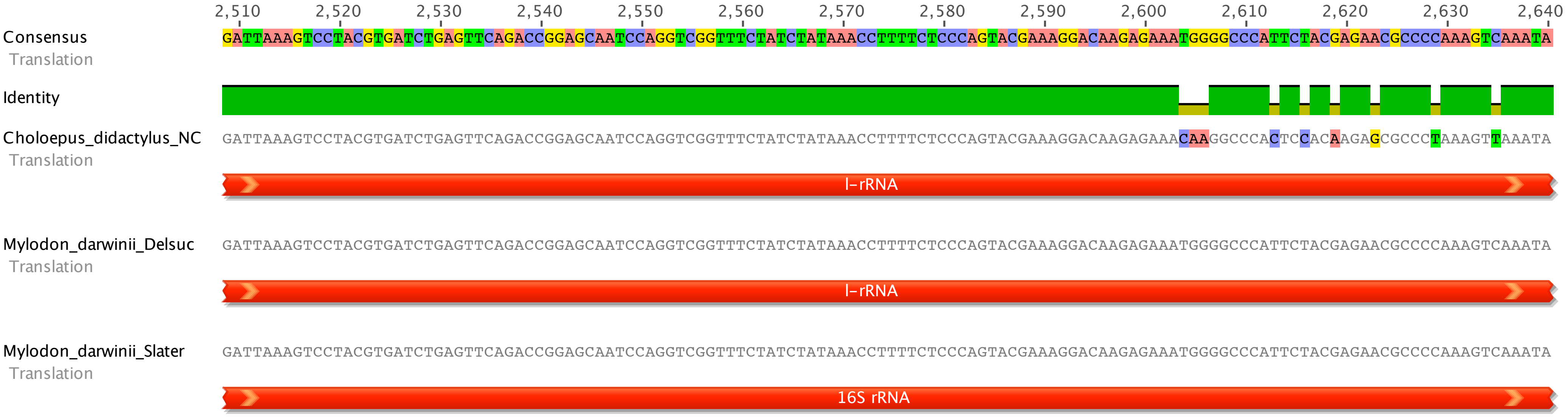


Consensus CGGAACAAGTTACCCTAGGGATAACAGCGCAATCCTATTTCAGAGTCCATATCGACAATAGGGTTTACGACCTCGATGTTGGATCAGGACACCCTAATGGCGCAACCGCTATTGATGGTTCGTTTGTTCAAC
Translation

Choloepus_didactylus_NC TGGAACAAGTTACCCTAGGGATAACAGCGCAATCCTATTCCAGAGTCCATATCGACAATAGGGTTTACGACCTCGATGTTGGATCAGGACATCCCAATGGCGCAGCAGCTATTAACGGTTCGTTTGTTCAAC
Translation

Mylodon_darwinii_Delsuc CGGAACAAGTTACCCTAGGGATAACAGCGCAATCCTATTTCAGAGTCCATATCGACAATAGGGTTTACGACCTCGATGTTGGATCAGGACACCCTAATGGCGCAACCGCTATTGATGGTTCGTTTGTTCAAC
Translation

Mylodon_darwinii_Slater CGGAACAAGTTACCCTAGGGATAACAGCGCAATCCTATTTCAGAGTCCATATCGACAATAGGGTTTACGACCTCGATGTTGGATCAGGACACCCTAATGGCGCAACCGCTATTGATGGTTCGTTTGTTCAAC
Translation



Consensus GATTAAAGTCCTACGTGATCTGAGTTCAGACCGGAGCAATCCAGGTCGGTTTCTATCTATAAACCTTTTCTCCCAGTACGAAAGGACAAGAGAAATGGGGCCCATTCTACGAGAACGCCCCAAAGTCAAATA
Translation

Choloepus_didactylus_NC GATTAAAGTCCTACGTGATCTGAGTTCAGACCGGAGCAATCCAGGTCGGTTTCTATCTATAAACCTTTTCTCCCAGTACGAAAGGACAAGAGAAACAAGGCCCACTCCACAAGAGCGCCCTAAAGTTAAATA
Translation

Mylodon_darwinii_Delsuc GATTAAAGTCCTACGTGATCTGAGTTCAGACCGGAGCAATCCAGGTCGGTTTCTATCTATAAACCTTTTCTCCCAGTACGAAAGGACAAGAGAAATGGGGCCCATTCTACGAGAACGCCCCAAAGTCAAATA
Translation

Mylodon_darwinii_Slater GATTAAAGTCCTACGTGATCTGAGTTCAGACCGGAGCAATCCAGGTCGGTTTCTATCTATAAACCTTTTCTCCCAGTACGAAAGGACAAGAGAAATGGGGCCCATTCTACGAGAACGCCCCAAAGTCAAATA
Translation

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                       2,650     2,660     2,670     2,680     2,690     2,700     2,710     2,720     2,730     2,740     2,750     2,760     2,770
Consensus              GATGAATCAATCTAAATCTAATCAACTCCTAACAAC--CAACCCCAAACCAGGGTTTGTTAAGATGGCAGAGCCC-GGTAATTGCATAAAACTTAAACCTTTATAATCAGAGGTTCAACTCCTCTTCTTAAC
  Translation
Identity
Choloepus_didactylus_NC GATGAACTAATCTAAATCTAATATACCCCCCCCCCCGACCACCCTAAACCAGGGTTTGTTAAGATGGCAGAGCCCGGGCAATTGCATAAAACTTAAACCTTTATAATCAGAGGTTCAATTCCTCTTCTTAAC
  Translation
                       l-rRNA
                                                                                   tRNA-Leu
Mylodon_darwinii_Delsuc GATGAATCAATCTAAATCTAATCAACTCCTAACAAC--CAACCCCAAACCAGGGTTTGTTAAGATGGCAGAGCCC-GGTAATTGCATAAAACTTAAACCTTTATAATCAGAGGTTCAACTCCTCTTCTTAAC
  Translation
                       l-rRNA
                                                                                   tRNA-Leu
Mylodon_darwinii_Slater GATGAATCAATCTAAATCTAATCAACTCCTAACAAC--CAACCCCAAACCAGGGTTTGTTAAGATGGCAGAGCCC-GGTAATTGCATAAAACTTAAACCTTTATAATCAGAGGTTCAACTCCTCTTCTTAAC
  Translation
                       16S rRNA

                                                                                     tRNA-Leu
                         2,780     2,790     2,800     2,810     2,820     2,830     2,840     2,850     2,860     2,870     2,880     2,890     2,900
Consensus              AA-AATGCTCTBCACCAACATCCTATGCCTAATCATCCCCATCCTTTTAGCCGTGGCATTCCTAACGCTAGTAGAACGAAAAATCCTAGGCTACATGCAACTCCGCAAGGGGCCAAACATTGTAGGACCTTA
  Translation
Identity
Choloepus_didactylus_NC AATAATGCTCACCACTAACATCCTATGCTTAATTATTCCTATTCTCTTAGCCGTAGCATTCCTAACGCTAGTAGAACGAAAAATCCTAGGCTACATACAATTTCGCAAAGGACCCAACATCGTCGGACCATA
  Translation             M  L  T  T  N  I  L  C  L  I  I  P  I  L  L  A  V  A  F  L  T  L  V  E  R  K  I  L  G  Y  M  Q  F  R  K  G  P  N  I  V  G  P  Y
                          ND1 gene
Mylodon_darwinii_Delsuc AA-AATGTTCTTAATCAACATCCTATGCCTAATCATCCCCATCCTTTTAGCCGTGGCATTCCTAACGCTAGTAGAACGAAAAATCCTAGGCTACATGCAACTCCGCAAGGGGCCAAACATTGTAGGACCTTA
  Translation             M  F  L  I  N  I  L  C  L  I  I  P  I  L  L  A  V  A  F  L  T  L  V  E  R  K  I  L  G  Y  M  Q  L  R  K  G  P  N  I  V  G  P  Y
                          ND1 gene
Mylodon_darwinii_Slater AA-ACGACTCTGCACCAACAAGAAAGGACCAAACATCCCCATCCTTTTAGCCGTGGCATTCCTAACGCTAGTAGAACGAAAAATCCTAGGCTACATGCAACTCCGCAAGGGGCCAAACATTGTAGGACCTTA
  Translation
                         ND1 misc
                         ND1 gene
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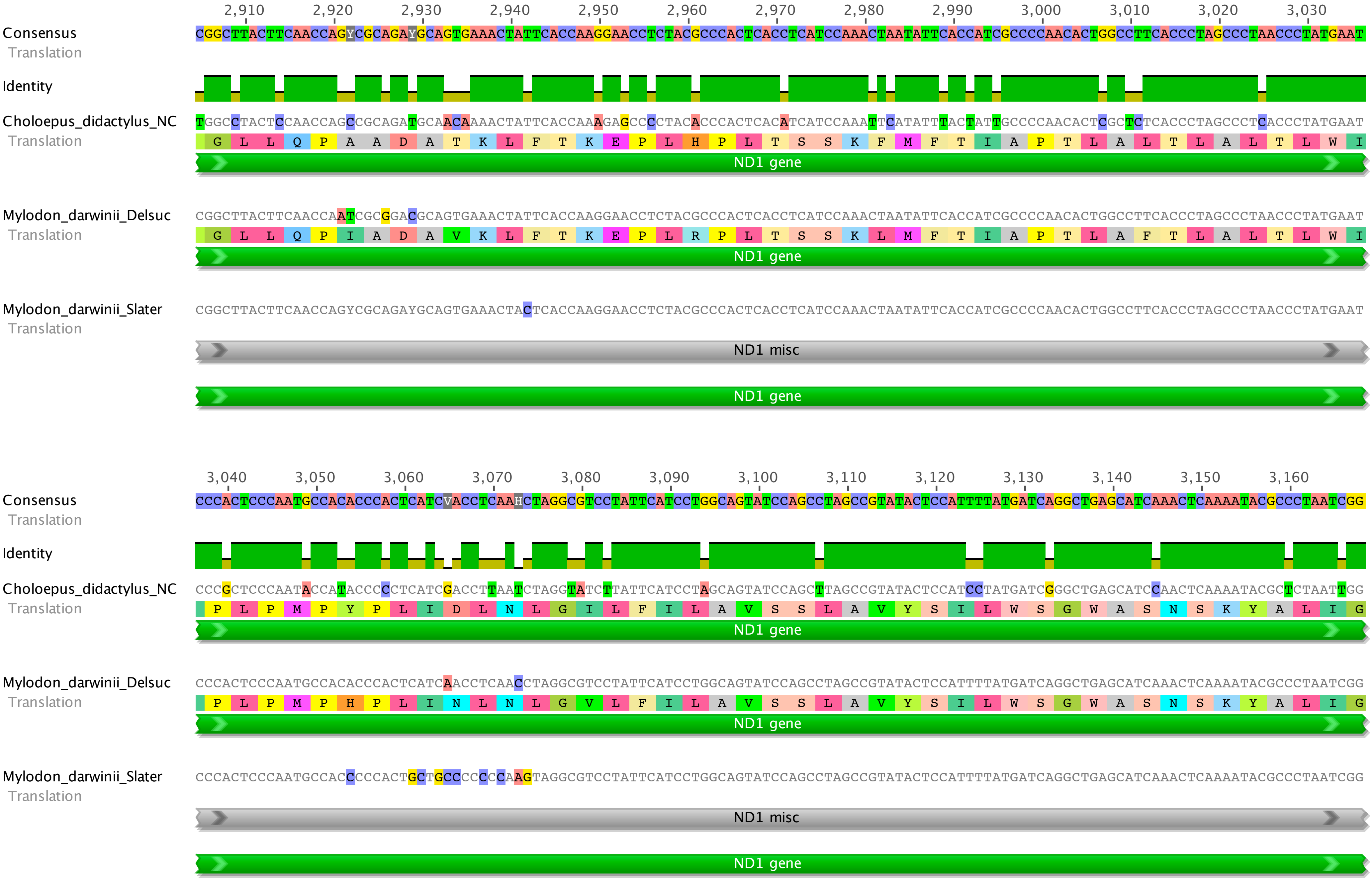


Consensus CGGCTTACTTCAACCAGYCGCAGAYGCAGTGAAACTATTCACCAAGGAACCTCTACGCCCACTCACCTCATCCAAACTAATATTCACCATCGCCCCAACACTGGCCTTCACCCTAGCCCTAACCCTATGAAT

Translation

Identity

Choloepus_didactylus_NC TGGCCTACTCCAACCAGCCGCAGATGCAACAAAACTATTCACCAAAGAGCCCCTACACCCACTCACATCATCCAAATTCATATTTACTATTGCCCCAACACTCGCTCTCACCCTAGCCCTCACCCTATGAAT

Translation G L L Q P A A D A T K L F T K E P L H P L T S S K F M F T I A P T L A L T L A L T L W I

Mylodon_darwinii_Delsuc CGGCTTACTTCAACCAATCGCGGACGCAGTGAAACTATTCACCAAGGAACCTCTACGCCCACTCACCTCATCCAAACTAATATTCACCATCGCCCCAACACTGGCCTTCACCCTAGCCCTAACCCTATGAAT

Translation G L L Q P I A D A V K L F T K E P L R P L T S S K L M F T I A P T L A F T L A L T L W I

Mylodon_darwinii_Slater CGGCTTACTTCAACCAGYCGCAGAYGCAGTGAAACTACTCACCAAGGAACCTCTACGCCCACTCACCTCATCCAAACTAATATTCACCATCGCCCCAACACTGGCCTTCACCCTAGCCCTAACCCTATGAAT

Translation

Consensus CCCACTCCCAATGCCACACCCACTCATCVACCTCAAHCTAGGCGTCCTATTCATCCTGGCAGTATCCAGCCTAGCCGTATACTCCATTTTATGATCAGGCTGAGCATCAAACTCAAAATACGCCCTAATCGG

Translation

Identity

Choloepus_didactylus_NC CCCGCTCCCAATACCATACCCCCTCATCGACCTTAATCTAGGTATCTTATTCATCCTAGCAGTATCCAGCTTAGCCGTATACTCCATCCTATGATCGGGCTGAGCATCCAACTCAAAATACGCTCTAATTGG

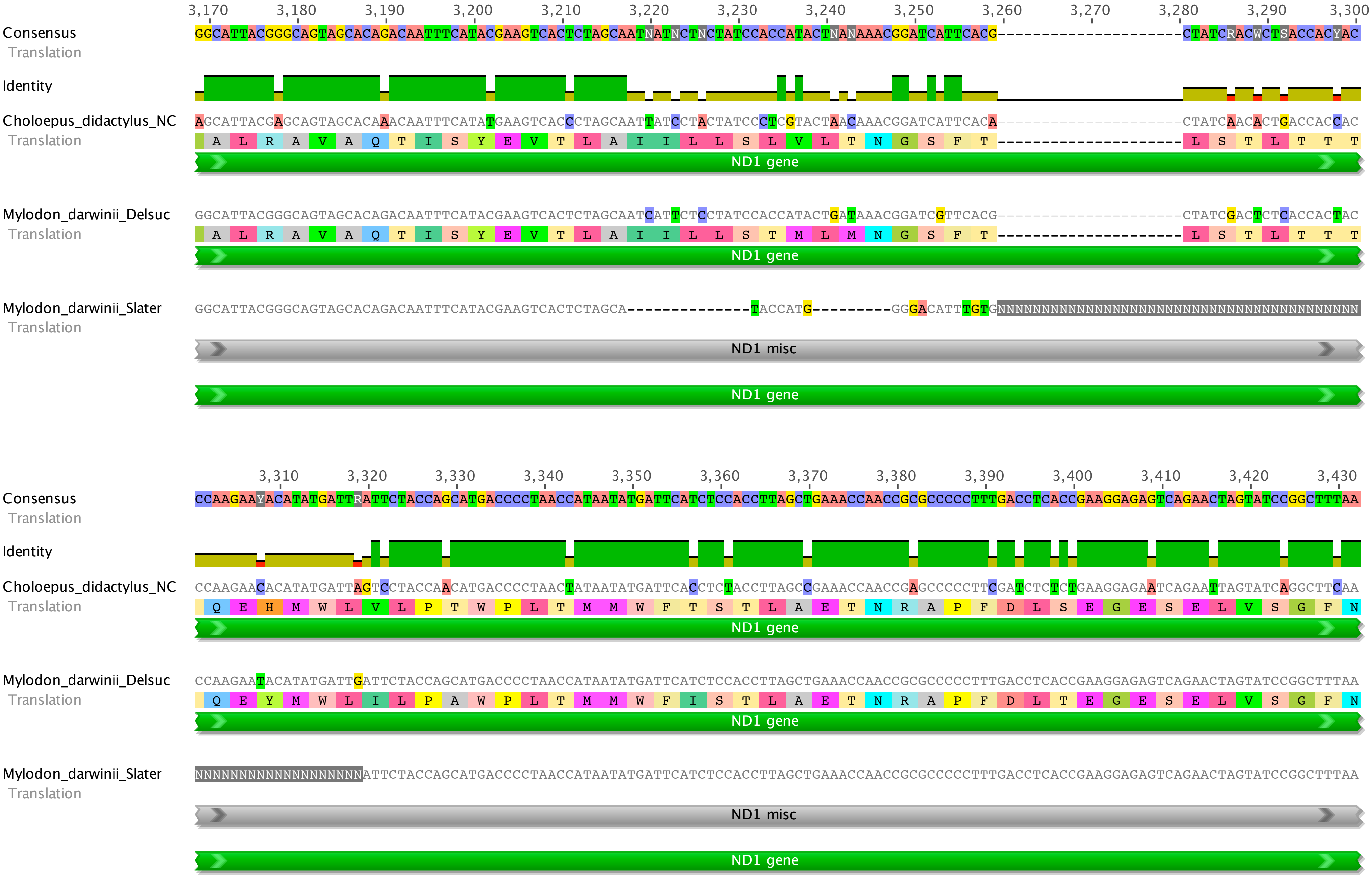
Translation P L P M P Y P L I D L N L G I L F I L A V S S L A V Y S I L W S G W A S N S K Y A L I G

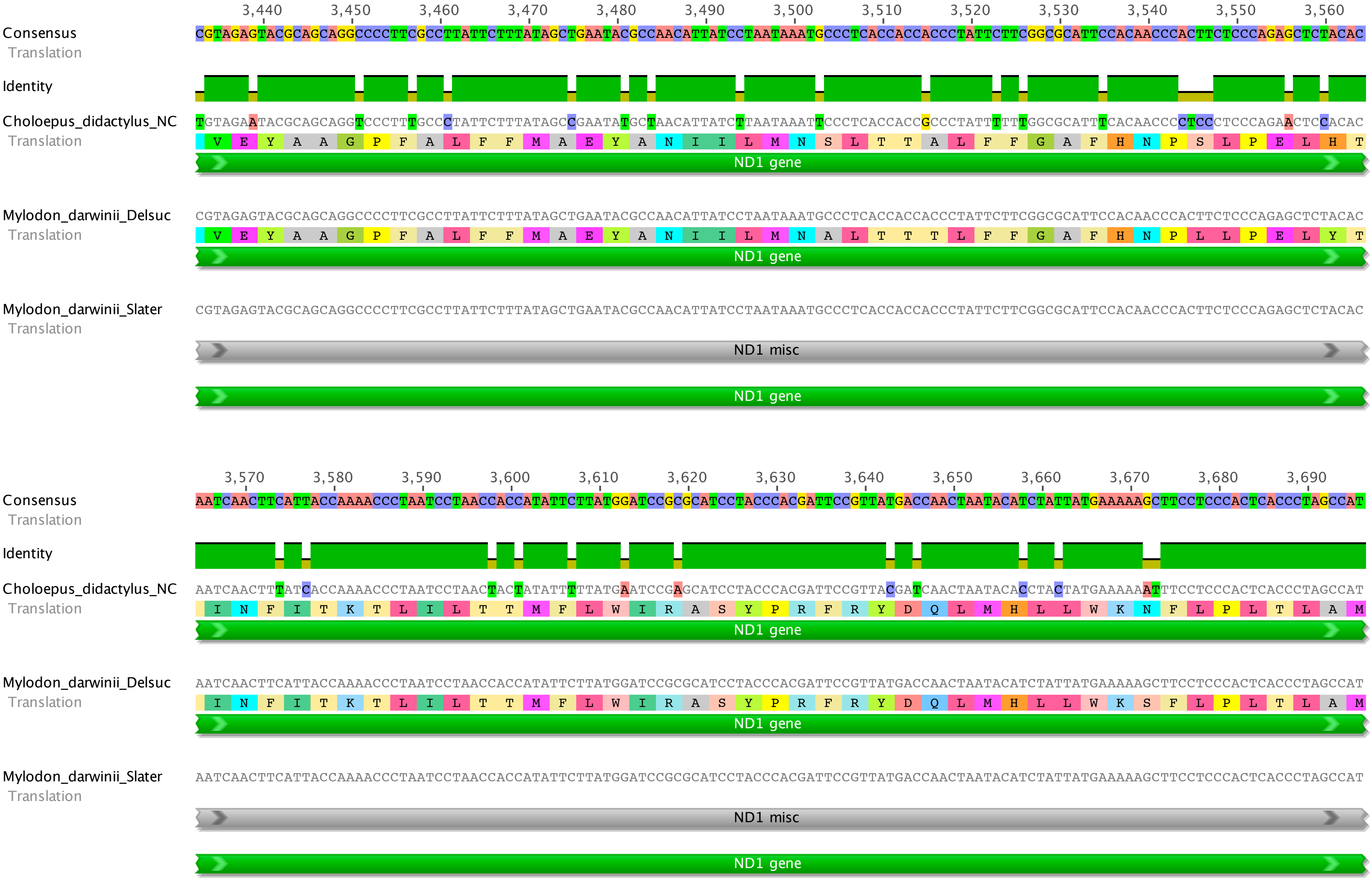
Mylodon_darwinii_Delsuc CCCACTCCCAATGCCACACCCACTCATCAACCTCAACCTAGGCGTCCTATTCATCCTGGCAGTATCCAGCCTAGCCGTATACTCCATTTTATGATCAGGCTGAGCATCAAACTCAAAATACGCCCTAATCGG

Translation P L P M P H P L I N L N L G V L F I L A V S S L A V Y S I L W S G W A S N S K Y A L I G

Mylodon_darwinii_Slater CCCACTCCCAATGCCACCCCCACTGCTGCCCCCCCAAGTAGGCGTCCTATTCATCCTGGCAGTATCCAGCCTAGCCGTATACTCCATTTTATGATCAGGCTGAGCATCAAACTCAAAATACGCCCTAATCGG

Translation


3,170 3,180 3,190 3,200 3,210 3,220 3,230 3,240 3,250 3,260 3,270 3,280 3,290 3,300
Consensus
GGCATTACGGGCAGTAGCACAGACAATTTCATACGAAGTCACTCTAGCAATNATNCTNCTATCCACCATACTNANAAACGGATCATTCACG---------------------CTATCRACWCTSACCACYAC
Translation
Identity
Choloepus_didactylus_NC
AGCATTACGAGCAGTAGCACAAACAATTTCATATGAAGTCACCCTAGCAATTATCCTACTATCCCTCGTACTAACAAACGGATCATTCACA---------------------CTATCAACACTGACCACCAC
Translation
A L R A V A Q T I S Y E V T L A I I L L S L V L T N G S F T L S T L T T T
ND1 gene
Mylodon_darwinii_Delsuc
GGCATTACGGGCAGTAGCACAGACAATTTCATACGAAGTCACTCTAGCAATCATTCTCCTATCCACCATACTGATAAACGGATCGTTCACG---------------------CTATCGACTCTCACCACTAC
Translation
A L R A V A Q T I S Y E V T L A I I L L S T M L M N G S F T L S T L T T T
ND1 gene
Mylodon_darwinii_Slater
GGCATTACGGGCAGTAGCACAGACAATTTCATACGAAGTCACTCTAGCA--------------TACCATG---------GGGACATTTGTGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Translation
ND1 misc
ND1 gene
3,310 3,320 3,330 3,340 3,350 3,360 3,370 3,380 3,390 3,400 3,410 3,420 3,430
Consensus
CCAAGAAYACATATGATTRATTCTACCAGCATGACCCCTAACCATAATATGATTCATCTCCACCTTAGCTGAAACCAACCGCGCCCCCTTTGACCTCACCGAAGGAGAGTCAGAACTAGTATCCGGCTTTAA
Translation
Identity
Choloepus_didactylus_NC
CCAAGAACACATATGATTAGTCCTACCAACATGACCCCTAACTATAATATGATTCACCTCTACCTTAGCCGAAACCAACCGAGCCCCCTTCGATCTCTCTGAAGGAGAATCAGAATTAGTATCAGGCTTCAA
Translation
Q E H M W L V L P T W P L T M M W F T S T L A E T N R A P F D L S E G E S E L V S G F N
ND1 gene
Mylodon_darwinii_Delsuc
CCAAGAATACATATGATTGATTCTACCAGCATGACCCCTAACCATAATATGATTCATCTCCACCTTAGCTGAAACCAACCGCGCCCCCTTTGACCTCACCGAAGGAGAGTCAGAACTAGTATCCGGCTTTAA
Translation
Q E Y M W L I L P A W P L T M M W F I S T L A E T N R A P F D L T E G E S E L V S G F N
ND1 gene
Mylodon_darwinii_Slater
NNNNNNNNNNNNNNNNNNNATTCTACCAGCATGACCCCTAACCATAATATGATTCATCTCCACCTTAGCTGAAACCAACCGCGCCCCCTTTGACCTCACCGAAGGAGAGTCAGAACTAGTATCCGGCTTTAA
Translation
ND1 misc
ND1 gene



Consensus CGTAGAGTACGCAGCAGGCCCCTTCGCCTTATTCTTTATAGCTGAATACGCCAACATTATCCTAATAAATGCCCTCACCACCACCCTATTCTTCGGCGCATTCCACAACCCACTTCTCCCAGAGCTCTACAC
Translation

Identity

Choloepus_didactylus_NC TGTAGAATACGCAGCAGGTCCCTTTGCCCTATTCTTTATAGCCGAATATGCTAACATTATCTTAATAAATTCCCTCACCACCGCCCTATTTTTTGGCGCATTTCACAACCCCTCCCTCCCAGAACTCCACAC
Translation V E Y A A G P F A L F F M A E Y A N I I L M N S L T T A L F F G A F H N P S L P E L H T

Mylodon_darwinii_Delsuc CGTAGAGTACGCAGCAGGCCCCTTCGCCTTATTCTTTATAGCTGAATACGCCAACATTATCCTAATAAATGCCCTCACCACCACCCTATTCTTCGGCGCATTCCACAACCCACTTCTCCCAGAGCTCTACAC
Translation V E Y A A G P F A L F F M A E Y A N I I L M N A L T T T L F F G A F H N P L L P E L Y T

Mylodon_darwinii_Slater CGTAGAGTACGCAGCAGGCCCCTTCGCCTTATTCTTTATAGCTGAATACGCCAACATTATCCTAATAAATGCCCTCACCACCACCCTATTCTTCGGCGCATTCCACAACCCACTTCTCCCAGAGCTCTACAC
Translation

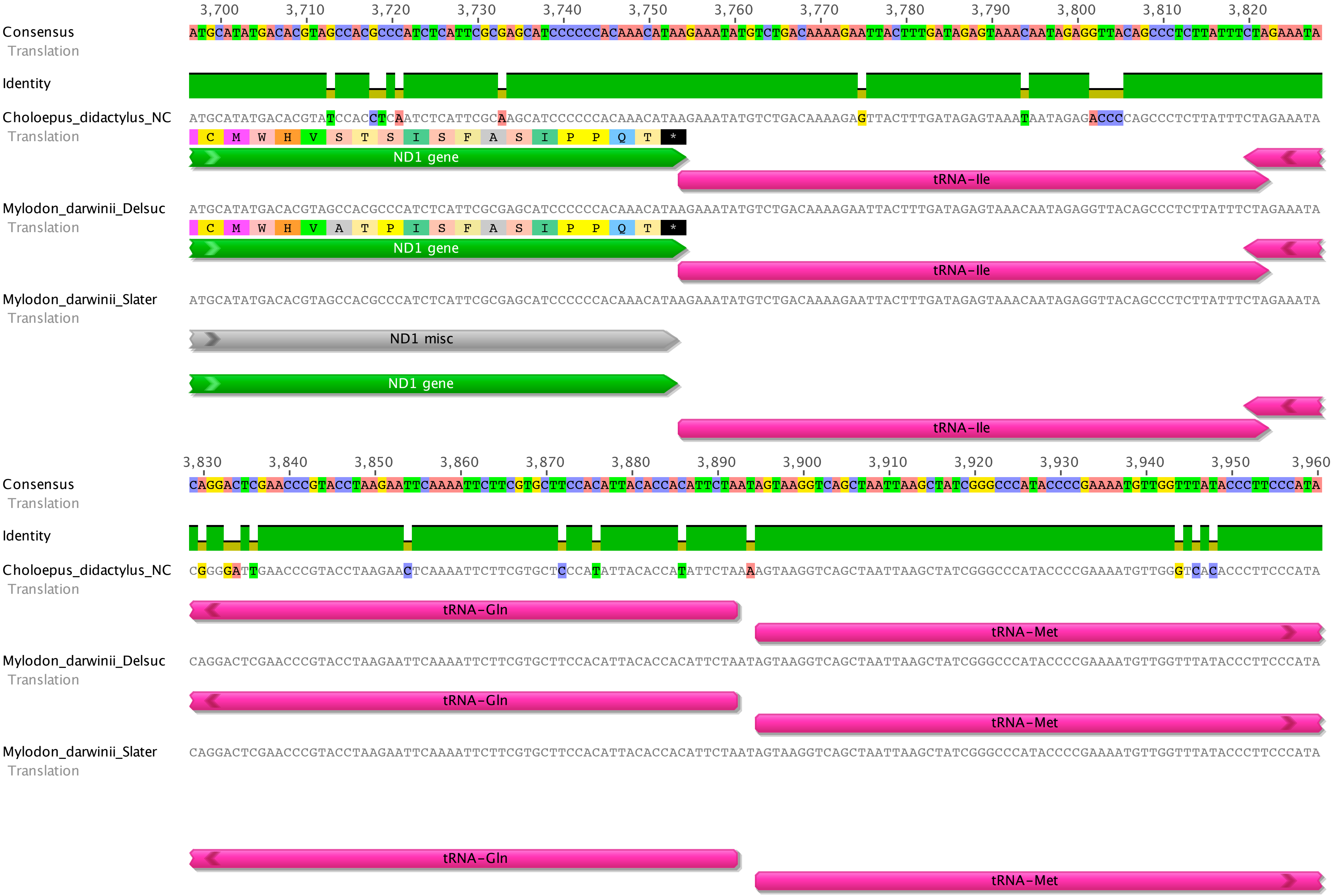
Consensus AATCAACTTCATTACCAAAACCCTAATCCTAACCACCATATTCTTATGGATCCGCGCATCCTACCCACGATTCCGTTATGACCAACTAATACATCTATTATGAAAAAGCTTCCTCCCACTCACCCTAGCCAT
Translation

Identity

Choloepus_didactylus_NC AATCAACTTTATCACCAAAACCCTAATCCTAACTACTATATTTTTATGAATCCGAGCATCCTACCCACGATTCCGTTACGATCAACTAATACACCTACTATGAAAAAATTTCCTCCCACTCACCCTAGCCAT
Translation I N F I T K T L I L T T M F L W I R A S Y P R F R Y D Q L M H L L W K N F L P L T L A M

Mylodon_darwinii_Delsuc AATCAACTTCATTACCAAAACCCTAATCCTAACCACCATATTCTTATGGATCCGCGCATCCTACCCACGATTCCGTTATGACCAACTAATACATCTATTATGAAAAAGCTTCCTCCCACTCACCCTAGCCAT
Translation I N F I T K T L I L T T M F L W I R A S Y P R F R Y D Q L M H L L W K S F L P L T L A M

Mylodon_darwinii_Slater AATCAACTTCATTACCAAAACCCTAATCCTAACCACCATATTCTTATGGATCCGCGCATCCTACCCACGATTCCGTTATGACCAACTAATACATCTATTATGAAAAAGCTTCCTCCCACTCACCCTAGCCAT
Translation



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              3,700     3,710     3,720     3,730     3,740     3,750     3,760     3,770     3,780     3,790     3,800     3,810     3,820
Consensus               ATGCATATGACACGTAGCCACGCCCATCTCATTCGCGAGCATCCCCCCACAAACATAAGAAATATGTCTGACAAAAGAATTACTTTGATAGAGTAAACAATAGAGGTTACAGCCCTCTTATTTCTAGAAATA
 Translation
Identity
Choloepus_didactylus_NC ATGCATATGACACGTATCCACCTCAATCTCATTCGCAAGCATCCCCCCACAAACATAAGAAATATGTCTGACAAAAGAGTTACTTTGATAGAGTAAATAATAGAGACCCCAGCCCTCTTATTTCTAGAAATA
 Translation             C  M  W  H  V  S  T  S  I  S  F  A  S  I  P  P  Q  T  *
Mylodon_darwinii_Delsuc ATGCATATGACACGTAGCCACGCCCATCTCATTCGCGAGCATCCCCCCACAAACATAAGAAATATGTCTGACAAAAGAATTACTTTGATAGAGTAAACAATAGAGGTTACAGCCCTCTTATTTCTAGAAATA
 Translation             C  M  W  H  V  A  T  P  I  S  F  A  S  I  P  P  Q  T  *
Mylodon_darwinii_Slater ATGCATATGACACGTAGCCACGCCCATCTCATTCGCGAGCATCCCCCCACAAACATAAGAAATATGTCTGACAAAAGAATTACTTTGATAGAGTAAACAATAGAGGTTACAGCCCTCTTATTTCTAGAAATA
 Translation

              3,830     3,840     3,850     3,860     3,870     3,880     3,890     3,900     3,910     3,920     3,930     3,940     3,950     3,960
Consensus               CAGGACTCGAACCCGTACCTAAGAATTCAAAATTCTTCGTGCTTCCACATTACACCACATTCTAATAGTAAGGTCAGCTAATTAAGCTATCGGGCCCATACCCCGAAAATGTTGGTTTATACCCTTCCCATA
 Translation
Identity
Choloepus_didactylus_NC CGGGGATTGAACCCGTACCTAAGAACTCAAAATTCTTCGTGCTCCCATATTACACCATATTCTAAAAGTAAGGTCAGCTAATTAAGCTATCGGGCCCATACCCCGAAAATGTTGGGTCACACCCTTCCCATA
 Translation
Mylodon_darwinii_Delsuc CAGGACTCGAACCCGTACCTAAGAATTCAAAATTCTTCGTGCTTCCACATTACACCACATTCTAATAGTAAGGTCAGCTAATTAAGCTATCGGGCCCATACCCCGAAAATGTTGGTTTATACCCTTCCCATA
 Translation
Mylodon_darwinii_Slater CAGGACTCGAACCCGTACCTAAGAATTCAAAATTCTTCGTGCTTCCACATTACACCACATTCTAATAGTAAGGTCAGCTAATTAAGCTATCGGGCCCATACCCCGAAAATGTTGGTTTATACCCTTCCCATA
 Translation
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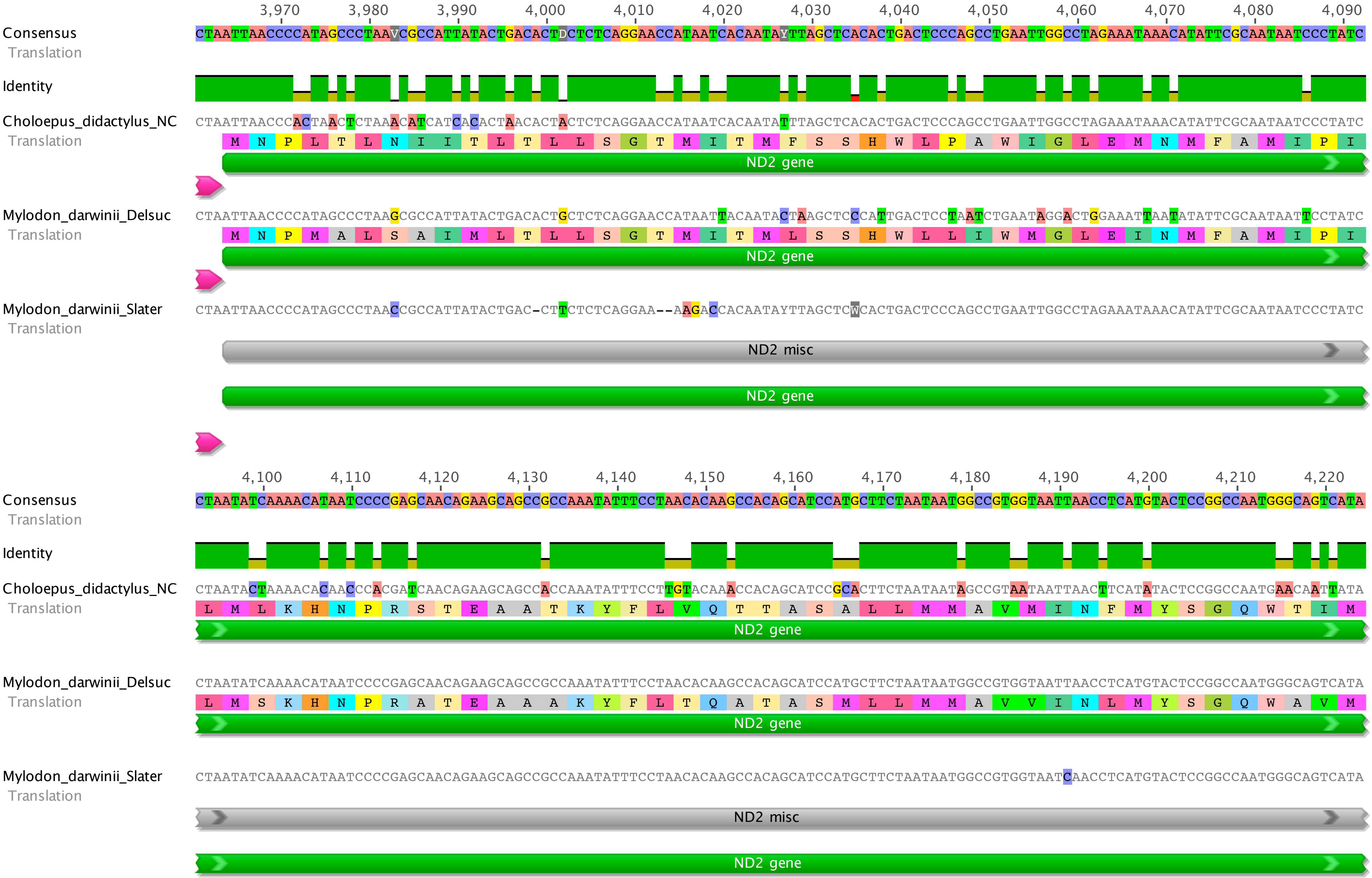

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Consensus                CTAATTAACCCCATAGCCCTAAVCGCCATTATACTGACACTDCTCTCAGGAACCATAATCACAATAYTTAGCTCACACTGACTCCCAGCCTGAATTGGCCTAGAAATAAACATATTCGCAATAATCCCTATC
 Translation
Identity
Choloepus_didactylus_NC  CTAATTAACCCACTAACTCTAAACATCATCACACTAACACTACTCTCAGGAACCATAATCACAATATTTAGCTCACACTGACTCCCAGCCTGAATTGGCCTAGAAATAAACATATTCGCAATAATCCCTATC
 Translation                 M  N  P  L  T  L  N  I  I  T  L  T  L  L  S  G  T  M  I  T  M  F  S  S  H  W  L  P  A  W  I  G  L  E  M  N  M  F  A  M  I  P  I
Mylodon_darwinii_Delsuc  CTAATTAACCCCATAGCCCTAAGCGCCATTATACTGACACTGCTCTCAGGAACCATAATTACAATACTAAGCTCCCATTGACTCCTAATCTGAATAGGACTGGAAATTAATATATTCGCAATAATTCCTATC
 Translation                 M  N  P  M  A  L  S  A  I  M  L  T  L  L  S  G  T  M  I  T  M  L  S  S  H  W  L  L  I  W  M  G  L  E  I  N  M  F  A  M  I  P  I
Mylodon_darwinii_Slater  CTAATTAACCCCATAGCCCTAACCGCCATTATACTGAC-CTTCTCTCAGGAA--AAGACCACAATAYTTAGCTCWCACTGACTCCCAGCCTGAATTGGCCTAGAAATAAACATATTCGCAATAATCCCTATC
 Translation

Consensus                CTAATATCAAAACATAATCCCCGAGCAACAGAAGCAGCCGCCAAATATTTCCTAACACAAGCCACAGCATCCATGCTTCTAATAATGGCCGTGGTAATTAACCTCATGTACTCCGGCCAATGGGCAGTCATA
 Translation
Identity
Choloepus_didactylus_NC  CTAATACTAAAACACAACCCACGATCAACAGAAGCAGCCACCAAATATTTCCTTGTACAAACCACAGCATCCGCACTTCTAATAATAGCCGTAATAATTAACTTCATAATACTCCGGCCAATGAACAATTATA
 Translation             L  M  L  K  H  N  P  R  S  T  E  A  A  T  K  Y  F  L  V  Q  T  T  A  S  A  L  L  M  M  A  V  M  I  N  F  M  Y  S  G  Q  W  T  I  M
Mylodon_darwinii_Delsuc  CTAATATCAAAACATAATCCCCGAGCAACAGAAGCAGCCGCCAAATATTTCCTAACACAAGCCACAGCATCCATGCTTCTAATAATGGCCGTGGTAATTAACCTCATGTACTCCGGCCAATGGGCAGTCATA
 Translation             L  M  S  K  H  N  P  R  A  T  E  A  A  A  K  Y  F  L  T  Q  A  T  A  S  M  L  L  M  M  A  V  V  I  N  L  M  Y  S  G  Q  W  A  V  M
Mylodon_darwinii_Slater  CTAATATCAAAACATAATCCCCGAGCAACAGAAGCAGCCGCCAAATATTTCCTAACACAAGCCACAGCATCCATGCTTCTAATAATGGCCGTGGTAATCAACCTCATGTACTCCGGCCAATGGGCAGTCATA
 Translation
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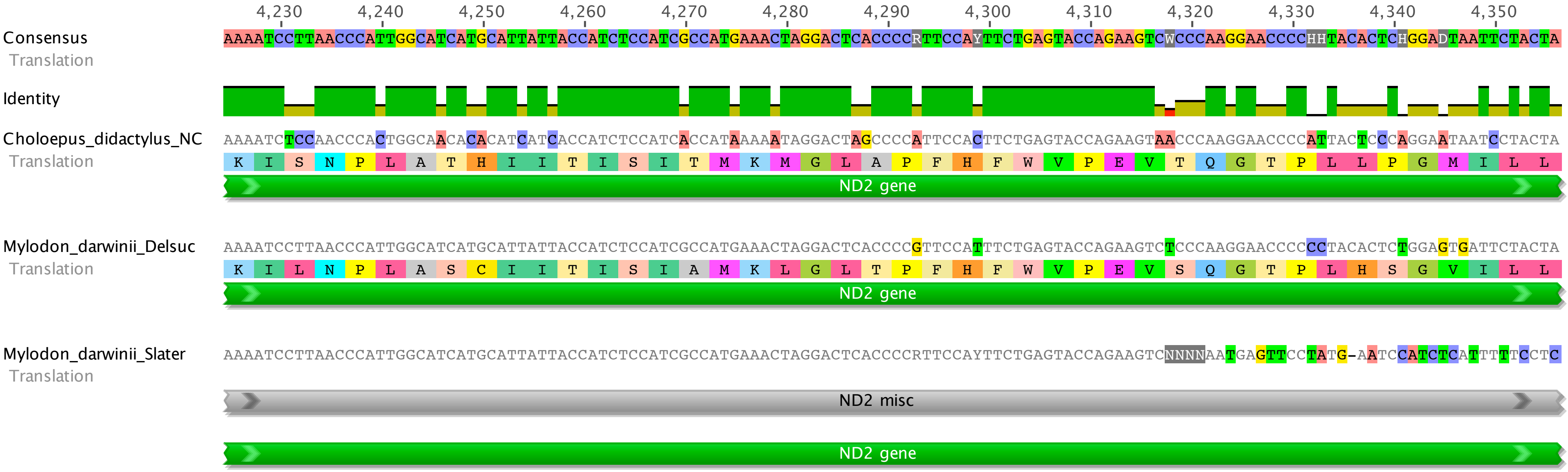
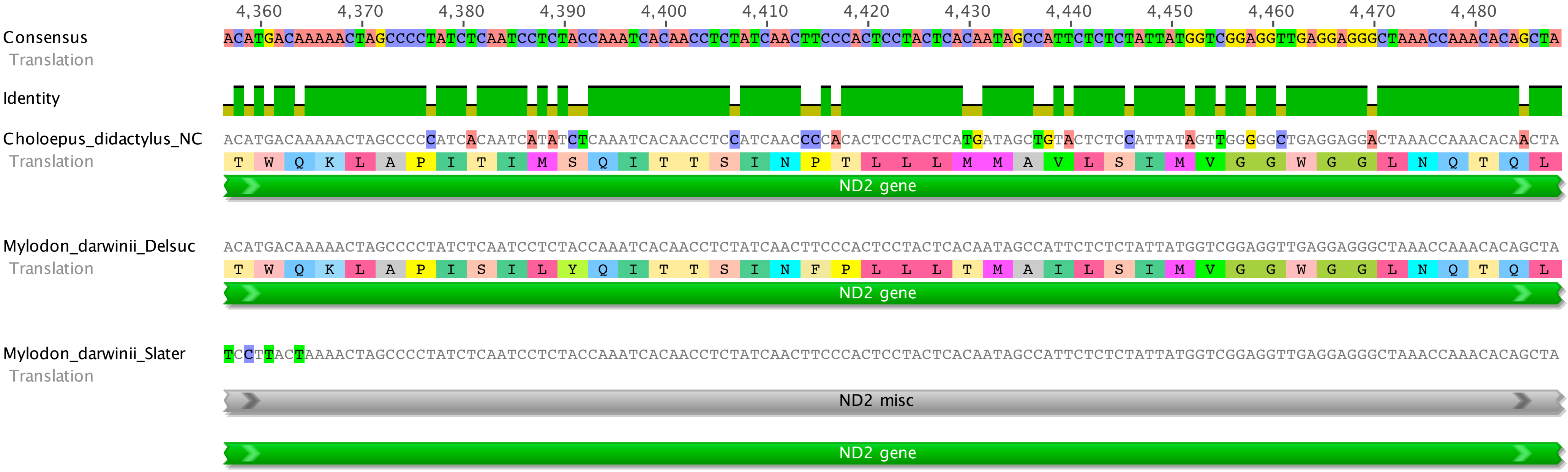


Consensus
AAAATCCTTAACCCATTGGCATCATGCATTATTACCATCTCCATCGCCATGAAACTAGGACTCACCCCRTTCCAYTTCTGAGTACCAGAAGTCWCCCAAGGAACCCCHHTACACTCHGGADTAATTCTACTA
Translation

Choloepus_didactylus_NC
AAAATCTCCAACCCACTGGCAACACAACATCATCACCATCTCCATCACCATAAAAATAGGACTAGCCCCATTCCACTTCTGAGTACCAGAAGTAACCCAAGGAACCCCATTACTCCCAGGAATAATCCTACTA
Translation
K I S N P L A T H I I T I S I T M K M G L A P F H F W V P E V T Q G T P L L P G M I L L

Mylodon_darwinii_Delsuc
AAAATCCTTAACCCATTGGCATCATGCATTATTACCATCTCCATCGCCATGAAACTAGGACTCACCCCGTTCCATTTCTGAGTACCAGAAGTCTCCCAAGGAACCCCCCTACACTCTGGAGTGATTCTACTA
Translation
K I L N P L A S C I I T I S I A M K L G L T P F H F W V P E V S Q G T P L H S G V I L L

Mylodon_darwinii_Slater
AAAATCCTTAACCCATTGGCATCATGCATTATTACCATCTCCATCGCCATGAAACTAGGACTCACCCCRTTCCAYTTCTGAGTACCAGAAGTCNNNNAATGAGTTCCTATG-AATCCATCTCATTTTTCCTC
Translation

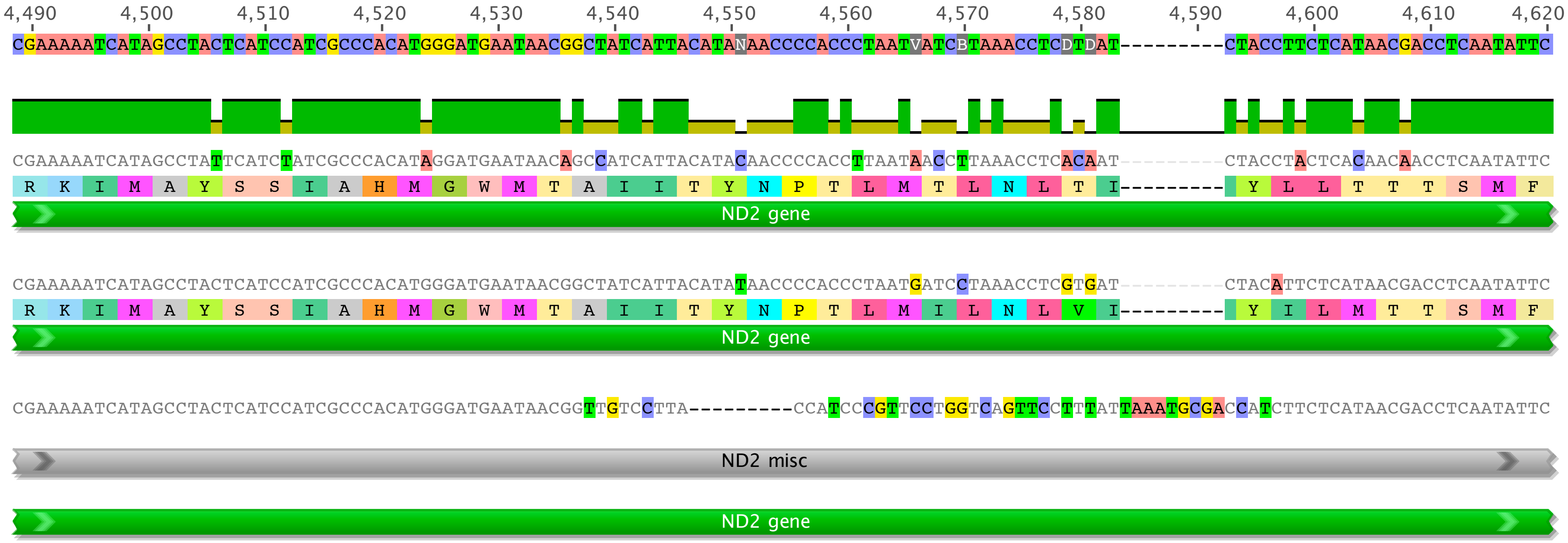


Consensus
ACATGACAAAAACTAGCCCCTATCTCAATCCTCTACCAAATCACAACCTCTATCAACTTCCCACTCCTACTCACAATAGCCATTCTCTCTATTATGGTCGGAGGTTGAGGAGGGCTAAACCAAACACAGCTA
Translation

Choloepus_didactylus_NC
ACATGACAAAAACTAGCCCCCATCACAATCATATCTCAAATCACAACCTCCATCAACCCCACACTCCTACTCATGATAGCTGTACTCTCCATTATAGTTGGGGGCTGAGGAGGACTAAACCAAACACAACTA
Translation
T W Q K L A P I T I M S Q I T T S I N P T L L L M M A V L S I M V G G W G G L N Q T Q L

Mylodon_darwinii_Delsuc
ACATGACAAAAACTAGCCCCTATCTCAATCCTCTACCAAATCACAACCTCTATCAACTTCCCACTCCTACTCACAATAGCCATTCTCTCTATTATGGTCGGAGGTTGAGGAGGGCTAAACCAAACACAGCTA
Translation
T W Q K L A P I S I L Y Q I T T S I N F P L L L T M A I L S I M V G G W G G L N Q T Q L

Mylodon_darwinii_Slater
TCCTTACTAAAACTAGCCCCTATCTCAATCCTCTACCAAATCACAACCTCTATCAACTTCCCACTCCTACTCACAATAGCCATTCTCTCTATTATGGTCGGAGGTTGAGGAGGGCTAAACCAAACACAGCTA
Translation



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                        4,490     4,500     4,510     4,520     4,530     4,540     4,550     4,560     4,570     4,580     4,590     4,600     4,610     4,620
Consensus               CGAAAAATCATAGCCTACTCATCCATCGCCCACATGGGATGAATAACGGCTATCATTACATANAACCCCACCCTAATVATCBTAAACCTCDTDAT----------CTACCTTCTCATAACGACCTCAATATTC
 Translation
Identity
Choloepus_didactylus_NC CGAAAAATCATAGCCTATTCATCTATCGCCCACATAGGATGAATAACAGCCATCATTACATACAACCCCACCTTAATAACCTTAAACCTCACAAT----------CTACCTACTCACAACAACCTCAATATTC
 Translation            R  K  I  M  A  Y  S  S  I  A  H  M  G  W  M  T  A  I  I  T  Y  N  P  T  L  M  T  L  N  L  T  I----------  Y  L  L  T  T  T  S  M  F
                        ND2 gene

Mylodon_darwinii_Delsuc CGAAAAATCATAGCCTACTCATCCATCGCCCACATGGGATGAATAACGGCTATCATTACATATAACCCCACCCTAATGATCCTAAACCTCGTGAT----------CTACATTCTCATAACGACCTCAATATTC
 Translation            R  K  I  M  A  Y  S  S  I  A  H  M  G  W  M  T  A  I  I  T  Y  N  P  T  L  M  I  L  N  L  V  I----------  Y  I  L  M  T  T  S  M  F
                        ND2 gene

Mylodon_darwinii_Slater CGAAAAATCATAGCCTACTCATCCATCGCCCACATGGGATGAATAACGGTTGTCCTTA----------CCATCCCGTTCCTGGTCAGTTCCTTTATTAAATGCGACCATCTTCTCATAACGACCTCAATATTC
 Translation
                        ND2 misc

                        ND2 gene
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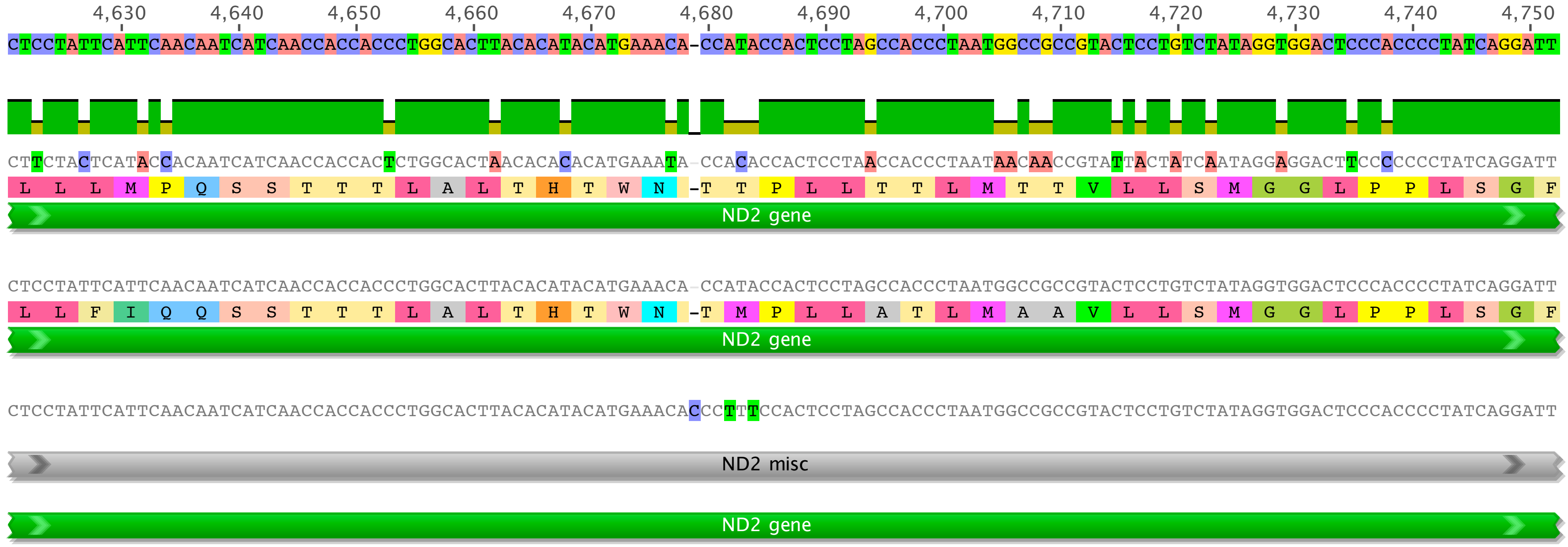

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                              4,630     4,640     4,650     4,660     4,670     4,680     4,690     4,700     4,710     4,720     4,730     4,740     4,750
Consensus               CTCCTATTCATTCAACAATCATCAACCACCACCCTGGCACTTACACATACATGAAACA-CCATACCACTCCTAGCCACCCTAATGGCCGCCGTACTCCTGTCTATAGGTGGACTCCCACCCCTATCAGGATT
 Translation
Identity
Choloepus_didactylus_NC CTTCTACTCATACCACAATCATCAACCACCACTCTGGCACTAACACACACATGAAATA-CCACACCACTCCTAACCACCCTAATAACAACCGTATTACTATCAATAGGAGGACTTCCCCCCCTATCAGGATT
 Translation            L  L  L  M  P  Q  S  S  T  T  T  L  A  L  T  H  T  W  N  -T  T  P  L  L  T  T  L  M  T  T  V  L  L  S  M  G  G  L  P  P  L  S  G  F
                        ND2 gene

Mylodon_darwinii_Delsuc CTCCTATTCATTCAACAATCATCAACCACCACCCTGGCACTTACACATACATGAAACA-CCATACCACTCCTAGCCACCCTAATGGCCGCCGTACTCCTGTCTATAGGTGGACTCCCACCCCTATCAGGATT
 Translation            L  L  F  I  Q  Q  S  S  T  T  T  L  A  L  T  H  T  W  N  -T  M  P  L  L  A  T  L  M  A  A  V  L  L  S  M  G  G  L  P  P  L  S  G  F
                        ND2 gene

Mylodon_darwinii_Slater CTCCTATTCATTCAACAATCATCAACCACCACCCTGGCACTTACACATACATGAAACACCCTTTCCACTCCTAGCCACCCTAATGGCCGCCGTACTCCTGTCTATAGGTGGACTCCCACCCCTATCAGGATT
 Translation
                        ND2 misc

                        ND2 gene
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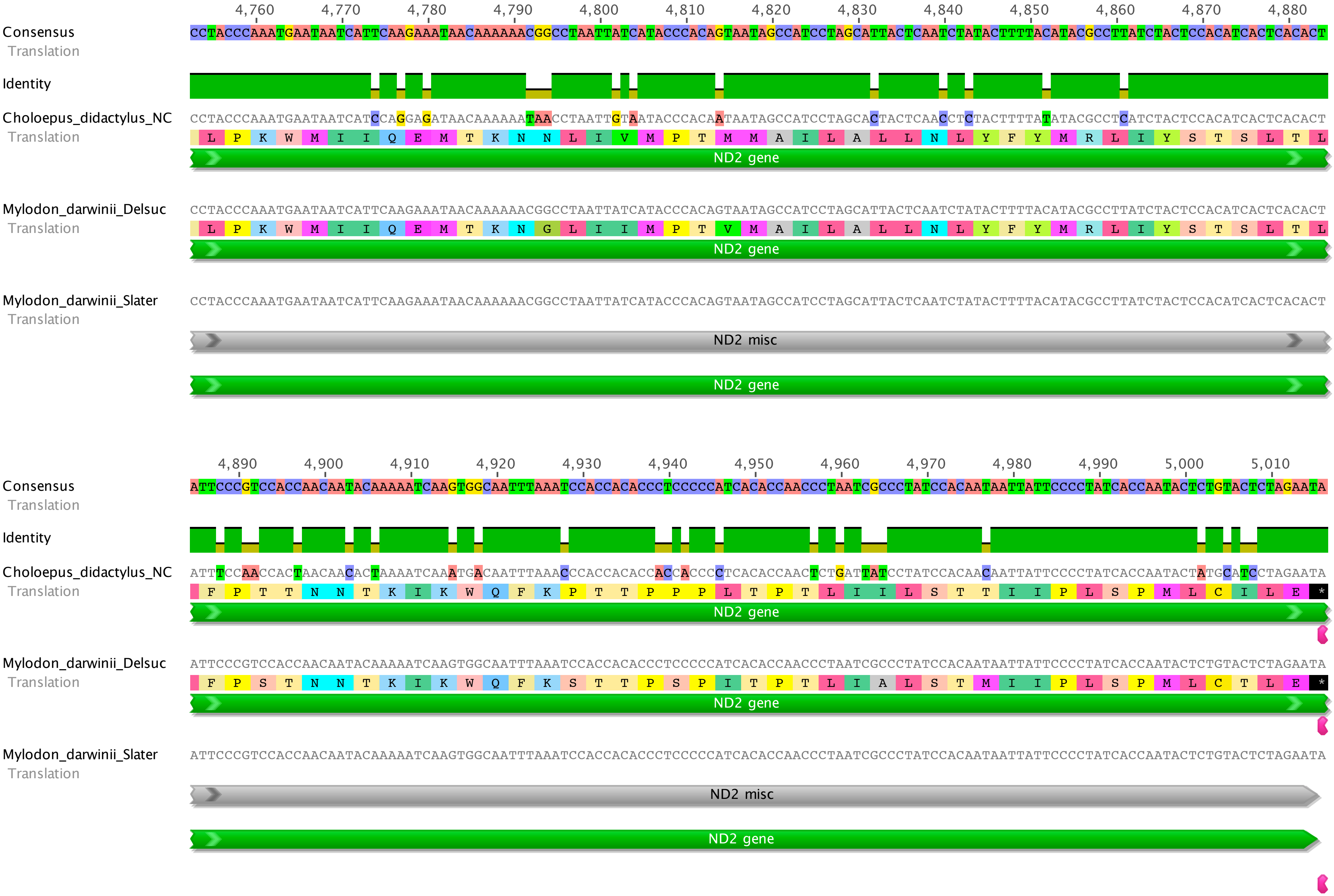

Consensus
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Translation

Choloepus_didactylus_NC
CCTACCCAAATGAATAATCATCCAGGAGATAACAAAAAATAACCTAATTGTAATACCCACAATAATAGCCATCCTAGCACTACTCAACCTCTACTTTTATATACGCCTCATCTACTCCACATCACTCACACT
Translation
L P K W M I I Q E M T K N N L I V M P T M M A I L A L L N L Y F Y M R L I Y S T S L T L

Mylodon_darwinii_Delsuc
CCTACCCAAATGAATAATCATTCAAGAAATAACAAAAAACGGCCTAATTATCATACCCACAGTAATAGCCATCCTAGCATTACTCAATCTATACTTTTACATACGCCTTATCTACTCCACATCACTCACACT
Translation
L P K W M I I Q E M T K N G L I I M P T V M A I L A L L N L Y F Y M R L I Y S T S L T L

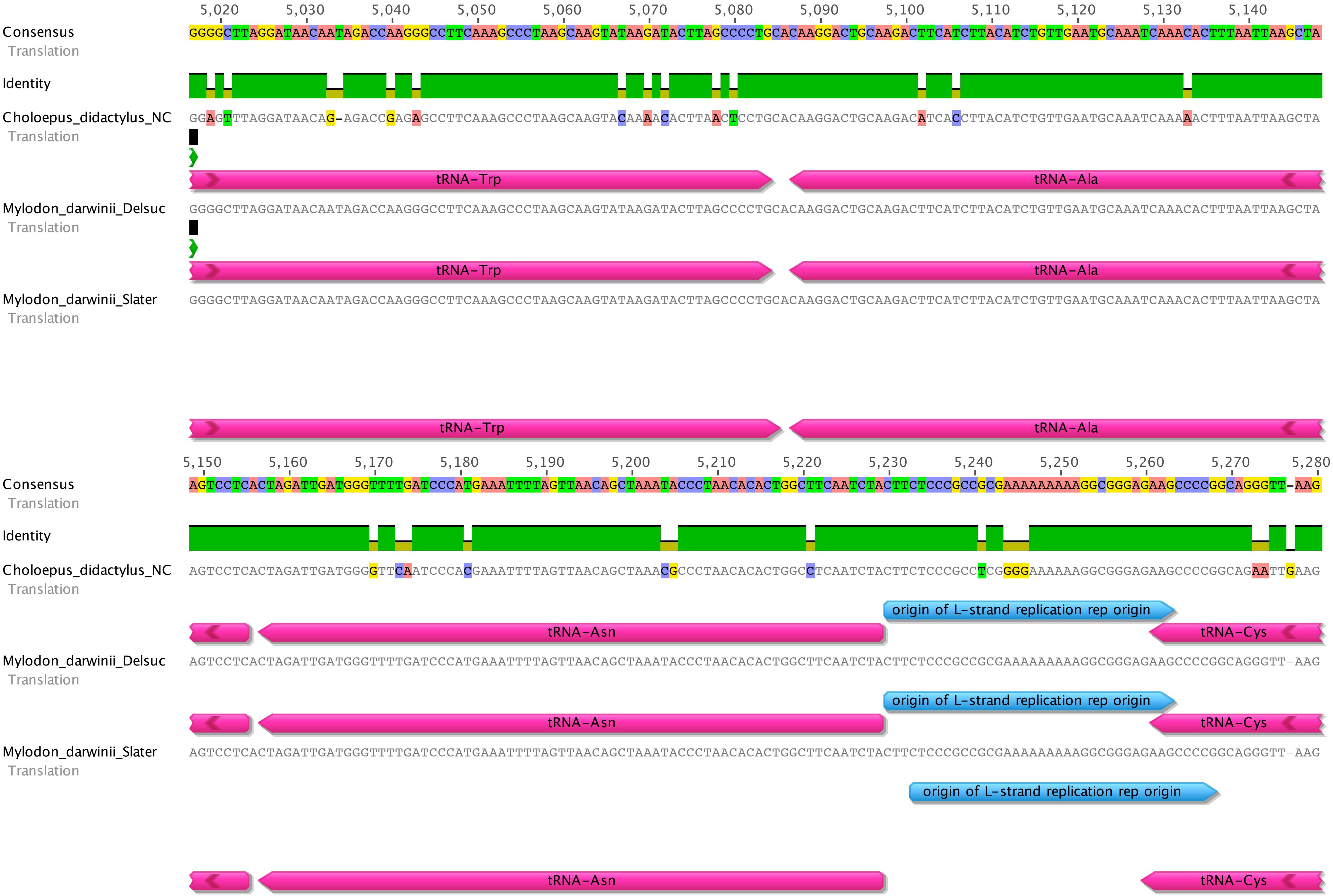
Mylodon_darwinii_Slater
CCTACCCAAATGAATAATCATTCAAGAAATAACAAAAAACGGCCTAATTATCATACCCACAGTAATAGCCATCCTAGCATTACTCAATCTATACTTTTACATACGCCTTATCTACTCCACATCACTCACACT
Translation

Consensus
ATTCCCGTCCACCAACAATACAAAAATCAAGTGGCAATTTAAATCCACCACACCCTCCCCCATCACACCAACCCTAATCGCCCTATCCACAATAATTATTCCCCTATCACCAATACTCTGTACTCTAGAATA
Translation

Choloepus_didactylus_NC
ATTTCCAACCACTAACAACACTAAAATCAAATGACAATTTAAACCCACCACACCACCACCCCTCACACCAACTCTGATTATCCTATCCACAACAATTATTCCCCTATCACCAATACTATGCATCCTAGAATA
Translation
F P T T N N T K I K W Q F K P T T P P P L T P T L I I L S T T I I P L S P M L C I L E *

Mylodon_darwinii_Delsuc
ATTCCCGTCCACCAACAATACAAAAATCAAGTGGCAATTTAAATCCACCACACCCTCCCCCATCACACCAACCCTAATCGCCCTATCCACAATAATTATTCCCCTATCACCAATACTCTGTACTCTAGAATA
Translation
F P S T N N T K I K W Q F K S T T P S P I T P T L I A L S T M I I P L S P M L C T L E *

Mylodon_darwinii_Slater
ATTCCCGTCCACCAACAATACAAAAATCAAGTGGCAATTTAAATCCACCACACCCTCCCCCATCACACCAACCCTAATCGCCCTATCCACAATAATTATTCCCCTATCACCAATACTCTGTACTCTAGAATA
Translation



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Consensus                GGGGCTTAGGATAACAATAGACCAAGGGCCTTCAAAGCCCTAAGCAAGTATAAGATACTTAGCCCCTGCACAAGGACTGCAAGACTTCATCTTACATCTGTTGAATGCAAATCAAACACTTTAATTAAGCTA
Choloepus_didactylus_NC  GGAGTTTAGGATAACAG-AGACCGAGAGCCTTCAAAGCCCTAAGCAAGTACAAAACACTTAACTCCTGCACAAGGACTGCAAGACATCACCTTACATCTGTTGAATGCAAATCAAAAACTTTAATTAAGCTA
Mylodon_darwinii_Delsuc  GGGGCTTAGGATAACAATAGACCAAGGGCCTTCAAAGCCCTAAGCAAGTATAAGATACTTAGCCCCTGCACAAGGACTGCAAGACTTCATCTTACATCTGTTGAATGCAAATCAAACACTTTAATTAAGCTA
Mylodon_darwinii_Slater  GGGGCTTAGGATAACAATAGACCAAGGGCCTTCAAAGCCCTAAGCAAGTATAAGATACTTAGCCCCTGCACAAGGACTGCAAGACTTCATCTTACATCTGTTGAATGCAAATCAAACACTTTAATTAAGCTA

Consensus                AGTCCTCACTAGATTGATGGGTTTTGATCCCATGAAATTTTAGTTAACAGCTAAATACCCTAACACACTGGCTTCAATCTACTTCTCCCGCCGCGAAAAAAAAAGGCGGGAGAAGCCCCGGCAGGGTT-AAG
Choloepus_didactylus_NC  AGTCCTCACTAGATTGATGGGGTTCAATCCCACGAAATTTTAGTTAACAGCTAAACGCCCTAACACACTGGCCTCAATCTACTTCTCCCGCCTCGGGGAAAAAAGGCGGGAGAAGCCCCGGCAGAATTGAAG
Mylodon_darwinii_Delsuc  AGTCCTCACTAGATTGATGGGTTTTGATCCCATGAAATTTTAGTTAACAGCTAAATACCCTAACACACTGGCTTCAATCTACTTCTCCCGCCGCGAAAAAAAAAGGCGGGAGAAGCCCCGGCAGGGTT-AAG
Mylodon_darwinii_Slater  AGTCCTCACTAGATTGATGGGTTTTGATCCCATGAAATTTTAGTTAACAGCTAAATACCCTAACACACTGGCTTCAATCTACTTCTCCCGCCGCGAAAAAAAAAGGCGGGAGAAGCCCCGGCAGGGTT-AAG
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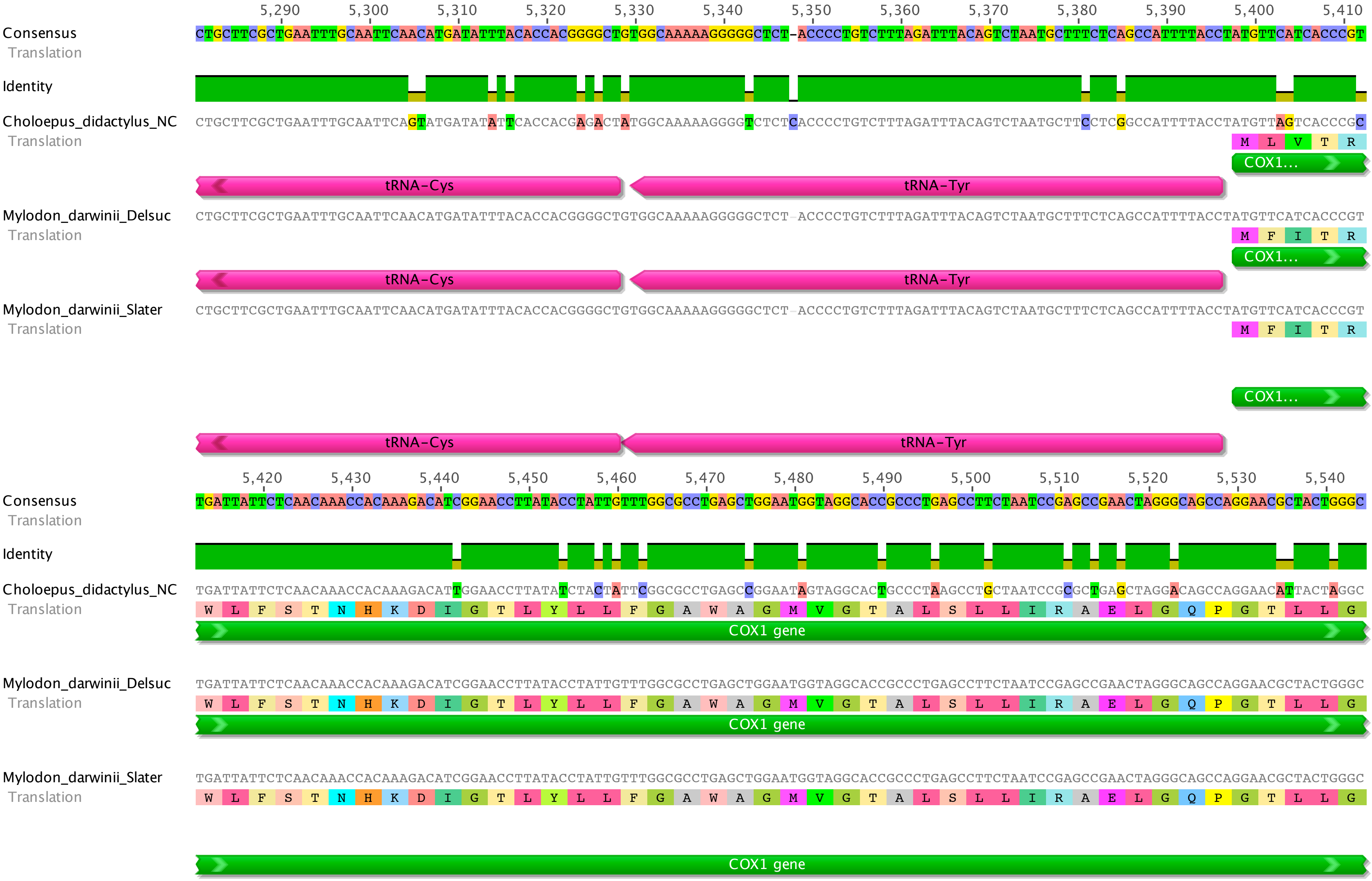

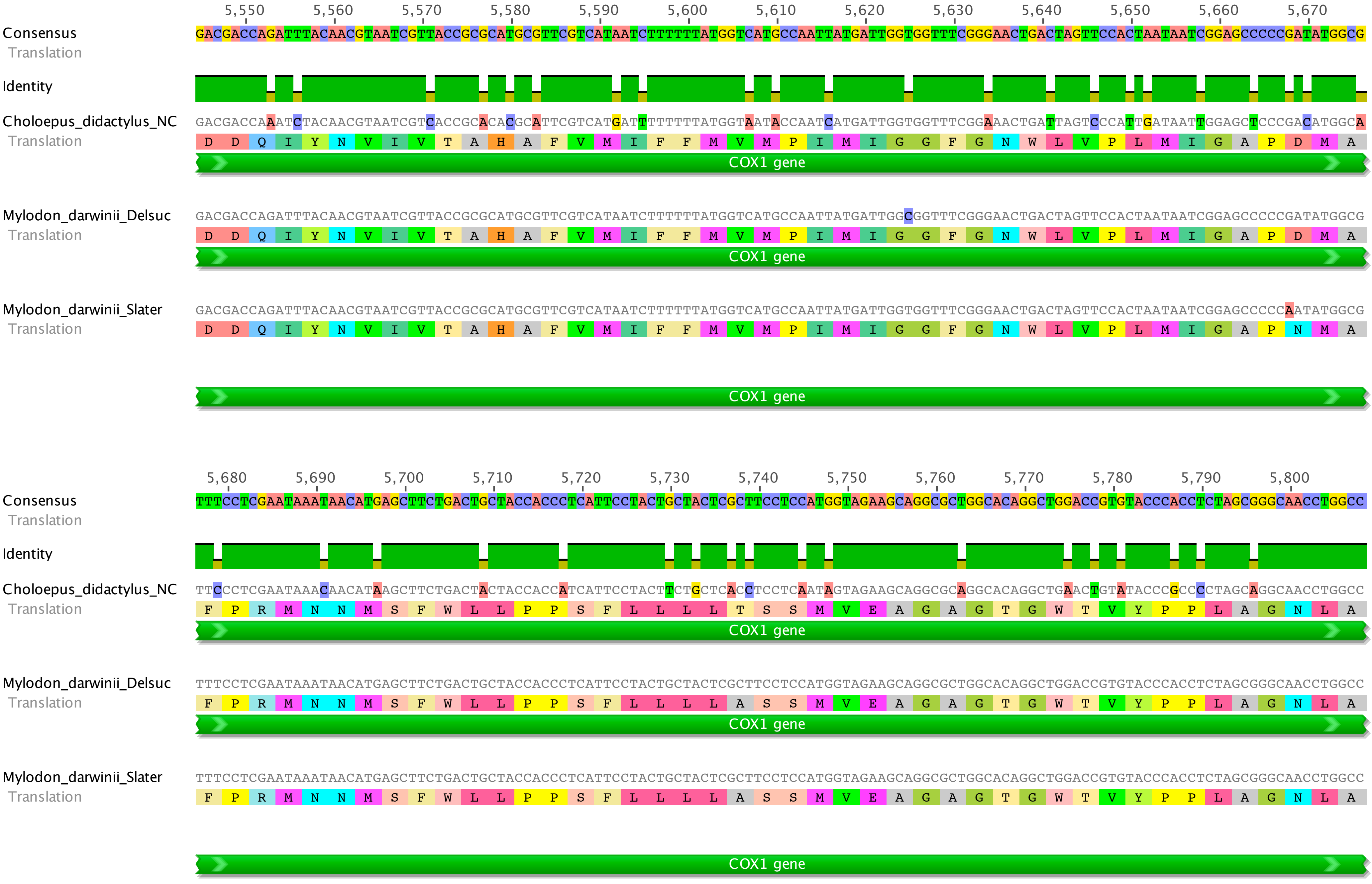

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Consensus                   GACGACCAGATTTACAACGTAATCGTTACCGCGCATGCGTTCGTCATAATCTTTTTTATGGTCATGCCAATTATGATTGGTGGTTTCGGGAACTGACTAGTTCCACTAATAATCGGAGCCCCCGATATGGCG
 Translation
Identity
Choloepus_didactylus_NC     GACGACCAAATCTACAACGTAATCGTCACCGCACACGCATTCGTCATGATTTTTTTTATGGTAATACCAATCATGATTGGTGGTTTCGGAAACTGATTAGTCCCATTGATAATTGGAGCTCCCGACATGGCA
 Translation                D D Q I Y N V I V T A H A F V M I F F M V M P I M I G G F G N W L V P L M I G A P D M A
Mylodon_darwinii_Delsuc     GACGACCAGATTTACAACGTAATCGTTACCGCGCATGCGTTCGTCATAATCTTTTTTATGGTCATGCCAATTATGATTGGCGGTTTCGGGAACTGACTAGTTCCACTAATAATCGGAGCCCCCGATATGGCG
 Translation                D D Q I Y N V I V T A H A F V M I F F M V M P I M I G G F G N W L V P L M I G A P D M A
Mylodon_darwinii_Slater     GACGACCAGATTTACAACGTAATCGTTACCGCGCATGCGTTCGTCATAATCTTTTTTATGGTCATGCCAATTATGATTGGTGGTTTCGGGAACTGACTAGTTCCACTAATAATCGGAGCCCCCAATATGGCG
 Translation                D D Q I Y N V I V T A H A F V M I F F M V M P I M I G G F G N W L V P L M I G A P N M A

Consensus                   TTTCCTCGAATAAATAACATGAGCTTCTGACTGCTACCACCCTCATTCCTACTGCTACTCGCTTCCTCCATGGTAGAAGCAGGCGCTGGCACAGGCTGGACCGTGTACCCACCTCTAGCGGGCAACCTGGCC
 Translation
Identity
Choloepus_didactylus_NC     TTCCCTCGAATAAACAACATAAGCTTCTGACTACTACCACCATCATTCCTACTTCTGCTCACCTCCTCAATAGTAGAAGCAGGCGCAGGCACAGGCTGAACTGTATACCCGCCCCTAGCAGGCAACCTGGCC
 Translation                F P R M N N M S F W L L P P S F L L L L T S S M V E A G A G T G W T V Y P P L A G N L A
Mylodon_darwinii_Delsuc     TTTCCTCGAATAAATAACATGAGCTTCTGACTGCTACCACCCTCATTCCTACTGCTACTCGCTTCCTCCATGGTAGAAGCAGGCGCTGGCACAGGCTGGACCGTGTACCCACCTCTAGCGGGCAACCTGGCC
 Translation                F P R M N N M S F W L L P P S F L L L L A S S M V E A G A G T G W T V Y P P L A G N L A
Mylodon_darwinii_Slater     TTTCCTCGAATAAATAACATGAGCTTCTGACTGCTACCACCCTCATTCCTACTGCTACTCGCTTCCTCCATGGTAGAAGCAGGCGCTGGCACAGGCTGGACCGTGTACCCACCTCTAGCGGGCAACCTGGCC
 Translation                F P R M N N M S F W L L P P S F L L L L A S S M V E A G A G T G W T V Y P P L A G N L A
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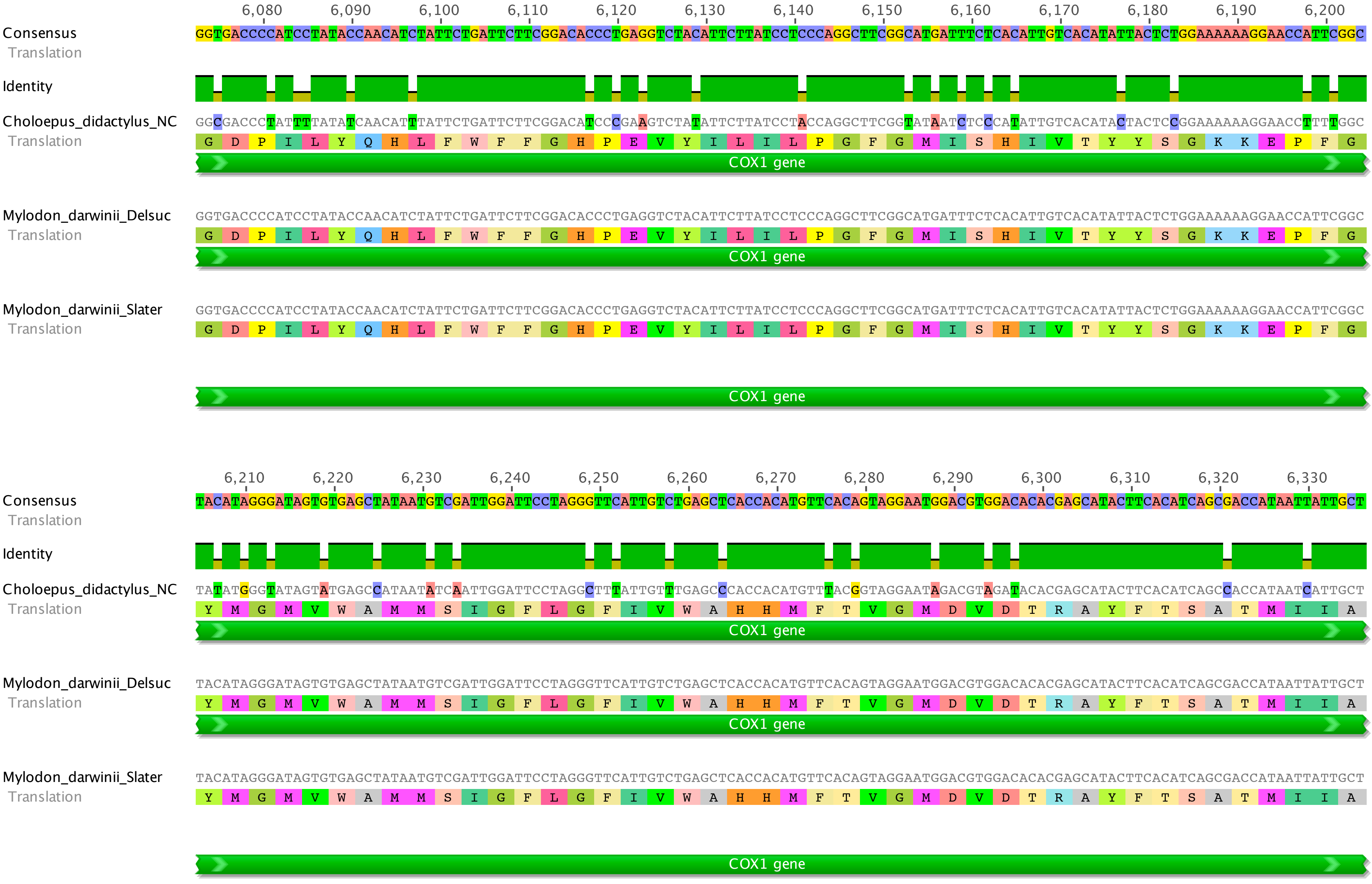
5,810 5,820 5,830 5,840 5,850 5,860 5,870 5,880 5,890 5,900 5,910 5,920 5,930 5,940
Consensus CATGCAGGAGCATCAGTCGACCTGACTATTTTCTCTCTACACCTAGCAGGAATCTCATCAATTTTAGGTGCCATCAACTTCATCACTACCATTATTAACATAAAACCCCCTGCCATGTCCCAATACCAAACC
Translation
Identity
Choloepus_didactylus_NC CATGCAGGCCCATCAGTCGATCTAACTATCTTTTCCCTTCACCTGGCAGGGATCTCATCAATCCTAGGCGCCATTAATTTTATTACCACTATTATTAACATAAAACCCCCAGCCATGTCCCAGTACCAAACC
Translation H A G P S V D L T I F S L H L A G I S S I L G A I N F I T T I I N M K P P A M S Q Y Q T
COX1 gene
Mylodon_darwinii_Delsuc CATGCAGGAGCATCAGTCGACCTGACTATTTTCTCTCTACACCTAGCAGGAATCTCATCAATTTTAGGTGCCATCAACTTCATCACTACCATTATTAACATAAAACCCCCTGCCATGTCCCAATACCAAACC
Translation H A G A S V D L T I F S L H L A G I S S I L G A I N F I T T I I N M K P P A M S Q Y Q T
COX1 gene
Mylodon_darwinii_Slater CATGCAGGAGCATCAGTCGACCTGACTATTTTCTCTCTACACCTAGCAGGAATCTCATCAATTTTAGGTGCCATCAACTTCATCACTACCATTATTAACATAAAACCCCCTGCCATGTCCCAATACCAAACC
Translation H A G A S V D L T I F S L H L A G I S S I L G A I N F I T T I I N M K P P A M S Q Y Q T
COX1 gene
5,950 5,960 5,970 5,980 5,990 6,000 6,010 6,020 6,030 6,040 6,050 6,060 6,070
Consensus CCACTGTTCGTATGATCGGTTCTGGTCACAGCGGTCCTCCTTCTCCTTTCGCTCCCTGTACTAGCCGCCGGAATTACCATGCTCCTAACAGACCGCAACTTAAACACTACATTCTTTGACCCGGCCGGAGGA
Translation
Identity
Choloepus_didactylus_NC CCCTTGTTTGTCTGATCAATCCTGATTACGGCAGTCCTCCTTCTCCTCTCACTCCCAGTACTAGCCGCTGGAATCACCATACTCCTGACAGACCGCAACTTAAATACCACATTTTTTGATCCTGCCGGAGGG
Translation P L F V W S I L I T A V L L L L S L P V L A A G I T M L L T D R N L N T T F F D P A G G
COX1 gene
Mylodon_darwinii_Delsuc CCACTGTTCGTATGATCGGTTCTGGTCACAGCGGTCCTCCTTCTCCTTTCGCTCCCTGTACTAGCCGCCGGAATTACCATGCTCCTAACAGACCGCAACTTAAACACTACATTCTTTGACCCGGCCGGAGGA
Translation P L F V W S V L V T A V L L L L S L P V L A A G I T M L L T D R N L N T T F F D P A G G
COX1 gene
Mylodon_darwinii_Slater CCACTGTTCGTATGATCGGTTCTGGTCACAGCGGTCCTCCTTCTCCTTTCGCTCCCTGTACTAGCCGCCGGAATTACCATGCTCCTAACAGACCGCAACTTAAACACTACATTCTTTGACCCGGCCGGAGGA
Translation P L F V W S V L V T A V L L L L S L P V L A A G I T M L L T D R N L N T T F F D P A G G
COX1 gene



6,080 6,090 6,100 6,110 6,120 6,130 6,140 6,150 6,160 6,170 6,180 6,190 6,200

Consensus GGTGACCCCATCCTATACCAACATCTATTCTGATTCTTCGGACACCCTGAGGTCTACATTCTTATCCTCCCAGGCTTCGGCATGATTTCTCACATTGTCACATATTACTCTGGAAAAAAGGAACCATTCGGC

Translation

Identity

Choloepus_didactylus_NC GGCGACCCTATTTTATATCAACATTTATTCTGATTCTTCGGACATCCCGAAGTCTATATTCTTATCCTACCAGGCTTCGGTATAATCTCCCATATTGTCACATACTACTCCGGAAAAAAGGAACCTTTTGGC

Translation G D P I L Y Q H L F W F F G H P E V Y I L I L P G F G M I S H I V T Y Y S G K K E P F G

COX1 gene

Mylodon_darwinii_Delsuc GGTGACCCCATCCTATACCAACATCTATTCTGATTCTTCGGACACCCTGAGGTCTACATTCTTATCCTCCCAGGCTTCGGCATGATTTCTCACATTGTCACATATTACTCTGGAAAAAAGGAACCATTCGGC

Translation G D P I L Y Q H L F W F F G H P E V Y I L I L P G F G M I S H I V T Y Y S G K K E P F G

COX1 gene

Mylodon_darwinii_Slater GGTGACCCCATCCTATACCAACATCTATTCTGATTCTTCGGACACCCTGAGGTCTACATTCTTATCCTCCCAGGCTTCGGCATGATTTCTCACATTGTCACATATTACTCTGGAAAAAAGGAACCATTCGGC

Translation G D P I L Y Q H L F W F F G H P E V Y I L I L P G F G M I S H I V T Y Y S G K K E P F G

COX1 gene

6,210 6,220 6,230 6,240 6,250 6,260 6,270 6,280 6,290 6,300 6,310 6,320 6,330

Consensus TACATAGGGATAGTGTGAGCTATAATGTCGATTGGATTCCTAGGGTTCATTGTCTGAGCTCACCACATGTTCACAGTAGGAATGGACGTGGACACACGAGCATACTTCACATCAGCGACCATAATTATTGCT

Translation

Identity

Choloepus_didactylus_NC TATATGGGTATAGTATGAGCCATAATATCAATTGGATTCCTAGGCTTTATTGTTTGAGCCCACCACATGTTTACGGTAGGAATAGACGTAGATACACGAGCATACTTCACATCAGCCACCATAATCATTGCT

Translation Y M G M V W A M M S I G F L G F I V W A H H M F T V G M D V D T R A Y F T S A T M I I A

COX1 gene

Mylodon_darwinii_Delsuc TACATAGGGATAGTGTGAGCTATAATGTCGATTGGATTCCTAGGGTTCATTGTCTGAGCTCACCACATGTTCACAGTAGGAATGGACGTGGACACACGAGCATACTTCACATCAGCGACCATAATTATTGCT

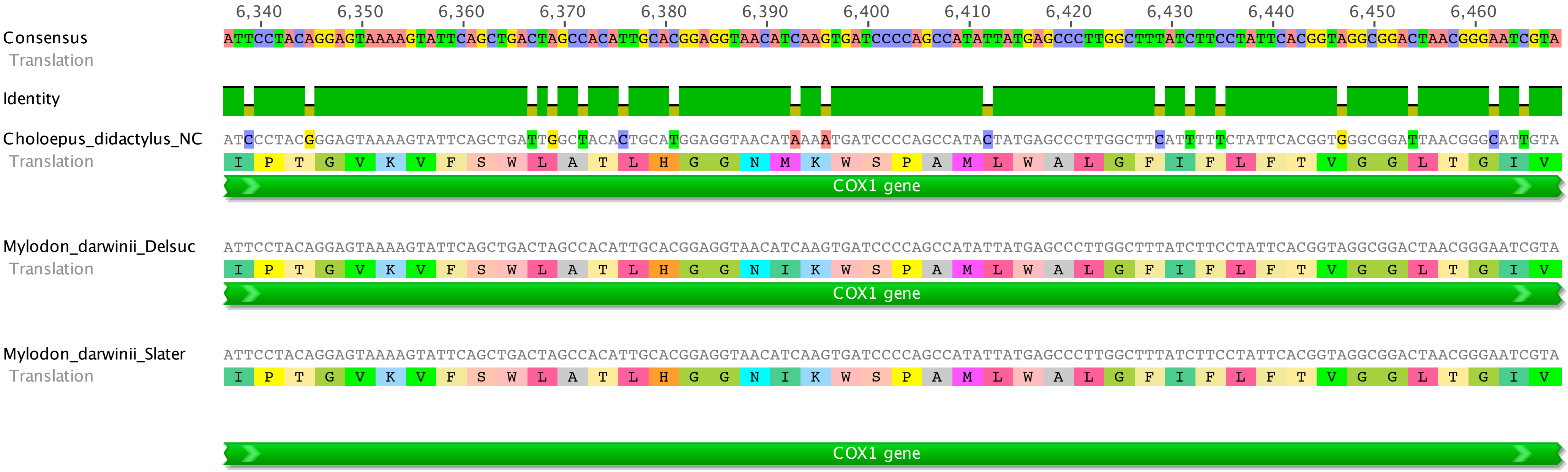
Translation Y M G M V W A M M S I G F L G F I V W A H H M F T V G M D V D T R A Y F T S A T M I I A

COX1 gene

Mylodon_darwinii_Slater TACATAGGGATAGTGTGAGCTATAATGTCGATTGGATTCCTAGGGTTCATTGTCTGAGCTCACCACATGTTCACAGTAGGAATGGACGTGGACACACGAGCATACTTCACATCAGCGACCATAATTATTGCT

Translation Y M G M V W A M M S I G F L G F I V W A H H M F T V G M D V D T R A Y F T S A T M I I A

COX1 gene



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            6,340     6,350     6,360     6,370     6,380     6,390     6,400     6,410     6,420     6,430     6,440     6,450     6,460
Consensus                 ATTCCTACAGGAGTAAAAGTATTCAGCTGACTAGCCACATTGCACGGAGGTAACATCAAGTGATCCCCAGCCATATTATGAGCCCTTGGCTTTATCTTCCTATTCACGGTAGGCGGACTAACGGGAATCGTA
 Translation
Identity
Choloepus_didactylus_NC   ATCCCTACGGGAGTAAAAGTATTCAGCTGATTGGCTACACTGCATGGAGGTAACATAAAATGATCCCCAGCCATACTATGAGCCCTTGGCTTCATTTTTCTATTCACGGTGGGCGGATTAACGGGCATTGTA
 Translation               I  P  T  G  V  K  V  F  S  W  L  A  T  L  H  G  G  N  M  K  W  S  P  A  M  L  W  A  L  G  F  I  F  L  F  T  V  G  G  L  T  G  I  V
                          COX1 gene
Mylodon_darwinii_Delsuc   ATTCCTACAGGAGTAAAAGTATTCAGCTGACTAGCCACATTGCACGGAGGTAACATCAAGTGATCCCCAGCCATATTATGAGCCCTTGGCTTTATCTTCCTATTCACGGTAGGCGGACTAACGGGAATCGTA
 Translation               I  P  T  G  V  K  V  F  S  W  L  A  T  L  H  G  G  N  I  K  W  S  P  A  M  L  W  A  L  G  F  I  F  L  F  T  V  G  G  L  T  G  I  V
                          COX1 gene
Mylodon_darwinii_Slater   ATTCCTACAGGAGTAAAAGTATTCAGCTGACTAGCCACATTGCACGGAGGTAACATCAAGTGATCCCCAGCCATATTATGAGCCCTTGGCTTTATCTTCCTATTCACGGTAGGCGGACTAACGGGAATCGTA
 Translation               I  P  T  G  V  K  V  F  S  W  L  A  T  L  H  G  G  N  I  K  W  S  P  A  M  L  W  A  L  G  F  I  F  L  F  T  V  G  G  L  T  G  I  V
                          COX1 gene
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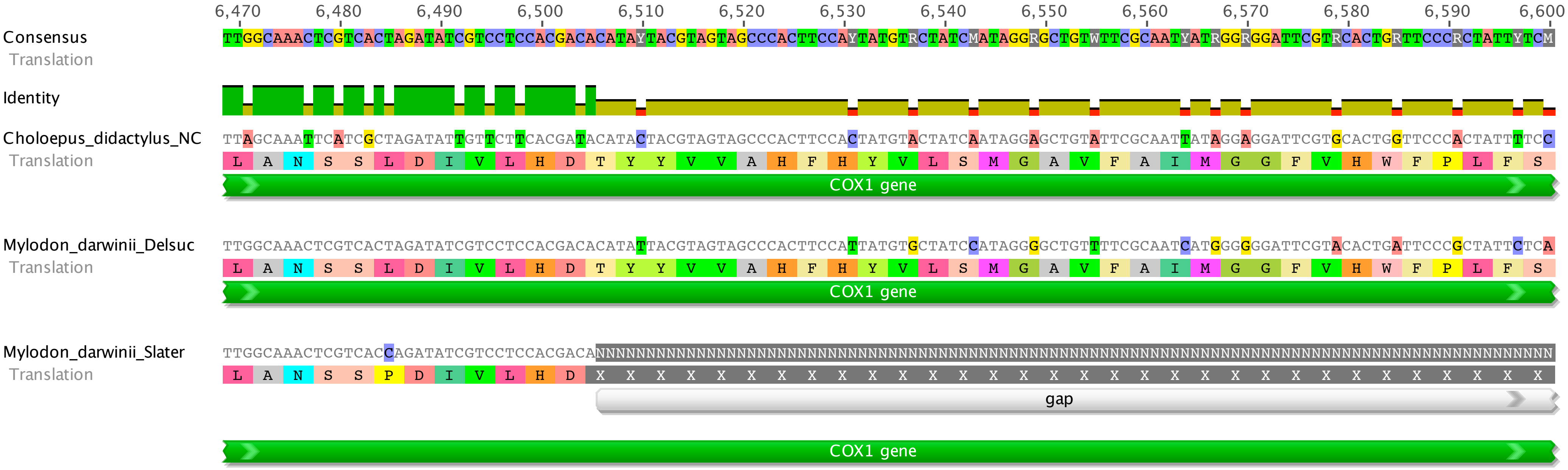

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           6,470     6,480     6,490     6,500     6,510     6,520     6,530     6,540     6,550     6,560     6,570     6,580     6,590     6,600
Consensus                 TTGGCAAACTCGTCACTAGATATCGTCCTCCACGACACATAYTACGTAGTAGCCCACTTCCAYTATGTRCTATCMATAGGRGCTGTWTTCGCAATYATRGGRGGATTCGTRCACTGRTTCCCRCTATTYTCM
 Translation
Identity
Choloepus_didactylus_NC   TTAGCAAATTCATCGCTAGATATTGTTCTTCACGATACATACTACGTAGTAGCCCACTTCCACTATGTACTATCAATAGGAGCTGTATTCGCAATTATAGGAGGATTCGTGCACTGGTTCCCACTATTTTCC
 Translation               L  A  N  S  S  L  D  I  V  L  H  D  T  Y  Y  V  V  A  H  F  H  Y  V  L  S  M  G  A  V  F  A  I  M  G  G  F  V  H  W  F  P  L  F  S
                          COX1 gene
Mylodon_darwinii_Delsuc   TTGGCAAACTCGTCACTAGATATCGTCCTCCACGACACATATTACGTAGTAGCCCACTTCCATTATGTGCTATCCATAGGGGCTGTTTTCGCAATCATGGGGGGATTCGTACACTGATTCCCGCTATTCTCA
 Translation               L  A  N  S  S  L  D  I  V  L  H  D  T  Y  Y  V  V  A  H  F  H  Y  V  L  S  M  G  A  V  F  A  I  M  G  G  F  V  H  W  F  P  L  F  S
                          COX1 gene
Mylodon_darwinii_Slater   TTGGCAAACTCGTCACCAGATATCGTCCTCCACGACANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
 Translation               L  A  N  S  S  P  D  I  V  L  H  D  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X  X
                                                                 gap
                          COX1 gene
```

Consensus GGCTATAYRCTCAACACAACCTGGGCYAAAATYCAYTTCGTAATYATATTCGTAGGCGTAAACATAACATTTTTCCCTCAACATTTTCTAGGTCTCTCAGGAATACCACGGCGCTACTCCGACTACCCTGAC

Translation

Choloepus_didactylus_NC GGCTATATACTCAACACAACCTGGGCTAAAATTCATTTCGTAATCATATTCGTAGGTGTAAACATGACATTCTTCCCCCAACACTTCCTAGGCCTCTCGGGTATACCACGGCGCTACTCTGACTACCCCGAC

Translation G Y M L N T T W A K I H F V I M F V G V N M T F F P Q H F L G L S G M P R R Y S D Y P D

Mylodon_darwinii_Delsuc GGCTATACGCTCAACACAACCTGGGCCAAAATCCACTTCGTAATTATATTCGTAGGCGTAAACATAACATTTTTCCCTCAACATTTTCTAGGTCTCTCAGGAATACCACGGCGCTACTCCGACTACCCTGAC

Translation G Y T L N T T W A K I H F V I M F V G V N M T F F P Q H F L G L S G M P R R Y S D Y P D

Mylodon_darwinii_Slater NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCGTAGGCGTAAACATAACATTTTTCCCTCAACATTTTCTAGGTCTCTCAGGAATACCACGGCGCTACTCCGACTACCCTGAC

Translation X X X X X X X X X X X X X X X X F V G V N M T F F P Q H F L G L S G M P R R Y S D Y P D

Consensus GCGTACACAATATGAAATACTATCTCATCAATGGGCTCTTTCATCTCACTAACCGCAGTAGTACTAATAGTTTTCATGGTCTGAGAGGCCTTCGCCTCCAAGCGCGAAGTGTCCCTAGTAGAACTTACTACT

Translation

Choloepus_didactylus_NC GCATACACAATATGAAACACAATCTCGTCAATAGGCTCTTTCATTTCACTAACCGCAGTAATACTAATAATCTTCATGATTTGAGAAGCCTTTGCCTCCAAACGCGAAGTGTTATTCGTAGAATTTACCACC

Translation A Y T M W N T I S S M G S F I S L T A V M L M I F M I W E A F A S K R E V L F V E F T T

Mylodon_darwinii_Delsuc GCGTACACAATATGAAATACTATCTCATCAATGGGCTCTTTCATCTCACTAACCGCAGTAGTACTAATAGTTTTCATGGTCTGAGAGGCCTTCGCCTCCAAGCGCGAAGTGTCCCTAGTAGAACTTACTACT

Translation A Y T M W N T I S S M G S F I S L T A V V L M V F M V W E A F A S K R E V S L V E L T T

Mylodon_darwinii_Slater GCGTACACAATATGAAATACTATCTCATCAATGGGCTCTTTCATCTCACTAACCGCAGTAGTACTAATAGTTTTCATGGTCTGAGAGGCCTTCGCCTCCAAGCGCGAAGTGTCCCTAGTAGAACTTACTACT

Translation A Y T M W N T I S S M G S F I S L T A V V L M V F M V W E A F A S K R E V S L V E L T T

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Consensus                 ACCAATATTGAGTGACTCCATGGCTGCCCACCACCATACCACACATTTGAAGAACCCGCATTCGTCAAAGTCTAGCCCAAGAAAGGAAGGAATCGAACCCCCCAAAATCGGTTTCAAGCCAACTTCATACCC
 Translation
Choloepus_didactylus_NC   ACTAATATTGAATGACTCCACGGCTGCCCACCACCATACCACACATTCGAAGAACCCGCATTCGTCAAAATCTAGCCCAAGAAAGGAAGGAATCGAACCCCCTAAAATCGGTTTCAAGCCAACCTCATACCC
 Translation              T  N  I  E  W  L  H  G  C  P  P  P  Y  H  T  F  E  E  P  A  F  V  K  I  *
Mylodon_darwinii_Delsuc   ACCAATATTGAGTGACTCCATGGCTGCCCACCACCATACCACACATTTGAAGAACCCGCATTCGTCAAAGTCTAGCCCAAGAAAGGAAGGAATCGAACCCCCCAAAATCGGTTTCAAGCCAACTTCATACCC
 Translation              T  N  I  E  W  L  H  G  C  P  P  P  Y  H  T  F  E  E  P  A  F  V  K  V  *
Mylodon_darwinii_Slater   ACCAATATTGAGTGACTCCATGGCTGCCCACCACCATACCACACATTTGAAGAACCCGCATTCGTCAAAGTCTAGCCCAAGAAAGGAAGGAATCGAACCCCCCAAAATCGGTTTCAAGCCAACTTCATACCC
 Translation              T  N  I  E  W  L  H  G  C  P  P  P  Y  H  T  F  E  E  P  A  F  V  K  V  *

Consensus                 AGTATGACTTTCTTCATGAACGAGGCGTTAATAAAATGATTATATAACTTTGTCGAAGTTAAATTATAGGCTAAAACCCTTTACACCTCTATGGCTTATCCCCTACAACTAGGATTTCAAGACGCCACATCA
 Translation
Choloepus_didactylus_NC   AGTATGTCTTTCTTAATGGACGAGGCGTTAATAAAACAATTATATAACTTTGTCAAAGTTAAATTATAGGCTATAACCCTTTACACCTCTATGGCTCATCCCATACAACTAGGATTCCAAGACGCCACATCA
 Translation                                                                                                 M  A  H  P  M  Q  L  G  F  Q  D  A  T  S
Mylodon_darwinii_Delsuc   AGTATGACTTTCTTCATGAACGAGGCGTTAATAAAATGATTATATAACTTTGTCGAAGTTAAATTATAGGCTAAAA-CCTTTACGCCTCTATGGCCTACCCCCTACAACTAGGATTTCAAGACGCCACATCA
 Translation                                                                                                 M  A  Y  P  L  Q  L  G  F  Q  D  A  T  S
Mylodon_darwinii_Slater   AGTATGACTTTCTTCATGAACGAGGCGTTAATAAAATGATTATATAACTTTGTCGAAGTTAAATTATAGGCTAAAACCCTTTACACCTCTATGGCTTATCCCCTACAGCTAGGATTTCAAGACGCCACATCA
 Translation                                                                                                 M  A  Y  P  L  Q  L  G  F  Q  D  A  T  S
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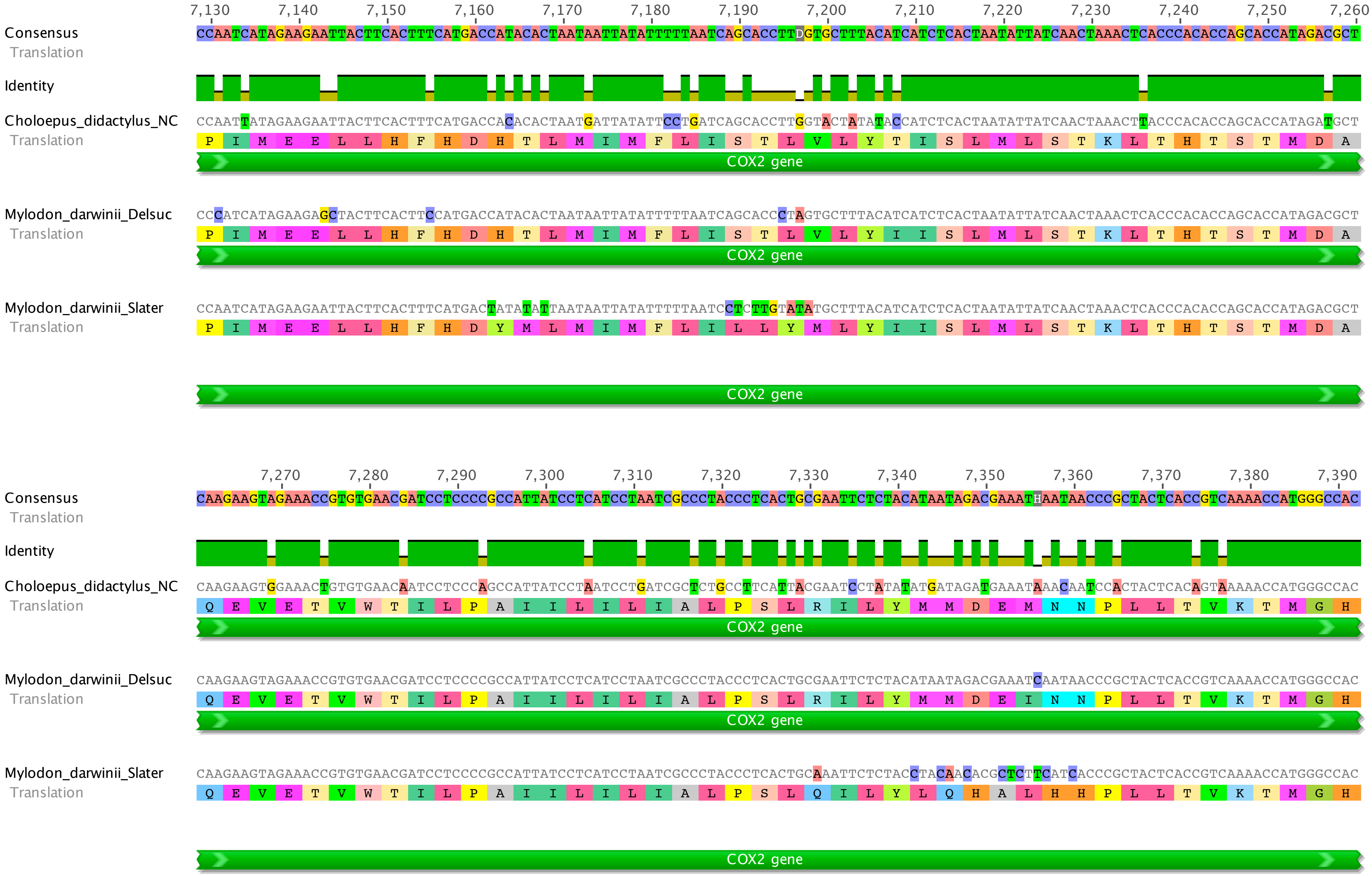

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                               7,130     7,140     7,150     7,160     7,170     7,180     7,190     7,200     7,210     7,220     7,230     7,240     7,250     7,260
Consensus                     CCAATCATAGAAGAATTACTTCACTTTCATGACCATACACTAATAATTATATTTTTAATCAGCACCTTDGTGCTTTACATCATCTCACTAATATTATCAACTAAACTCACCCACACCAGCACCATAGACGCT
 Translation
Identity
Choloepus_didactylus_NC       CCAATTATAGAAGAATTACTTCACTTTCATGACCACACACTAATGATTATATTCCTGATCAGCACCTTGGTACTATATACCATCTCACTAATATTATCAACTAAACTTACCCACACCAGCACCATAGATGCT
 Translation                   P  I  M  E  E  L  L  H  F  H  D  H  T  L  M  I  M  F  L  I  S  T  L  V  L  Y  T  I  S  L  M  L  S  T  K  L  T  H  T  S  T  M  D  A
                              COX2 gene
Mylodon_darwinii_Delsuc       CCCATCATAGAAGAGCTACTTCACTTCCATGACCATACACTAATAATTATATTTTTAATCAGCACCCTAGTGCTTTACATCATCTCACTAATATTATCAACTAAACTCACCCACACCAGCACCATAGACGCT
 Translation                   P  I  M  E  E  L  L  H  F  H  D  H  T  L  M  I  M  F  L  I  S  T  L  V  L  Y  I  I  S  L  M  L  S  T  K  L  T  H  T  S  T  M  D  A
                              COX2 gene
Mylodon_darwinii_Slater       CCAATCATAGAAGAATTACTTCACTTTCATGACTATATATTAATAATTATATTTTTAATCCTCTTGTATATGCTTTACATCATCTCACTAATATTATCAACTAAACTCACCCACACCAGCACCATAGACGCT
 Translation                   P  I  M  E  E  L  L  H  F  H  D  Y  M  L  M  I  M  F  L  I  L  L  Y  M  L  Y  I  I  S  L  M  L  S  T  K  L  T  H  T  S  T  M  D  A
                              COX2 gene
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                                   7,270     7,280     7,290     7,300     7,310     7,320     7,330     7,340     7,350     7,360     7,370     7,380     7,390
Consensus                     CAAGAAGTAGAAACCGTGTGAACGATCCTCCCCGCCATTATCCTCATCCTAATCGCCCTACCCTCACTGCGAATTCTCTACATAATAGACGAAATHAATAACCCGCTACTCACCGTCAAAACCATGGGCCAC
 Translation
Identity
Choloepus_didactylus_NC       CAAGAAGTGGAAACTGTGTGAACAATCCTCCCAGCCATTATCCTAATCCTGATCGCTCTGCCTTCATTACGAATCCTATATATGATAGATGAAATAAACAATCCACTACTCACAGTAAAAACCATGGGCCAC
 Translation                   Q  E  V  E  T  V  W  T  I  L  P  A  I  I  L  I  L  I  A  L  P  S  L  R  I  L  Y  M  M  D  E  M  N  N  P  L  L  T  V  K  T  M  G  H
                              COX2 gene
Mylodon_darwinii_Delsuc       CAAGAAGTAGAAACCGTGTGAACGATCCTCCCCGCCATTATCCTCATCCTAATCGCCCTACCCTCACTGCGAATTCTCTACATAATAGACGAAATCAATAACCCGCTACTCACCGTCAAAACCATGGGCCAC
 Translation                   Q  E  V  E  T  V  W  T  I  L  P  A  I  I  L  I  L  I  A  L  P  S  L  R  I  L  Y  M  M  D  E  I  N  N  P  L  L  T  V  K  T  M  G  H
                              COX2 gene
Mylodon_darwinii_Slater       CAAGAAGTAGAAACCGTGTGAACGATCCTCCCCGCCATTATCCTCATCCTAATCGCCCTACCCTCACTGCAAATTCTCTACCTACAACACGCTCTTCATCACCCGCTACTCACCGTCAAAACCATGGGCCAC
 Translation                   Q  E  V  E  T  V  W  T  I  L  P  A  I  I  L  I  L  I  A  L  P  S  L  Q  I  L  Y  L  Q  H  A  L  H  H  P  L  L  T  V  K  T  M  G  H
                              COX2 gene
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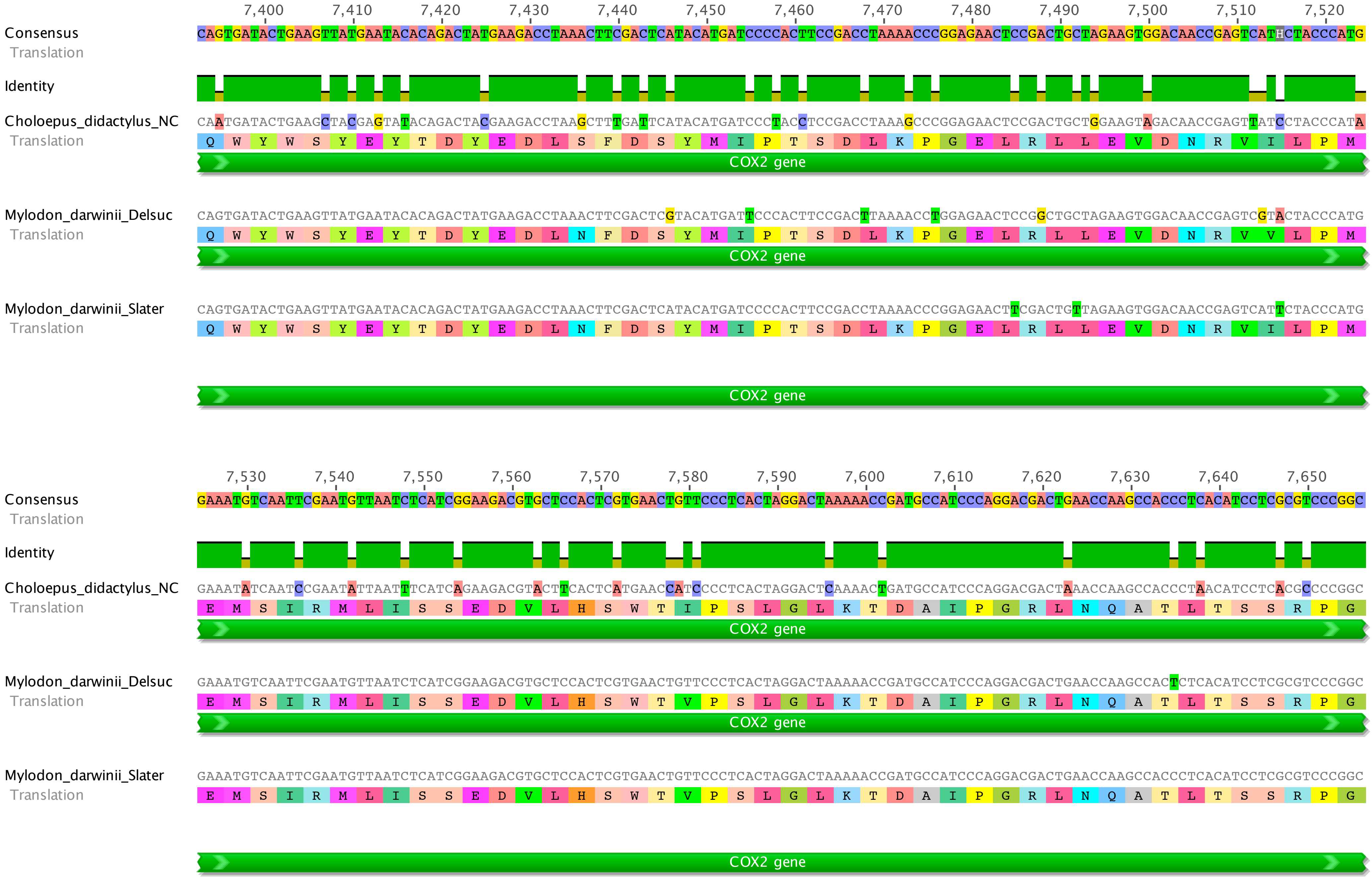

Consensus CAGTGATACTGAAGTTATGAATACACAGACTATGAAGACCTAAACTTCGACTCATACATGATCCCCACTTCCGACCTAAAACCCGGAGAACTCCGACTGCTAGAAGTGGACAACCGAGTCATHCTACCCATG
Translation

Choloepus_didactylus_NC CAATGATACTGAAGCTACGAGTATACAGACTACGAAGACCTAAGCTTTGATTCATACATGATCCCTACCTCCGACCTAAAGCCCGGAGAACTCCGACTGCTGGAAGTAGACAACCGAGTTATCCTACCCATA
Translation Q W Y W S Y E Y T D Y E D L S F D S Y M I P T S D L K P G E L R L L E V D N R V I L P M

Mylodon_darwinii_Delsuc CAGTGATACTGAAGTTATGAATACACAGACTATGAAGACCTAAACTTCGACTCGTACATGATTCCCACTTCCGACTTAAAACCTGGAGAACTCCGGCTGCTAGAAGTGGACAACCGAGTCGTACTACCCATG
Translation Q W Y W S Y E Y T D Y E D L N F D S Y M I P T S D L K P G E L R L L E V D N R V V L P M

Mylodon_darwinii_Slater CAGTGATACTGAAGTTATGAATACACAGACTATGAAGACCTAAACTTCGACTCATACATGATCCCCACTTCCGACCTAAAACCCGGAGAACTTCGACTGTTAGAAGTGGACAACCGAGTCATTCTACCCATG
Translation Q W Y W S Y E Y T D Y E D L N F D S Y M I P T S D L K P G E L R L L E V D N R V I L P M

Consensus GAAATGTCAATTCGAATGTTAATCTCATCGGAAGACGTGCTCCACTCGTGAACTGTTCCCTCACTAGGACTAAAAACCGATGCCATCCCAGGACGACTGAACCAAGCCACCCTCACATCCTCGCGTCCCGGC
Translation

Choloepus_didactylus_NC GAAATATCAATCCGAATATTAATTTCATCAGAAGACGTACTTCACTCATGAACCATCCCCTCACTAGGACTCAAAACTGATGCCATCCCAGGACGACTAAACCAAGCCACCCTAACATCCTCACGCCCCGGC
Translation E M S I R M L I S S E D V L H S W T I P S L G L K T D A I P G R L N Q A T L T S S R P G

Mylodon_darwinii_Delsuc GAAATGTCAATTCGAATGTTAATCTCATCGGAAGACGTGCTCCACTCGTGAACTGTTCCCTCACTAGGACTAAAAACCGATGCCATCCCAGGACGACTGAACCAAGCCACTCTCACATCCTCGCGTCCCGGC
Translation E M S I R M L I S S E D V L H S W T V P S L G L K T D A I P G R L N Q A T L T S S R P G

Mylodon_darwinii_Slater GAAATGTCAATTCGAATGTTAATCTCATCGGAAGACGTGCTCCACTCGTGAACTGTTCCCTCACTAGGACTAAAAACCGATGCCATCCCAGGACGACTGAACCAAGCCACCCTCACATCCTCGCGTCCCGGC
Translation E M S I R M L I S S E D V L H S W T V P S L G L K T D A I P G R L N Q A T L T S S R P G

```
        7,660     7,670     7,680     7,690     7,700     7,710     7,720     7,730     7,740     7,750     7,760     7,770     7,780
Consensus                  CTCTACTACGGCCAATGCTCAGAAATCTGTGGATCAAACCACAGCTTTATACCAATCGTACTTGAGCTTGTCCCACTCAAACATTTCGAAGACTGATCCACATCCATACTCTAAATCATTAGAGAAGCTATG
 Translation
Identity
Choloepus_didactylus_NC    TTATACTATGGTCAATGCTCGGAAATCTGCGGATCCAACCACAGCTTCATGCCAATTGTACTCGAACTCACTCCTCTCAAACATTTTGAAAACTGATCCTCATCCACGCTCTAAATCATTAGAGAAGCTGTT
 Translation               L Y Y G Q C S E I C G S N H S F M P I V L E L T P L K H F E N W S S S T L *
Mylodon_darwinii_Delsuc    CTCTACTACGGCCAATGCTCAGAAATCTGTGGATCAAACCACAGCTTTATACCAATCGTACTTGAGCTTGTCCCACTCAAACATTTCGAAGACTGATCCACATCCATACTCTAAATCATTAGAGAAGCTATG
 Translation               L Y Y G Q C S E I C G S N H S F M P I V L E L V P L K H F E D W S T S M L *
Mylodon_darwinii_Slater    CTCTACTACGGCCAATGCTCAGAAATCTGTGGATCAAACCACAGCTTTATACCAATCGTACTTGAGCTTGTCCCACTCAAACATTTCGAAGACTGATCCACATCCATACTCTAAATCATTAGAGAAGCTATG
 Translation               L Y Y G Q C S E I C G S N H S F M P I V L E L V P L K H F E D W S T S M L *

        7,790     7,800     7,810     7,820     7,830     7,840     7,850     7,860     7,870     7,880     7,890     7,900     7,910     7,920
Consensus                  CTAGCGTTAACCTTTTAAGTTAAAGACTGGGAACCCGAACTTCCCCTCAATGAAATGCCCCAVCTAGACACATCAACATGATTCCTCACTATCCTCTCAATATTCATTTCACTATTTATCCTAATACAACTT
 Translation
Identity
Choloepus_didactylus_NC    CTAGCATTAACCTTTTAAGTTAAAGACTGGGAACCTAAAACTCCCCTCAATGAAATGCCTCAGCTAGACACGTCAACATGATCCATCACTATCCTCTCAACATTCATCTCACTATTCACCCTAATACAACTC
 Translation               M P Q L D T S T W S I T I L S T F I S L F T L M Q L
Mylodon_darwinii_Delsuc    CTAGCGTTAACCTTTTAAGTTAAAGACTGGGAACCCGAACTTCCCCTCAATGAAATGCCCCAACTAGACACATCAACATGATTCCTCACTATCCTCTCAATATTCATTTCACTATTTATCCTAATACAACTT
 Translation               M P Q L D T S T W F L T I L S M F I S L F I L M Q L
Mylodon_darwinii_Slater    CTAGCGTTAACCTTTTAAGTTAAAGACTGGGAACCCGAACTTCCCCTCAATGAAATGCCCCACCTAGACACATCAACATGATTCCTCACTATCCTCTCCATATTCATTTCACTATTTATCCTAATACAACTT
 Translation
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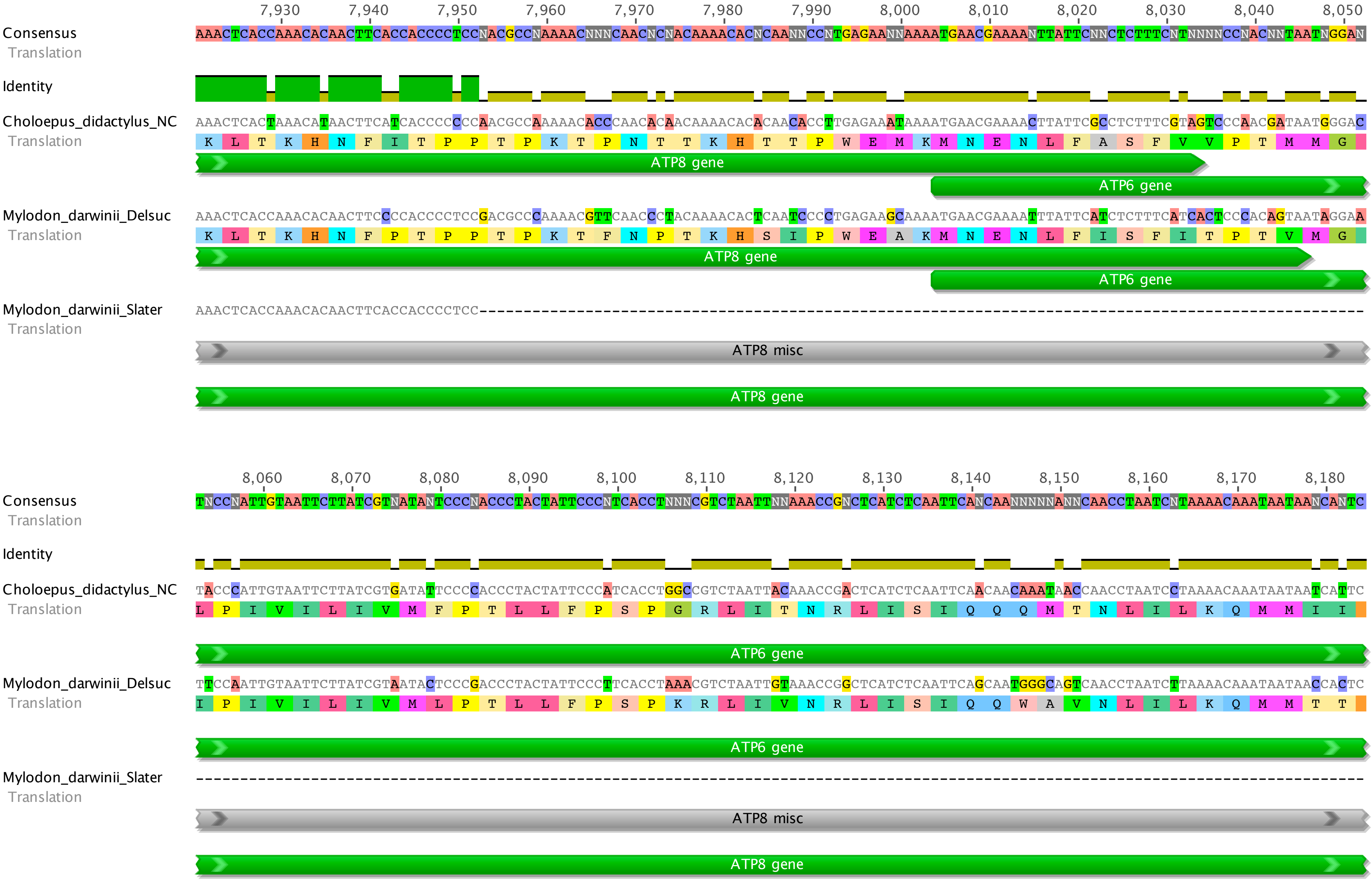

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Consensus                 AAACTCACCAAACACAACTTCACCACCCCTCCNACGCCNAAAACNNNCAACNCNACAAAACACNCAANNCCNTGAGAANNAAAATGAACGAAAANTTATTCNNCTCTTTCNTNNNNCCNACNNTAATNGGAN
Choloepus_didactylus_NC   AAACTCACTAAACATAACTTCATCACCCCCCCAACGCCAAAAACACCCAACACAACAAAACACACAACACCTTGAGAAATAAAATGAACGAAAACTTATTCGCCTCTTTCGTAGTCCCAACGATAATGGGAC
 Translation              K L T K H N F I T P P T P K T P N T T K H T T P W E M K M N E N L F A S F V V P T M M G
Mylodon_darwinii_Delsuc   AAACTCACCAAACACAACTTCCCCACCCCTCCGACGCCCAAAACGTTCAACCCTACAAAACACTCAATCCCCTGAGAAGCAAAATGAACGAAAATTTATTCATCTCTTTCATCACTCCCACAGTAATAGGAA
 Translation              K L T K H N F P T P P T P K T F N P T K H S I P W E A K M N E N L F I S F I T P T V M G
Mylodon_darwinii_Slater   AAACTCACCAAACACAACTTCACCACCCCTCC----------------------------------------------------------------------------------------------------

Consensus                 TNCCNATTGTAATTCTTATCGTNATANTCCCNACCCTACTATTCCCNTCACCTNNNCGTCTAATTNNAAACCGNCTCATCTCAATTCANCAANNNNNANNCAACCTAATCNTAAAACAAATAATAANCANTC
Choloepus_didactylus_NC   TACCATTGTAATTCTTATCGTGATATTCCCCACCCTACTATTCCCATCACCTGGCCGTCTAATTACAAACCGACTCATCTCAATTCAACAACAAATAACCAACCTAATCCTAAAACAAATAATAATCATTC
 Translation              L P I V I L I V M F P T L L F P S P G R L I T N R L I S I Q Q Q M T N L I L K Q M M I I
Mylodon_darwinii_Delsuc   TTCCAATTGTAATTCTTATCGTAATACTCCCGACCCTACTATTCCCTTCACCTAAACGTCTAATTGTAAACCGGCTCATCTCAATTCAGCAATGGGCAGTCAACCTAATCTTAAAACAAATAATAACCACCTC
 Translation              I P I V I L I V M L P T L L F P S P K R L I V N R L I S I Q Q W A V N L I L K Q M M T T
Mylodon_darwinii_Slater   ------------------------------------------------------------------------------------------------------------------------------------
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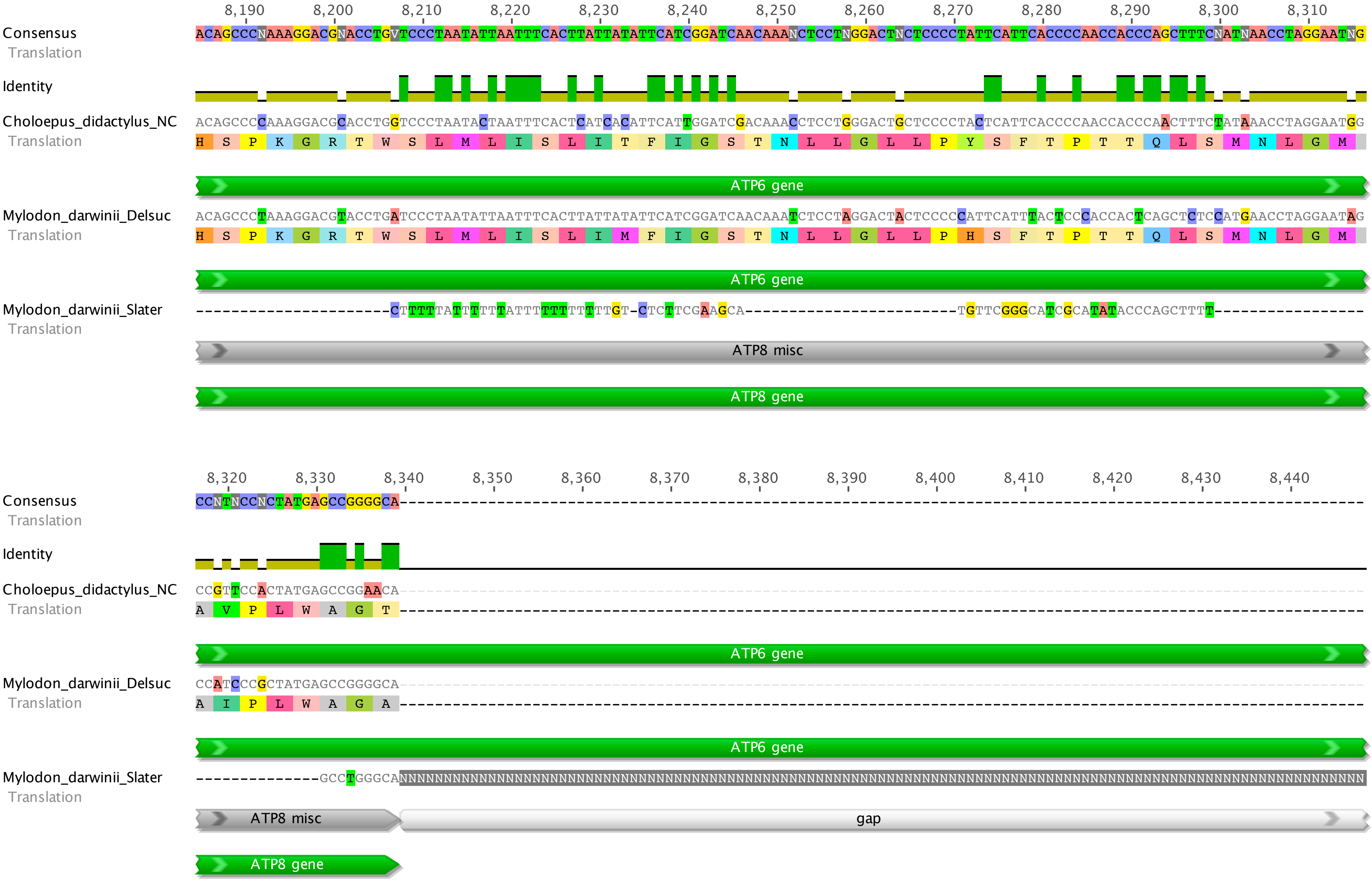
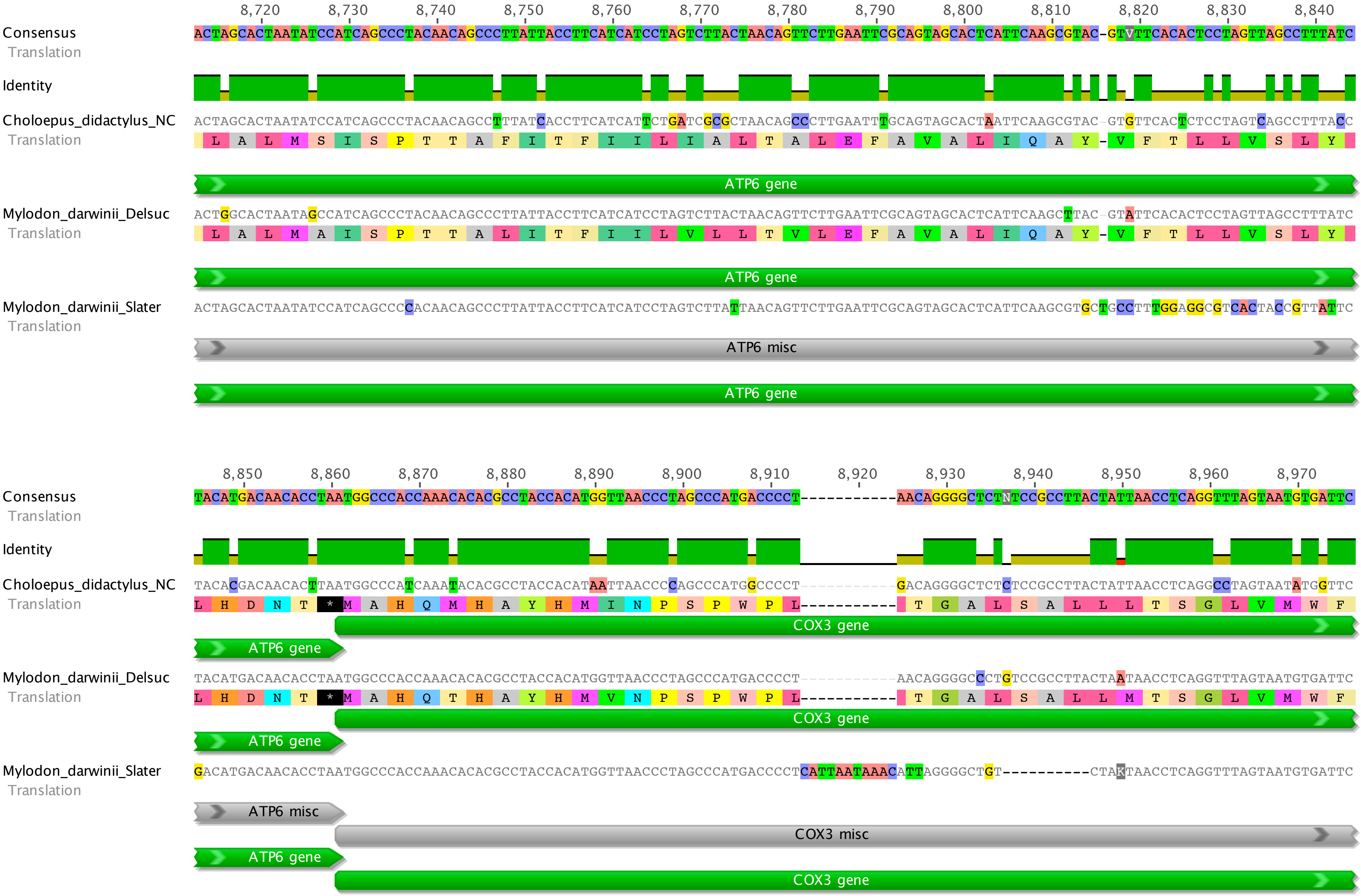
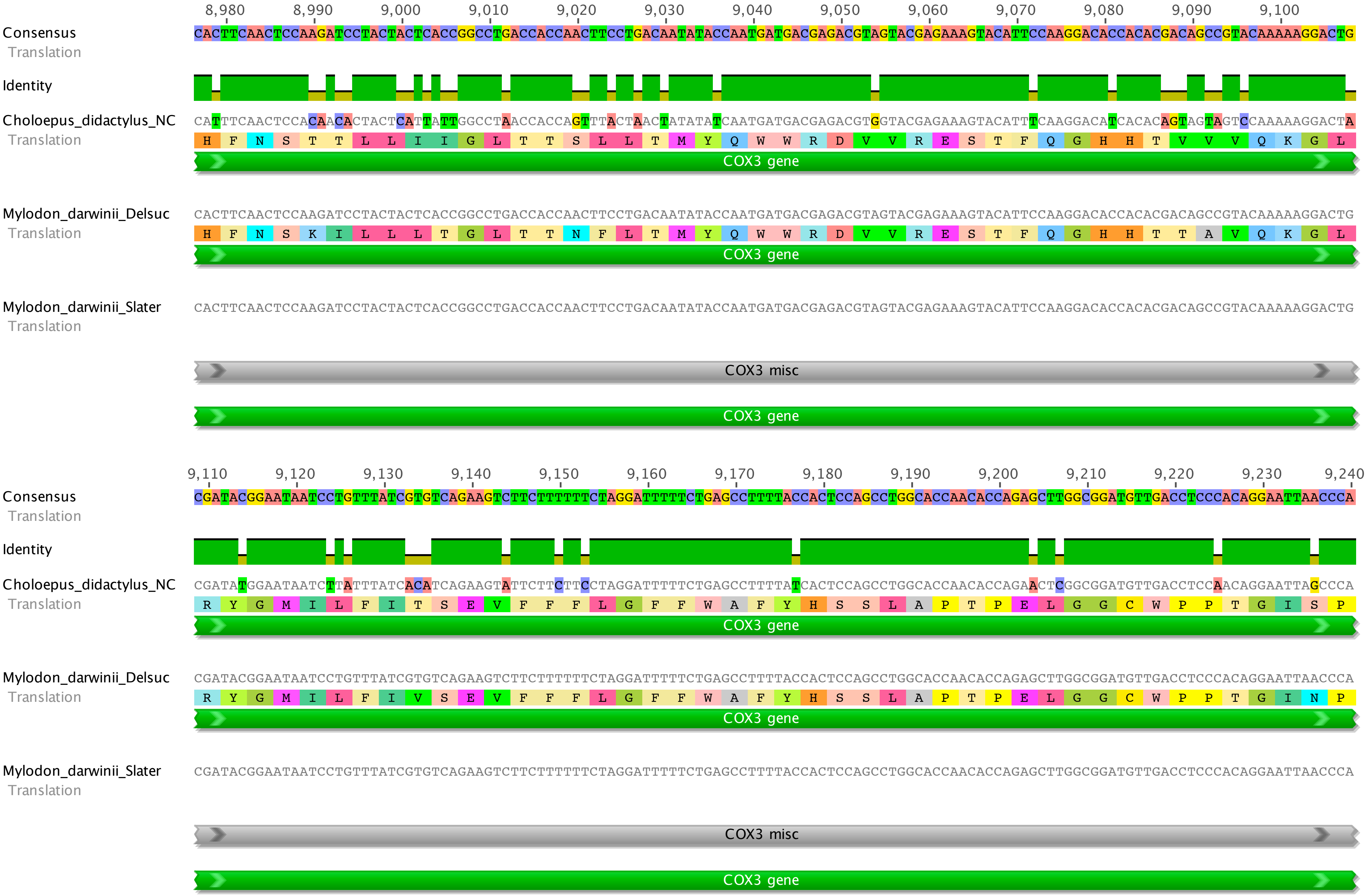

8,190
8,200
8,210
8,220
8,230
8,240
8,250
8,260
8,270
8,280
8,290
8,300
8,310
Consensus
ACAGCCCNAAAGGACGNACCTGVTCCCTAATATTAATTTCACTTATTATATTCATCGGATCAACAAANCTCCTNGGACTNCTCCCCTATTCATTCACCCCAACCACCCAGCTTTCNATNAACCTAGGAATNG
Translation
Identity
Choloepus_didactylus_NC
ACAGCCCCAAAGGACGCACCTGGTCCCTAATACTAATTTCACTCATCACATTCATTGGATCGACAAACCTCCTGGGACTGCTCCCCTACTCATTCACCCCAACCACCCAACTTTCTATAAACCTAGGAATGG
Translation
H S P K G R T W S L M L I S L I T F I G S T N L L G L L P Y S F T P T T Q L S M N L G M
ATP6 gene
Mylodon_darwinii_Delsuc
ACAGCCCTAAAGGACGTACCTGATCCCTAATATTAATTTCACTTATTATATTCATCGGATCAACAAATCTCCTAGGACTACTCCCCCATTCATTTACTCCCACCACTCAGCTCTCCATGAACCTAGGAATAG
Translation
H S P K G R T W S L M L I S L I M F I G S T N L L G L L P H S F T P T T Q L S M N L G M
ATP6 gene
Mylodon_darwinii_Slater
----------------------CTTTTTATTTTTATTTTTTTTTTTGT-CTCTTCGAAGCA------------------------TGTTCGGGCATCGCATATACCCAGCTTTT-----------------
Translation
ATP8 misc
ATP8 gene
8,320
8,330
8,340
8,350
8,360
8,370
8,380
8,390
8,400
8,410
8,420
8,430
8,440
Consensus
CCNTNCCNCTATGAGCCGGGGCA
Translation
Identity
Choloepus_didactylus_NC
CCGTTCCACTATGAGCCGGAACA
Translation
A V P L W A G T
ATP6 gene
Mylodon_darwinii_Delsuc
CCATCCCGCTATGAGCCGGGGCA
Translation
A I P L W A G A
ATP6 gene
Mylodon_darwinii_Slater
--------------GCCTGGGCANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Translation
ATP8 misc
gap
ATP8 gene


8,450
8,460
8,470
8,480
8,490
8,500
8,510
8,520
8,530
8,540
8,550
8,560
8,570
8,580
Consensus
GTAATCACGGGTTTCCGCCACAAAACCAAAGCATCATTAGCCCACTTCTTACCACAAGGCACCCC
Translation
Identity
Choloepus_didactylus_NC
GTAATTATAGGCTTACGCCACAAGACCAAAACATCACTAGCCCATTTCCTACCACAAGGCACTCC
Translation
V I M G L R H K T K T S L A H F L P Q G T P
ATP6 gene
Mylodon_darwinii_Delsuc
GTAATCACGGGTTTCCGCCACAAAACCAAAGCATCATTAGCCCACTTCTTACCACAAGGCACCCC
Translation
V I T G F R H K T K A S L A H F L P Q G T P
ATP6 gene
Mylodon_darwinii_Slater
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCGTACTCACGGGTTTCCGCCACAAAACCAAAGCATCATTAGCCCACTTCTTACCACAAGGCACCCC
Translation
gap
ATP6 misc
ATP6 gene
8,590
8,600
8,610
8,620
8,630
8,640
8,650
8,660
8,670
8,680
8,690
8,700
8,710
Consensus
AATCCCCCTCATCCCCATGCTGGTGGTTATCGAAACAATCAGCCTATTCATCCAACCTATAGCCCTAGCCGTTCGACTCACAGCAAATATCACCGCAGGGCACCTCCTCATACACCTAATTGGAAGTGCCAC
Translation
Identity
Choloepus_didactylus_NC
AATTCCCCTGATTCCCATACTAGTGATTATCGAGACAATAAGCTTATTTATCCAACCCACAGCTCTAGCCGTACGACTTACAGCAAATATCACCGCGGGACATCTCATCATACACCTCATTGGTAACGCCAC
Translation
I P L I P M L V I I E T M S L F I Q P T A L A V R L T A N I T A G H L I M H L I G N A T
ATP6 gene
Mylodon_darwinii_Delsuc
AATCCTCCTCATCCCCATGCTGGTGGTTATCGAAACAATCAGCCTATTCATCCAACCTATAGCCCTAGCCGTTCGACTCACAGCAAATATCACCGCAGGGCACCTCCTCATGCACCTAATCGGAGGTGCTAC
Translation
I L L I P M L V V I E T I S L F I Q P M A L A V R L T A N I T A G H L L M H L I G G A T
ATP6 gene
Mylodon_darwinii_Slater
AATCCCCCTCATCCCCATGCTGCTGGTCATCGAAACAATCAGCCTATTCATCCAACCTATAGCCCTAGCCGTTCGACTCACAGCAAATATCACCGCAGGGCACCTCCTCATACACCTAATTGGAAGTGCCAC
Translation
ATP6 misc
ATP6 gene


8,720
8,730
8,740
8,750
8,760
8,770
8,780
8,790
8,800
8,810
8,820
8,830
8,840
Consensus
ACTAGCACTAATATCCATCAGCCCTACAACAGCCCTTATTACCTTCATCATCCTAGTCTTACTAACAGTTCTTGAATTCGCAGTAGCACTCATTCAAGCGTAC-GTVTTCACACTCCTAGTTAGCCTTTATC
Translation
Identity
Choloepus_didactylus_NC
ACTAGCACTAATATCCATCAGCCCTACAACAGCCTTTATCACCTTCATCATTCTGATCGCGCTAACAGCCCTTGAATTTGCAGTAGCACTAATTCAAGCGTAC-GTGTTCACTCTCCTAGTCAGCCTTTACC
Translation
L A L M S I S P T T A F I T F I I L I A L T A L E F A V A L I Q A Y - V F T L L V S L Y
ATP6 gene
Mylodon_darwinii_Delsuc
ACTGGCACTAATAGCCATCAGCCCTACAACAGCCCTTATTACCTTCATCATCCTAGTCTTACTAACAGTTCTTGAATTCGCAGTAGCACTCATTCAAGCTTAC-GTATTCACACTCCTAGTTAGCCTTTATC
Translation
L A L M A I S P T T A L I T F I I L V L L T V L E F A V A L I Q A Y - V F T L L V S L Y
ATP6 gene
Mylodon_darwinii_Slater
ACTAGCACTAATATCCATCAGCCCCACAACAGCCCTTATTACCTTCATCATCCTAGTCTTATTAACAGTTCTTGAATTCGCAGTAGCACTCATTCAAGCGTGCTGCCTTTGGAGGCGTCACTACCGTTATTC
Translation
ATP6 misc
ATP6 gene
8,850
8,860
8,870
8,880
8,890
8,900
8,910
8,920
8,930
8,940
8,950
8,960
8,970
Consensus
TACATGACAACACCTAATGGCCCACCAAACACACGCCTACCACATGGTTAACCCTAGCCCATGACCCCT-----------AACAGGGGCTCTNTCCGCCTTACTATTAACCTCAGGTTTAGTAATGTGATTC
Translation
Identity
Choloepus_didactylus_NC
TACACGACAACACTTAATGGCCCATCAAATACACGCCTACCACATAATTAACCCCAGCCCATGGCCCCT-----------GACAGGGGCTCTCTCCGCCTTACTATTAACCTCAGGCCTAGTAATATGGTTC
Translation
L H D N T * M A H Q M H A Y H M I N P S P W P L ----------- T G A L S A L L L T S G L V M W F
COX3 gene
ATP6 gene
Mylodon_darwinii_Delsuc
TACATGACAACACCTAATGGCCCACCAAACACACGCCTACCACATGGTTAACCCTAGCCCATGACCCCT-----------AACAGGGGCCCTGTCCGCCTTACTAATAACCTCAGGTTTAGTAATGTGATTC
Translation
L H D N T * M A H Q T H A Y H M V N P S P W P L ----------- T G A L S A L L M T S G L V M W F
COX3 gene
ATP6 gene
Mylodon_darwinii_Slater
GACATGACAACACCTAATGGCCCACCAAACACACGCCTACCACATGGTTAACCCTAGCCCATGACCCCTCATTAATAAACATTAGGGGCTGT----------CTAKTAACCTCAGGTTTAGTAATGTGATTC
Translation
ATP6 misc
COX3 misc
ATP6 gene
COX3 gene



Consensus CACTTCAACTCCAAGATCCTACTACTCACCGGCCTGACCACCAACTTCCTGACAATATACCAATGATGACGAGACGTAGTACGAGAAAGTACATTCCAAGGACACCACACGACAGCCGTACAAAAGGACTG
Translation

Identity

Choloepus_didactylus_NC CATTTCAACTCCACAACACTACTCATTATTGGCCTAACCACCAGTTTACTAACTATATATCAATGATGACGAGACGTGGTACGAGAAAGTACATTTCAAGGACATCACACAGTAGTAGTCCAAAAGGACTA
Translation H F N S T T L L I I G L T T S L L T M Y Q W W R D V V R E S T F Q G H H T V V V Q K G L

Mylodon_darwinii_Delsuc CACTTCAACTCCAAGATCCTACTACTCACCGGCCTGACCACCAACTTCCTGACAATATACCAATGATGACGAGACGTAGTACGAGAAAGTACATTCCAAGGACACCACACGACAGCCGTACAAAAGGACTG
Translation H F N S K I L L L T G L T T N F L T M Y Q W W R D V V R E S T F Q G H H T T A V Q K G L

Mylodon_darwinii_Slater CACTTCAACTCCAAGATCCTACTACTCACCGGCCTGACCACCAACTTCCTGACAATATACCAATGATGACGAGACGTAGTACGAGAAAGTACATTCCAAGGACACCACACGACAGCCGTACAAAAGGACTG
Translation

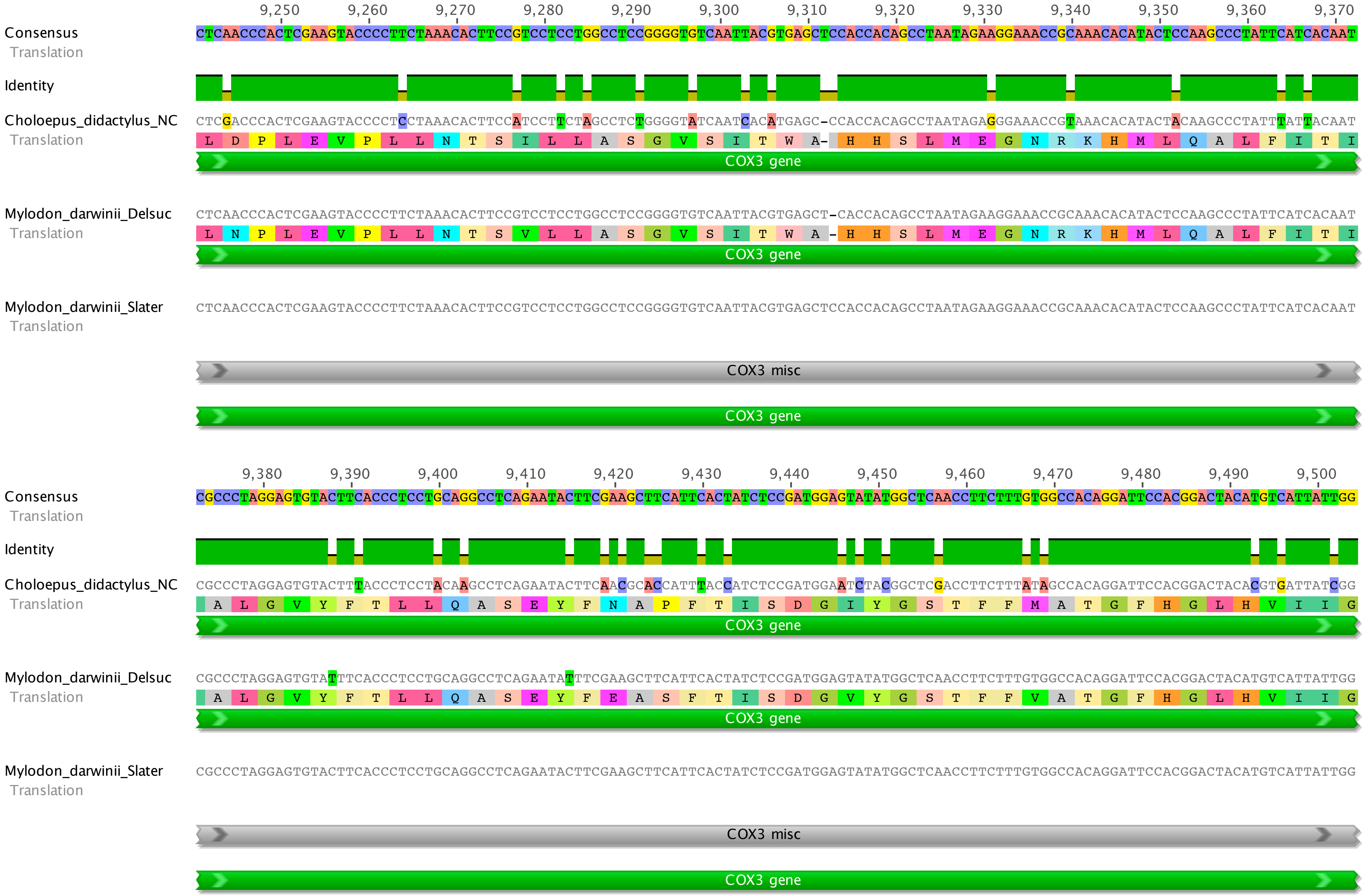
Consensus CGATACGGAATAATCCTGTTTATCGTGTCAGAAGTCTTCTTTTTTCTAGGATTTTTCTGAGCCTTTTACCACTCCAGCCTGGCACCAACACCAGAGCTTGGCGGATGTTGACCTCCCACAGGAATTAACCCA
Translation

Identity

Choloepus_didactylus_NC CGATATGGAATAATCTTATTTATCACATCAGAAGTATTCTTCTTCCTAGGATTTTTCTGAGCCTTTTATCACTCCAGCCTGGCACCAACACCAGAACTCGGCGGATGTTGACCTCCAACAGGAATTAGCCCA
Translation R Y G M I L F I T S E V F F F L G F F W A F Y H S S L A P T P E L G G C W P P T G I S P

Mylodon_darwinii_Delsuc CGATACGGAATAATCCTGTTTATCGTGTCAGAAGTCTTCTTTTTTCTAGGATTTTTCTGAGCCTTTTACCACTCCAGCCTGGCACCAACACCAGAGCTTGGCGGATGTTGACCTCCCACAGGAATTAACCCA
Translation R Y G M I L F I V S E V F F F L G F F W A F Y H S S L A P T P E L G G C W P P T G I N P

Mylodon_darwinii_Slater CGATACGGAATAATCCTGTTTATCGTGTCAGAAGTCTTCTTTTTTCTAGGATTTTTCTGAGCCTTTTACCACTCCAGCCTGGCACCAACACCAGAGCTTGGCGGATGTTGACCTCCCACAGGAATTAACCCA
Translation



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                          9,250     9,260     9,270     9,280     9,290     9,300     9,310     9,320     9,330     9,340     9,350     9,360     9,370
Consensus                CTCAACCCACTCGAAGTACCCCTTCTAAACACTTCCGTCCTCCTGGCCTCCGGGGTGTCAATTACGTGAGCTCCACCACAGCCTAATAGAAGGAAACCGCAAACACATACTCCAAGCCCTATTCATCACAAT
 Translation
Identity
Choloepus_didactylus_NC  CTCGACCCACTCGAAGTACCCCTCCTAAACACTTCCATCCTTCTAGCCTCTGGGGTATCAATCACATGAGC-CCACCACAGCCTAATAGAGGGAAACCGTAAACACATACTACAAGCCCTATTTATTACAAT
 Translation              L  D  P  L  E  V  P  L  L  N  T  S  I  L  L  A  S  G  V  S  I  T  W  A- H  H  S  L  M  E  G  N  R  K  H  M  L  Q  A  L  F  I  T  I
                         COX3 gene
Mylodon_darwinii_Delsuc  CTCAACCCACTCGAAGTACCCCTTCTAAACACTTCCGTCCTCCTGGCCTCCGGGGTGTCAATTACGTGAGCT-CACCACAGCCTAATAGAAGGAAACCGCAAACACATACTCCAAGCCCTATTCATCACAAT
 Translation              L  N  P  L  E  V  P  L  L  N  T  S  V  L  L  A  S  G  V  S  I  T  W  A - H  H  S  L  M  E  G  N  R  K  H  M  L  Q  A  L  F  I  T  I
                         COX3 gene
Mylodon_darwinii_Slater  CTCAACCCACTCGAAGTACCCCTTCTAAACACTTCCGTCCTCCTGGCCTCCGGGGTGTCAATTACGTGAGCTCCACCACAGCCTAATAGAAGGAAACCGCAAACACATACTCCAAGCCCTATTCATCACAAT
 Translation
                         COX3 misc
                         COX3 gene

                        9,380     9,390     9,400     9,410     9,420     9,430     9,440     9,450     9,460     9,470     9,480     9,490     9,500
Consensus                CGCCCTAGGAGTGTACTTCACCCTCCTGCAGGCCTCAGAATACTTCGAAGCTTCATTCACTATCTCCGATGGAGTATATGGCTCAACCTTCTTTGTGGCCACAGGATTCCACGGACTACATGTCATTATTGG
 Translation
Identity
Choloepus_didactylus_NC  CGCCCTAGGAGTGTACTTTACCCTCCTACAAGCCTCAGAATACTTCAACGCACCATTTACCATCTCCGATGGAATCTACGGCTCGACCTTCTTTATAGCCACAGGATTCCACGGACTACACGTGATTATCGG
 Translation                A  L  G  V  Y  F  T  L  L  Q  A  S  E  Y  F  N  A  P  F  T  I  S  D  G  I  Y  G  S  T  F  F  M  A  T  G  F  H  G  L  H  V  I  I  G
                         COX3 gene
Mylodon_darwinii_Delsuc  CGCCCTAGGAGTGTATTTCACCCTCCTGCAGGCCTCAGAATATTTCGAAGCTTCATTCACTATCTCCGATGGAGTATATGGCTCAACCTTCTTTGTGGCCACAGGATTCCACGGACTACATGTCATTATTGG
 Translation                A  L  G  V  Y  F  T  L  L  Q  A  S  E  Y  F  E  A  S  F  T  I  S  D  G  V  Y  G  S  T  F  F  V  A  T  G  F  H  G  L  H  V  I  I  G
                         COX3 gene
Mylodon_darwinii_Slater  CGCCCTAGGAGTGTACTTCACCCTCCTGCAGGCCTCAGAATACTTCGAAGCTTCATTCACTATCTCCGATGGAGTATATGGCTCAACCTTCTTTGTGGCCACAGGATTCCACGGACTACATGTCATTATTGG
 Translation
                         COX3 misc
                         COX3 gene
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9,510
9,520
9,530
9,540
9,550
9,560
9,570
9,580
9,590
9,600
9,610
9,620
9,630
Consensus
CTCCTCATTTCTAATCGTCTGCTTTCTACGCCAACTGAAATTTCACTTCACCTCCAACCACCACTTCGGATTTGAAGCGGCGGCCTGATACTGACACTTCGTAGACGTAGTCTGACTATTCCTTTATGTCTC
Translation
Identity
Choloepus_didactylus_NC
CTCCTCCTTCCTAATCATCTGCTTCCTACGCCAATTAAAATTTCACTTTACCTCTAATCACCACTTCGGATTTGAAGCAGCAGCCTGATATTGACACTTCGTAGATGTAGTTTGACTACTCCTCTACGTCTC
Translation
S S F L I I C F L R Q L K F H F T S N H H F G F E A A A W Y W H F V D V V W L L L Y V S
COX3 gene
Mylodon_darwinii_Delsuc
CTCCTCATTTCTAATCGTCTGCTTTCTACGCCAACTGAAATTTCACTTCACCTCCAACCACCACTTCGGATTTGAAGCGGCGGCCTGATACTGACACTTCGTAGACGTAGTCTGACTATTCCTTTATGTCTC
Translation
S S F L I V C F L R Q L K F H F T S N H H F G F E A A A W Y W H F V D V V W L F L Y V S
COX3 gene
Mylodon_darwinii_Slater
CTCCTCATTTCTAATCGTCTGCTTTCTACGCCAACTGAAATTTCACTTCACCTCCAACCACCACTTCGGATTTGAAGCGGCGGCCTGATACTGACACTTCGTAGACGTAGTCTGACTATTCCTTTATGTCTC
Translation
COX3 misc
COX3 gene
9,640
9,650
9,660
9,670
9,680
9,690
9,700
9,710
9,720
9,730
9,740
9,750
9,760
Consensus
AATTTATTGATGAGGCTCATGTCCTTTTAGTATAACAAGTACGATTGACTTCCAATCAATTAGCTCCGATAACAAACCCGGAAAAGAACAATTAACCTAATCCTCTCTCTACTTATTAATTCCACATTAGCT
Translation
Identity
Choloepus_didactylus_NC
AATTTATTGATGAGGCTCATGTCCTTTTAGTATAACAAGTACAATTGACTTCCAATCAATCAGCTCCGACAATAAACCCGGAAAAGAACAATCAACCTAATTCTAACCTTCTAATTAACTCAGCACTAGCC
Translation
I Y W W G S
M N L I L T L L I N S A L A
COX3 gene
tRNA-Gly
ND3 gene
Mylodon_darwinii_Delsuc
AATTTATTGATGAGGCTCATGTCCTTTTAGTATAACAAGTACGATTGACTTCCAATCAATTAGCTCCGATAACAAACCCGGAAAAGAACAATTAACCTAATCCTCTCTCTACTTATTAATTCCACATTAGCT
Translation
I Y W W G S
M N L I L S L L I N S T L A
COX3 gene
tRNA-Gly
ND3 gene
Mylodon_darwinii_Slater
AATTTATTGATGAGGCTCATGTCCTTTTAGTATAACAAGTACGATTGACTTCCAATCAATTAGCTCCGATAACAAACCCGGAAAAGAACAATTAACCTAATCCTCTCTCTACTTATTAATTCCACATTAGCT
Translation
M N L I L S L L I N S T L A
COX3 misc
ND3 gene
COX3 gene
tRNA-Gly


Consensus
Translation
Identity
Choloepus_didactylus_NC
Translation
ND3 gene
Mylodon_darwinii_Delsuc
Translation
ND3 gene
Mylodon_darwinii_Slater
Translation
gap
ND3 gene
9,770
9,780
9,790
9,800
9,810
9,820
9,830
9,840
9,850
9,860
9,870
9,880
9,890
9,900
9,910
9,920
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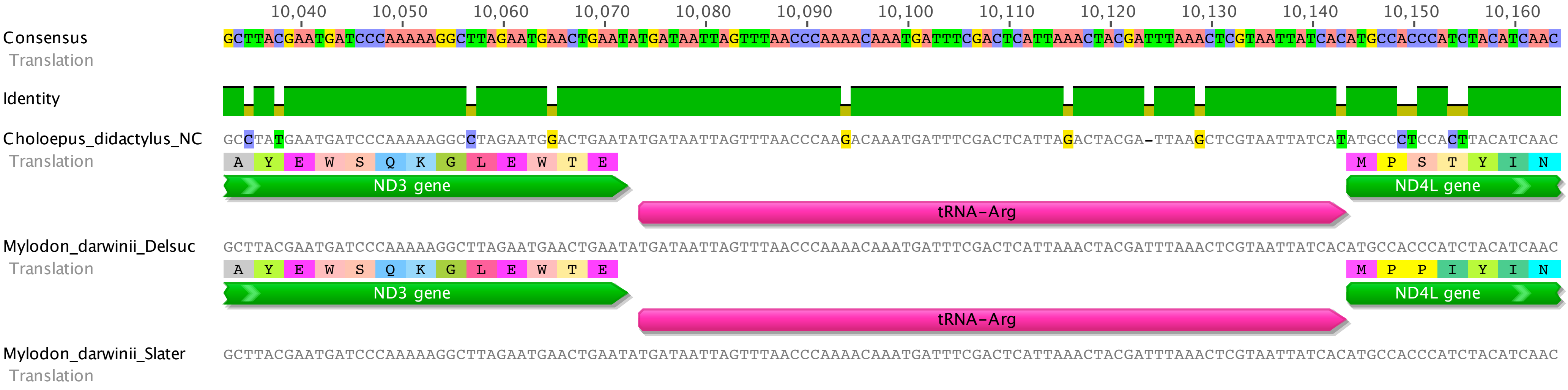
9,970
9,980
9,990
10,000
10,010
10,020
10,030

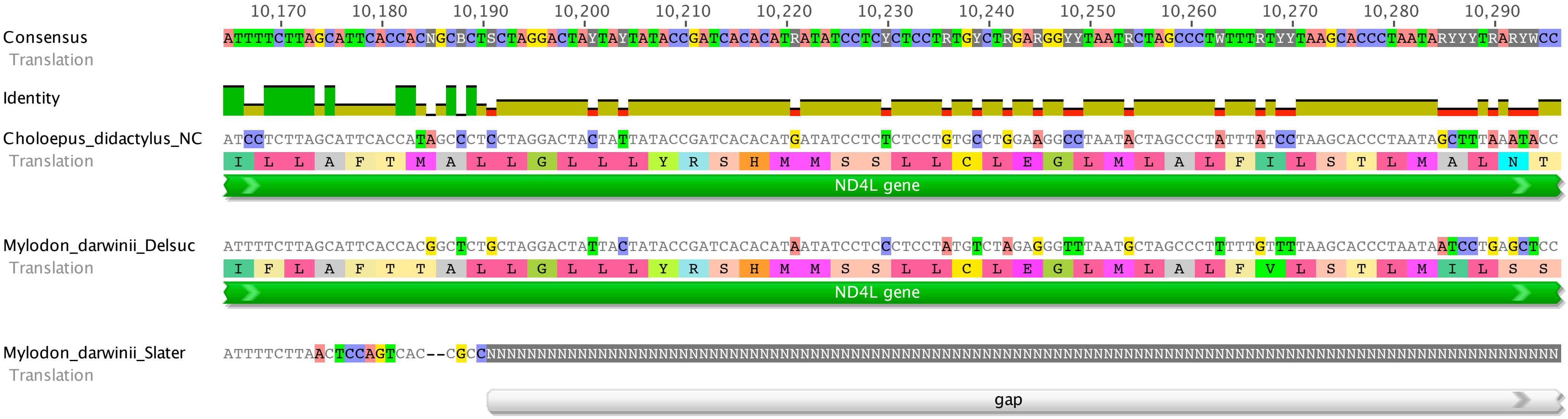


Consensus GCTTACGAATGATCCCAAAAAGGCTTAGAATGAACTGAATATGATAATTAGTTTAACCCAAAACAAATGATTTCGACTCATTAAACTACGATTTAAACTCGTAATTATCACATGCCACCCATCTACATCAAC
Translation

Choloepus_didactylus_NC GCCTATGAATGATCCCAAAAAGGCCTAGAATGGACTGAATATGATAATTAGTTTAACCCAAGACAAATGATTTCGACTCATTAGACTACGA-TTAAGCTCGTAATTATCATATGCCCTCCACTTACATCAAC
Translation A Y E W S Q K G L E W T E … M P S T Y I N

Mylodon_darwinii_Delsuc GCTTACGAATGATCCCAAAAAGGCTTAGAATGAACTGAATATGATAATTAGTTTAACCCAAAACAAATGATTTCGACTCATTAAACTACGATTTAAACTCGTAATTATCACATGCCACCCATCTACATCAAC
Translation A Y E W S Q K G L E W T E … M P P I Y I N

Mylodon_darwinii_Slater GCTTACGAATGATCCCAAAAAGGCTTAGAATGAACTGAATATGATAATTAGTTTAACCCAAAACAAATGATTTCGACTCATTAAACTACGATTTAAACTCGTAATTATCACATGCCACCCATCTACATCAAC
Translation

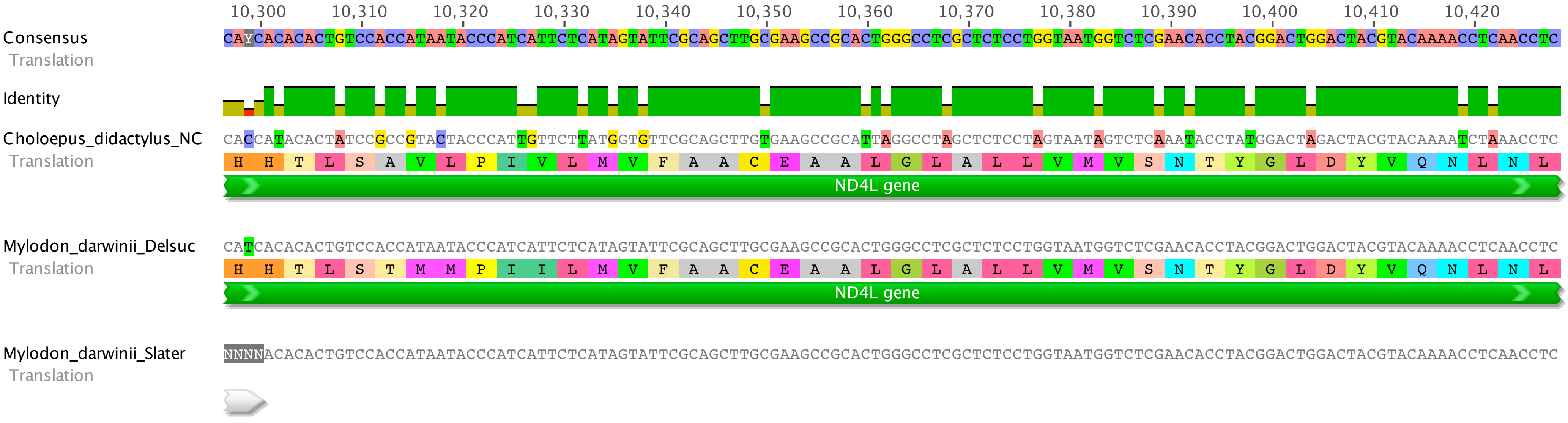


Consensus ATTTTCTTAGCATTCACCACNGCBCTSCTAGGACTAYTAYTATACCGATCACACATRATATCCTCYCTCCTRTGYCTRGARGGYYTAATRCTAGCCCTWTTTRTYYTAAGCACCCTAATARYYYTRARYWCC
Translation

Choloepus_didactylus_NC ATCCTCTTAGCATTCACCATAGCCCTCCTAGGACTACTATTATACCGATCACACATGATATCCTCTCTCCTGTGCCTGGAAGGCCTAATACTAGCCCTATTTATCCTAAGCACCCTAATAGCTTTAAATACC
Translation I L L A F T M A L L G L L L Y R S H M M S S L L C L E G L M L A L F I L S T L M A L N T

Mylodon_darwinii_Delsuc ATTTTCTTAGCATTCACCACGGCTCTGCTAGGACTATTACTATACCGATCACACATAATATCCTCCCTCCTATGTCTAGAGGGTTTAATGCTAGCCCTTTTTGTTTTAAGCACCCTAATAATCCTGAGCTCC
Translation I F L A F T T A L L G L L L Y R S H M M S S L L C L E G L M L A L F V L S T L M I L S S

Mylodon_darwinii_Slater ATTTTCTTAACTCCAGTCAC--CGCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Translation



Consensus CAYCACACACTGTCCACCATAATACCCATCATTCTCATAGTATTCGCAGCTTGCGAAGCCGCACTGGGCCTCGCTCTCCTGGTAATGGTCTCGAACACCTACGGACTGGACTACGTACAAAACCTCAACCTC

Translation

Choloepus_didactylus_NC CACCATACACTATCCGCCGTACTACCCATTGTTCTTATGGTGTTCGCAGCTTGTGAAGCCGCATTAGGCCTAGCTCTCCTAGTAATAGTCTCAAATACCTATGGACTAGACTACGTACAAAATCTAAACCTC

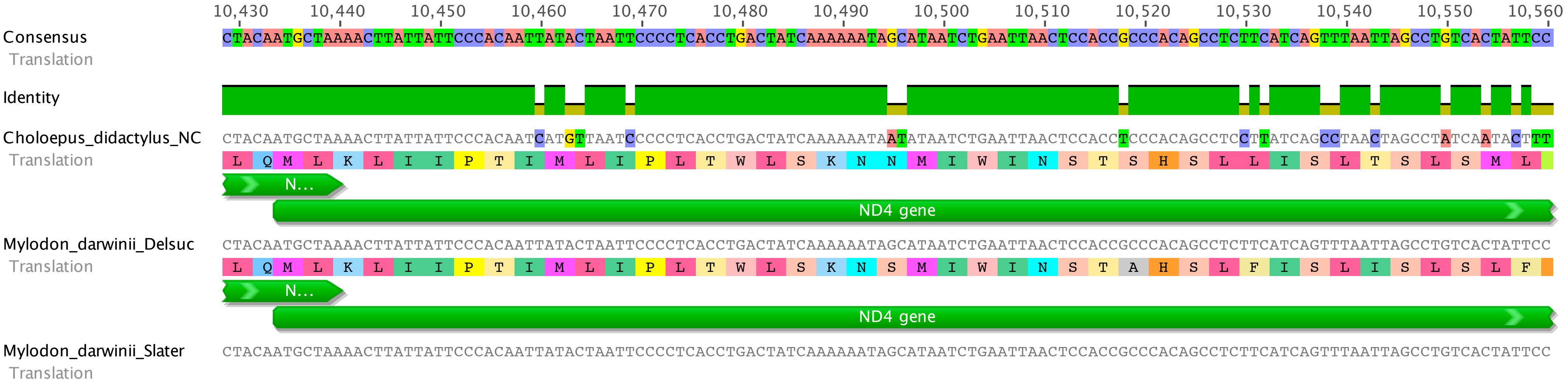
Translation H H T L S A V L P I V L M V F A A C E A A L G L A L L V M V S N T Y G L D Y V Q N L N L

Mylodon_darwinii_Delsuc CATCACACACTGTCCACCATAATACCCATCATTCTCATAGTATTCGCAGCTTGCGAAGCCGCACTGGGCCTCGCTCTCCTGGTAATGGTCTCGAACACCTACGGACTGGACTACGTACAAAACCTCAACCTC

Translation H H T L S T M M P I I L M V F A A C E A A L G L A L L V M V S N T Y G L D Y V Q N L N L

Mylodon_darwinii_Slater NNNNACACACTGTCCACCATAATACCCATCATTCTCATAGTATTCGCAGCTTGCGAAGCCGCACTGGGCCTCGCTCTCCTGGTAATGGTCTCGAACACCTACGGACTGGACTACGTACAAAACCTCAACCTC

Translation



Consensus CTACAATGCTAAAACTTATTATTCCCACAATTATACTAATTCCCCTCACCTGACTATCAAAAAATAGCATAATCTGAATTAACTCCACCGCCCACAGCCTCTTCATCAGTTTAATTAGCCTGTCACTATTCC

Translation

Choloepus_didactylus_NC CTACAATGCTAAAACTTATTATTCCCACAATCATGTTAATCCCCCTCACCTGACTATCAAAAAATAATATAATCTGAATTAACTCCACCTCCCACAGCCTCCTTATCAGCCTAACTAGCCTATCAATACTTT

Translation L Q M L K L I I P T I M L I P L T W L S K N N M I W I N S T S H S L L I S L T S L S M L

Mylodon_darwinii_Delsuc CTACAATGCTAAAACTTATTATTCCCACAATTATACTAATTCCCCTCACCTGACTATCAAAAAATAGCATAATCTGAATTAACTCCACCGCCCACAGCCTCTTCATCAGTTTAATTAGCCTGTCACTATTCC

Translation L Q M L K L I I P T I M L I P L T W L S K N S M I W I N S T A H S L F I S L I S L S L F

Mylodon_darwinii_Slater CTACAATGCTAAAACTTATTATTCCCACAATTATACTAATTCCCCTCACCTGACTATCAAAAAATAGCATAATCTGAATTAACTCCACCGCCCACAGCCTCTTCATCAGTTTAATTAGCCTGTCACTATTCC

Translation

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             10,570    10,580    10,590    10,600    10,610    10,620    10,630    10,640    10,650    10,660    10,670    10,680    10,690
Consensus               ACCAAACCACCAACACCAGCCTNAACTTCTCRCYACTATTCTTYACMGACCCCCTCTCCACRCCCCTRCTAATYTTAACAACCTGRYTACTSCCYCTAATAATTATAGCCAGYCAATCCCAYCTACAYAAWG
 Translation
Identity
Choloepus_didactylus_NC ACCAAACCACCAACAACAGTCTAAACTTCTCGCCACTATTCTTTACAGACCCCCTCTCCACACCCCTACTAATTTTAACAACCTGGTTACTCCCTCTAATAATTATAGCCAGTCAATCCCATCTACACAAAG
 Translation            Y  Q  T  T  N  N  S  L  N  F  S  P  L  F  F  T  D  P  L  S  T  P  L  L  I  L  T  T  W  L  L  P  L  M  I  M  A  S  Q  S  H  L  H  K
                        ND4 gene
Mylodon_darwinii_Delsuc ACCAAACCACCAACACCAGCCTGAACTTCTCACTACTATTCTTCACCGACCCCCTCTCCACGCCCCTGCTAATCTTAACAACCTGACTACTGCCCCTAATAATTATAGCCAGCCAATCCCACCTACATAATG
 Translation            H  Q  T  T  N  T  S  L  N  F  S  L  L  F  F  T  D  P  L  S  T  P  L  L  I  L  T  T  W  L  L  P  L  M  I  M  A  S  Q  S  H  L  H  N
                        ND4 gene
Mylodon_darwinii_Slater ACCAAACCACCAACACCAGCCT-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
 Translation
                                               gap

             10,700    10,710    10,720    10,730    10,740    10,750    10,760    10,770    10,780    10,790    10,800    10,810    10,820
Consensus               ACACWACCACCCGRAARAAAAYRTAYATCTCAATACTYATCTCCCTMCAAATAYTCCTAATYAYAACATTCACCGCCACCGAACTGATTATATTCTACATTCTATTTGAAGCAACCCTGATCCCAACCCTTA
 Translation
Identity
Choloepus_didactylus_NC ACACAACCACCCGAAAGAAAACGTACATCTCAATACTCATCTCCCTCCAAATACTCCTAATCACAACATTCACCGCCACTGAACTAATAATATTCTACATTTTATTCGAGGCAACCCTAATCCCAACCCTAA
 Translation            D  T  T  T  R  K  K  T  Y  I  S  M  L  I  S  L  Q  M  L  L  I  T  T  F  T  A  T  E  L  M  M  F  Y  I  L  F  E  A  T  L  I  P  T  L
                        ND4 gene
Mylodon_darwinii_Delsuc ACACTACCACCCGGAAAAAAATATATATCTCAATACTTATCTCCCTACAAATATTCCTAATTATAACATTCACCGCCACCGAACTGATTATATTCTACATTCTATTTGAAGCAACCCTGATCCCAACCCTTA
 Translation            D  T  T  T  R  K  K  M  Y  I  S  M  L  I  S  L  Q  M  F  L  I  M  T  F  T  A  T  E  L  I  M  F  Y  I  L  F  E  A  T  L  I  P  T  L
                        ND4 gene
Mylodon_darwinii_Slater NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCCGAACTGATTATATTCTACACTCTATTTGAAGCAACCCTGATCCCAACCCTTA
 Translation
                                               gap                                               ND4 misc
                                                                                                 ND4 gene
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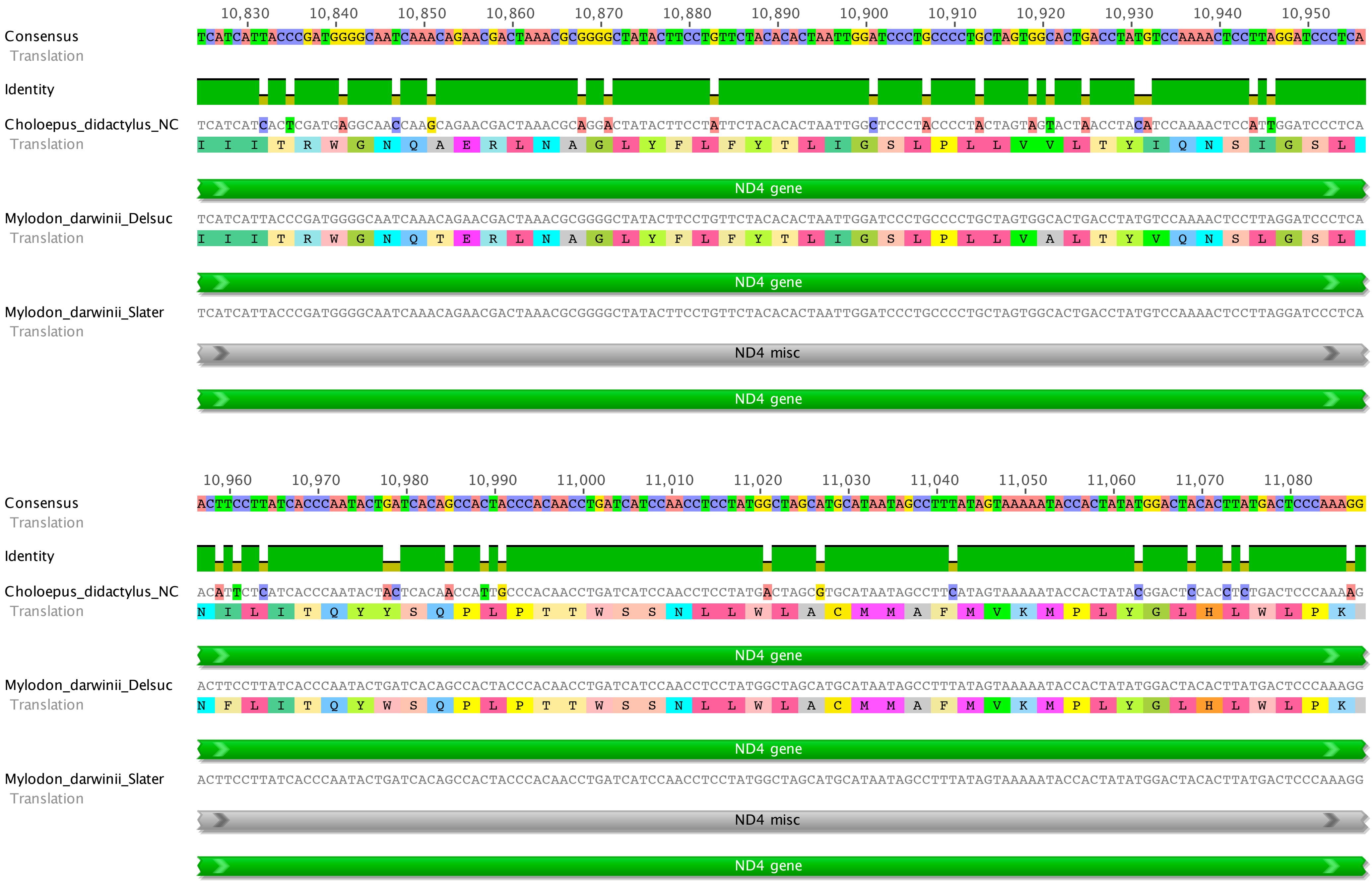

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                           10,830    10,840    10,850    10,860    10,870    10,880    10,890    10,900    10,910    10,920    10,930    10,940    10,950
Consensus                  TCATCATTACCCGATGGGGCAATCAAACAGAACGACTAAACGCGGGGCTATACTTCCTGTTCTACACACTAATTGGATCCCTGCCCCTGCTAGTGGCACTGACCTATGTCCAAAACTCCTTAGGATCCCTCA
 Translation
Identity
Choloepus_didactylus_NC    TCATCATCACTCGATGAGGCAACCAAGCAGAACGACTAAACGCAGGACTATACTTCCTATTCTACACACTAATTGGCTCCCTACCCCTACTAGTAGTACTAACCTACATCCAAAACTCCATTGGATCCCTCA
 Translation               I  I  I  T  R  W  G  N  Q  A  E  R  L  N  A  G  L  Y  F  L  F  Y  T  L  I  G  S  L  P  L  L  V  V  L  T  Y  I  Q  N  S  I  G  S  L
                           ND4 gene
Mylodon_darwinii_Delsuc    TCATCATTACCCGATGGGGCAATCAAACAGAACGACTAAACGCGGGGCTATACTTCCTGTTCTACACACTAATTGGATCCCTGCCCCTGCTAGTGGCACTGACCTATGTCCAAAACTCCTTAGGATCCCTCA
 Translation               I  I  I  T  R  W  G  N  Q  T  E  R  L  N  A  G  L  Y  F  L  F  Y  T  L  I  G  S  L  P  L  L  V  A  L  T  Y  V  Q  N  S  L  G  S  L
                           ND4 gene
Mylodon_darwinii_Slater    TCATCATTACCCGATGGGGCAATCAAACAGAACGACTAAACGCGGGGCTATACTTCCTGTTCTACACACTAATTGGATCCCTGCCCCTGCTAGTGGCACTGACCTATGTCCAAAACTCCTTAGGATCCCTCA
 Translation
                           ND4 misc
                           ND4 gene

                         10,960    10,970    10,980    10,990    11,000    11,010    11,020    11,030    11,040    11,050    11,060    11,070    11,080
Consensus                  ACTTCCTTATCACCCAATACTGATCACAGCCACTACCCACAACCTGATCATCCAACCTCCTATGGCTAGCATGCATAATAGCCTTTATAGTAAAAATACCACTATATGGACTACACTTATGACTCCCAAAGG
 Translation
Identity
Choloepus_didactylus_NC    ACATTCTCATCACCCAATACTACTCACAACCATTGCCCACAACCTGATCATCCAACCTCCTATGACTAGCGTGCATAATAGCCTTCATAGTAAAAATACCACTATACGGACTCCACCTCTGACTCCCAAAAG
 Translation               N  I  L  I  T  Q  Y  Y  S  Q  P  L  P  T  T  W  S  S  N  L  L  W  L  A  C  M  M  A  F  M  V  K  M  P  L  Y  G  L  H  L  W  L  P  K
                           ND4 gene
Mylodon_darwinii_Delsuc    ACTTCCTTATCACCCAATACTGATCACAGCCACTACCCACAACCTGATCATCCAACCTCCTATGGCTAGCATGCATAATAGCCTTTATAGTAAAAATACCACTATATGGACTACACTTATGACTCCCAAAGG
 Translation               N  F  L  I  T  Q  Y  W  S  Q  P  L  P  T  T  W  S  S  N  L  L  W  L  A  C  M  M  A  F  M  V  K  M  P  L  Y  G  L  H  L  W  L  P  K
                           ND4 gene
Mylodon_darwinii_Slater    ACTTCCTTATCACCCAATACTGATCACAGCCACTACCCACAACCTGATCATCCAACCTCCTATGGCTAGCATGCATAATAGCCTTTATAGTAAAAATACCACTATATGGACTACACTTATGACTCCCAAAGG
 Translation
                           ND4 misc
                           ND4 gene
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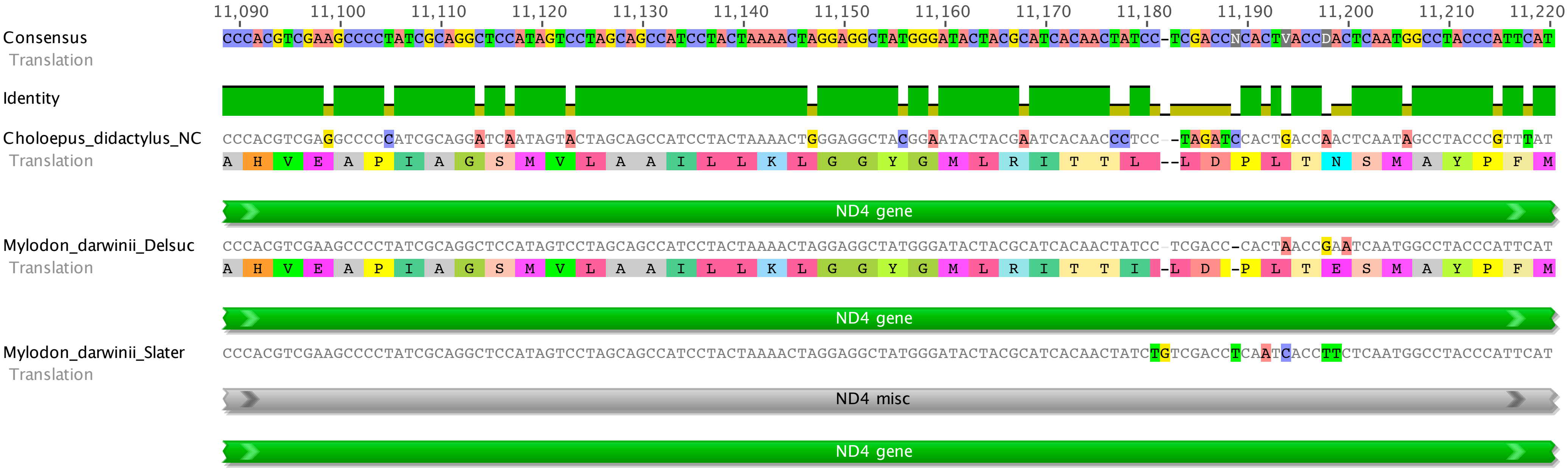

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           11,090    11,100    11,110    11,120    11,130    11,140    11,150    11,160    11,170    11,180    11,190    11,200    11,210    11,220
Consensus                 CCCACGTCGAAGCCCCTATCGCAGGCTCCATAGTCCTAGCAGCCATCCTACTAAAACTAGGAGGCTATGGGATACTACGCATCACAACTATCC-TCGACCNCACTVACCDACTCAATGGCCTACCCATTCAT
 Translation
Identity
Choloepus_didactylus_NC   CCCACGTCGAGGCCCCCATCGCAGGATCAATAGTACTAGCAGCCATCCTACTAAAACTGGGAGGCTACGGAATACTACGAATCACAACCCTCC--TAGATCCACTGACCAACTCAATAGCCTACCCGTTTAT
 Translation              A H V E A P I A G S M V L A A I L L K L G G Y G M L R I T T L --L D P L T N S M A Y P F M
                          ND4 gene
Mylodon_darwinii_Delsuc   CCCACGTCGAAGCCCCTATCGCAGGCTCCATAGTCCTAGCAGCCATCCTACTAAAACTAGGAGGCTATGGGATACTACGCATCACAACTATCC-TCGACC-CACTAACCGAATCAATGGCCTACCCATTCAT
 Translation              A H V E A P I A G S M V L A A I L L K L G G Y G M L R I T T I -L D -P L T E S M A Y P F M
                          ND4 gene
Mylodon_darwinii_Slater   CCCACGTCGAAGCCCCTATCGCAGGCTCCATAGTCCTAGCAGCCATCCTACTAAAACTAGGAGGCTATGGGATACTACGCATCACAACTATCTGTCGACCTCAATCACCTTCTCAATGGCCTACCCATTCAT
 Translation
                          ND4 misc
                          ND4 gene
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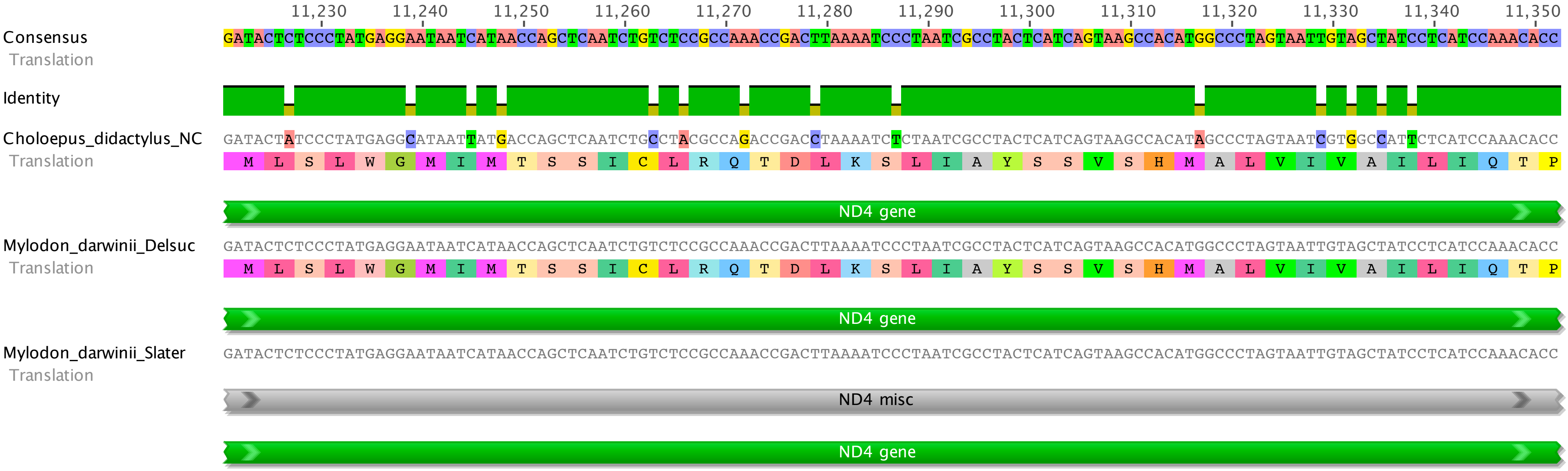

```
           11,230    11,240    11,250    11,260    11,270    11,280    11,290    11,300    11,310    11,320    11,330    11,340    11,350
Consensus                 GATACTCTCCCTATGAGGAATAATCATAACCAGCTCAATCTGTCTCCGCCAAACCGACTTAAAATCCCTAATCGCCTACTCATCAGTAAGCCACATGGCCCTAGTAATTGTAGCTATCCTCATCCAAACACC
 Translation
Identity
Choloepus_didactylus_NC   GATACTATCCCTATGAGGCATAATTATGACCAGCTCAATCTGCCTACGCCAGACCGACCTAAAATCTCTAATCGCCTACTCATCAGTAAGCCACATAGCCCTAGTAATCGTGGCCATTCTCATCCAAACACC
 Translation              M L S L W G M I M T S S I C L R Q T D L K S L I A Y S S V S H M A L V I V A I L I Q T P
                          ND4 gene
Mylodon_darwinii_Delsuc   GATACTCTCCCTATGAGGAATAATCATAACCAGCTCAATCTGTCTCCGCCAAACCGACTTAAAATCCCTAATCGCCTACTCATCAGTAAGCCACATGGCCCTAGTAATTGTAGCTATCCTCATCCAAACACC
 Translation              M L S L W G M I M T S S I C L R Q T D L K S L I A Y S S V S H M A L V I V A I L I Q T P
                          ND4 gene
Mylodon_darwinii_Slater   GATACTCTCCCTATGAGGAATAATCATAACCAGCTCAATCTGTCTCCGCCAAACCGACTTAAAATCCCTAATCGCCTACTCATCAGTAAGCCACATGGCCCTAGTAATTGTAGCTATCCTCATCCAAACACC
 Translation
                          ND4 misc
                          ND4 gene
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            11,360    11,370    11,380    11,390    11,400    11,410    11,420    11,430    11,440    11,450    11,460    11,470    11,480
Consensus                ATGAAGTTTCATAGGAGCCTCAGCCTTGATAATTGCACATGGCCTCACCTCCTCCCTACTATTCTGCCTAGCCAACACCAACTATGAGCGCGTCCACAGTCGTACCATGATCCTAGCCCGCGGACTTCAGAC
 Translation
Identity
Choloepus_didactylus_NC  ATGAAGCTTTATAGGCGCCTCAACCCTAATAATCGCACACGGCCTGACTTCCTCACTGCTATTCTGCCTAGCCAATACCAACTATGAACGCACCCACAGCCGCACCATAATACTAACCCGCGGACTTCAAAC
 Translation              W  S  F  M  G  A  S  T  L  M  I  A  H  G  L  T  S  S  L  L  F  C  L  A  N  T  N  Y  E  R  T  H  S  R  T  M  M  L  T  R  G  L  Q  T
                         ND4 gene
Mylodon_darwinii_Delsuc  ATGAAGTTTCATAGGAGCCTCAGCCTTGATAATTGCACATGGCCTCACCTCCTCCCTACTATTCTGCCTAGCCAACACCAACTATGAGCGCGTCCACAGTCGTACCATGATCCTAGCCCGCGGACTTCAGAC
 Translation              W  S  F  M  G  A  S  A  L  M  I  A  H  G  L  T  S  S  L  L  F  C  L  A  N  T  N  Y  E  R  V  H  S  R  T  M  I  L  A  R  G  L  Q  T
                         ND4 gene
Mylodon_darwinii_Slater  ATGAAGTTTCATAGGAGCCTCAGCCTTGATAATTGCACATGGCCTCACCTCCTCCCTACTATTCTGCCTAGCCAACACCAACTATGAGCGCGTCCACAGTCGTACCATGATCCTAGCCCGCGGACTTCAGAC
 Translation
                         ND4 misc
                         ND4 gene

          11,490    11,500    11,510    11,520    11,530    11,540    11,550    11,560    11,570    11,580    11,590    11,600    11,610
Consensus                CCTCCTACCCCTAATAGCACTATGATGACTCCTAGCAAGCCTAGCCAACCTGGCCCTCCCACCCACAATCAACCTAATCGGAGAGCTATTCATCATCCTACCAACATTTTCATGATCCAACATTACAATCAC
 Translation
Identity
Choloepus_didactylus_NC  CCTCCTTCCCCTAATAGCACTATGGTGACTCCTGGCAAACCTATCCAACCTGGCCCTCCCACCCACAATTAACCTGATCGGAGAACTATTTGTGATCATACCAACGATTTCGTGATCCAATATTACAATCGC
 Translation              L  L  P  L  M  A  L  W  W  L  L  A  N  L  S  N  L  A  L  P  P  T  I  N  L  I  G  E  L  F  V  I  M  P  T  I  S  W  S  N  I  T  I  A
                         ND4 gene
Mylodon_darwinii_Delsuc  CCTCCTACCCCTAATAGCACTATGATGACTCCTAGCAAGCCTAGCCAACCTGGCCCTCCCACCCACAATCAACCTAATCGGAGAGCTATTCATCATCCTACCAACATTTTCATGATCCAACATTACAATCAC
 Translation              L  L  P  L  M  A  L  W  W  L  L  A  S  L  A  N  L  A  L  P  P  T  I  N  L  I  G  E  L  F  I  I  L  P  T  F  S  W  S  N  I  T  I  T
                         ND4 gene
Mylodon_darwinii_Slater  CCTCCTACCCCTAATAGCACTATGATGACTCCTAGCAAGCCTAGCCAACCTGGCCCTCCCACCCACAATCAACCTAATCGGAGAGCTATTCATCATCCTACCAACATTTTCATGATCCAACATTACAATCAC
 Translation
                         ND4 misc
                         ND4 gene
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          11,620    11,630    11,640    11,650    11,660    11,670    11,680    11,690    11,700    11,710    11,720    11,730    11,740
Consensus                 ACTGCTAGGACTCAATATGATCATCACCTCTATATATTCACTATTCATGCTAATCACCACACAACGTGGCAACCCAACCAACCACATCCACACGATCAAACCAACCTTCACGCGGGAAAACACACTAATACT
 Translation
Identity
Choloepus_didactylus_NC   ACTCCTAGGACTCAATATAACCATTACATCTATATACTCACTGTCTATATTCATCATCACACAACGCGGAAACCCAACTAACCACATACACACAATCAAACCATCATTCACACGAGAAAATACTCTAATACT
 Translation               L  L  G  L  N  M  T  I  T  S  M  Y  S  L  S  M  F  I  I  T  Q  R  G  N  P  T  N  H  M  H  T  I  K  P  S  F  T  R  E  N  T  L  M  L
                          ND4 gene
Mylodon_darwinii_Delsuc   ACTGCTAGGACTCAACATGATCATCACCTCTATATATTCACTATTCATGCTAATCACCACACAACGTGGCAACCCAACCAACCACATCCACACGATCAAACCAACCTTCACGCGGGAAAACACACTAATACT
 Translation               L  L  G  L  N  M  I  I  T  S  M  Y  S  L  F  M  L  I  T  T  Q  R  G  N  P  T  N  H  I  H  T  I  K  P  T  F  T  R  E  N  T  L  M  L
                          ND4 gene
Mylodon_darwinii_Slater   ACTGCTAGGACTCAATATGATCATCACCTCTATATATTCACTATTCATGCTAATCACCACACAACGTGGCAACCCAACCAACCACATCCACACGATCAAACCAACCTTCACGCGGGAAAACACACTAATACT
 Translation
                          ND4 misc
                          ND4 gene

         11,750    11,760    11,770    11,780    11,790    11,800    11,810    11,820    11,830    11,840    11,850    11,860    11,870    11,880
Consensus                 CATGCACCTTCTACCACTAGCCCTCCTATCGCTTAACCCCAAACTCATCTTAGGGCTATCCTACTGTAGGCATAGTTTATCAAAAACACTAGATTGTGAACCTAGAAACAGGACCCCAAAAATCCTTGCCAA
 Translation
Identity
Choloepus_didactylus_NC   CATACATCTCCTACCACTGGCCCTCCTATCAATCAACCCAAAACTCATTCTAGGGTTACCTTACTGTAGGCATAGTTTACCAAAAACACTAGATCGTGAACCTAGAAACAGGACCCCAAAAATCCTTGCCAA
 Translation               M  H  L  L  P  L  A  L  L  S  I  N  P  K  L  I  L  G  L  P  Y
                          ND4 gene                                                          tRNA-His
Mylodon_darwinii_Delsuc   CATGCACCTTCTACCACTAGCCCTCCTATCGCTTAACCCCAAACTCATCTTAGGGCTATCCTACTGTAGGCATAGTTTATCAAAAACACTAGATTGTGAACCTAGAAACAGGACCCCAAAAATCCTTGCCAA
 Translation               M  H  L  L  P  L  A  L  L  S  L  N  P  K  L  I  L  G  L  S  Y
                          ND4 gene                                                          tRNA-His
Mylodon_darwinii_Slater   CATGCACCTTCTACCACTAGCCCTCCTATCGCTTAACCCCAAACTCATCTTAGGGCTATCCTACTGTAGGCATAGTTTATCAAAAACACTAGATTGTGAACCTAGAAACAGGACCCCAAAAATCCTTGCCAA
 Translation
                          ND4 misc
                          ND4 gene
                                                                                            tRNA-His
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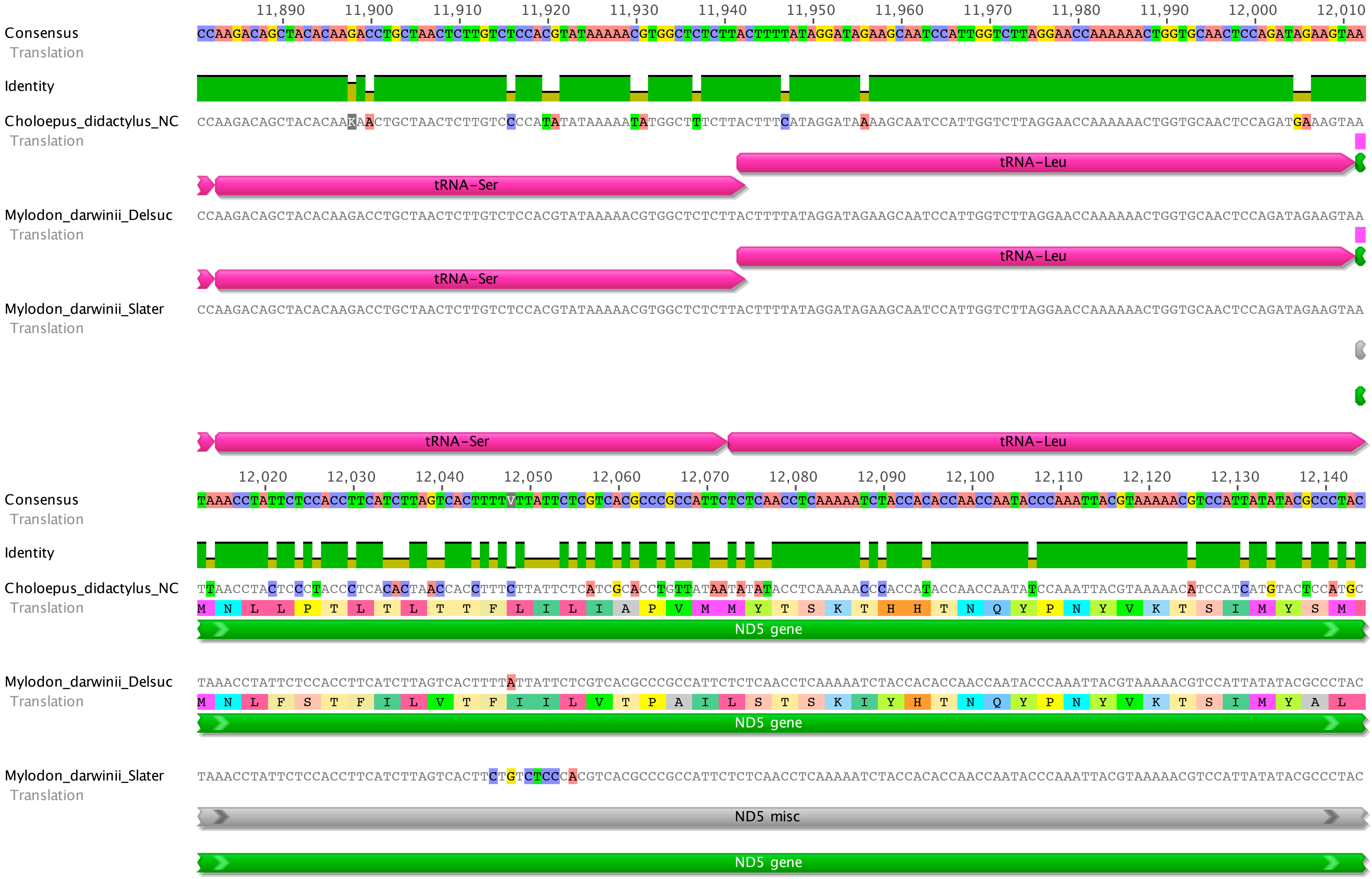

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                                 11,890       11,900       11,910       11,920       11,930       11,940       11,950       11,960       11,970       11,980       11,990       12,000       12,010
Consensus                  CCAAGACAGCTACACAAGACCTGCTAACTCTTGTCTCCACGTATAAAAACGTGGCTCTCTTACTTTTATAGGATAGAAGCAATCCATTGGTCTTAGGAACCAAAAAACTGGTGCAACTCCAGATAGAAGTAA
 Translation
Identity
Choloepus_didactylus_NC    CCAAGACAGCTACACAAKAACTGCTAACTCTTGTCCCCATATATAAAAATATGGCTTTCTTACTTTCATAGGATAAAAGCAATCCATTGGTCTTAGGAACCAAAAAACTGGTGCAACTCCAGATGAAAGTAA
 Translation
Mylodon_darwinii_Delsuc    CCAAGACAGCTACACAAGACCTGCTAACTCTTGTCTCCACGTATAAAAACGTGGCTCTCTTACTTTTATAGGATAGAAGCAATCCATTGGTCTTAGGAACCAAAAAACTGGTGCAACTCCAGATAGAAGTAA
 Translation
Mylodon_darwinii_Slater    CCAAGACAGCTACACAAGACCTGCTAACTCTTGTCTCCACGTATAAAAACGTGGCTCTCTTACTTTTATAGGATAGAAGCAATCCATTGGTCTTAGGAACCAAAAAACTGGTGCAACTCCAGATAGAAGTAA
 Translation

                               12,020       12,030       12,040       12,050       12,060       12,070       12,080       12,090       12,100       12,110       12,120       12,130       12,140
Consensus                  TAAACCTATTCTCCACCTTCATCTTAGTCACTTTTVTTATTCTCGTCACGCCCGCCATTCTCTCAACCTCAAAAATCTACCACACCAACCAATACCCAAATTACGTAAAAACGTCCATTATATACGCCCTAC
 Translation
Identity
Choloepus_didactylus_NC    TTAACCTACTCCCTACCCTCACACTAACCACCTTTCTTATTCTCATCGCACCTGTTATAATATATACCTCAAAAACCCACCATACCAACCAATATCCAAATTACGTAAAAACATCCATCATGTACTCCATGC
 Translation               M  N  L  L  P  T  L  T  L  T  T  F  L  I  L  I  A  P  V  M  M  Y  T  S  K  T  H  H  T  N  Q  Y  P  N  Y  V  K  T  S  I  M  Y  S  M
Mylodon_darwinii_Delsuc    TAAACCTATTCTCCACCTTCATCTTAGTCACTTTTATTATTCTCGTCACGCCCGCCATTCTCTCAACCTCAAAAATCTACCACACCAACCAATACCCAAATTACGTAAAAACGTCCATTATATACGCCCTAC
 Translation               M  N  L  F  S  T  F  I  L  V  T  F  I  I  L  V  T  P  A  I  L  S  T  S  K  I  Y  H  T  N  Q  Y  P  N  Y  V  K  T  S  I  M  Y  A  L
Mylodon_darwinii_Slater    TAAACCTATTCTCCACCTTCATCTTAGTCACTTCTGTCTCCCACGTCACGCCCGCCATTCTCTCAACCTCAAAAATCTACCACACCAACCAATACCCAAATTACGTAAAAACGTCCATTATATACGCCCTAC
 Translation
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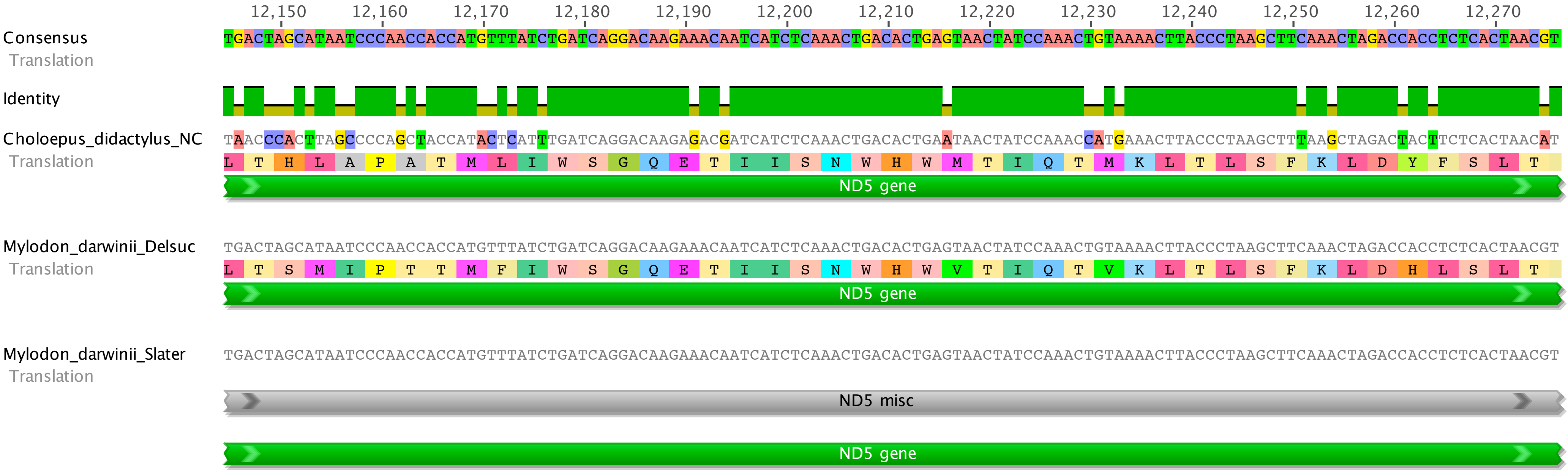

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                            12,150    12,160    12,170    12,180    12,190    12,200    12,210    12,220    12,230    12,240    12,250    12,260    12,270
Consensus                 TGACTAGCATAATCCCAACCACCATGTTTATCTGATCAGGACAAGAAACAATCATCTCAAACTGACACTGAGTAACTATCCAAACTGTAAAACTTACCCTAAGCTTCAAACTAGACCACCTCTCACTAACGT
 Translation
Identity
Choloepus_didactylus_NC   TAACCCACTTAGCCCCAGCTACCATACTCATTTGATCAGGACAAGAGACGATCATCTCAAACTGACACTGAATAACTATCCAAACCATGAAACTTACCCTAAGCTTTAAGCTAGACTACTTCTCACTAACAT
 Translation              L  T  H  L  A  P  A  T  M  L  I  W  S  G  Q  E  T  I  I  S  N  W  H  W  M  T  I  Q  T  M  K  L  T  L  S  F  K  L  D  Y  F  S  L  T
                          ND5 gene
Mylodon_darwinii_Delsuc   TGACTAGCATAATCCCAACCACCATGTTTATCTGATCAGGACAAGAAACAATCATCTCAAACTGACACTGAGTAACTATCCAAACTGTAAAACTTACCCTAAGCTTCAAACTAGACCACCTCTCACTAACGT
 Translation              L  T  S  M  I  P  T  T  M  F  I  W  S  G  Q  E  T  I  I  S  N  W  H  W  V  T  I  Q  T  V  K  L  T  L  S  F  K  L  D  H  L  S  L  T
                          ND5 gene
Mylodon_darwinii_Slater   TGACTAGCATAATCCCAACCACCATGTTTATCTGATCAGGACAAGAAACAATCATCTCAAACTGACACTGAGTAACTATCCAAACTGTAAAACTTACCCTAAGCTTCAAACTAGACCACCTCTCACTAACGT
 Translation
                          ND5 misc
                          ND5 gene
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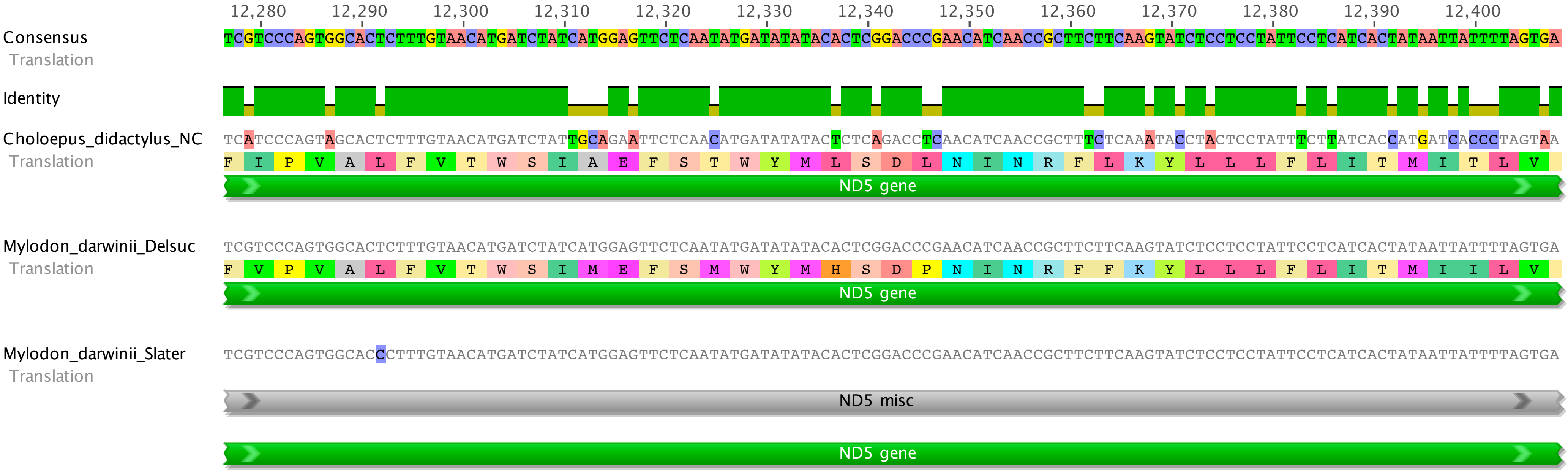

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                          12,280    12,290    12,300    12,310    12,320    12,330    12,340    12,350    12,360    12,370    12,380    12,390    12,400
Consensus                 TCGTCCCAGTGGCACTCTTTGTAACATGATCTATCATGGAGTTCTCAATATGATATATACACTCGGACCCGAACATCAACCGCTTCTTCAAGTATCTCCTCCTATTCCTCATCACTATAATTATTTTAGTGA
 Translation
Identity
Choloepus_didactylus_NC   TCATCCCAGTAGCACTCTTTGTAACATGATCTATTGCAGAATTCTCAACATGATATATACTCTCAGACCTCAACATCAACCGCTTTCTCAAATACCTACTCCTATTTCTTATCACCATGATCACCCTAGTAA
 Translation              F  I  P  V  A  L  F  V  T  W  S  I  A  E  F  S  T  W  Y  M  L  S  D  L  N  I  N  R  F  L  K  Y  L  L  L  F  L  I  T  M  I  T  L  V
                          ND5 gene
Mylodon_darwinii_Delsuc   TCGTCCCAGTGGCACTCTTTGTAACATGATCTATCATGGAGTTCTCAATATGATATATACACTCGGACCCGAACATCAACCGCTTCTTCAAGTATCTCCTCCTATTCCTCATCACTATAATTATTTTAGTGA
 Translation              F  V  P  V  A  L  F  V  T  W  S  I  M  E  F  S  M  W  Y  M  H  S  D  P  N  I  N  R  F  F  K  Y  L  L  L  F  L  I  T  M  I  I  L  V
                          ND5 gene
Mylodon_darwinii_Slater   TCGTCCCAGTGGCACCCTTTGTAACATGATCTATCATGGAGTTCTCAATATGATATATACACTCGGACCCGAACATCAACCGCTTCTTCAAGTATCTCCTCCTATTCCTCATCACTATAATTATTTTAGTGA
 Translation
                          ND5 misc
                          ND5 gene
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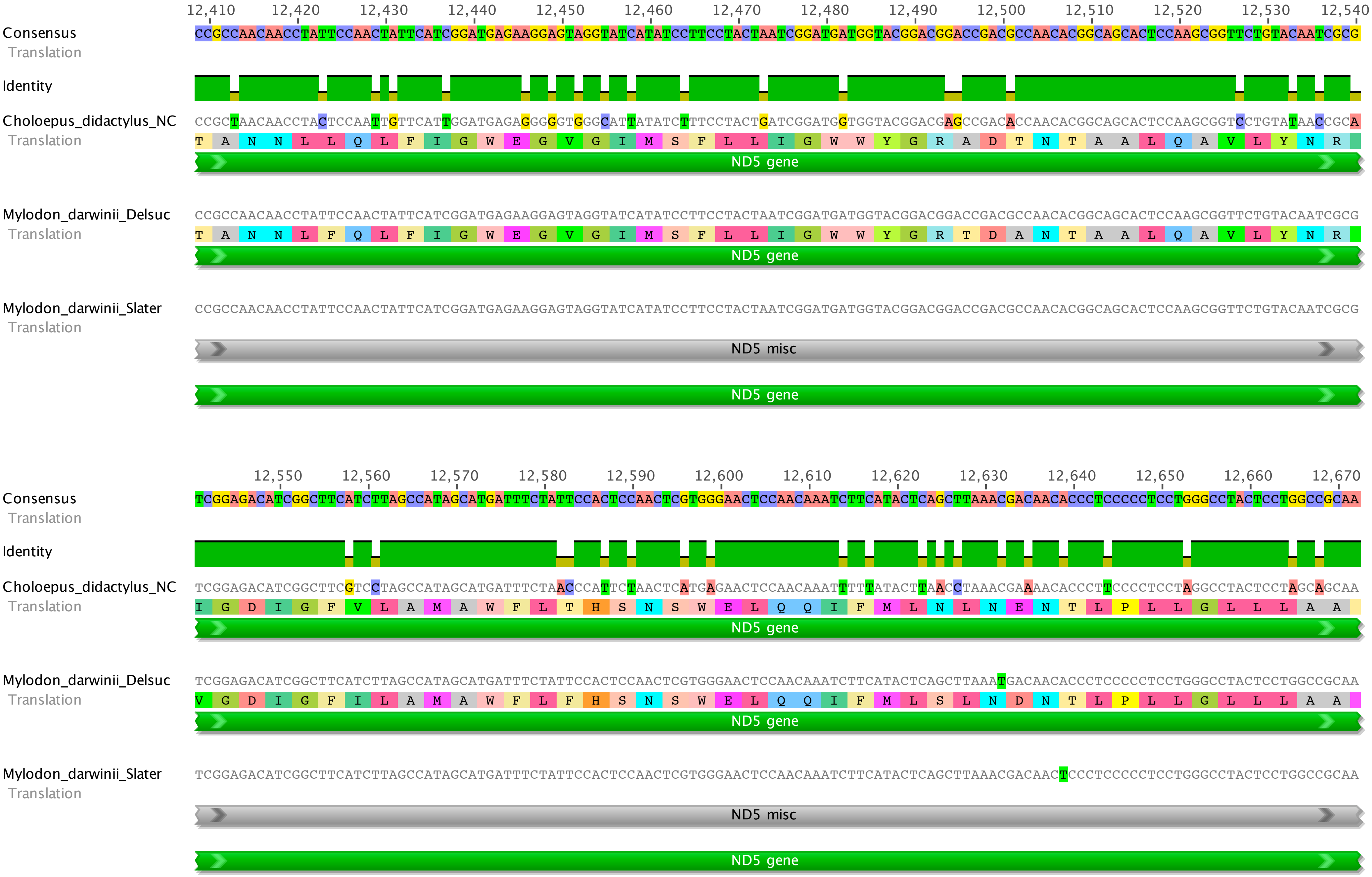


Consensus
CCGCCAACAACCTATTCCAACTATTCATCGGATGAGAAGGAGTAGGTATCATATCCTTCCTACTAATCGGATGATGGTACGGACGGACCGACGCCAACACGGCAGCACTCCAAGCGGTTCTGTACAATCGCG
Translation

Choloepus_didactylus_NC
CCGCTAACAACCTACTCCAATTGTTCATTGGATGAGAGGGGGTGGCATTATATCTTTCCTACTGATCGGATGGTGGTACGGACGAGCCGACACCAACACGGCAGCACTCCAAGCGGTCCTGTATAACCGCA
Translation
T A N N L L Q L F I G W E G V G I M S F L L I G W W Y G R A D T N T A A L Q A V L Y N R

Mylodon_darwinii_Delsuc
CCGCCAACAACCTATTCCAACTATTCATCGGATGAGAAGGAGTAGGTATCATATCCTTCCTACTAATCGGATGATGGTACGGACGGACCGACGCCAACACGGCAGCACTCCAAGCGGTTCTGTACAATCGCG
Translation
T A N N L F Q L F I G W E G V G I M S F L L I G W W Y G R T D A N T A A L Q A V L Y N R

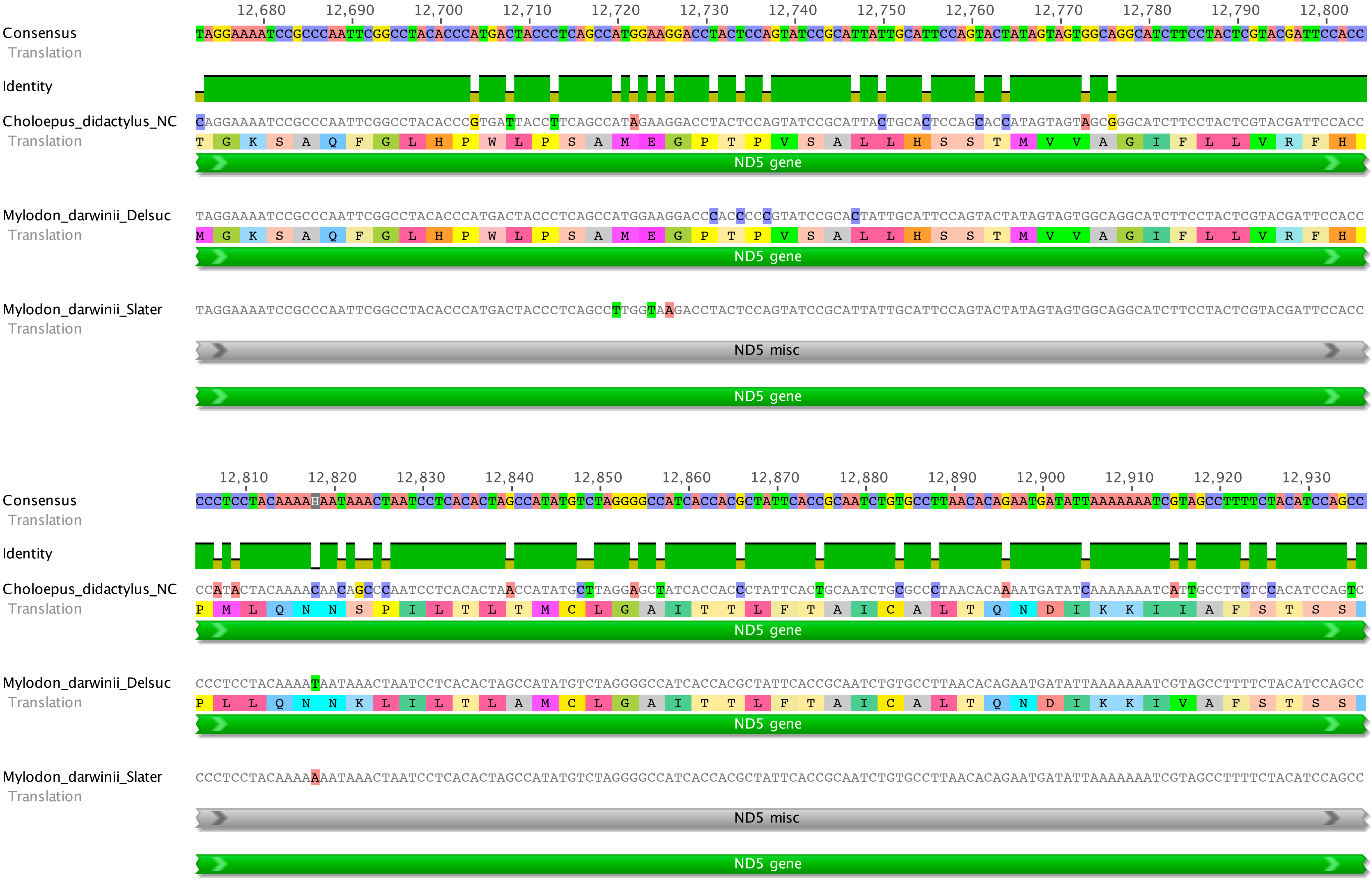
Mylodon_darwinii_Slater
CCGCCAACAACCTATTCCAACTATTCATCGGATGAGAAGGAGTAGGTATCATATCCTTCCTACTAATCGGATGATGGTACGGACGGACCGACGCCAACACGGCAGCACTCCAAGCGGTTCTGTACAATCGCG
Translation

Consensus
TCGGAGACATCGGCTTCATCTTAGCCATAGCATGATTTCTATTCCACTCCAACTCGTGGGAACTCCAACAAATCTTCATACTCAGCTTAAACGACAACACCCTCCCCCTCCTGGGCCTACTCCTGGCCGCAA
Translation

Choloepus_didactylus_NC
TCGGAGACATCGGCTTCGTCCTAGCCATAGCATGATTTCTAACCCATTCTAACTCATGAGAACTCCAACAAATTTTTATACTTAACCTAAACGAAAACACCCTTCCCCTCCTAGGCCTACTCCTAGCAGCAA
Translation
I G D I G F V L A M A W F L T H S N S W E L Q Q I F M L N L N E N T L P L L G L L L A A

Mylodon_darwinii_Delsuc
TCGGAGACATCGGCTTCATCTTAGCCATAGCATGATTTCTATTCCACTCCAACTCGTGGGAACTCCAACAAATCTTCATACTCAGCTTAAATGACAACACCCTCCCCCTCCTGGGCCTACTCCTGGCCGCAA
Translation
V G D I G F I L A M A W F L F H S N S W E L Q Q I F M L S L N D N T L P L L G L L L A A

Mylodon_darwinii_Slater
TCGGAGACATCGGCTTCATCTTAGCCATAGCATGATTTCTATTCCACTCCAACTCGTGGGAACTCCAACAAATCTTCATACTCAGCTTAAACGACAACTCCCTCCCCCTCCTGGGCCTACTCCTGGCCGCAA
Translation



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Consensus                   TAGGAAAATCCGCCCAATTCGGCCTACACCCATGACTACCCTCAGCCATGGAAGGACCTACTCCAGTATCCGCATTATTGCATTCCAGTACTATAGTAGTGGCAGGCATCTTCCTACTCGTACGATTCCACC
 Translation
Identity
Choloepus_didactylus_NC     CAGGAAAATCCGCCCAATTCGGCCTACACCCGTGATTACCTTCAGCCATAGAAGGACCTACTCCAGTATCCGCATTACTGCACTCCAGCACCATAGTAGTAGCGGGCATCTTCCTACTCGTACGATTCCACC
 Translation                T  G  K  S  A  Q  F  G  L  H  P  W  L  P  S  A  M  E  G  P  T  P  V  S  A  L  L  H  S  S  T  M  V  V  A  G  I  F  L  L  V  R  F  H
Mylodon_darwinii_Delsuc     TAGGAAAATCCGCCCAATTCGGCCTACACCCATGACTACCCTCAGCCATGGAAGGACCCACCCCCGTATCCGCACTATTGCATTCCAGTACTATAGTAGTGGCAGGCATCTTCCTACTCGTACGATTCCACC
 Translation                M  G  K  S  A  Q  F  G  L  H  P  W  L  P  S  A  M  E  G  P  T  P  V  S  A  L  L  H  S  S  T  M  V  V  A  G  I  F  L  L  V  R  F  H
Mylodon_darwinii_Slater     TAGGAAAATCCGCCCAATTCGGCCTACACCCATGACTACCCTCAGCCTTGGTAAGACCTACTCCAGTATCCGCATTATTGCATTCCAGTACTATAGTAGTGGCAGGCATCTTCCTACTCGTACGATTCCACC
 Translation
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Consensus                   CCCTCCTACAAAAHAATAAACTAATCCTCACACTAGCCATATGTCTAGGGGCCATCACCACGCTATTCACCGCAATCTGTGCCTTAACACAGAATGATATTAAAAAAATCGTAGCCTTTTCTACATCCAGCC
 Translation
Identity
Choloepus_didactylus_NC     CCATACTACAAAACAACAGCCCAATCCTCACACTAACCATATGCTTAGGAGCTATCACCACCCTATTCACTGCAATCTGCGCCCTAACACAAAATGATATCAAAAAAATCATTGCCTTCTCCACATCCAGTC
 Translation                P  M  L  Q  N  N  S  P  I  L  T  L  T  M  C  L  G  A  I  T  T  L  F  T  A  I  C  A  L  T  Q  N  D  I  K  K  I  I  A  F  S  T  S  S
Mylodon_darwinii_Delsuc     CCCTCCTACAAAATAATAAACTAATCCTCACACTAGCCATATGTCTAGGGGCCATCACCACGCTATTCACCGCAATCTGTGCCTTAACACAGAATGATATTAAAAAAATCGTAGCCTTTTCTACATCCAGCC
 Translation                P  L  L  Q  N  N  K  L  I  L  T  L  A  M  C  L  G  A  I  T  T  L  F  T  A  I  C  A  L  T  Q  N  D  I  K  K  I  V  A  F  S  T  S  S
Mylodon_darwinii_Slater     CCCTCCTACAAAAAAATAAACTAATCCTCACACTAGCCATATGTCTAGGGGCCATCACCACGCTATTCACCGCAATCTGTGCCTTAACACAGAATGATATTAAAAAAATCGTAGCCTTTTCTACATCCAGCC
 Translation
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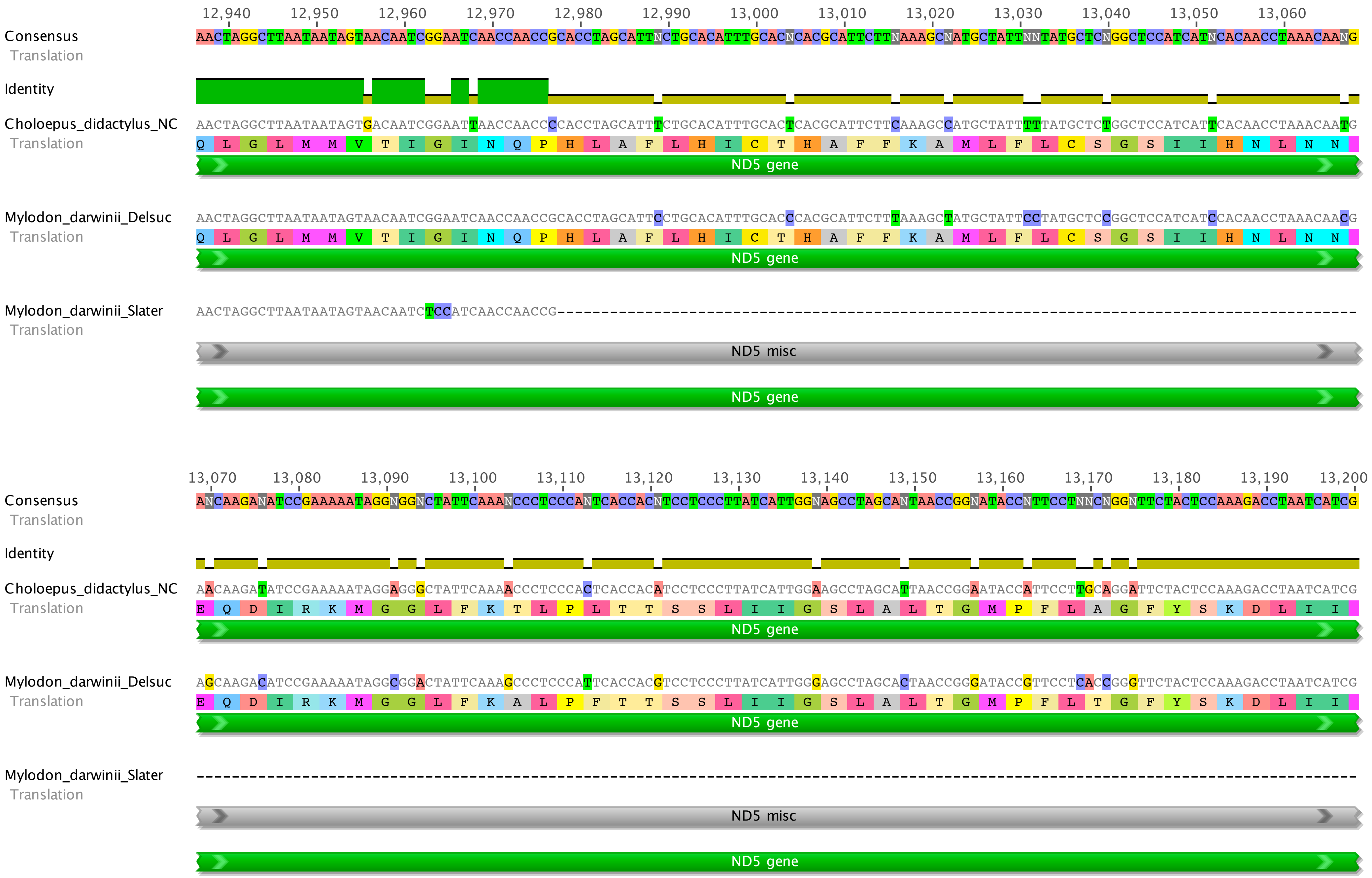
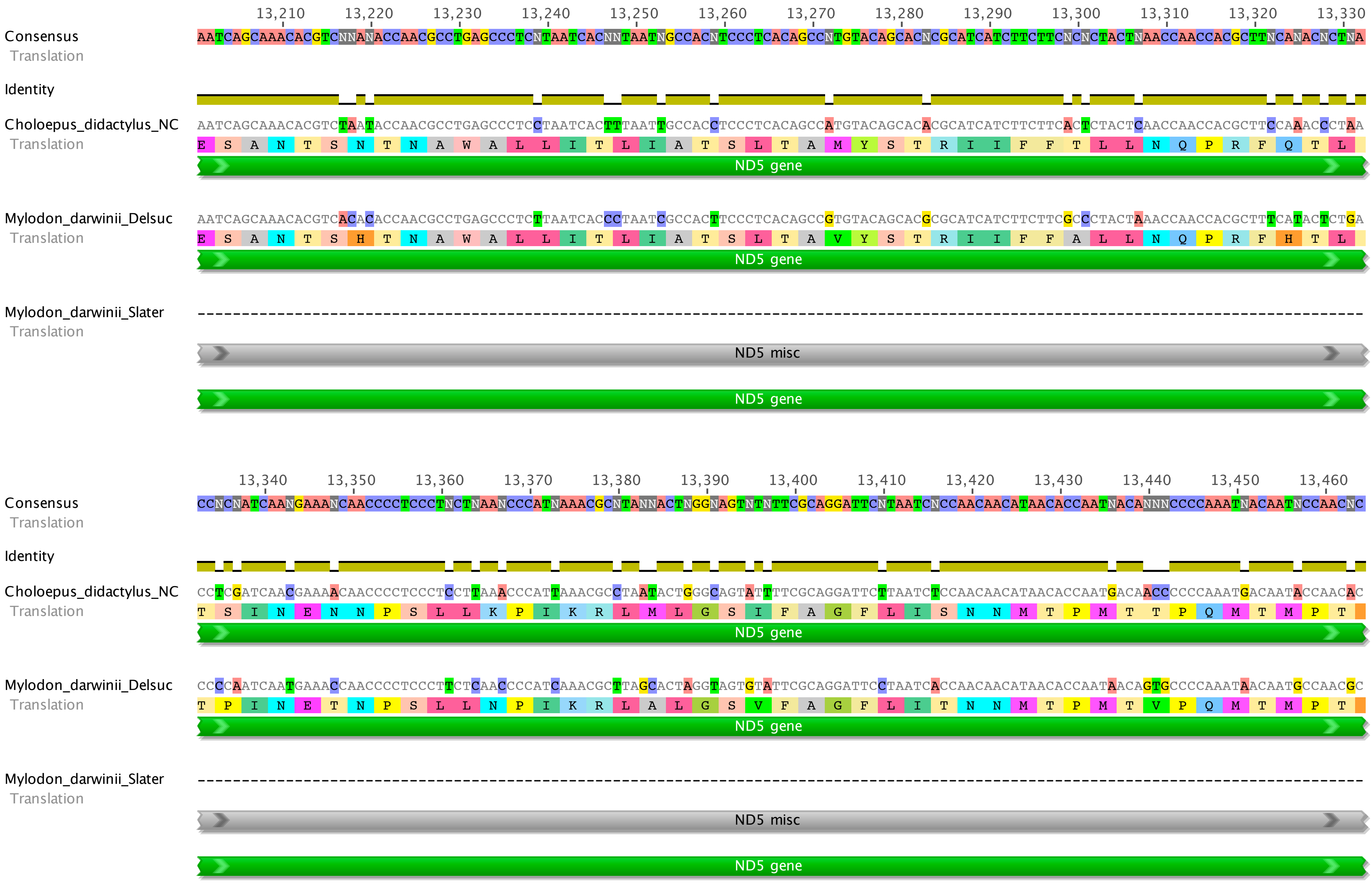

12,940 12,950 12,960 12,970 12,980 12,990 13,000 13,010 13,020 13,030 13,040 13,050 13,060
Consensus
AACTAGGCTTAATAATAGTAACAATCGGAATCAACCAACCGCACCTAGCATTNCTGCACATTTGCACNCACGCATTCTTNAAAGCNATGCTATTNNTATGCTCNGGCTCCATCATNCACAACCTAAACAANG
Translation
Identity
Choloepus_didactylus_NC
AACTAGGCTTAATAATAGTGACAATCGGAATTAACCAACCCCACCTAGCATTTCTGCACATTTGCACTCACGCATTCTTCAAAGCCATGCTATTTTTATGCTCTGGCTCCATCATTCACAACCTAAACAATG
Translation
Q L G L M M V T I G I N Q P H L A F L H I C T H A F F K A M L F L C S G S I I H N L N N
ND5 gene
Mylodon_darwinii_Delsuc
AACTAGGCTTAATAATAGTAACAATCGGAATCAACCAACCGCACCTAGCATTCCTGCACATTTGCACCCACGCATTCTTTAAAGCTATGCTATTCCTATGCTCCGGCTCCATCATCCACAACCTAAACAACG
Translation
Q L G L M M V T I G I N Q P H L A F L H I C T H A F F K A M L F L C S G S I I H N L N N
ND5 gene
Mylodon_darwinii_Slater
AACTAGGCTTAATAATAGTAACAATCTCCATCAACCAACCG---
Translation
ND5 misc
ND5 gene
13,070 13,080 13,090 13,100 13,110 13,120 13,130 13,140 13,150 13,160 13,170 13,180 13,190 13,200
Consensus
ANCAAGANATCCGAAAAATAGGNGGNCTATTCAAANCCCTCCCANTCACCACNTCCTCCCTTATCATTGGNAGCCTAGCANTAACCGGNATACCNTTCCTNNCNGGNTTCTACTCCAAAGACCTAATCATCG
Translation
Identity
Choloepus_didactylus_NC
AACAAGATATCCGAAAAATAGGAGGGCTATTCAAAACCCTCCCACTCACCACATCCTCCCTTATCATTGGAAGCCTAGCATTAACCGGAATACCATTCCTTGCAGGATTCTACTCCAAAGACCTAATCATCG
Translation
E Q D I R K M G G L F K T L P L T T S S L I I G S L A L T G M P F L A G F Y S K D L I I
ND5 gene
Mylodon_darwinii_Delsuc
AGCAAGACATCCGAAAAATAGGCGGACTATTCAAAGCCCTCCCATTCACCACGTCCTCCCTTATCATTGGGAGCCTAGCACTAACCGGGATACCGTTCCTCACCGGGTTCTACTCCAAAGACCTAATCATCG
Translation
E Q D I R K M G G L F K A L P F T T S S L I I G S L A L T G M P F L T G F Y S K D L I I
ND5 gene
Mylodon_darwinii_Slater

Translation
ND5 misc
ND5 gene



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                    13,210    13,220    13,230    13,240    13,250    13,260    13,270    13,280    13,290    13,300    13,310    13,320    13,330
Consensus           AATCAGCAAACACGTCNNANACCAACGCCTGAGCCCTCNTAATCACNNTAATNGCCACNTCCCTCACAGCCNTGTACAGCACNCGCATCATCTTCTTCNCNCTACTNAACCAACCACGCTTNCANACNCTNA
 Translation

Identity

Choloepus_didactylus_NC  AATCAGCAAACACGTCTAATACCAACGCCTGAGCCCTCCTAATCACTTTAATTGCCACCTCCCTCACAGCCATGTACAGCACACGCATCATCTTCTTCACTCTACTCAACCAACCACGCTTCCAAACCCTAA
 Translation             E  S  A  N  T  S  N  T  N  A  W  A  L  L  I  T  L  I  A  T  S  L  T  A  M  Y  S  T  R  I  I  F  F  T  L  L  N  Q  P  R  F  Q  T  L
                         ND5 gene

Mylodon_darwinii_Delsuc  AATCAGCAAACACGTCACACACCAACGCCTGAGCCCTCTTAATCACCCTAATCGCCACTTCCCTCACAGCCGTGTACAGCACGCGCATCATCTTCTTCGCCCTACTAAACCAACCACGCTTTCATACTCTGA
 Translation             E  S  A  N  T  S  H  T  N  A  W  A  L  L  I  T  L  I  A  T  S  L  T  A  V  Y  S  T  R  I  I  F  F  A  L  L  N  Q  P  R  F  H  T  L
                         ND5 gene

Mylodon_darwinii_Slater  -------------------------------------------------------------------------------------------------------------------------------------
 Translation
                         ND5 misc
                         ND5 gene
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                    13,340    13,350    13,360    13,370    13,380    13,390    13,400    13,410    13,420    13,430    13,440    13,450    13,460
Consensus           CCNCNATCAANGAAANCAACCCCTCCCTNCTNAANCCCATNAAACGCNTANNACTNGGNAGTNTNTTCGCAGGATTCNTAATCNCCAACAACATAACACCAATNACANNNCCCCAAATNACAATNCCAACNC
 Translation

Identity

Choloepus_didactylus_NC  CCTCGATCAACGAAAACAACCCCTCCCTCCTTAAACCCATTAAACGCCTAATACTGGGCAGTATTTTCGCAGGATTCTTAATCTCCAACAACATAACACCAATGACAACCCCCCAAATGACAATACCAACAC
 Translation             T  S  I  N  E  N  N  P  S  L  L  K  P  I  K  R  L  M  L  G  S  I  F  A  G  F  L  I  S  N  N  M  T  P  M  T  T  P  Q  M  T  M  P  T
                         ND5 gene

Mylodon_darwinii_Delsuc  CCCCAATCAATGAAACCAACCCCTCCCTTCTCAACCCCATCAAACGCTTAGCACTAGGTAGTGTATTCGCAGGATTCCTAATCACCAACAACATAACACCAATAACAGTGCCCCAAATAACAATGCCAACGC
 Translation             T  P  I  N  E  T  N  P  S  L  L  N  P  I  K  R  L  A  L  G  S  V  F  A  G  F  L  I  T  N  N  M  T  P  M  T  V  P  Q  M  T  M  P  T
                         ND5 gene

Mylodon_darwinii_Slater  -------------------------------------------------------------------------------------------------------------------------------------
 Translation
                         ND5 misc
                         ND5 gene
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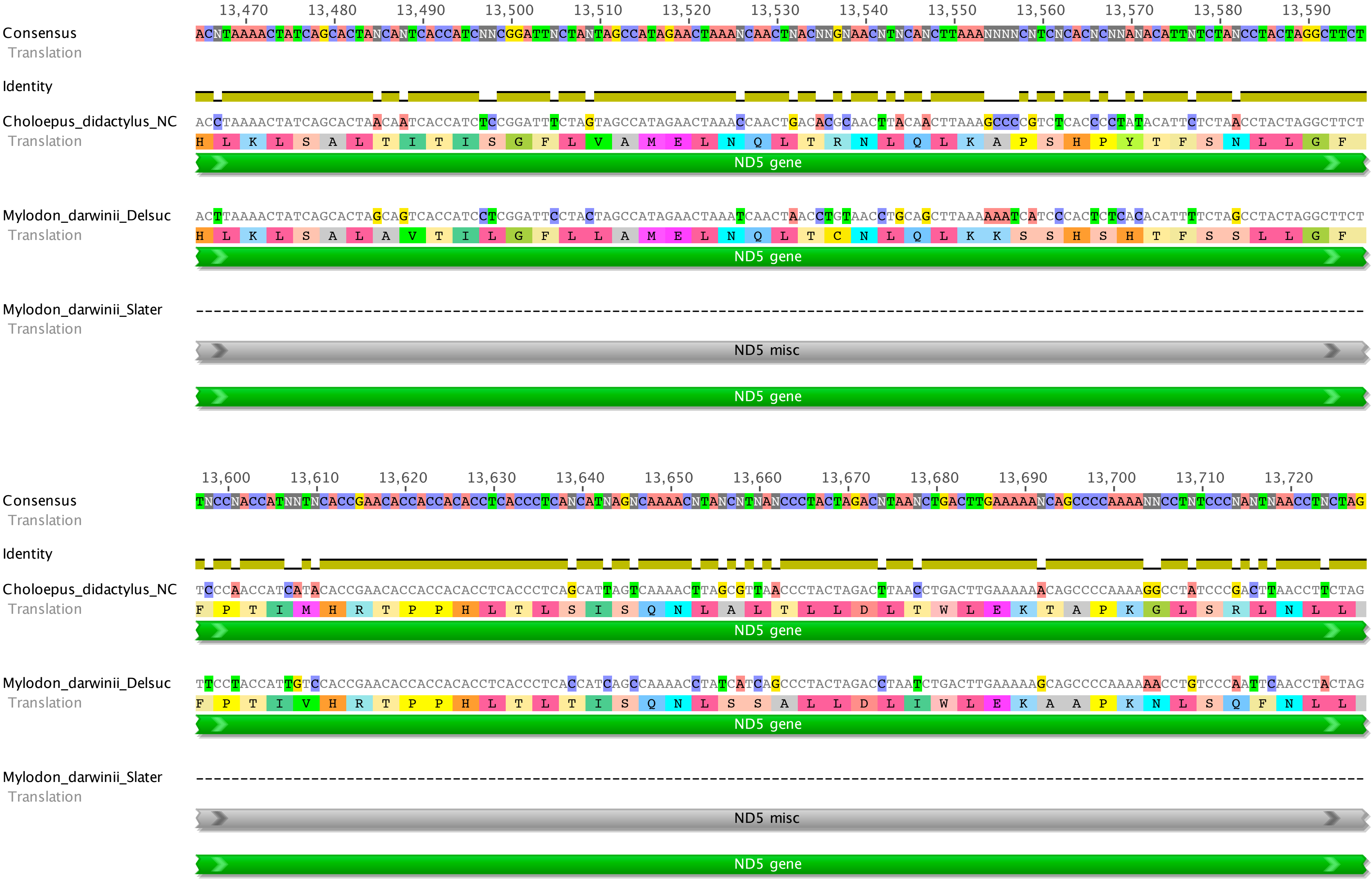
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13,470 13,480 13,490 13,500 13,510 13,520 13,530 13,540 13,550 13,560 13,570 13,580 13,590
Consensus               ACNTAAAACTATCAGCACTANCANTCACCATCNNCGGATTNCTANTAGCCATAGAACTAAANCAACTNACNNGNAACNTNCANCTTAAANNNNCNTCNCACNCNNANACATTNTCTANCCTACTAGGCTTCT
 Translation
Identity
Choloepus_didactylus_NC ACCTAAAACTATCAGCACTAACAATCACCATCTCCGGATTTCTAGTAGCCATAGAACTAAACCAACTGACACGCAACTTACAACTTAAAGCCCCGTCTCACCCCTATACATTCTCTAACCTACTAGGCTTCT
 Translation            H L K L S A L T I T I S G F L V A M E L N Q L T R N L Q L K A P S H P Y T F S N L L G F
                        ND5 gene
Mylodon_darwinii_Delsuc ACTTAAAACTATCAGCACTAGCAGTCACCATCCTCGGATTCCTACTAGCCATAGAACTAAATCAACTAACCTGTAACCTGCAGCTTAAAAAATCATCCCACTCTCACACATTTTCTAGCCTACTAGGCTTCT
 Translation            H L K L S A L A V T I L G F L L A M E L N Q L T C N L Q L K K S S H S H T F S S L L G F
                        ND5 gene
Mylodon_darwinii_Slater ------------------------------------------------------------------------------------------------------------------------------------
 Translation
                        ND5 misc
                        ND5 gene

13,600 13,610 13,620 13,630 13,640 13,650 13,660 13,670 13,680 13,690 13,700 13,710 13,720
Consensus               TNCCNACCATNNTNCACCGAACACCACCACACCTCACCCTCANCATNAGNCAAAACNTANCNTNANCCCTACTAGACNTAANCTGACTTGAAAAANCAGCCCCAAAANNCCTNTCCCNANTNAACCTNCTAG
 Translation
Identity
Choloepus_didactylus_NC TCCCAACCATCATACACCGAACACCACCACACCTCACCCTCAGCATTAGTCAAAACTTAGCGTTAACCCTACTAGACTTAACCTGACTTGAAAAAACAGCCCCAAAAGGCCTATCCCGACTTAACCTTCTAG
 Translation            F P T I M H R T P P H L T L S I S Q N L A L T L L D L T W L E K T A P K G L S R L N L L
                        ND5 gene
Mylodon_darwinii_Delsuc TTCCTACCATTGTCCACCGAACACCACCACACCTCACCCTCACCATCAGCCAAAACCTATCATCAGCCCTACTAGACCTAATCTGACTTGAAAAAGCAGCCCCAAAAAACCTGTCCCAATTCAACCTACTAG
 Translation            F P T I V H R T P P H L T L T I S Q N L S S A L L D L I W L E K A A P K N L S Q F N L L
                        ND5 gene
Mylodon_darwinii_Slater ------------------------------------------------------------------------------------------------------------------------------------
 Translation
                        ND5 misc
                        ND5 gene
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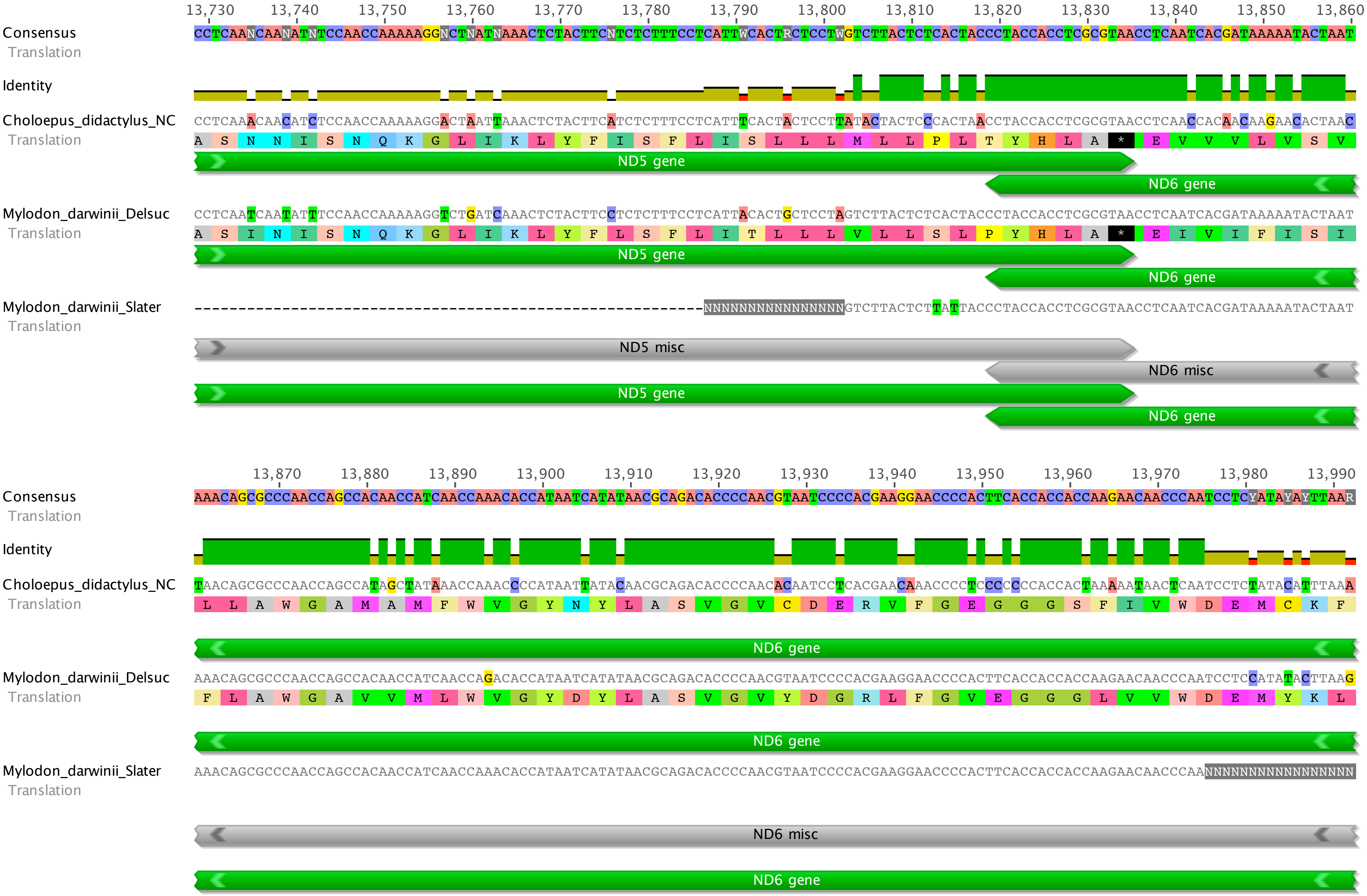

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                        13,730    13,740    13,750    13,760    13,770    13,780    13,790    13,800    13,810    13,820    13,830    13,840    13,850    13,860
Consensus               CCTCAANCAANATNTCCAACCAAAAAGGNCTNATNAAACTCTACTTCNTCTCTTTCCTCATTWCACTRCTCCTWGTCTTACTCTCACTACCCTACCACCTCGCGTAACCTCAATCACGATAAAAATACTAAT
 Translation
Identity
Choloepus_didactylus_NC CCTCAAACAACATCTCCAACCAAAAAGGACTAATTAAACTCTACTTCATCTCTTTCCTCATTTCACTACTCCTTATACTACTCCCACTAACCTACCACCTCGCGTAACCTCAACCACAACAAGAACACTAAC
 Translation            A  S  N  N  I  S  N  Q  K  G  L  I  K  L  Y  F  I  S  F  L  I  S  L  L  L  M  L  L  P  L  T  Y  H  L  A  *  E  V  V  V  L  V  S  V
Mylodon_darwinii_Delsuc CCTCAATCAATATTTCCAACCAAAAAGGTCTGATCAAACTCTACTTCCTCTCTTTCCTCATTACACTGCTCCTAGTCTTACTCTCACTACCCTACCACCTCGCGTAACCTCAATCACGATAAAAATACTAAT
 Translation            A  S  I  N  I  S  N  Q  K  G  L  I  K  L  Y  F  L  S  F  L  I  T  L  L  L  V  L  L  S  L  P  Y  H  L  A  *  E  I  V  I  F  I  S  I
Mylodon_darwinii_Slater ----------------------------------------------------------NNNNNNNNNNNNNNNNGTCTTACTCTTATTACCCTACCACCTCGCGTAACCTCAATCACGATAAAAATACTAAT
 Translation

                             13,870    13,880    13,890    13,900    13,910    13,920    13,930    13,940    13,950    13,960    13,970    13,980    13,990
Consensus               AAACAGCGCCCAACCAGCCACAACCATCAACCAAACACCATAATCATATAACGCAGACACCCCAACGTAATCCCCACGAAGGAACCCCACTTCACCACCACCAAGAACAACCCAATCCTCYATAYAYTTAAR
 Translation
Identity
Choloepus_didactylus_NC TAACAGCGCCCAACCAGCCATAGCTATAAACCAAACCCCATAATTATACAACGCAGACACCCCAACACAATCCTCACGAACAAACCCCTCCCCCCACCACTAAAAATAACTCAATCCTCTATACATTTAAA
 Translation             L  L  A  W  G  A  M  A  M  F  W  V  G  Y  N  Y  L  A  S  V  G  V  C  D  E  R  V  F  G  E  G  G  G  S  F  I  V  W  D  E  M  C  K  F
Mylodon_darwinii_Delsuc AAACAGCGCCCAACCAGCCACAACCATCAACCAGACACCATAATCATATAACGCAGACACCCCAACGTAATCCCCACGAAGGAACCCCACTTCACCACCACCAAGAACAACCCAATCCTCCATATACTTAAG
 Translation             F  L  A  W  G  A  V  V  M  L  W  V  G  Y  D  Y  L  A  S  V  G  V  Y  D  G  R  L  F  G  V  E  G  G  G  L  V  V  W  D  E  M  Y  K  L
Mylodon_darwinii_Slater AAACAGCGCCCAACCAGCCACAACCATCAACCAAACACCATAATCATATAACGCAGACACCCCAACGTAATCCCCACGAAGGAACCCCACTTCACCACCACCAAGAACAACCCAANNNNNNNNNNNNNNNNN
 Translation
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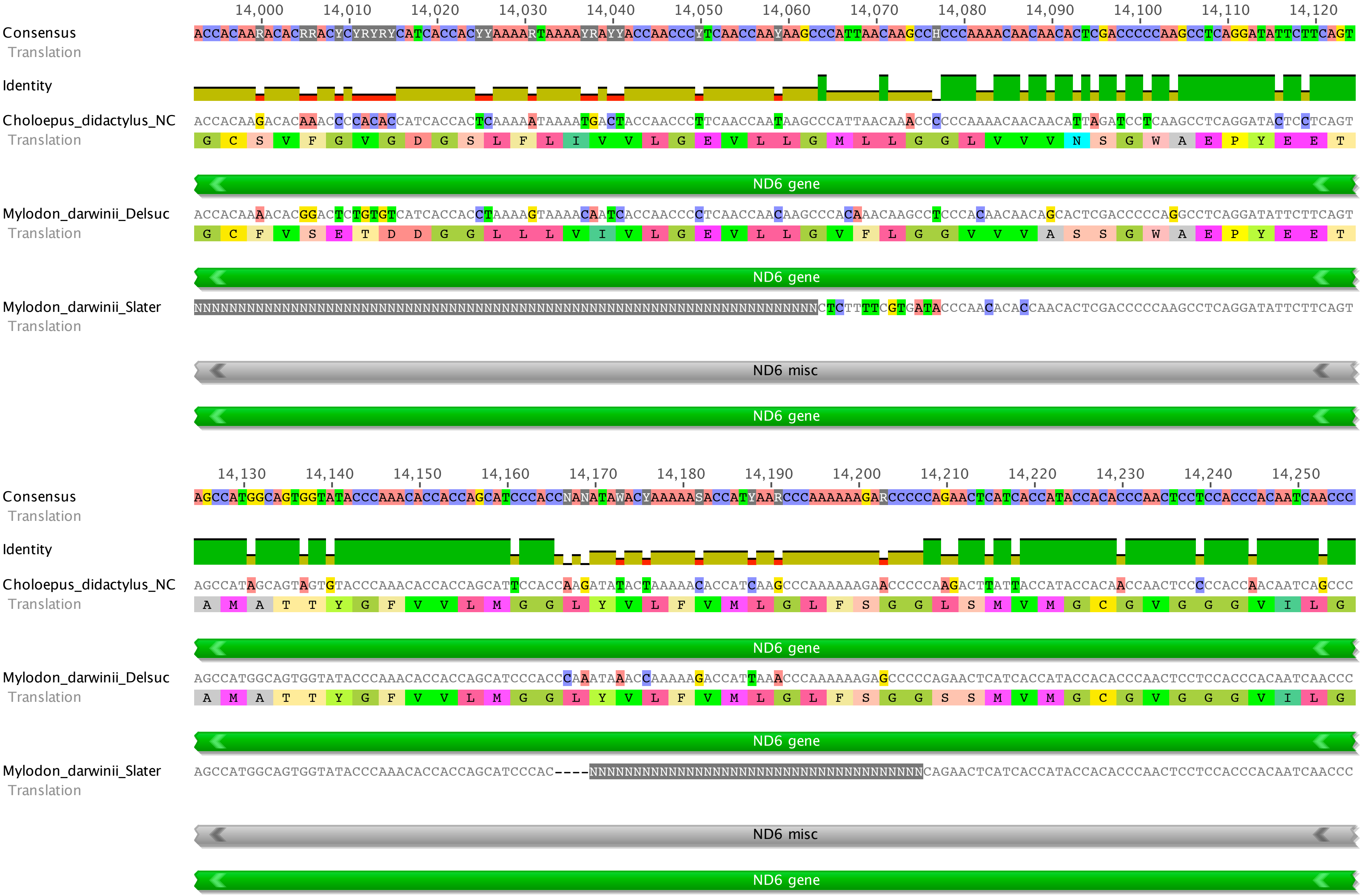

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Consensus             ACCACAARACACRRACYCYRYRYCATCACCACYYAAAARTAAAAYRAYYACCAACCCYTCAACCAAYAAGCCCATTAACAAGCCHCCCAAAACAACAACACTCGACCCCCAAGCCTCAGGATATTCTTCAGT
 Translation
Identity
Choloepus_didactylus_NC ACCACAAGACACAAACCCCACACCATCACCACTCAAAAATAAAATGACTACCAACCCTTCAACCAATAAGCCCATTAACAAACCCCCCAAAACAACAACATTAGATCCTCAAGCCTCAGGATACTCCTCAGT
 Translation           G  C  S  V  F  G  V  G  D  G  S  L  F  L  I  V  V  L  G  E  V  L  L  G  M  L  L  G  G  L  V  V  V  N  S  G  W  A  E  P  Y  E  E  T
                      ND6 gene
Mylodon_darwinii_Delsuc ACCACAAAACACGGACTCTGTGTCATCACCACCTAAAAGTAAAACAATCACCAACCCCTCAACCAACAAGCCCACAAACAAGCCTCCCACAACAACAGCACTCGACCCCCAGGCCTCAGGATATTCTTCAGT
 Translation           G  C  F  V  S  E  T  D  D  G  G  L  L  L  V  I  V  L  G  E  V  L  L  G  V  F  L  G  G  V  V  V  A  S  S  G  W  A  E  P  Y  E  E  T
                      ND6 gene
Mylodon_darwinii_Slater NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCTCTTTTCGTGATACCCAACACACCAACACTCGACCCCCAAGCCTCAGGATATTCTTCAGT
 Translation
                      ND6 misc
                      ND6 gene

                      14,130 14,140 14,150 14,160 14,170 14,180 14,190 14,200 14,210 14,220 14,230 14,240 14,250
Consensus             AGCCATGGCAGTGGTATACCCAAACACCACCAGCATCCCACCNANATAWACYAAAAASACCATYAARCCCAAAAAAGARCCCCCAGAACTCATCACCATACCACACCCAACTCCTCCACCCACAATCAACCC
 Translation
Identity
Choloepus_didactylus_NC AGCCATAGCAGTAGTGTACCCAAACACCACCAGCATTCCACCAAGATATACTAAAAACACCATCAAGCCCAAAAAAGAACCCCCAAGACTTATTACCATACCACAACCAACTCCCCCACCAACAATCAGCCC
 Translation           A  M  A  T  T  Y  G  F  V  V  L  M  G  G  L  Y  V  L  F  V  M  L  G  L  F  S  G  G  L  S  M  V  M  G  C  G  V  G  G  G  V  I  L  G
                      ND6 gene
Mylodon_darwinii_Delsuc AGCCATGGCAGTGGTATACCCAAACACCACCAGCATCCCACCCAAATAAACCAAAAAGACCATTAAACCCAAAAAAGAGCCCCCAGAACTCATCACCATACCACACCCAACTCCTCCACCCACAATCAACCC
 Translation           A  M  A  T  T  Y  G  F  V  V  L  M  G  G  L  Y  V  L  F  V  M  L  G  L  F  S  G  G  S  S  M  V  M  G  C  G  V  G  G  G  V  I  L  G
                      ND6 gene
Mylodon_darwinii_Slater AGCCATGGCAGTGGTATACCCAAACACCACCAGCATCCCAC----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCAGAACTCATCACCATACCACACCCAACTCCTCCACCCACAATCAACCC
 Translation
                      ND6 misc
                      ND6 gene
```

```
Consensus                  CAAACCACCATAAATAGGAGATGGCTTAGACGAAAAACCAATAAAACTAACCACAAAAACCACACTTAGTAAAAACACGGTATATATCATAATTCTCACATGAGATCTAACCATGACCAATGATATGAAAAA
 Translation
Choloepus_didactylus_NC    CAAACCTCCATAAATAGGAGATGGCTTGCATGAAAAACCAACAAAACTAGCCACAAAAATTACACTTAACAAAAATACAATATATATCATAATTCTCACATGGAATTTAACCATGACCAATGGCATGAAAAA
 Translation               L  G  G  Y  I  P  S  P  K  C  S  F  G  V  F  S  A  V  F  I  V  S  L  L  F  V  I  Y  M  M
Mylodon_darwinii_Delsuc    CAAACCACCATAAATAGGAGATGGCTTAGACGAAAAACCAATAAAACTAACCACAAAAACCACACTTAGTAAAAACACGGTATATATCATAATTCTCACATGAGATCTAACCATGACCAATGATATGAAAAA
 Translation               L  G  G  Y  I  P  S  P  K  S  S  F  G  I  F  S  V  V  F  V  V  S  L  L  F  V  T  Y  M  M
Mylodon_darwinii_Slater    CAAACCACCATAAATAGGAGATGGCTTAGACGAAAAACCAATAAAACTAACCACAAAAACCACACTTAGTAAAAACACGGTATATATCATAATTCTCACATGAGATCTAACCATGACCAATGATATGAAAAA
 Translation

Consensus                  CCACCGTTGTAATTCAACTATGAGAACTAATGACCAACATTCGCAAAACACACCCCCTGTTCAAAATCATTAACCACGCGTTCACTGACCTACCCGCACCATCAAACATCTCGGCATGGTGAAACTTCGGCT
 Translation
Choloepus_didactylus_NC    CCACCGTTGTGACTCAACTACAAGAACTAATGACCAACATTCGCAAAACACACCCCCTTATTTAAAATCATTAACCACACATTTATCGACCTACCCACACCATCAAACATCTCGACCTGATGAAACTTTGGCT
 Translation                                                         M  T  N  I  R  K  T  H  P  L  F  K  I  I  N  H  T  F  I  D  L  P  T  P  S  N  I  S  T  W  W  N  F  G
Mylodon_darwinii_Delsuc    CCACCGTTGTAATTCAACTATGAGAACTAATGACCAACATTCGCAAAACACACCCCCTGTTCAAAATCATTAACCACGCGTTCACTGACCTACCCGCACCATCAAACATCTCGGCATGGTGAAACTTCGGCT
 Translation                                                         M  T  N  I  R  K  T  H  P  L  F  K  I  I  N  H  A  F  T  D  L  P  A  P  S  N  I  S  A  W  W  N  F  G
Mylodon_darwinii_Slater    CCACCGTTGTAATTCAACTATGAGAACTAATGACCAACATTCGCAAAACACACCCCCTGTTCAAAATCATTAACCACGCGTTCACTGACCTACCCGCACCATCAAACATCTCGGCATGGTGAAACTTCGGCT
 Translation
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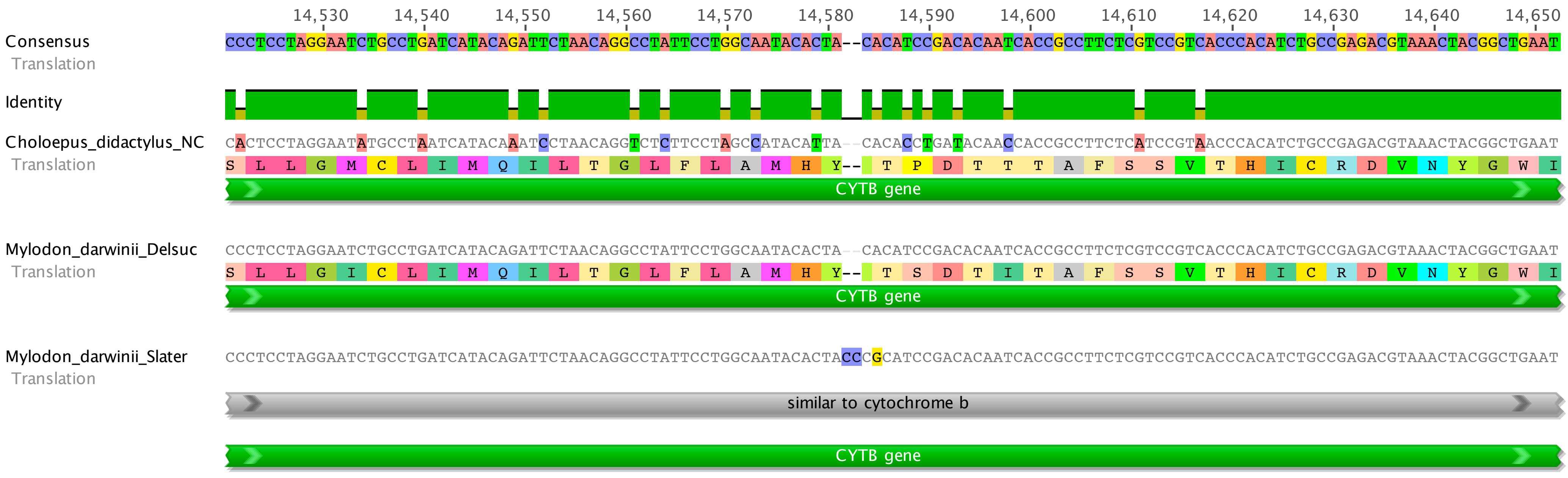

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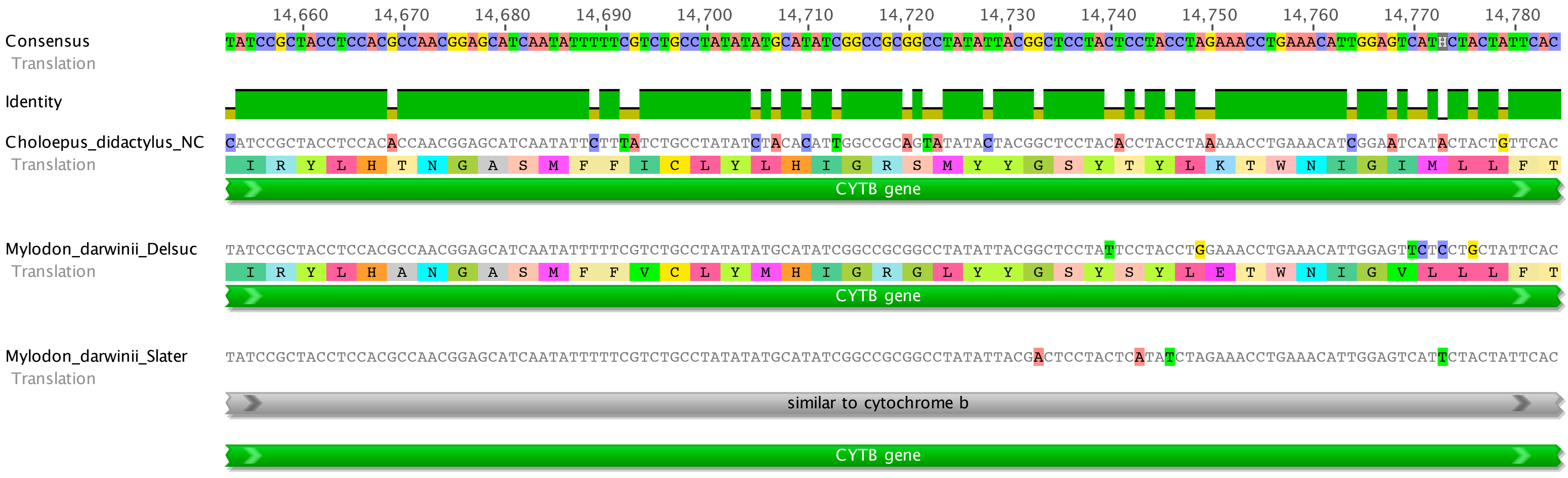
                14,530    14,540    14,550    14,560    14,570    14,580    14,590    14,600    14,610    14,620    14,630    14,640    14,650
Consensus               CCCTCCTAGGAATCTGCCTGATCATACAGATTCTAACAGGCCTATTCCTGGCAATACACTA--CACATCCGACACAATCACCGCCTTCTCGTCCGTCACCCACATCTGCCGAGACGTAAACTACGGCTGAAT
 Translation
Identity
Choloepus_didactylus_NC CACTCCTAGGAATATGCCTAATCATACAAATCCTAACAGGTCTCTTCCTAGCCATACATTA--CACACCTGATACAACCACCGCCTTCTCATCCGTAACCCACATCTGCCGAGACGTAAACTACGGCTGAAT
 Translation            S L L G M C L I M Q I L T G L F L A M H Y-- T P D T T T A F S S V T H I C R D V N Y G W I
                        CYTB gene
Mylodon_darwinii_Delsuc CCCTCCTAGGAATCTGCCTGATCATACAGATTCTAACAGGCCTATTCCTGGCAATACACTA--CACATCCGACACAATCACCGCCTTCTCGTCCGTCACCCACATCTGCCGAGACGTAAACTACGGCTGAAT
 Translation            S L L G I C L I M Q I L T G L F L A M H Y-- T S D T I T A F S S V T H I C R D V N Y G W I
                        CYTB gene
Mylodon_darwinii_Slater CCCTCCTAGGAATCTGCCTGATCATACAGATTCTAACAGGCCTATTCCTGGCAATACACTACCCGCATCCGACACAATCACCGCCTTCTCGTCCGTCACCCACATCTGCCGAGACGTAAACTACGGCTGAAT
 Translation
                        similar to cytochrome b
                        CYTB gene
```



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                14,660    14,670    14,680    14,690    14,700    14,710    14,720    14,730    14,740    14,750    14,760    14,770    14,780
Consensus               TATCCGCTACCTCCACGCCAACGGAGCATCAATATTTTTCGTCTGCCTATATATGCATATCGGCCGCGGCCTATATTACGGCTCCTACTCCTACCTAGAAACCTGAAACATTGGAGTCATHCTACTATTCAC
 Translation
Identity
Choloepus_didactylus_NC CATCCGCTACCTCCACACCAACGGAGCATCAATATTCTTTATCTGCCTATATCTACACATTGGCCGCAGTATATACTACGGCTCCTACACCTACCTAAAAACCTGAAACATCGGAATCATACTACTGTTCAC
 Translation            I R Y L H T N G A S M F F I C L Y L H I G R S M Y Y G S Y T Y L K T W N I G I M L L F T
                        CYTB gene
Mylodon_darwinii_Delsuc TATCCGCTACCTCCACGCCAACGGAGCATCAATATTTTTCGTCTGCCTATATATGCATATCGGCCGCGGCCTATATTACGGCTCCTATTCCTACCTGGAAACCTGAAACATTGGAGTTCTCCTGCTATTCAC
 Translation            I R Y L H A N G A S M F F V C L Y M H I G R G L Y Y G S Y S Y L E T W N I G V L L L F T
                        CYTB gene
Mylodon_darwinii_Slater TATCCGCTACCTCCACGCCAACGGAGCATCAATATTTTTCGTCTGCCTATATATGCATATCGGCCGCGGCCTATATTACGACTCCTACTCATATCTAGAAACCTGAAACATTGGAGTCATTCTACTATTCAC
 Translation
                        similar to cytochrome b
                        CYTB gene
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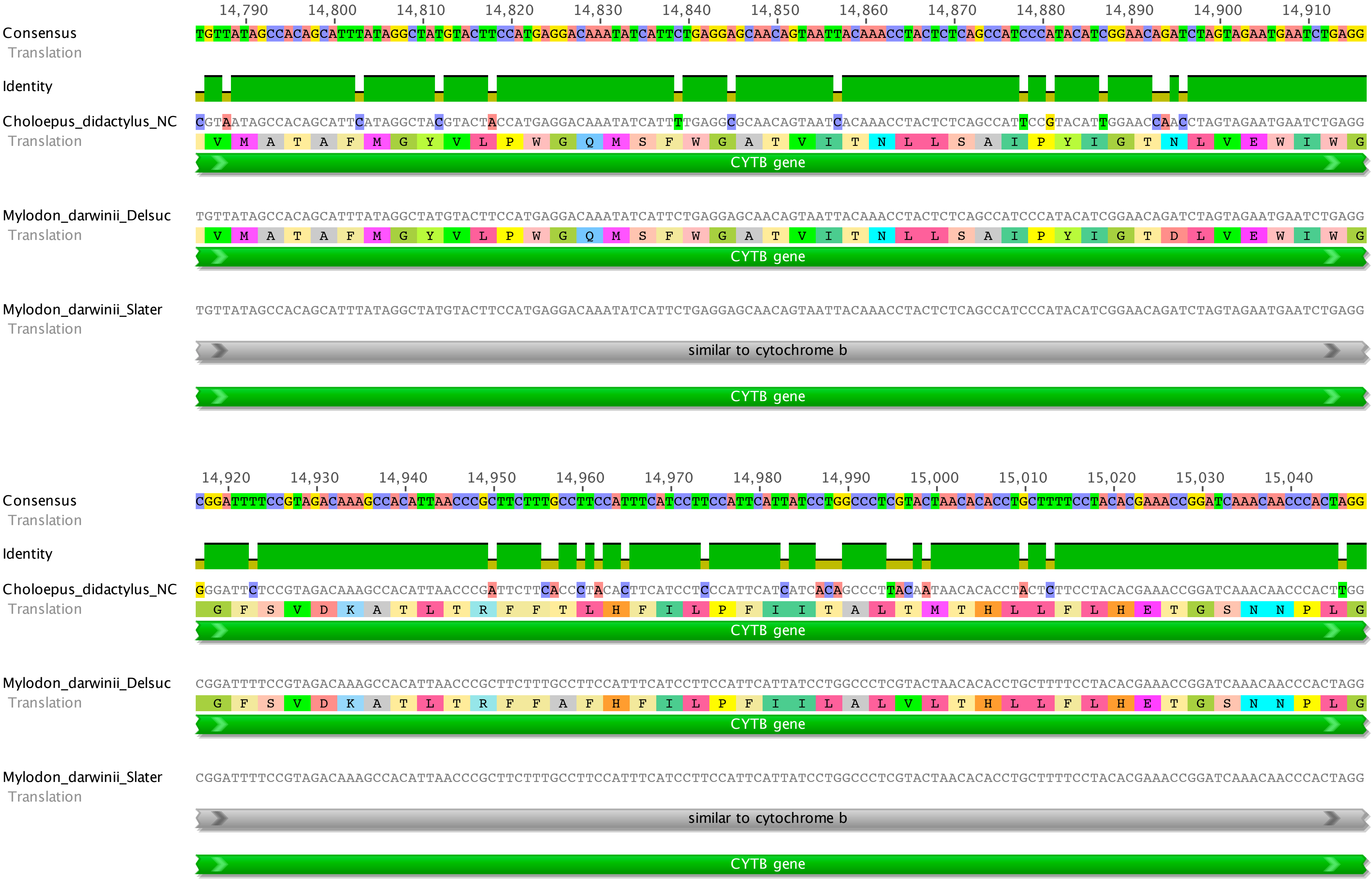


Consensus TGTTATAGCCACAGCATTTATAGGCTATGTACTTCCATGAGGACAAATATCATTCTGAGGAGCAACAGTAATTACAAACCTACTCTCAGCCATCCCATACATCGGAACAGATCTAGTAGAATGAATCTGAGG

Translation

Choloepus_didactylus_NC CGTAATAGCCACAGCATTCATAGGCTACGTACTACCATGAGGACAAATATCATTTTGAGGCGCAACAGTAATCACAAACCTACTCTCAGCCATTCCGTACATTGGAACCAACCTAGTAGAATGAATCTGAGG

Translation V M A T A F M G Y V L P W G Q M S F W G A T V I T N L L S A I P Y I G T N L V E W I W G

Mylodon_darwinii_Delsuc TGTTATAGCCACAGCATTTATAGGCTATGTACTTCCATGAGGACAAATATCATTCTGAGGAGCAACAGTAATTACAAACCTACTCTCAGCCATCCCATACATCGGAACAGATCTAGTAGAATGAATCTGAGG

Translation V M A T A F M G Y V L P W G Q M S F W G A T V I T N L L S A I P Y I G T D L V E W I W G

Mylodon_darwinii_Slater TGTTATAGCCACAGCATTTATAGGCTATGTACTTCCATGAGGACAAATATCATTCTGAGGAGCAACAGTAATTACAAACCTACTCTCAGCCATCCCATACATCGGAACAGATCTAGTAGAATGAATCTGAGG

Translation

Consensus CGGATTTTCCGTAGACAAAGCCACATTAACCCGCTTCTTTGCCTTCCATTTCATCCTTCCATTCATTATCCTGGCCCTCGTACTAACACACCTGCTTTTCCTACACGAAACCGGATCAAACAACCCACTAGG

Translation

Choloepus_didactylus_NC GGGATTCTCCGTAGACAAAGCCACATTAACCCGATTCTTCACCCTACACTTCATCCTCCCATTCATCATCACAGCCCTTACAATAACACACCTACTCTTCCTACACGAAACCGGATCAAACAACCCACTTGG

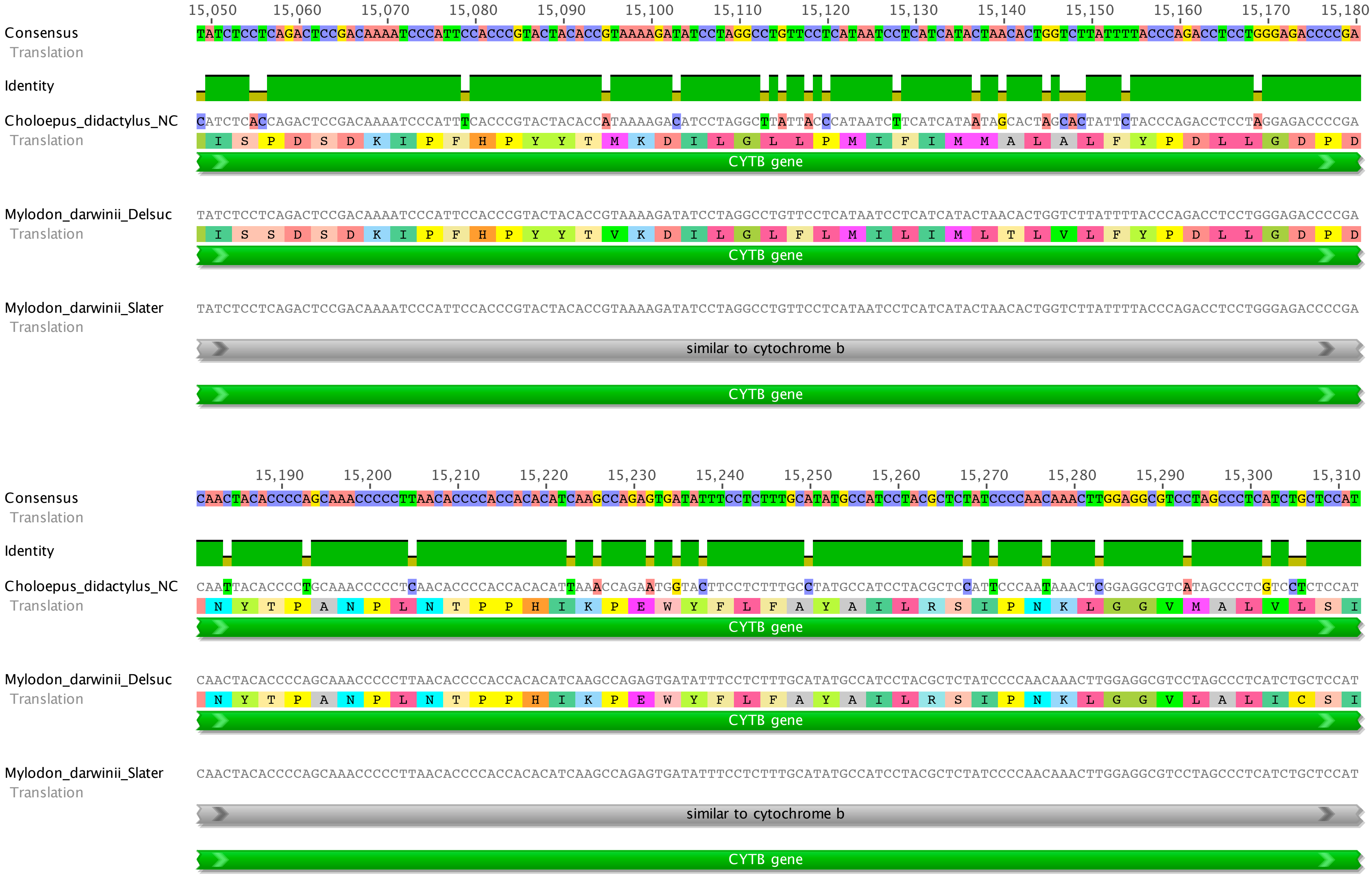
Translation G F S V D K A T L T R F F T L H F I L P F I I T A L T M T H L L F L H E T G S N N P L G

Mylodon_darwinii_Delsuc CGGATTTTCCGTAGACAAAGCCACATTAACCCGCTTCTTTGCCTTCCATTTCATCCTTCCATTCATTATCCTGGCCCTCGTACTAACACACCTGCTTTTCCTACACGAAACCGGATCAAACAACCCACTAGG

Translation G F S V D K A T L T R F F A F H F I L P F I I L A L V L T H L L F L H E T G S N N P L G

Mylodon_darwinii_Slater CGGATTTTCCGTAGACAAAGCCACATTAACCCGCTTCTTTGCCTTCCATTTCATCCTTCCATTCATTATCCTGGCCCTCGTACTAACACACCTGCTTTTCCTACACGAAACCGGATCAAACAACCCACTAGG

Translation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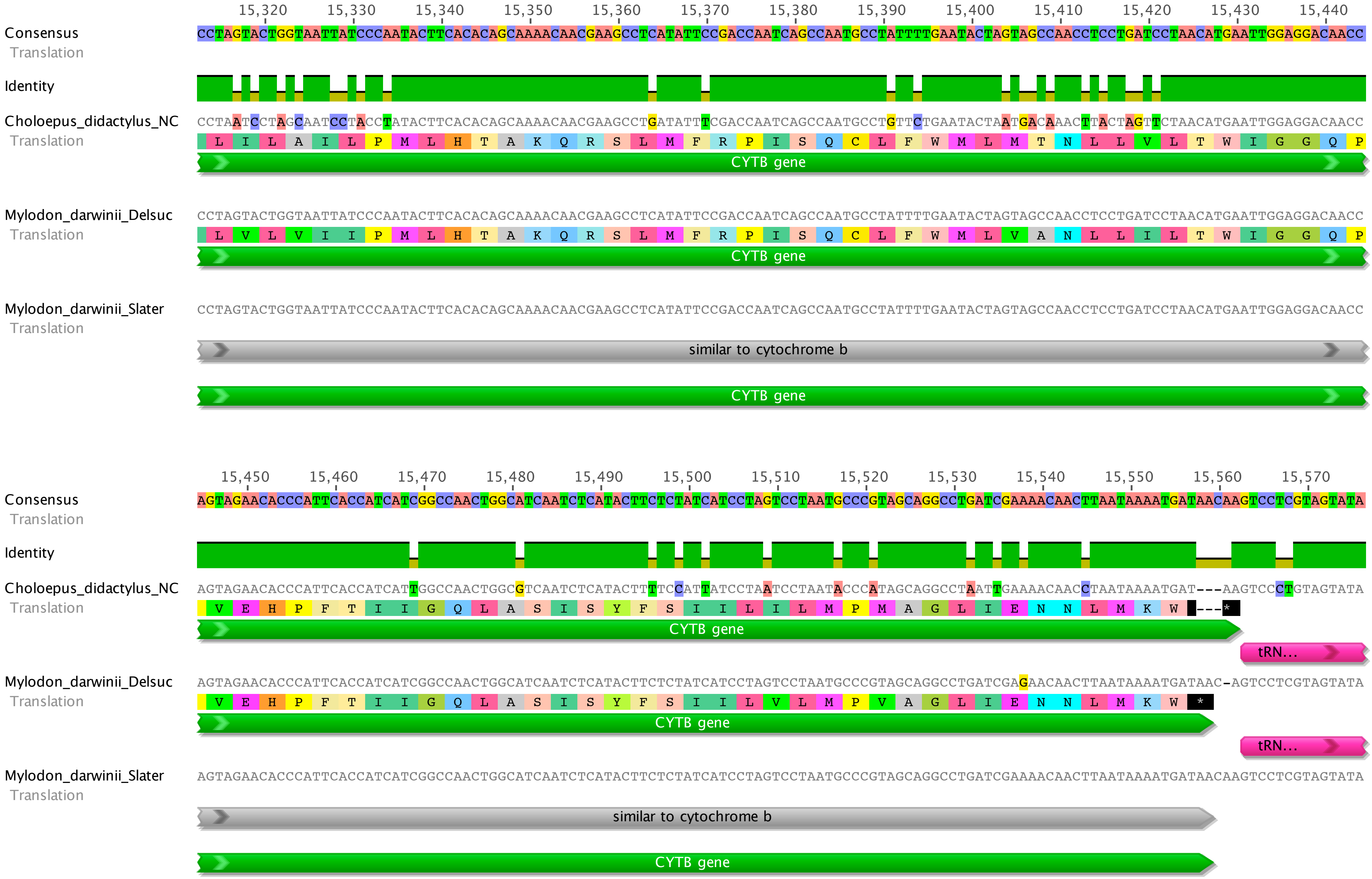
15,060
15,070
15,080
15,090
15,100
15,110
15,120
15,130
15,140
15,150
15,160
15,170
15,180
Consensus
TATCTCCTCAGACTCCGACAAAATCCCATTCCACCCGTACTACACCGTAAAAGATATCCTAGGCCTGTTCCTCATAATCCTCATCATACTAACACTGGTCTTATTTTACCCAGACCTCCTGGGAGACCCCGA
Translation
Identity
Choloepus_didactylus_NC
CATCTCACCAGACTCCGACAAAATCCCATTTCACCCGTACTACACCATAAAAGACATCCTAGGCTTATTACCCATAATCTTCATCATAATAGCACTAGCACTATTCTACCCAGACCTCCTAGGAGACCCCGA
Translation
I S P D S D K I P F H P Y Y T M K D I L G L L P M I F I M M A L A L F Y P D L L G D P D
CYTB gene
Mylodon_darwinii_Delsuc
TATCTCCTCAGACTCCGACAAAATCCCATTCCACCCGTACTACACCGTAAAAGATATCCTAGGCCTGTTCCTCATAATCCTCATCATACTAACACTGGTCTTATTTTACCCAGACCTCCTGGGAGACCCCGA
Translation
I S S D S D K I P F H P Y Y T V K D I L G L F L M I L I M L T L V L F Y P D L L G D P D
CYTB gene
Mylodon_darwinii_Slater
TATCTCCTCAGACTCCGACAAAATCCCATTCCACCCGTACTACACCGTAAAAGATATCCTAGGCCTGTTCCTCATAATCCTCATCATACTAACACTGGTCTTATTTTACCCAGACCTCCTGGGAGACCCCGA
Translation
similar to cytochrome b
CYTB gene
15,190
15,200
15,210
15,220
15,230
15,240
15,250
15,260
15,270
15,280
15,290
15,300
15,310
Consensus
CAACTACACCCCAGCAAACCCCCTTAACACCCCACCACACATCAAGCCAGAGTGATATTTCCTCTTTGCATATGCCATCCTACGCTCTATCCCCAACAAACTTGGAGGCGTCCTAGCCCTCATCTGCTCCAT
Translation
Identity
Choloepus_didactylus_NC
CAATTACACCCCTGCAAACCCCCTCAACACCCCACCACACATTAAACCAGAATGGTACTTCCTCTTTGCCTATGCCATCCTACGCTCCATTCCCAATAAACTCGGAGGCGTCATAGCCCTCGTCCTCTCCAT
Translation
N Y T P A N P L N T P P H I K P E W Y F L F A Y A I L R S I P N K L G G V M A L V L S I
CYTB gene
Mylodon_darwinii_Delsuc
CAACTACACCCCAGCAAACCCCCTTAACACCCCACCACACATCAAGCCAGAGTGATATTTCCTCTTTGCATATGCCATCCTACGCTCTATCCCCAACAAACTTGGAGGCGTCCTAGCCCTCATCTGCTCCAT
Translation
N Y T P A N P L N T P P H I K P E W Y F L F A Y A I L R S I P N K L G G V L A L I C S I
CYTB gene
Mylodon_darwinii_Slater
CAACTACACCCCAGCAAACCCCCTTAACACCCCACCACACATCAAGCCAGAGTGATATTTCCTCTTTGCATATGCCATCCTACGCTCTATCCCCAACAAACTTGGAGGCGTCCTAGCCCTCATCTGCTCCAT
Translation
similar to cytochrome b
CYTB gene



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Consensus                CCTAGTACTGGTAATTATCCCAATACTTCACACAGCAAAACAACGAAGCCTCATATTCCGACCAATCAGCCAATGCCTATTTTGAATACTAGTAGCCAACCTCCTGATCCTAACATGAATTGGAGGACAACC
Choloepus_didactylus_NC  CCTAATCCTAGCAATCCTACCTATACTTCACACAGCAAAACAACGAAGCCTGATATTTCGACCAATCAGCCAATGCCTGTTCTGAATACTAATGACAAACTTACTAGTTCTAACATGAATTGGAGGACAACC
Translation              L I L A I L P M L H T A K Q R S L M F R P I S Q C L F W M L M T N L L V L T W I G G Q P
Mylodon_darwinii_Delsuc  CCTAGTACTGGTAATTATCCCAATACTTCACACAGCAAAACAACGAAGCCTCATATTCCGACCAATCAGCCAATGCCTATTTTGAATACTAGTAGCCAACCTCCTGATCCTAACATGAATTGGAGGACAACC
Translation              L V L V I I P M L H T A K Q R S L M F R P I S Q C L F W M L V A N L L I L T W I G G Q P
Mylodon_darwinii_Slater  CCTAGTACTGGTAATTATCCCAATACTTCACACAGCAAAACAACGAAGCCTCATATTCCGACCAATCAGCCAATGCCTATTTTGAATACTAGTAGCCAACCTCCTGATCCTAACATGAATTGGAGGACAACC

Consensus                AGTAGAACACCCATTCACCATCATCGGCCAACTGGCATCAATCTCATACTTCTCTATCATCCTAGTCCTAATGCCCGTAGCAGGCCTGATCGAAAACAACTTAATAAAATGATAACAAGTCCTCGTAGTATA
Choloepus_didactylus_NC  AGTAGAACACCCATTCACCATCATTGGCCAACTGGCGTCAATCTCATACTTTTCCATTATCCTAATCCTAATACCCATAGCAGGCCTAATTGAAAACAACCTAATAAAATGAT---AAGTCCCTGTAGTATA
Translation              V E H P F T I I G Q L A S I S Y F S I I L I L M P M A G L I E N N L M K W ---*
Mylodon_darwinii_Delsuc  AGTAGAACACCCATTCACCATCATCGGCCAACTGGCATCAATCTCATACTTCTCTATCATCCTAGTCCTAATGCCCGTAGCAGGCCTGATCGAGAACAACTTAATAAAATGATAAC-AGTCCTCGTAGTATA
Translation              V E H P F T I I G Q L A S I S Y F S I I L V L M P V A G L I E N N L M K W *
Mylodon_darwinii_Slater  AGTAGAACACCCATTCACCATCATCGGCCAACTGGCATCAATCTCATACTTCTCTATCATCCTAGTCCTAATGCCCGTAGCAGGCCTGATCGAAAACAACTTAATAAAATGATAACAAGTCCTCGTAGTATA
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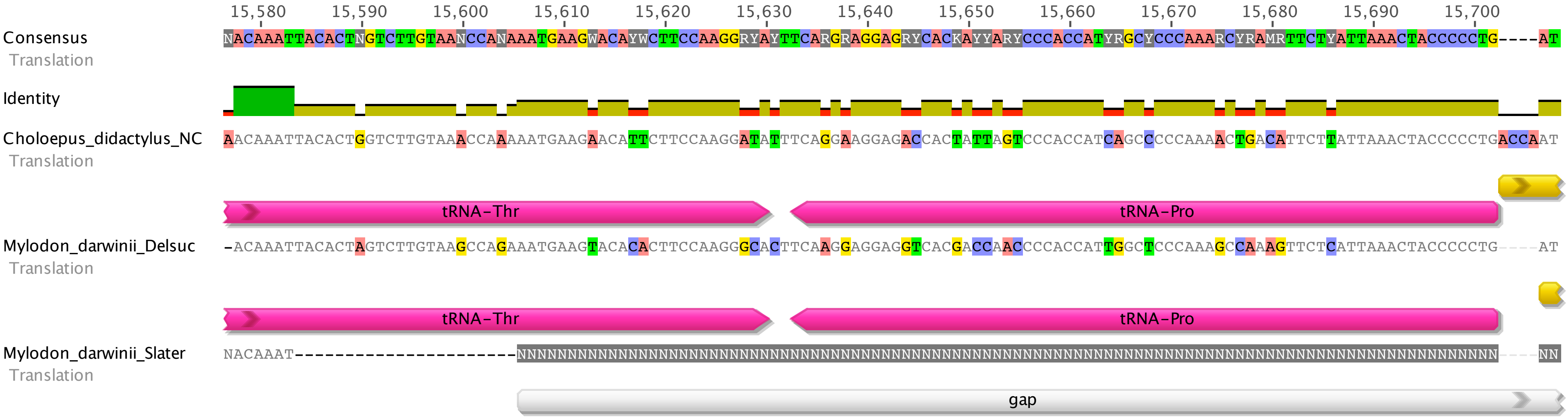
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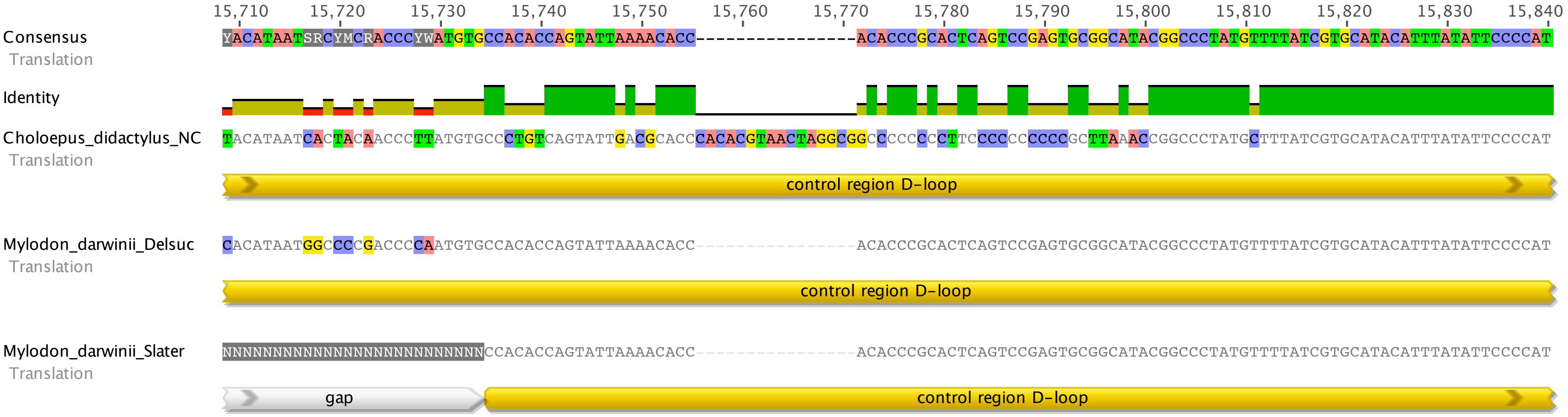
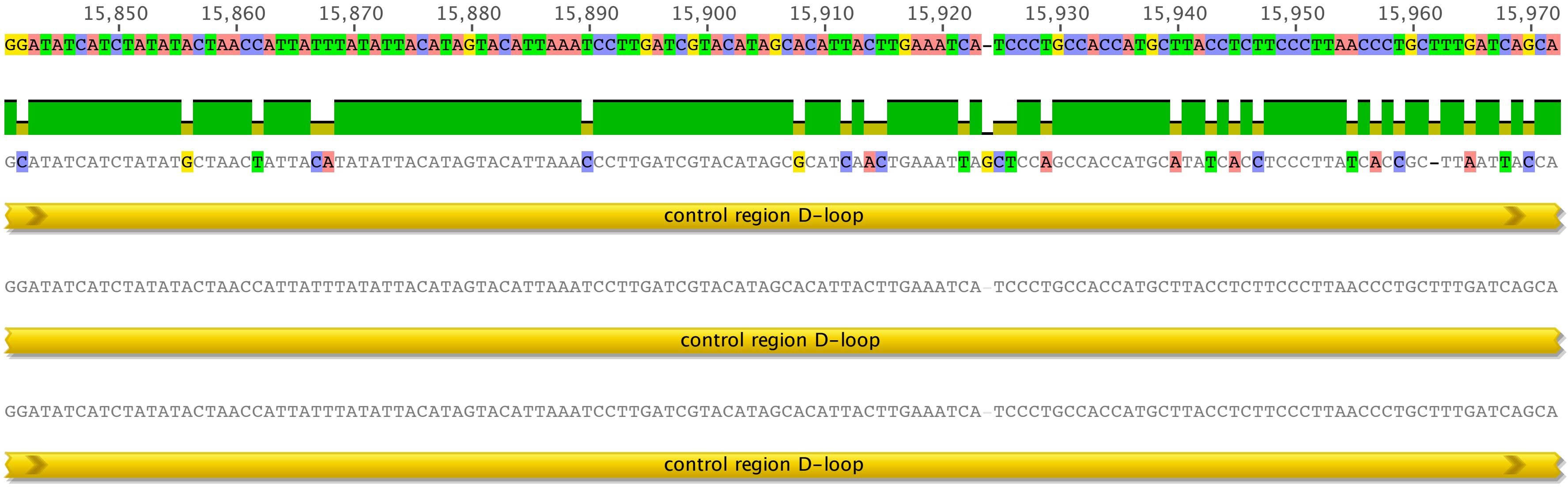
15,590
15,600
15,610
15,620
15,630
15,640
15,650
15,660
15,670
15,680
15,690
15,700
Consensus
NACAAATTACACTNGTCTTGTAANCCANAAATGAAGWACAYWCTTCCAAGGRYAYTTCARGRAGGAGRYCACKAYYARYCCCACCATYRGCYCCCAAARCYRAMRTTCTYATTAAACTACCCCCTG----AT
Translation
Identity
Choloepus_didactylus_NC
AACAAATTACACTGGTCTTGTAAACCAAAAATGAAGAACATTCTTCCAAGGATATTTCAGGAAGGAGACCACTATTAGTCCCACCATCAGCCCCCAAAACTGACATTCTTATTAAACTACCCCCTGACCAAT
Translation
tRNA-Thr
tRNA-Pro
Mylodon_darwinii_Delsuc
-ACAAATTACACTAGTCTTGTAAGCCAGAAATGAAGTACACACTTCCAAGGGCACTTCAAGGAGGAGGTCACGACCAACCCCACCATTGGCTCCCAAAGCCAAAGTTCTCATTAAACTACCCCCTG----AT
Translation
tRNA-Thr
tRNA-Pro
Mylodon_darwinii_Slater
NACAAAT----------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NN
Translation
gap


15,710
15,720
15,730
15,740
15,750
15,760
15,770
15,780
15,790
15,800
15,810
15,820
15,830
15,840
Consensus
YACATAATSRCYMCRACCCYWATGTGCCACACCAGTATTAAAACACC----------------ACACCCGCACTCAGTCCGAGTGCGGCATACGGCCCTATGTTTTATCGTGCATACATTTATATTCCCCAT
Translation
Identity
Choloepus_didactylus_NC
TACATAATCACTACAACCCTTATGTGCCCTGTCAGTATTGACGCACCCACACGTAACTAGGCGGCCCCCCCCTTCCCCCCCCCCGCTTAAACCGGCCCTATGCTTTATCGTGCATACATTTATATTCCCCAT
Translation
control region D-loop
Mylodon_darwinii_Delsuc
CACATAATGGCCCCGACCCCAATGTGCCACACCAGTATTAAAACACC----------------ACACCCGCACTCAGTCCGAGTGCGGCATACGGCCCTATGTTTTATCGTGCATACATTTATATTCCCCAT
Translation
control region D-loop
Mylodon_darwinii_Slater
NNNNNNNNNNNNNNNNNNNNNNNNNNCCACACCAGTATTAAAACACC----------------ACACCCGCACTCAGTCCGAGTGCGGCATACGGCCCTATGTTTTATCGTGCATACATTTATATTCCCCAT
Translation
gap
control region D-loop



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                         15,850    15,860    15,870    15,880    15,890    15,900    15,910    15,920    15,930    15,940    15,950    15,960    15,970
Consensus                GGATATCATCTATATACTAACCATTATTTATATTACATAGTACATTAAATCCTTGATCGTACATAGCACATTACTTGAAATCA-TCCCTGCCACCATGCTTACCTCTTCCCTTAACCCTGCTTTGATCAGCA
 Translation
Identity
Choloepus_didactylus_NC  GCATATCATCTATATGCTAACTATTACATATATTACATAGTACATTAAACCCTTGATCGTACATAGCGCATCAACTGAAATTAGCTCCAGCCACCATGCATATCACCTCCCTTATCACCGC-TTAATTACCA
 Translation
                         control region D-loop
Mylodon_darwinii_Delsuc  GGATATCATCTATATACTAACCATTATTTATATTACATAGTACATTAAATCCTTGATCGTACATAGCACATTACTTGAAATCA-TCCCTGCCACCATGCTTACCTCTTCCCTTAACCCTGCTTTGATCAGCA
 Translation
                         control region D-loop
Mylodon_darwinii_Slater  GGATATCATCTATATACTAACCATTATTTATATTACATAGTACATTAAATCCTTGATCGTACATAGCACATTACTTGAAATCA-TCCCTGCCACCATGCTTACCTCTTCCCTTAACCCTGCTTTGATCAGCA
 Translation
                         control region D-loop
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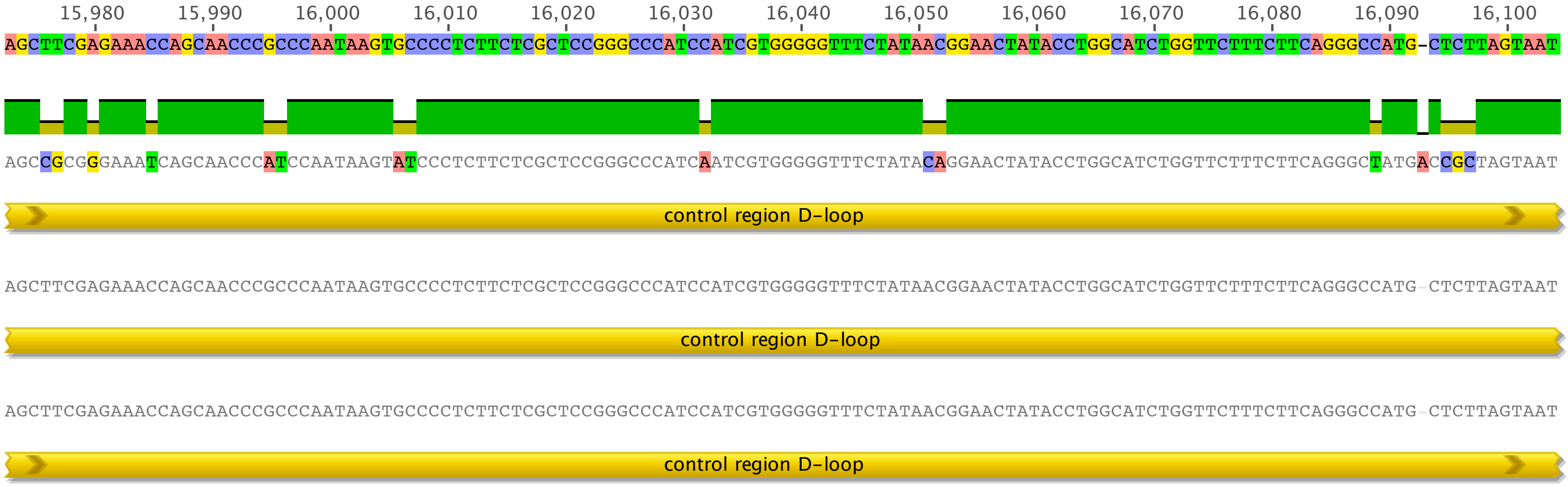

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                         15,980    15,990    16,000    16,010    16,020    16,030    16,040    16,050    16,060    16,070    16,080    16,090    16,100
Consensus                AGCTTCGAGAAACCAGCAACCCGCCCAATAAGTGCCCCTCTTCTCGCTCCGGGCCCATCCATCGTGGGGGTTTCTATAACGGAACTATACCTGGCATCTGGTTCTTTCTTCAGGGCCATG-CTCTTAGTAAT
 Translation
Identity
Choloepus_didactylus_NC  AGCCGCGGGAAATCAGCAACCCATCCAATAAGTATCCCTCTTCTCGCTCCGGGCCCATCAATCGTGGGGGTTTCTATACAGGAACTATACCTGGCATCTGGTTCTTTCTTCAGGGCTATGACCGCTAGTAAT
 Translation
                         control region D-loop
Mylodon_darwinii_Delsuc  AGCTTCGAGAAACCAGCAACCCGCCCAATAAGTGCCCCTCTTCTCGCTCCGGGCCCATCCATCGTGGGGGTTTCTATAACGGAACTATACCTGGCATCTGGTTCTTTCTTCAGGGCCATG-CTCTTAGTAAT
 Translation
                         control region D-loop
Mylodon_darwinii_Slater  AGCTTCGAGAAACCAGCAACCCGCCCAATAAGTGCCCCTCTTCTCGCTCCGGGCCCATCCATCGTGGGGGTTTCTATAACGGAACTATACCTGGCATCTGGTTCTTTCTTCAGGGCCATG-CTCTTAGTAAT
 Translation
                         control region D-loop
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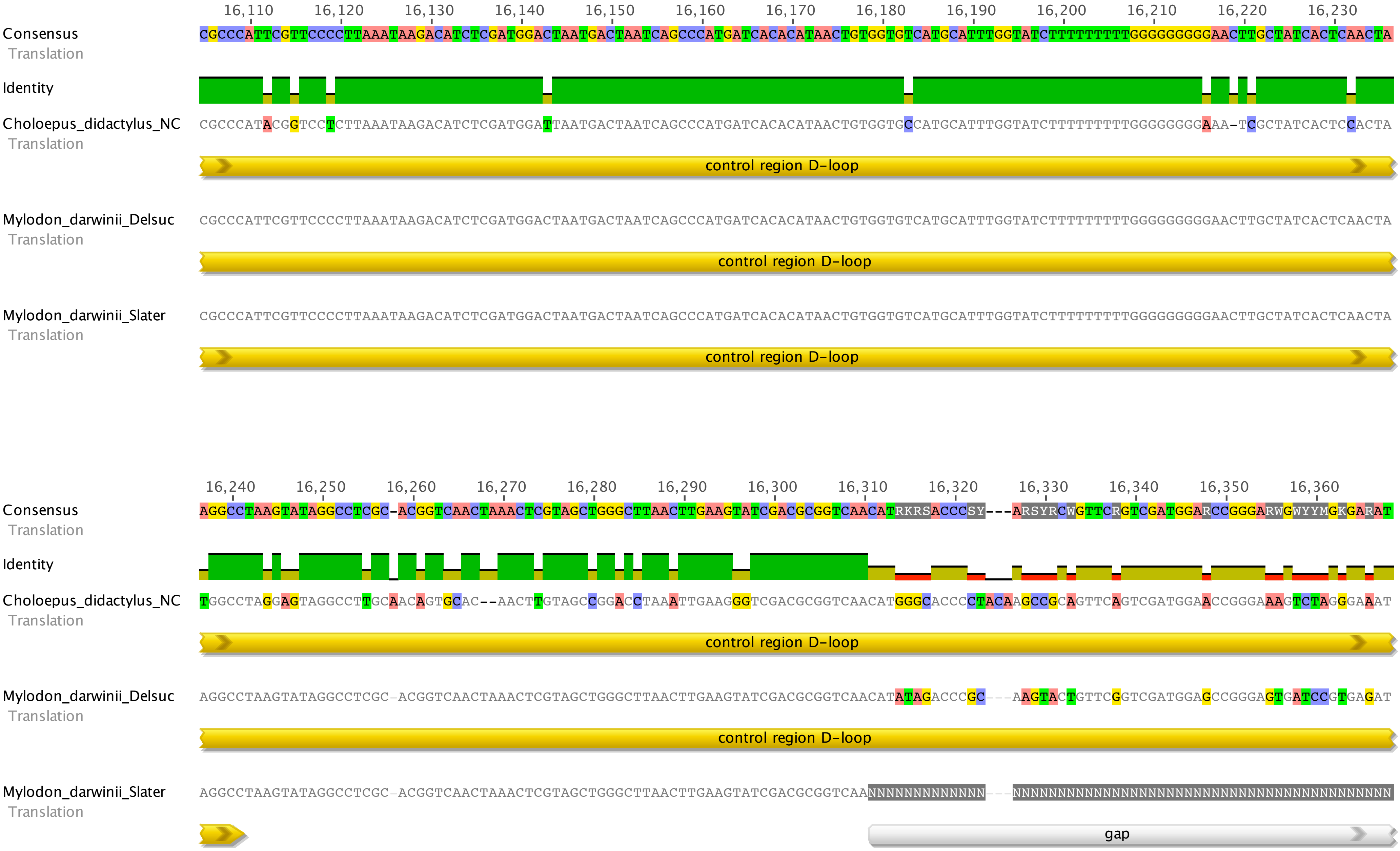

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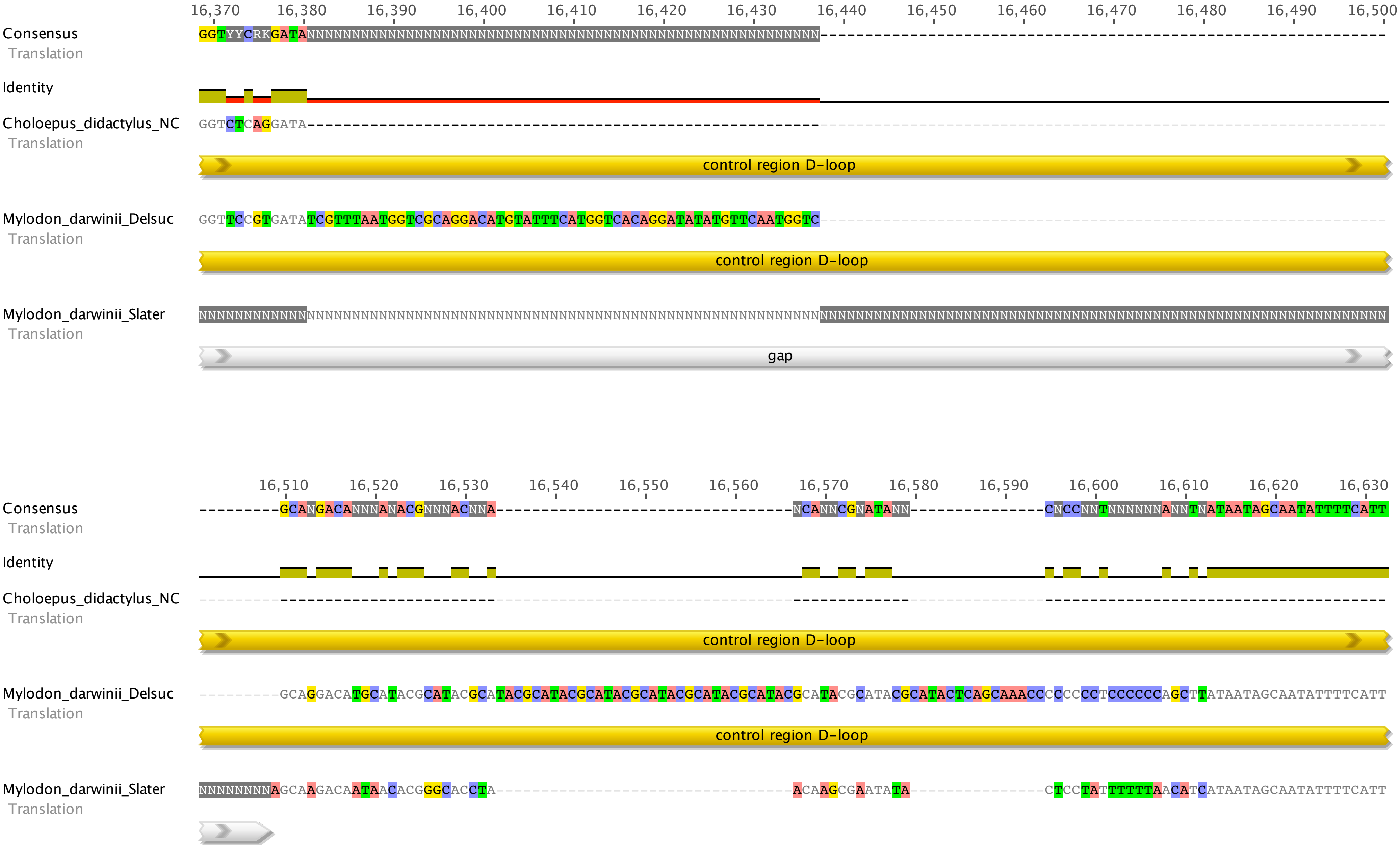
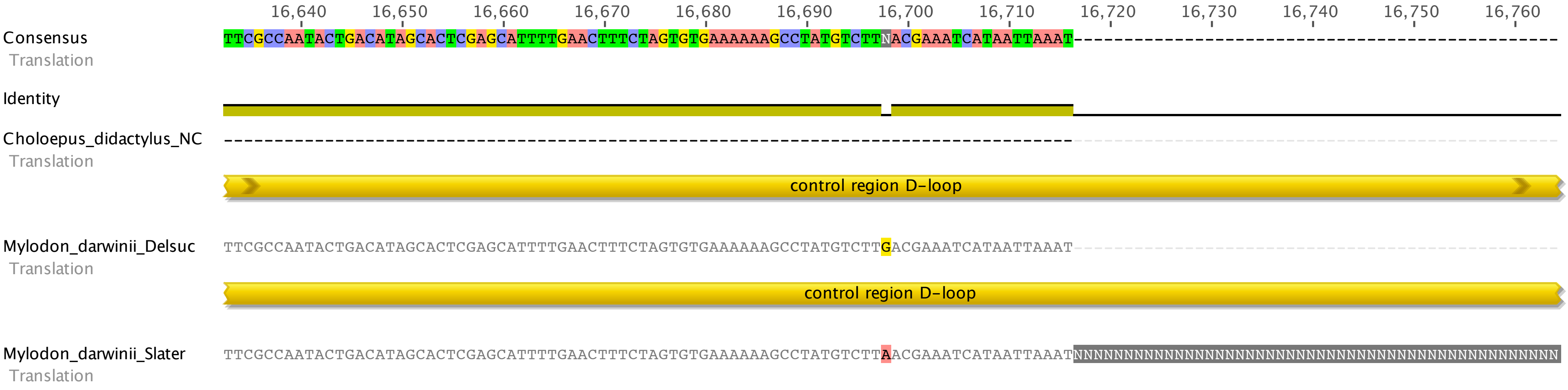
Consensus                 CGCCCATTCGTTCCCCTTAAATAAGACATCTCGATGGACTAATGACTAATCAGCCCATGATCACACATAACTGTGGTGTCATGCATTTGGTATCTTTTTTTTTGGGGGGGGGAACTTGCTATCACTCAACTA
 Translation
Choloepus_didactylus_NC   CGCCCATACGGTCCTCTTAAATAAGACATCTCGATGGATTAATGACTAATCAGCCCATGATCACACATAACTGTGGTGCCATGCATTTGGTATCTTTTTTTTTGGGGGGGGAAA-TCGCTATCACTCCACTA
 Translation
Mylodon_darwinii_Delsuc   CGCCCATTCGTTCCCCTTAAATAAGACATCTCGATGGACTAATGACTAATCAGCCCATGATCACACATAACTGTGGTGTCATGCATTTGGTATCTTTTTTTTTGGGGGGGGGAACTTGCTATCACTCAACTA
 Translation
Mylodon_darwinii_Slater   CGCCCATTCGTTCCCCTTAAATAAGACATCTCGATGGACTAATGACTAATCAGCCCATGATCACACATAACTGTGGTGTCATGCATTTGGTATCTTTTTTTTTGGGGGGGGGAACTTGCTATCACTCAACTA
 Translation

Consensus                 AGGCCTAAGTATAGGCCTCGC-ACGGTCAACTAAACTCGTAGCTGGGCTTAACTTGAAGTATCGACGCGGTCAACATRKRSACCCSY---ARSYRCWGTTCRGTCGATGGARCCGGGARWGWYYMGKGARAT
 Translation
Choloepus_didactylus_NC   TGGCCTAGGAGTAGGCCTTGCAACAGTGCAC--AACTTGTAGCCGGACCTAAATTGAAGGGTCGACGCGGTCAACATGGGCACCCCTACAAGCCGCAGTTCAGTCGATGGAACCGGGAAAGTCTAGGGAAAT
 Translation
Mylodon_darwinii_Delsuc   AGGCCTAAGTATAGGCCTCGC-ACGGTCAACTAAACTCGTAGCTGGGCTTAACTTGAAGTATCGACGCGGTCAACATATAGACCCGC---AAGTACTGTTCGGTCGATGGAGCCGGGAGTGATCCGTGAGAT
 Translation
Mylodon_darwinii_Slater   AGGCCTAAGTATAGGCCTCGC-ACGGTCAACTAAACTCGTAGCTGGGCTTAACTTGAAGTATCGACGCGGTCAANNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
 Translation
```



```
Consensus                GGTYYCRKGATANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---------------------------------------------------------------
Choloepus_didactylus_NC  GGTCTCAGGATA------------------------------------------------------------------------------------------------------------------------
Mylodon_darwinii_Delsuc  GGTTCCGTGATATCGTTTAATGGTCGCAGGACATGTATTTCATGGTCACAGGATATATGTTCAATGGTC---------------------------------------------------------------
Mylodon_darwinii_Slater  NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

Consensus                ---------GCANGACANNNANACGNNNACNNA---------------------------------NCANNCGNATANN---------------CNCCNNTNNNNNNANNTNATAATAGCAATATTTTCATT
Choloepus_didactylus_NC  ------------------------------------------------------------------------------------------------------------------------------------
Mylodon_darwinii_Delsuc  ---------GCAGGACATGCATACGCATACGCATACGCATACGCATACGCATACGCATACGCATACGCATACGCATACTCAGCAAACCCCCCCCTCCCCCCAGCTTATAATAGCAATATTTTCATT
Mylodon_darwinii_Slater  NNNNNNNNAGCAAGACAATAACACGGGCACCTA---------------------------------ACAAGCGAATATA---------------CTCCTATTTTTTAACATCATAATAGCAATATTTTCATT
```



```
Consensus
Translation
TTCGCCAATACTGACATAGCACTCGAGCATTTTGAACTTTCTAGTGTGAAAAAAGCCTATGTCTTNACGAAATCATAATTAAAT
Choloepus_didactylus_NC
Translation
Mylodon_darwinii_Delsuc
Translation
TTCGCCAATACTGACATAGCACTCGAGCATTTTGAACTTTCTAGTGTGAAAAAAGCCTATGTCTTGACGAAATCATAATTAAAT
Mylodon_darwinii_Slater
Translation
TTCGCCAATACTGACATAGCACTCGAGCATTTTGAACTTTCTAGTGTGAAAAAAGCCTATGTCTTAACGAAATCATAATTAAATNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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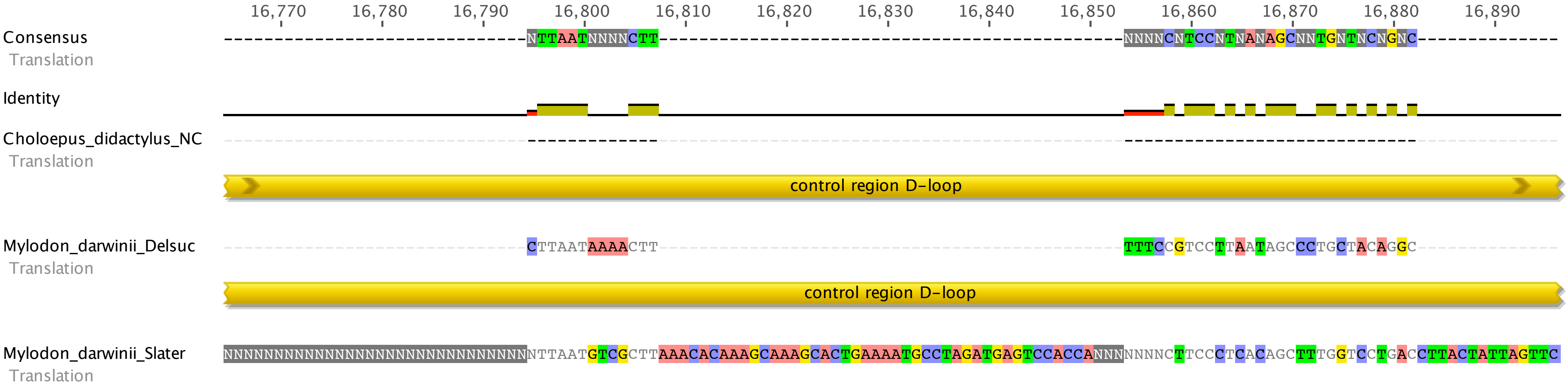

```
Consensus
Translation
NTTAATNNNNCTT NNNNCNTCCNTNANAGCNNTGNTNCNGNC
Choloepus_didactylus_NC
Translation
Mylodon_darwinii_Delsuc
Translation
CTTAATAAAACTT TTTCCGTCCTTAATAGCCCTGCTACAGGC
Mylodon_darwinii_Slater
Translation
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTAATGTCGCTTAAACACAAAGCAAAGCACTGAAAATGCCTAGATGAGTCCACCANNNNNNNCTTCCCTCACAGCTTTGGTCCTGACCTTACTATTAGTTC
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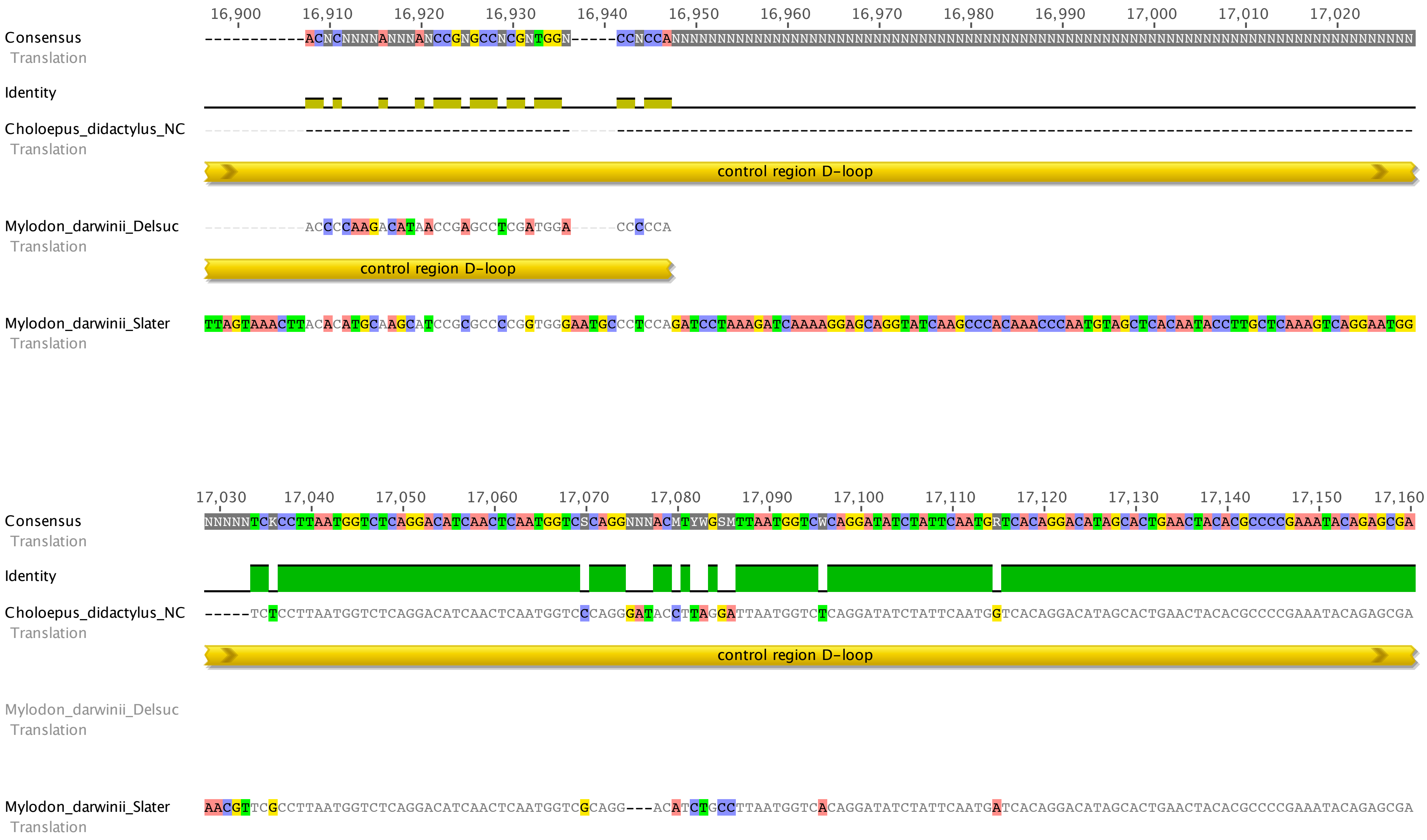
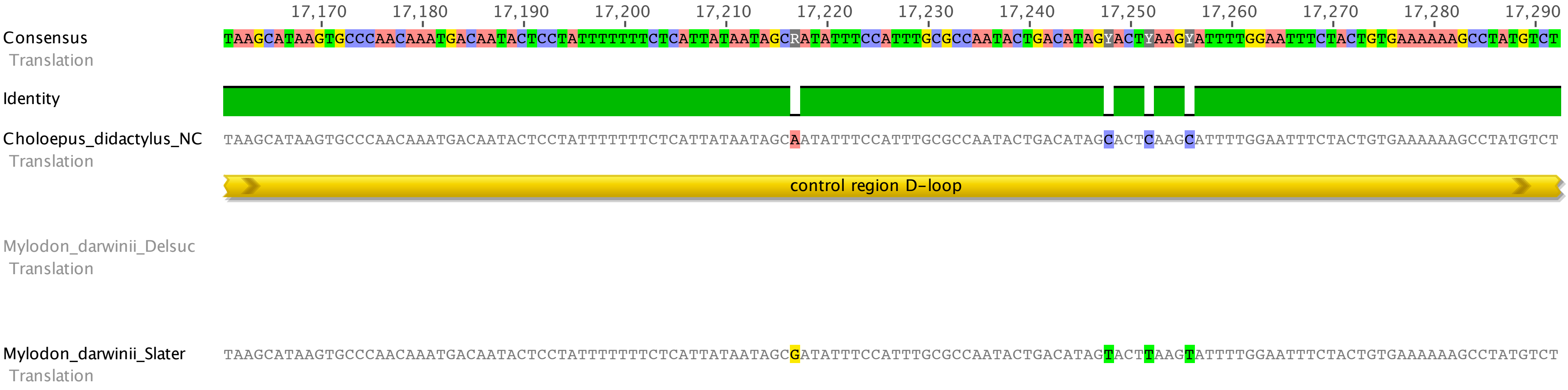


```
Consensus                 -----------ACNCNNNNANNNANCCGNGCCNCGNTGGN-----CCNCCANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
 Translation
Choloepus_didactylus_NC   ------------------------------------------------------------------------------------------------------------------------------------
 Translation
Mylodon_darwinii_Delsuc   -----------ACCCCAAGACATAACCGAGCCTCGATGGA-----CCCCCA
 Translation
Mylodon_darwinii_Slater   TTAGTAAACTTACACATGCAAGCATCCGCGCCCCGGTGGGAATGCCCTCCAGATCCTAAAGATCAAAAGGAGCAGGTATCAAGCCCACAAACCCAATGTAGCTCACAATACCTTGCTCAAAGTCAGGAATGG
 Translation
```

```
Consensus                 NNNNNTCKCCTTAATGGTCTCAGGACATCAACTCAATGGTCSCAGGNNNACMTYWGSMTTAATGGTCWCAGGATATCTATTCAATGRTCACAGGACATAGCACTGAACTACACGCCCCGAAATACAGAGCGA
 Translation
Choloepus_didactylus_NC   -----TCTCCTTAATGGTCTCAGGACATCAACTCAATGGTCCCAGGGATACCTTAGGATTAATGGTCTCAGGATATCTATTCAATGGTCACAGGACATAGCACTGAACTACACGCCCCGAAATACAGAGCGA
 Translation
Mylodon_darwinii_Delsuc
 Translation
Mylodon_darwinii_Slater   AACGTTCGCCTTAATGGTCTCAGGACATCAACTCAATGGTCGCAGG---ACATCTGCCTTAATGGTCACAGGATATCTATTCAATGATCACAGGACATAGCACTGAACTACACGCCCCGAAATACAGAGCGA
 Translation
```



17,170 17,180 17,190 17,200 17,210 17,220 17,230 17,240 17,250 17,260 17,270 17,280 17,290

Consensus TAAGCATAAGTGCCCAACAAATGACAATACTCCTATTTTTTTCTCATTATAATAGCRATATTTCCATTTGCGCCAATACTGACATAGYACTYAAGYATTTTGGAATTTCTACTGTGAAAAAAGCCTATGTCT
Translation

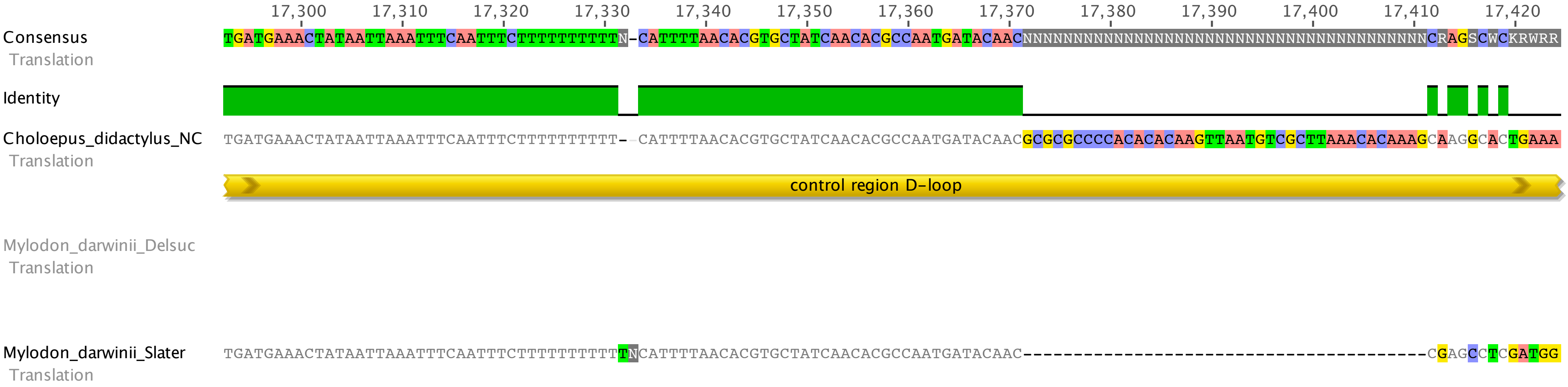
Identity

Choloepus_didactylus_NC TAAGCATAAGTGCCCAACAAATGACAATACTCCTATTTTTTTCTCATTATAATAGCAATATTTCCATTTGCGCCAATACTGACATAGCACTCAAGCATTTTGGAATTTCTACTGTGAAAAAAGCCTATGTCT
Translation

control region D-loop

Mylodon_darwinii_Delsuc
Translation

Mylodon_darwinii_Slater TAAGCATAAGTGCCCAACAAATGACAATACTCCTATTTTTTTCTCATTATAATAGCGATATTTCCATTTGCGCCAATACTGACATAGTACTTAAGTATTTTGGAATTTCTACTGTGAAAAAAGCCTATGTCT
Translation



17,300 17,310 17,320 17,330 17,340 17,350 17,360 17,370 17,380 17,390 17,400 17,410 17,420

Consensus TGATGAAACTATAATTAAATTTCAATTTCTTTTTTTTTTN-CATTTTAACACGTGCTATCAACACGCCAATGATACAACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCRAGSCWCKRWRR
Translation

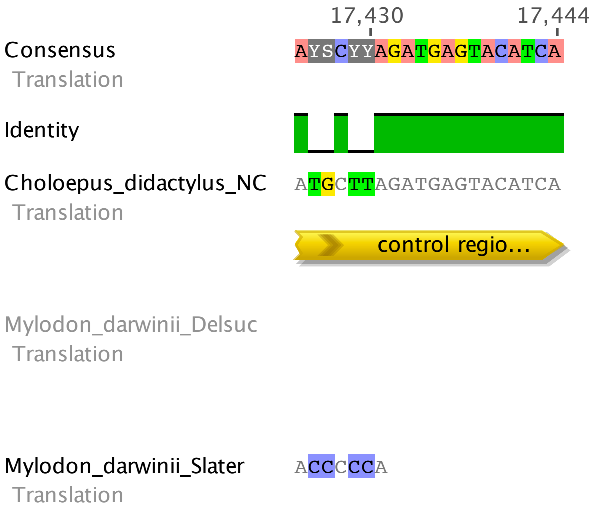
Identity

Choloepus_didactylus_NC TGATGAAACTATAATTAAATTTCAATTTCTTTTTTTTTT--CATTTTAACACGTGCTATCAACACGCCAATGATACAACGCGCGCCCCACACACAAGTTAATGTCGCTTAAACACAAAGCAAGGCACTGAAA
Translation

control region D-loop

Mylodon_darwinii_Delsuc
Translation

Mylodon_darwinii_Slater TGATGAAACTATAATTAAATTTCAATTTCTTTTTTTTTTTNCATTTTAACACGTGCTATCAACACGCCAATGATACAAC--CGAGCCTCGATGG
Translation



```
                               17,430        17,444
Consensus                 AYSCYYAGATGAGTACATCA
 Translation
Identity
Choloepus_didactylus_NC   ATGCTTAGATGAGTACATCA
 Translation
                          control regio...
Mylodon_darwinii_Delsuc
 Translation
Mylodon_darwinii_Slater   ACCCCCA
 Translation
```

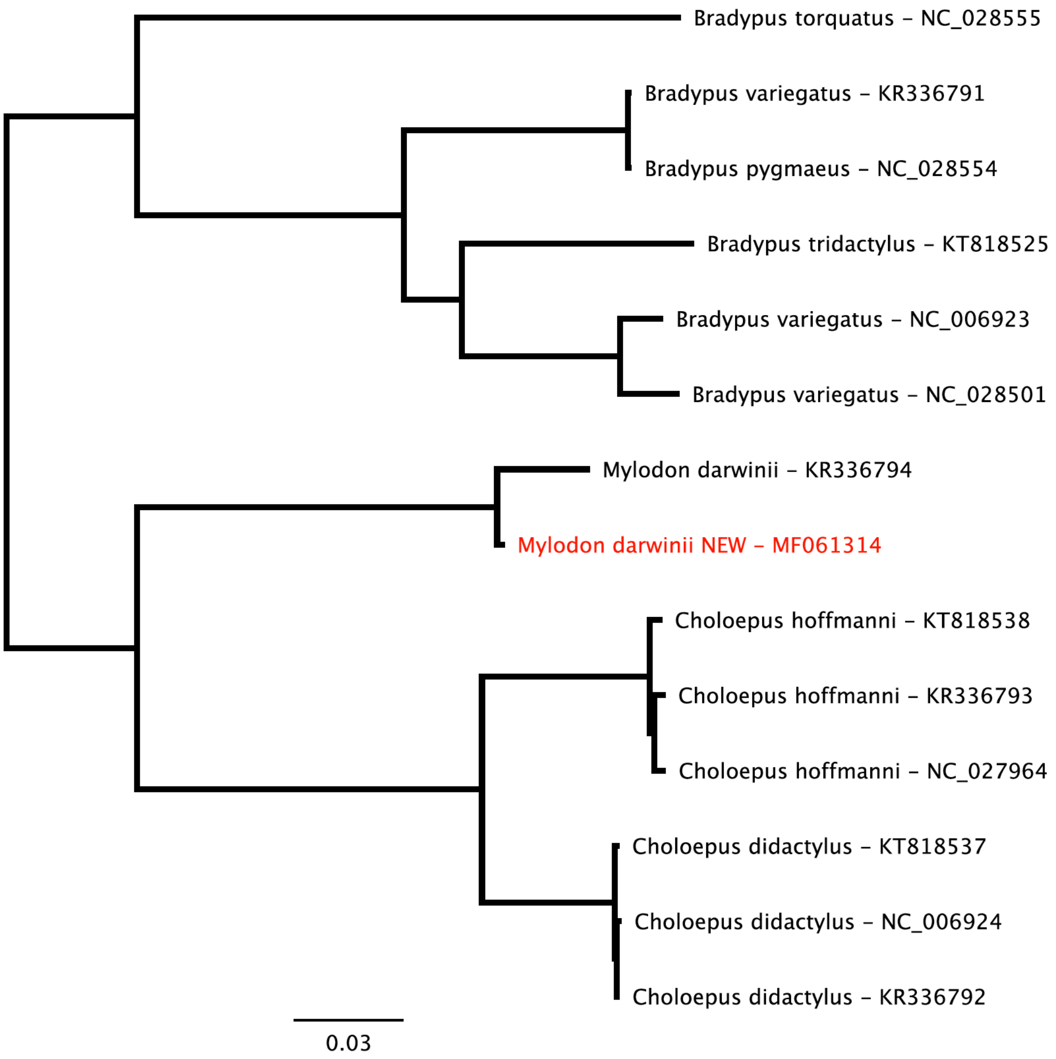


Figure S12: Maximum likelihood tree of available sloth mitogenomes obtained with RAxML under a single GTR+G model. Our new Mylodon mitogenome sequence is indicated in red to illustrate its much shorter branch length relative to the one previously obtained by Slater et al. (2017). Branch lengths represent mean number of substitutions per site.