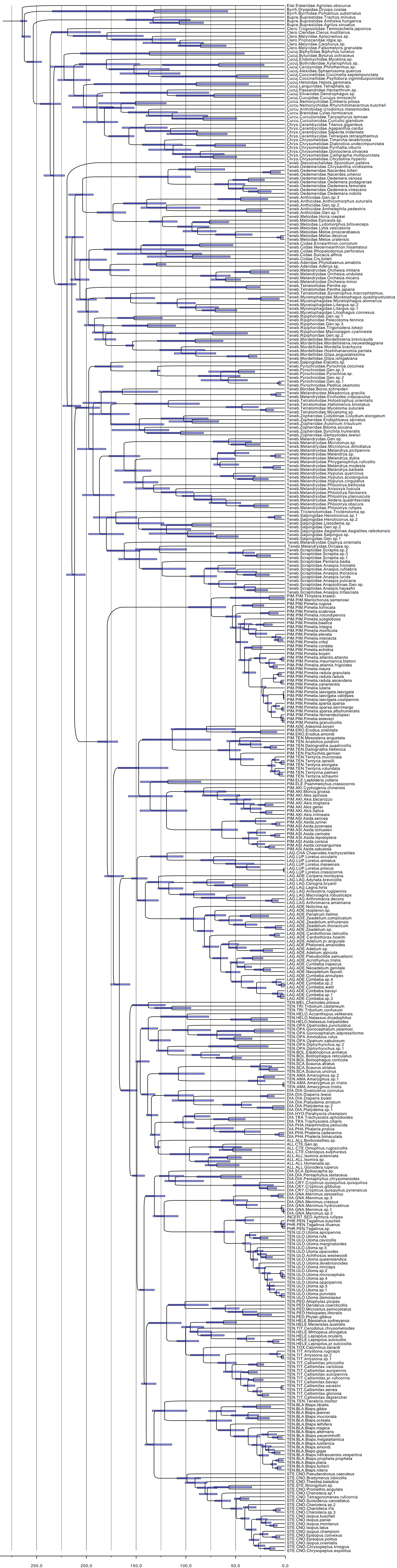


### **Additional figure S3**

Timetree corresponding to the results of the 'BD crown' calibration procedure implemented with BEAST. Horizontal bars on nodes correspond to the 95% higher posterior probabilities (HPD) of age estimates.



250,0

200,0

150,0

100,0

50,0

0,0

Elat., Elateridae, Agrion, obscurus  
Byrrh., Byrrhidae, Dryops, costae  
Byrrh., Byrrhidae, Pomatinus, substriatus  
Bupre., Buprestidae, Trachys, minutus  
Bupre., Buprestidae, Anthaxia, hungarica  
Cucuj., Cucujidae, Agriotes, glandium  
Clero., Trogossitidae, Temnoscheila, japonica  
Clero., Cleridae, Clerus, mutillarius  
Clero., Melyridae, Aplocnemus, sp.  
Clero., Melyridae, Ictopus, sp.  
Clero., Melyridae, Carphurus, sp.  
Clero., Melyridae, Falsomelyris, granulata  
Cucuj., Biphylidae, Biphylus, lunatus  
Cucuj., Byrrhidae, Elymus, sordidus  
Cucuj., Endomychidae, Mycetop, sp.  
Cucuj., Bothrididae, Xylariophilus, sp.  
Cucuj., Cerolyridae, Philothermus, sp.  
Cucuj., Aleocharidae, Sphaerosoma, quercus  
Cucuj., Coccinellidae, Coccinella, septempunctata  
Cucuj., Helotidae, Helota, gemmata  
Cucuj., Languriidae, Tetrachala, sp.  
Cucuj., Passandridae, Helcarthrum, sp.  
Cucuj., Silvanidae, Dendrophagus, sp.  
Cucuj., Cucujidae, Cucujus, mniszechi  
Curcu., Nemonychidae, Cimberis, pilosa  
Curcu., Nemonychidae, Rhyrchtiomacerinus, kuscheli  
Curcu., Anthribidae, Urodontus, mesemoides  
Curcu., Brentidae, Cylas, formicarius  
Curcu., Curculionidae, Tanyphyrus, lemnae  
Curcu., Curculionidae, Curculio, glandium  
Chrys., Cerambycidae, Titanus, giganteus  
Chrys., Cerambycidae, Agapanthia, cardui  
Chrys., Cerambycidae, Saperda, tridentata  
Chrys., Cerambycidae, Tetraxipus, tetraxiphalus  
Chrys., Chrysomelidae, Timarcha, tenebricosa  
Chrys., Chrysomelidae, Diabrotica, undecimpunctata  
Chrys., Chrysomelidae, Pyrrhalta, viburni  
Chrys., Chrysomelidae, Gonioctena, olivacea  
Chrys., Chrysomelidae, Calligrapha, multipunctata  
Chrys., Chrysomelidae, Chrysolina, hyperici  
Teneb., Stenotrachelidae, Spondium, pallens  
Teneb., Oedemeridae, Chrysanthia, viridissima  
Teneb., Oedemeridae, Macrosoma, hilleri  
Teneb., Oedemeridae, Nacardes, umenoi  
Teneb., Oedemeridae, Oedemera, venosa  
Teneb., Oedemeridae, Oedemera, podagrariae  
Teneb., Oedemeridae, Oedemera, sp.  
Teneb., Oedemeridae, Oedemera, virescens  
Teneb., Oedemeridae, Oedemera, nobilis  
Teneb., Anthicidae, Gen. sp. 3  
Teneb., Anthicidae, Anthicomyrma, suturalis  
Teneb., Anthicidae, Gen. sp. 2  
Teneb., Anthicidae, Anthelephila, pedestris  
Teneb., Anthicidae, Gen. sp. 1  
Teneb., Meloidae, Moria, roepkei  
Teneb., Meloidae, Gen. sp.  
Teneb., Meloidae, Lytta, vesicatoria  
Teneb., Meloidae, Lydomorphus, bifoveiceps  
Teneb., Meloidae, Meloe, proscarabaeus  
Teneb., Meloidae, Meloe, uralensis  
Teneb., Meloidae, Meloe, uralensis  
Teneb., Cidae, Ennearthron, cornutum  
Teneb., Cidae, Neonearthron, hisamatsui  
Teneb., Cidae, Rhopalotria, perforatus  
Teneb., Cidae, Sulcacis, affinis  
Teneb., Cidae, Cis, boleti  
Teneb., Aderidae, Phytobaeus, amabilis  
Teneb., Aderidae, Aderus, sp.  
Teneb., Melandryidae, Orchesia, imitans  
Teneb., Melandryidae, Orchesia, undulata  
Teneb., Melandryidae, Orchesia, micans  
Teneb., Melandryidae, Orchesia, minor  
Teneb., Tetratomidae, Penthe, sp.  
Teneb., Tetratomidae, Penthe, japana  
Teneb., Tetratomidae, Synstrophus, macrophthalmus.  
Teneb., Mycetophagidae, Mycetophagus, quadripustulatus  
Teneb., Mycetophagidae, Mycetophagus, atomarius  
Teneb., Mycetophagidae, Litargus, sp. 2  
Teneb., Mycetophagidae, Litargus, sp. 1  
Teneb., Mycetophagidae, Litophagus, connexus  
Teneb., Ripiphoridae, Gen. sp.  
Teneb., Ripiphoridae, Pelecotoma, fennica  
Teneb., Ripiphoridae, Gen. sp. 3  
Teneb., Ripiphoridae, Trigonodera, lokeji  
Teneb., Ripiphoridae, Macrosogon, cyaniveste  
Teneb., Ripiphoridae, Gen. sp.  
Teneb., Mordellidae, Mordellistena, brevicauda  
Teneb., Mordellidae, Mordellistena, neuwaldeggiana  
Teneb., Mordellidae, Mordellistena, achyru  
Teneb., Mordellidae, Hoshihananomia, perlata  
Teneb., Mordellidae, Glipa, angustatissima  
Teneb., Mordellidae, Glipa, ishigakiana  
Teneb., Salpingidae, Elacatis, sp.  
Teneb., Pyrochroidae, Pyrochroa, coccinea  
Teneb., Pyrochroidae, Pyrochroa, sp.  
Teneb., Pyrochroidae, Gen. sp. 2  
Teneb., Pyrochroidae, Gen. sp. 1  
Teneb., Pyrochroidae, Pedilus, okamotoi  
Teneb., Boridae, Boros, schneideri  
Teneb., Melandryidae, Mikadonius, gracilis  
Teneb., Melandryidae, Enchodes, crivellus  
Teneb., Tetratomidae, Holostrophus, orientalis  
Teneb., Tetratomidae, Hallomenus, binotatus  
Teneb., Tetratomidae, Mycetoma, suturale  
Teneb., Tetratomidae, Mycetoma, sp.  
Teneb., Zopheridae, Colydiinae, Colydium, elongatum  
Teneb., Zopheridae, Endophloeus, serratus  
Teneb., Zopheridae, Anolium, trisulcum  
Teneb., Zopheridae, Blotna, sicana  
Teneb., Zopheridae, Sychita, humeralis  
Teneb., Zopheridae, Gempylodes, lewisii  
Teneb., Melandryidae, Gen. sp.  
Teneb., Melandryidae, Microtronus, sp.  
Teneb., Melandryidae, Melandrya, dimidiatus  
Teneb., Melandryidae, Melandrya, pictipennis  
Teneb., Melandryidae, Melandrya, sp.  
Teneb., Melandryidae, Melandrya, dubia  
Teneb., Melandryidae, Melandrya, ruficollis  
Teneb., Melandryidae, Melandrya, modesta  
Teneb., Melandryidae, Melandrya, barbata  
Teneb., Melandryidae, Hypulus, quercinus  
Teneb., Melandryidae, Hypulus, acutangulus  
Teneb., Melandryidae, Hypulus, cingulatus  
Teneb., Melandryidae, Phloiotrya, bellicosa  
Teneb., Melandryidae, Anisoxya, fuscata  
Teneb., Melandryidae, Phloiotrya, flavitarsis  
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Teneb., Melandryidae, Abdera, quadrifasciata  
Teneb., Melandryidae, Phloiotrya, obscura  
Teneb., Melandryidae, Phloiotrya, rufipes  
Teneb., Tricentotomidae, Tricentotoma, sp.  
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Teneb., Salpingidae, Henoticonus, sp. 1  
Teneb., Salpingidae, Lissodema, sp.  
Teneb., Salpingidae, Gen. sp. 2  
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Teneb., Salpingidae, Salpingus, sp.  
Teneb., Salpingidae, Gen. sp. 1  
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Teneb., Melandryidae, Dircaea, sp.  
Teneb., Scaptiidae, Scaptia, sp. 2  
Teneb., Scaptiidae, Scaptia, sp. 3  
Teneb., Scaptiidae, Scaptia, sp.  
Teneb., Scaptiidae, Pentaria, badia  
Teneb., Scaptiidae, Anaspis, frontalis  
Teneb., Scaptiidae, Anaspis, rufilabris  
Teneb., Scaptiidae, Anaspis, thracica  
Teneb., Scaptiidae, Anaspis, lurida  
Teneb., Scaptiidae, Anaspis, pulicaria  
Teneb., Scaptiidae, Anapsidinae, Gen. sp.  
Teneb., Scaptiidae, Anaspis, hayashii  
Teneb., Scaptiidae, Anaspis, trifasciata  
PIM., PIM., Thripidae, kraatzi  
PIM., PIM., Manticoruria, semenowi  
PIM., PIM., Pimelia, rugosa  
PIM., PIM., Pimelia, subglobosa  
PIM., PIM., Pimelia, subglobosa  
PIM., PIM., Pimelia, integra  
PIM., PIM., Pimelia, monticola  
PIM., PIM., Pimelia, elevata  
PIM., PIM., Pimelia, interjecta  
PIM., PIM., Pimelia, cribra  
PIM., PIM., Pimelia, cordata  
PIM., PIM., Pimelia, echidna  
PIM., PIM., Pimelia, boyeri  
PIM., PIM., Pimelia, atlantis, atlantis  
PIM., PIM., Pimelia, mauritanica, bletoni  
PIM., PIM., Pimelia, atlantis, frigidoides  
PIM., PIM., Pimelia, maura  
PIM., PIM., Pimelia, radula, granulata  
PIM., PIM., Pimelia, radula, radula  
PIM., PIM., Pimelia, radula, ascendens  
PIM., PIM., Pimelia, canariensis  
PIM., PIM., Pimelia, lutaria  
PIM., PIM., Pimelia, laevigata, laevigata  
PIM., PIM., Pimelia, laevigata, validipes  
PIM., PIM., Pimelia, laevigata, costipennis  
PIM., PIM., Pimelia, sparsa, sparsa  
PIM., PIM., Pimelia, sparsa, serrimargo  
PIM., PIM., Pimelia, sparsa, albohumeralis  
PIM., PIM., Pimelia, fernandezlopezi  
PIM., PIM., Pimelia, estevezi  
PIM., PIM., Pimelia, granulicollis  
PIM., ADE, Aedesmia, boyeri  
PIM., ERO, Erodium, orientalis  
PIM., ERO, Erodium, emondi  
PIM., TEN, Mesosoma, angustata  
PIM., TEN, Anatolica, potanini  
PIM., TEN, Dailognatha, quadricollis  
PIM., TEN, Dailognatha, hellenica  
PIM., TEN, Dailognatha, punctulata  
PIM., TEN, Tentyria, mucronata  
PIM., TEN, Tentyria, latreilli  
PIM., TEN, Tentyria, elongata  
PIM., TEN, Tentyria, rotundata  
PIM., TEN, Tentyrina, palmieri  
PIM., TEN, Tentyria, schaumii  
PIM., ELE, Leptoderis, collaris  
PIM., ELE, Psamechus, crassicornis  
PIM., AKI, Cyphogenia, chinensis  
PIM., AKI, Morica, grossa  
PIM., AKI, Akis, spinosa  
PIM., AKI, Akis, bizzozzo  
PIM., AKI, Akis, tinglana  
PIM., AKI, Akis, genei  
PIM., AKI, Akis, italica  
PIM., AKI, Akis, trilineata  
PIM., ASI, Asida, sericea  
PIM., ASI, Asida, jurinei  
PIM., ASI, Asida, pyrenaea  
PIM., ASI, Asida, schusteri  
PIM., ASI, Asida, carinata  
PIM., ASI, Asida, lepidoptera  
PIM., ASI, Asida, corsica  
PIM., ASI, Asida, consanguinea  
LAG, CHA, Chaerodes, trachyscelides  
LAG, LUP, Lorelus, occularis  
LAG, LUP, Lorelus, armatus  
LAG, LUP, Lorelus, panis  
LAG, LUP, Lorelus, priscus  
LAG, ADE, Coripera, morleyana  
LAG, LAG, Agyrtidae, bicollis  
LAG, LAG, Cerora, bryanti  
LAG, LAG, Lagria, hirta  
LAG, LAG, Anisostira, rugipennis  
LAG, LAG, Macrologia, robusticeps  
LAG, LAG, Arthromacra, amamiana  
LAG, ADE, Nolicima, sp.  
LAG, ADE, Isopteron, sp.  
LAG, ADE, Periatrum, helmsi  
LAG, ADE, Zeadelium, complicatum  
LAG, ADE, Zeadelium, arthurensis  
LAG, ADE, Zeadelium, thoracicum  
LAG, ADE, Zeadelium, sp.  
LAG, ADE, Cardiothorax, laticollis  
LAG, ADE, Cardiothorax, howitti  
LAG, ADE, Adellium, pr. angurale  
LAG, ADE, Phaeonius, antartoides  
LAG, ADE, Adellium, sp.  
LAG, ADE, Adellium, alpicola  
LAG, ADE, Pseudocilibe, samuelsoni  
LAG, ADE, Acrotlymus, tristis  
LAG, ADE, Cymbeta, rufipes  
LAG, ADE, Neoadellium, genitale  
LAG, ADE, Neoadellium, fauveli  
LAG, ADE, Cymbeta, annulipes  
LAG, ADE, Cymbeta, sp. 4  
LAG, ADE, Cymbeta, sp. 2  
LAG, ADE, Cymbeta, watti  
LAG, ADE, Cymbeta, bavayi  
LAG, ADE, Cymbeta, sp. 1  
LAG, ADE, Cymbeta, sp. 3  
TEN, MEL, Cheirodes, pilosus  
TEN, TRI, Tribolium, castaneum  
TEN, TRI, Tribolium, confusum  
TEN, HELO, Accanthopus, velikensis  
TEN, HELO, Nalessus, dryadophilus  
TEN, HELO, Nalessus, harpaloides  
TEN, OPA, Catephagus, punctulatus  
TEN, OPA, Gonoccephalum, yelamosi  
TEN, OPA, Gonoccephalum, adpressiforme  
TEN, OPA, Ammobius, rufus  
TEN, OPA, Opatum, sabulosum  
TEN, OPA, Diphyrhynchus, sp. 2  
TEN, OPA, Diphyrhynchus, sp. 1  
TEN, BOL, Eledonoprius, armatus  
TEN, BOL, Bolitophagus, reticulatus  
TEN, SCA, Scaurus, stratus  
TEN, SCA, Scaurus, atratus  
TEN, SCA, Scaurus, striatus  
TEN, SCA, Scaurus, uncinus  
TEN, AMA, Amarygmus, sp. 2  
TEN, AMA, Amarygmus, sp. 1  
TEN, AMA, Amarygmus, pr. tristis  
TEN, AMA, Amarygmus, tristis  
DIA, DIA, Diaperis, cornutus  
DIA, DIA, Diaperis, lewisii  
DIA, DIA, Diaperis, boleti  
DIA, DIA, Platydema, striatum  
DIA, DIA, Platydema, sp. 2  
DIA, DIA, Platydema, sp. 1  
DIA, HYO, Parahyocis, championi  
DIA, TRA, Trachyscelis, aphodioides  
DIA, TRA, Trachyscelis, ciliaris  
DIA, PHA, Halimobius, lucida  
DIA, PHA, Phaleria, proluxa  
DIA, PHA, Phaleria, cadaverina  
DIA, PHA, Phaleria, birhacutata  
ALL, ALL, Borborytes, sp.  
ALL, CTE, Gen. sp.  
ALL, CTE, Omophilus, rugosicollis  
ALL, CTE, Ctenopus, sulphureus  
ALL, ALL, Isomira, antehrata  
ALL, ALL, Isomira, sp.  
ALL, ALL, Hymenalia, sp.  
ALL, ALL, Gonoderia, luperus  
DIA, SCY, Scydmaenidae, sp.  
DIA, DIA, Pentaphyllus, chrysomeloides  
DIA, DIA, Pentaphyllus, chrysomeloides  
DIA, CRY, Crypticus, quisquilius, quisquilius  
DIA, CRY, Crypticus, quisquilius, quisquilius  
DIA, CRY, Crypticus, quisquilius, pyrenaeicus  
DIA, GNA, Menimus, setosellus  
DIA, GNA, Menimus, setosellus  
DIA, GNA, Menimus, crassus  
DIA, GNA, Menimus, hydrovatinus  
DIA, GNA, Menimus, sp. 1  
DIA, GNA, Menimus, sp. 2  
INCB, SE, Aphrotia, rufipes  
PHR, PEN, Tagalinus, kuscheli  
PHR, PEN, Tagalinus, sp.  
PHR, PEN, Tagalinus, sp.  
TEN, ULO, Uloma, apicipennis  
TEN, ULO, Uloma, cavicolis  
TEN, ULO, Uloma, marginatoides  
TEN, ULO, Uloma, sp. 5  
TEN, ULO, Uloma, opacooides  
TEN, ULO, Uloma, queenslandica  
TEN, ULO, Uloma, tenebrionoides  
TEN, ULO, Uloma, miniceps  
TEN, ULO, Uloma, sp. 2  
TEN, ULO, Uloma, microcephala  
TEN, ULO, Uloma, sp. 4  
TEN, ULO, Uloma, opacipennis  
TEN, ULO, Uloma, sp. 3  
TEN, ULO, Uloma, sp. 1  
TEN, ULO, Uloma, punctata  
TEN, ULO, Uloma, damoiseaui  
TEN, PED, Alloglyphax, picipolus  
TEN, PED, Dendarus, coarcticollis  
TEN, PED, Microstus, semicostatus  
TEN, PED, Heliopterus, littoralis  
TEN, PED, Phytomyza, sp.  
TEN, HELE, Bassianus, sydnevanus  
TEN, HELE, Meneristes, australis  
TEN, TIT, Cerodolus, chrysomeloides  
TEN, HELE, Heliopterus, semicostatus  
TEN, HELE, Lepispilus, sulcicollis  
TEN, HELE, Lepispilus, pr. sulcicollis  
TEN, TOX, Calymnus, berardi  
TEN, TIT, Artystona, rugiceps  
TEN, TIT, Artystona, sp. 2  
TEN, TIT, Artystona, sp. 1  
TEN, TIT, Callismilax, plicicollis  
TEN, TIT, Callismilax, ruficollis  
TEN, TIT, Callismilax, sulcicollis  
TEN, TIT, Callismilax, auripennis  
TEN, TIT, Callismilax, pr. ruficornis  
TEN, TIT, Callismilax, bavayi  
TEN, TIT, Callismilax, sarasini  
TEN, TIT, Callismilax, aenea  
TEN, TIT, Callismilax, gloriosa  
TEN, TIT, Callismilax, cepianchei  
TEN, TEN, Tenabrio, molitor  
TEN, BLA, Blaps, tibialis  
TEN, BLA, Blaps, gibba  
TEN, BLA, Blaps, jeanneli  
TEN, BLA, Blaps, monticola  
TEN, BLA, Blaps, ocreata  
TEN, BLA, Blaps, lethifera  
TEN, BLA, Blaps, magica  
TEN, BLA, Blaps, allanans  
TEN, BLA, Blaps, peyerimhoffi  
TEN, BLA, Blaps, lusitanica  
TEN, BLA, Blaps, emondi  
TEN, BLA, Blaps, gigas  
TEN, BLA, Blaps, nefraouensis, vespertina  
TEN, BLA, Blaps, propeta, propheta  
TEN, BLA, Blaps, kollarii  
TEN, BLA, Blaps, kollarii  
TEN, BLA, Blaps, nitens  
STE, CNO, Pseudandrosus, caeruleus  
STE, CNO, Pseudandrosus, topicollis  
STE, CNO, Thesleia, bisulcata  
STE, STE, Strongylus, sp.  
STE, CNO, Promethis, angulata  
STE, CNO, Ochratoeca, sp. 1  
STE, CNO, Ochratoeca, sp. 2  
STE, CNO, Scotoderus, cancellatus  
STE, CNO, Charloteca, sp. 2  
STE, CNO, Charloteca, iris  
STE, CNO, Charloteca, sp. 3  
STE, CNO, Isopus, kuscheli  
STE, CNO, Isopus, paniei  
STE, CNO, Isopus, montianus  
STE, CNO, Isopus, sp.  
STE, CNO, Isopus, championi  
STE, CNO, Episopus, convexus  
STE, CNO, Episopus, politus  
STE, CNO, Chrysospeplus, trisulcatus  
STE, CNO, Chrysospeplus, trisulcatus  
STE, CNO, Chrysospeplus, trisulcatus  
STE, CNO, Chrysospeplus, expositus