

## ORIGINAL ARTICLE

# Catalogue of Eucnemidae (Coleoptera: Elateroidea) in China

Ziye Meng<sup>1</sup>, Xiaoqin Chen<sup>2</sup>, Yuna Sun<sup>3</sup>, Yongying Ruan<sup>2</sup>, Shihong Jiang<sup>2\*</sup>

<sup>1</sup>Research Center of Buckwheat Industry Technology, Guizhou Normal University, Guiyang, Guizhou 550001, China

<sup>2</sup>College of Applied Chemistry and Biotechnology, Shenzhen Polytechnic, Shenzhen, Guangdong 518055, China

<sup>3</sup>School of Foreign Languages, Guizhou Normal University, Guiyang, Guizhou 550001, China

\*Corresponding author, E-mail: sjjiang@szpt.edu.cn

**Abstract** This catalogue records the Eucnemidae species in China, including 15 genera, namely *Isorhipis* Lacordaire, 1835, *Melasis* Olivier, 1790, *Calyplocerus* Guérin-Ménéville, 1843, *Hylis* Gozis, 1886, *Epiphanis* Eschscholtz, 1829, *Farsus* Jacquelin du Val, 1860, *Microrhagus* Dejean, 1833, *Dyscharachthis* Blackburn, 1900, *Galbites* Fleutiaux, 1918, *Procladidus* Fleutiaux, 1921, *Pseudochapianus* Lucht, 1987, *Raapia* Fleutiaux, 1899, *Scython* Laporte, 1835, *Serrifornax* Fleutiaux, 1926, *Fornax* Laporte, 1835 and 25 species, belonging to 3 subfamilies: Melasinae, Eucneminae, and Macraulacinae, respectively. The taxonomy in the catalogue is based on the present classification system follows Muona.

**Key words** Eucnemidae, false click beetles, checklist, China.

## 1 Introduction

False click beetles, Eucnemidae (Coleoptera) is a moderate family in beetles. Despite its common name indicating they are incapable of “clicking”, numerous species can snap into the air just as the click beetles (Coleoptera: Elateridae). Their larvae develop in decaying wood, researchers hypothesized Eucnemidae plays an important role in the interactions between trees, fungi, and forest regeneration (Muona, 2000). More than 1,700 species of eucnemids have been described all over the world, which are divided into 9 subfamilies in present taxonomy: Macraulacinae, Melasinae, Eucneminae, Palaeoxeninae, Perothopinae, Phlegoninae, Pseudomeninae, Phyllocerinae, and Anischiinae. However, the taxonomy of Chinese Eucnemidae was not well studied. Here, the family in China is catalogued, including 25 species.

## 2 Abbreviation

BPBM—Bernice P. Bishop Museum, Honolulu, USA;

BMNH—British Museum (Natural History), London, England;

MAK—Museum Alexander Koenig, Bonn, German;

MHNP—Museum d'Histoire Naturelle Paris, Paris, France;

NMW—Naturhistorisches Museum Wien, Vienna, Austria;

SM—Senckenberg Museum, Frankfurt, German;

TSM—The Science Museum, California Academy of Sciences, San Francisco, USA;

TUA—Tokyo University of Agriculture, Tokyo, Japan.

urn:lsid:zoobank.org:pub:FACAE96D-BD3A-4A9F-ADDC-C5B85E517585

Received 26 April 2020, accepted 30 September 2020

Executive editor: Fuqiang Chen

### 3 Taxonomy

#### Series Elateriformia Crowson, 1960

#### Superfamily Elateroidea Leach, 1815

#### Family Eucnemidae Eschscholtz, 1829

Melasidae Fleming, 1821, *Suppl. Four., Fifth, Sixth Edit. Ency. Brit., Prel. Diss. Hist. Sci. Illus. Engr.*, 5: 49. Type genus: *Melasis* Olivier, 1790. Muona & Alarukka (2007: 32) submitted an application to conserve usage of Eucnemidae Eschscholtz, 1829 over Melasidae Fleming, 1821. However, This Case (NO. 2938) is probably still not closed, since the status of this application is not published. —Thomson, 1864, *Skan. Col., Syn. Bear.*, 4: 44. —Fleutiaux, 1911, *Annls. Soc. Entomol. Fr.*, 80: 238. —Fleutiaux, 1919, *Voy. Ch. Alluaud R. Jeannel Afr. Orien., Rés. Sci.*, 6: 112. —Fleutiaux, 1920a, *Annls. Soc. Entomol. Belg.*, 60: 93. —Fleutiaux, 1921a, *Philipp. J. Sci.*, 18: 71. —Fleutiaux, 1921b, *Annls. Soc. Entomol. Belg.*, 61: 23. —Fleutiaux, 1924a, *Bull. Soc. Entomol. Fr.*, 1924: 156. —Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 301. —Fleutiaux, 1925a, *Bull. Soc. Entomol. Fr.*, 1925: 177. —Fleutiaux, 1926, *Annls. Soc. Entomol. Fr.*, 95: 37. —Abdullah, 1971, *Beitr. Entomol.*, 21: 504. —Becker, 1991, *Immat. Insect.*, 2: 158–421. —Muona, 1993b, *Entomol. Blät.*, 89(1): 20. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Mertlik & Platia, 2008, *Elateridarium*, 2: 1–40. —Dušánek, 2008, *Elateridarium*, 2: 143. —Bouchard *et al.*, 2011, *Zookeys*, 88: 299. —Dušánek, 2009, *Elateridarium*, 3: 145, 146. —Leseigneur, 2010, *Publ. Soc. L. Lyon*, 2(1): 153, 156. —Dušánek, 2011, *Elateridarium*, 5: 205, 228. —Mertlik, 2011, *Elateridarium*, 5: 55.

Eucnemides Eschscholtz, 1829b, *Zool. Atlas, Enth. Abb. Besch. Thier. Währ. Flot. Kotz. Reise Welt, Russ. Kais. Krieg. Pred. Jah.*, 4: 9. Type genus: *Eucnemis* Ahrens, 1812. —Perty, 1833, *Insect. Am. Merid. Habit. Vit. Gen., Morib. Dist. Geog. Obser. Nonn.*: 7. —Laport, 1835, *Rev. Entomol. (G. Silb.)*, 3: 157–181. —Laport, 1840, *Hist. Nat. Insect. Col.*, 1: 221. —Westwood, 1840a, *Intr. Mod. Class. Insect.* 1: 224. —Blanchard, 1845, *His. Insect.*, 2: 70. —LeConte, 1852, *Proc. Acad. Nat. Sci. Phil.*, 6: 45, 49. —LeConte, 1853a, *Trans. Am. Phil. Soc.*, 10: 405–413, 420, 460, 508. —LeConte, 1853b, *Proc. Acad. Nat. Sci. Phil.*, 6: 229. —LeConte, 1853c, *Proc. Acad. Nat. Sci. Phil.*, 6: 351. —Bonvouloir, 1871, *Annls. Soc. Entomol. Fr.*, 40 (Suppl.): 1–288. —Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 5–57. —Fleutiaux, 1896b, *Mém. Soc. Entomol. Fr.*, 9: 300. —Hyslop, 1917, *Annls. Entomol. Soc. Am.*, 10(3): 242. —Saunders, 1836, *Trans. Roy. Entomol. Soc. Lond.*, 1(3): 150. —Broun, 1880, *Man. N. Z.*, 277, 279. —Fleutiaux, 1947, *Note. Entomol. Chi.*, 11: 2. —Jeuniaux, 1951, *Bull. Annls. Soc. Entomol. Bel.*, 87(9–10): 207. —Sharp, 1877, *J. Nat. His.*, 113: 396.

Eucnemidae: Laport, 1840, *Hist. Nat. Insect. Col.*, 1: 221. Type genus: *Eucnemis* Ahrens, 1812. —Westwood, 1840a, *Intr. Mod. Class. Insect.* 1: 224. —Kiesenwetter, 1858, *Nat. Insect. Deut.*: 173. —Murry, 1868, *Annls. Mag. Nat. Hist.*, 4(2): 103. —Stein, 1877, *Cat. Col. Eu.*: 91. —Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 5, 47. —Horn, 1890, *Biol. Cent. Am., Insect., Col.*, 3(1): 210. —Fleutiaux, 1896c, *Annal. Mus. Civ. Sto. Nat. Gen.*, 36: 534. —Van Horn, 1909, *Proc. Entomol. Soc. Wash.*, 11: 54. —Bruch, 1911, *Rev. Mus. Plat.*, 17: 242. —Reitter, 1911, *Fauna Ger.*, 3: 201. —Hyslop, 1917, *Annls. Entomol. Soc. Am.*, 1917, 10(3): 242–246. —Knull, 1946, *Annls. Entomol. Soc. Am.*, 39: 246. —Knull, 1957, *Ohio J. Sci.*, 57(1): 9. —Cobos, 1958, *Acta Zool. Li.*, 15: 103. —Cobos, 1959, *Misc. Zool.*, 1(2): 77. —Olexa, 1963, *Entomol. Blät.*, 59(2): 89. —Cobos, 1964, *EOS: Rev. Espan. Entomol.*, 40(3–4): 289. —Abdullah, 1971, *Beitr. Entomol.*, 21: 504. —Olexa, 1975, *Entomol. Blät. Biol. Syst. Käfer*, 71: 155. —Leseigneur, 1978, *Entomologiste*, 34(3): 105–123. —Ford & Spilman, 1979, *Col. Bull.*, 33(1): 75, 76. —Suzuki & Lucht, 1983, *Entomol. Rev. Japan*, 1983, 38(1): 41. —Muona, 1985, *Entomol. Scand.*, 16(1): 5. —Muona, 1987, *Entomol. Scand.*, 18(1): 79. —Muona, 1988, *Elytra*, 16(1): 17. —Becker, 1991, *Immat. Insect.*, 2: 158–421. —Burakowski & Buchholz, 1991, *Annls. Up. Sil. Mus. Entomol.*, 2: 103–125. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 165–172, 180–181. —Buchholz & Królik, 1992, *Wiad. Entomol.*, 11(1): 17–18. —Leseigneur & Steffen, 1992, *Publ. Soc. L. Lyon*, 61(4): 93. —Levesque & Levesque, 1993, *Col. Bull.*, 47(3): 269, 274. —Lucht & Otto, 1993, *Magy. Állat. Faun. Hung.*, 8(3): 3. —Muona, 1993a, *Entomol. Scand. Suppl.*, 44: 5–133. —Muona, 1993b, *Entomol. Blät.*, 89(1): 15–20, 23, 33, 43. —Seibert, 1993, *Faun. Surv. Elat. Mont.*: 3, 4, 10, 11, 16, 217, 230, 231, 233. —Muona, 1995b, *Cladistics*, 11: 317–332. —Otto & Young, 1998, *Col. Bull.*, 52(4): 305, 311. —Muona, 2002, *Am. Beet.*, 2: 155. —Costa *et al.*, 2003, *Syst. Entomol.*, 28(3): 376. —Dodelin *et al.*, 2003, *Bull. Mens. Soc. Linn. Lyon*, 72(9): 294. —Moraal *et al.*, 2003, *Entomol. Ber.*, 63(2): 36–37. —Bouget & Leseigneur, 2005, *Bull. Mens. Soc. Linn. Lyon*, 74(3): 81, 82, 84–92. —Tamisier *et al.*, 2006, *Bull. Soc. Linn. Bor.*, 140(34): 8–11. —Westcott *et al.*, 2006, *Zootaxa*, 1142: 22. —Buchholz & Bidas, 2007, *Wiad. Entomol.*, 26(4): 257, 274. —Chassain & Sautière, 2007, *L'Entomologiste*, 63: 141, 143. —Irurzun *et al.*, 2007, *Bol. Soc. Entomol. Arag.*, 1(41): 397, 400. —Majka, 2007, *Zootaxa*, 1636: 33, 34, 40–45. —Mertlik *et al.*, 2007, *Elateridarium*, 1: 92–94. —Sagegami-Oba *et al.*, 2007, *Mol. Phy. Evol.*, 42(2): 412, 414, 415. —Buchholz, 2008, *Wiad. Entomol.*, 4(27): 197, 209. —Brustel & Van Meer, 2008, *L'Entomologiste*, 64(2): 75, 77, 78. —Chang *et al.*, 2008, *Zootaxa*, 1785: 54. —Irurzun, 2008, *Heter. Rev. Entomol.*, 8(2): 233–235. —Jesús de la Rosa, 2008, *Bol. S. E. A.*, 42: 367. —Muona & Brüstle, 2008, *Entomol. Fen.*, 19: 152, 157. —Muona & Teräväinen, 2008, *Col. Bull.*, 62(4): 475–476. —Özdikmen, 2008, *Munis Entomol. Zool.*, 3(2): 675–676. —Brüstle & Muona, 2009, *J. Zool. Syst. Evol. Res.*, 47(4): 337–342. —Hoffman *et al.*, 2009, *Banisteria*, 34: 25, 26. —Vahtera *et al.*, 2009, *Cladistics*, 25(2): 147, 149, 152–154. —Brüstle *et al.*, 2010, *Cladistics*, 26(1): 14, 15. —Chang *et al.*, 2010, *Ann. Entomol. Soc. Am.*, 103(6): 866–874. —Leseigneur, 2010, *Publ. Soc. L. Lyon*, 2(1): 153, 156. —Otto, 2010, *Col. Bull.*, 64(1): 92. —Ohsawa, 2010, *J. Insect Conserv.*,

14(5): 480–483. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 299. —Kundrata & Bocak, 2011, *Zool. Scr.*, 40(4): 364–368, 372–375. —Chittaro & Blanc, 2012, *Mit. Sch. Entomol. Ges.*, 85: 98, 102. —Otto, 2012a, *Col. Bull.*, 66(3): 219–220. —Otto, 2012b, *Col. Bull.*, 66(3): 285. —Otto, 2012b, *Col. Bull.*, 66(4): 358. —Suzuki, 2012, *Sayab. N. S.*, 6: 7. —Suzuki & Chou, 2012, *Sayab. N. S.*, 8: 37. —Suzuki & Heish, 2014, *Sayab. N. S.*, 14: 4. —Webster *et al.*, 2012, *Zookeys*, 179: 77–80. —Kovalev, 2013, *Proc. Zool. Inst. PAH*, 317(3): 268–270. —Kundrata *et al.*, 2013, *Contrib. Zool.*, 82(4): 201. —Mertlik & Pelikán, 2013, *Elateridarium*, 7: 45. —Otto, 2013a, *Insect. Mundi*, 0297: 1, 4. —Otto, 2013b, *Insect. Mundi*, 0307: 1, 4, 5. —Otto, 2013c, *Col. Bull.*, 67(2): 97. —Otto, 2013d, *Col. Bull.*, 67(1): 50. —Otto & Kovalev, 2013, *Col. Bull.*, 67(4): 600. —Kundrata *et al.*, 2014, *Mol. Phylogenet. Evol.*, 76: 162–169. —Németh *et al.*, 2014, *Elateridarium*, 8: 112, 114. —Otto, 2014, *Col. Bull.*, 68(2): 331. —Otto *et al.*, 2014, *Zootaxa*, 3878(2): 179. —Týr, 2014, *Záp. Entomol. Listy*, 5: 1, 10. —Chang *et al.*, 2016, *Cladistics*, 32(2): 211–213. —Costa *et al.*, 2014, *Zootaxa*, 3878(3): 248–249. —Johnson, 2015, *Insect. Mundi*, 0445: 9. —Hilszczański *et al.*, 2015, *Spixiana*, 38(1): 77–78. —Otto, 2015a, *Insect. Mundi*, 0404: 1, 2, 4. —Otto, 2015b, *Insect. Mundi*, 0421: 1–6. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 1–16. —Bocak *et al.*, 2016, *Proc. R. Soc. B.*, 283(1830): 3, 4. —Németh & Otto, 2016, *Elateridarium*, 10: 133–138. —Kovalev, 2016, *Zool. Ros.*, 25: 278. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 181–183, 188, 387–392. —Otto & Gruber, 2016, *Insect. Mundi*, 0702: 1. —Webster, 2016, *Zookeys*, 573: 389, 448. —Webster *et al.*, 2016, *Zookeys*, 573: 265, 266, 272. —Marché, I. I., Jordan, 2017, *Great Lakes Entomol.*, 7. —Otto, 2017a, *Rev. Per. Boil.*, 24(1): 23. —Otto, 2017b, *Zootaxa*, 4278(1): 4–14. —Otto, 2017c, *Insect. Mundi*, 0569: 1, 2, 5, 13. —Otto, 2017d, *Insect. Mundi*, 0545: 1, 2, 5. —Otto, 2017e, *Insect. Mundi*, 0558: 1. —Seung *et al.*, 2017, *J. Asia. Pac. Entomol.*, 20(2): 569. —Seung & Lee, 2018a, *J. Asia. Pac. Biodivers.*, 11(2): 309. —Seung & Lee, 2018b, *J. Asia. Pac. Entomol.*, 21(1): 115. —Seung & Lee, 2018c, *Zookeys*, 781: 81–94. —Szoltys & Taszakowski, 2017, *Acta Entomol. Siles.*, 25: 1. —Володченко *et al.*, 2018, *Eversmannia*, 53: 11. —Kovalev, 2019, *Zootaxa*, 4683(1): 98. —Muona, 2019, *Entomol. Blät. Col.*, 115: 91. —Otto, 2019, *Insect. Mundi*, 0702: 1–2. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 1–11.

### 3.1 Subfamily Melasinae Fleming, 1821

Melasides: Lacordaire, 1857, *Hist. Nat. Insect.*, 4: 98–99 [as tribe]. Type genus: *Melasis* Olivier, 1790. —Thomson, 1859, *Skan. Col. Syn. Bear.*, 1: 100. —Fleutiaux, 1901, *Annl. Soc. Entomol. Fr.*, 70: 641. —Leconte, 1853a, *Trans. Am. Phil. Soc.*, 10: 410.

Melasites: Du Val, 1859–1863, *Gen. Col. Eur.*, 3: 113–121. [secondary group in Eucnemites]. Type genus: *Melasis* Olivier, 1790. —Blanchard, 1845, *His. Insect.*, 2: 70. —Fleutiaux, 1901, *Annl. Soc. Entomol. Fr.*, 70: 641. —Muona, 2007, *Catal. Pal. Col.*, 4: 82.

Melasitae: Cobos, 1958, *Acta Zool. Li.*, 15: 114. Type genus: *Melasis* Olivier, 1790. —Cobos, 1959, *Misc. Zool.*, 1(2): 78. —Cobos, 1961, *Inst. Sci. Nat. Belg.*, 35: 2. —Cobos, 1964, *Rev. Espan. Entomol.*, 4(3–4): 368. —Muona, 2007, *Catal. Pal. Col.*, 4: 82.

Melasinae: Fleutiaux, 1901, *Annl. Soc. Entomol. Fr.*, 70: 643–648 [as subfamily]. Type genus: *Melasis* Olivier, 1790. —Fleutiaux, 1920b, *Annl. Soc. Entomol. Belg.*, 60: 93. —Fleutiaux, 1921b, *Annl. Soc. Entomol. Belg.*, 61: 23. —Wu, 1937, *Cat. Insect. Sin.*: 472. —Fleutiaux, 1947, *Not. Entomol. Chin.*, 11: 4, 48. —Mouna, 1991, *Aust. Syst. Bot.*, 4(1): 167–172. —Mouna, 1993, *Entomol. Scand. Suppl.*, 44: 6. —Lawrence & Newton, 1995, *Fam. Sub. Col.*, 1995: 852. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Majka, 2007, *Zootaxa*, 1636(1): 35–41. —Muona & Teräväinen, 2008, *Col. Bull.*, 62(4): 476–478. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 301. —Chittaro & Blanc, 2012, *Mit. Sch. Entomol. Ges.*, 85: 98. —Otto, 2013a, *Insect. Mundi*, 0297: 1. —Kovalev, 2013, *Proc. Zool. Inst. PAH*, 317(3): 268–269. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 4. —Mertlik, 2015, *Elateridarium*, 9: 78–95. —Kovalev, 2016, *Zool. Ros.*, 25: 278. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 184, 188, 189. —Németh & Otto, 2016, *Elateridarium*, 10: 133–139. —Seung & Lee, 2018b, *J. Asia. Pac. Entomol.*, 21(1): 115–123. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 1–11.

#### 3.1.1 Tribe Melasini Fleming, 1821

Melasima: Thomson, 1864, *Skand. Col. Syn. Bear.*, 6: 45. Type genus: *Melasis* Olivier, 1790.

Melasini: Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 6. Type genus: *Melasis* Olivier, 1790. —Fleutiaux, 1919, *Voy. Ch. Alluud. R. Jeannel Afr. Orien.*, Rés. Sci., 6: 119. —Fleutiaux, 1920a, *Annl. Soc. Entomol. Belg.*, 60: 23. —Fleutiaux, 1921a, *Philipp. J. SciW.*, 18: 71. —Fleutiaux, 1921b, *Annl. Soc. Entomol. Belg.*, 61: 23. —Fleutiaux, 1924a, *Bull. Soc. Entomol. Fr.*, 1924: 156. —Fleutiaux, 1924b, *Annl. Soc. Entomol. Fr.*, 92: 301. —Fleutiaux, 1925a, *Bull. Soc. Entomol. Fr.*, 1925: 177. —Fleutiaux, 1926, *Annl. Soc. Entomol. Fr.*, 95: 37. —Muona, 2007, *Catal. Pal. Col.*, 4: 84. —Mertlik & Platia, 2008, *Elateridarium*, 2: 1–40. —Dušánek, 2008, *Elateridarium*, 2: 143. —Mertlik *et al.*, 2009, *Elateridarium*, 3: 1. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 2, 3, 5, 6, 8, 11.

### Genus *Isorhipis* Lacordaire, 1835

*Isorhipis* Lacordaire, 1835, *Col.*, 1: 622. Type species: *Isorhipis lepaigei* Lacordaire, 1835 [= *Tharops melasoides* Laporte, 1835]. —Bousquet, 1991, *Check. Beet. Can. Alas.*: 187. —Lucht, 1979, *Abh. Lan. Nat. Mün.*, 41(1): 32. —Muona, 1987, *Entomol. Scand.*, 18(1): 81. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167, 170. —Muona, 2002, *Am. Beet.*, 2: 155. —Dodelin *et al.*, 2003, *Publ. Soc. Linn. Lyon*, 72(9): 294. —Muona, 2007, *Catal. Pal. Col.*, 4: 84. —Thieren *et al.*, 2009, *Lambillionea CLK*, 4: 3–4. —

Brüstle & Muona, 2009, *J. Zool. Syst. Evol. Res.*, 47(4): 338–341. —Moreno & Irurzun, 2010, *Bol. SEA*, 47: 413–416. —Bousquet & Bouchard, 2013b, *Zookeys*, 282: 223. —Otto, 2017d, *Insect. Mundi*, 0545: 1–9.  
*Tharops* Laporte, 1835, *Rev. Entomol.*, 3: 168. Type species: *Tharops melasoides* Laporte, 1835. —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 [= *Isorhipis* Lacordaire, 1835]. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 84.

Distribution. China (Gansu).

### ***Isorhipis potanini* (Semenov, 1891)**

*Tharops potanini* Semenov, 1891, *Hor. Soc. Entomol. Ros.*, 25 (1890–1891): 345 (China: Gansu, syntype: ♀, 9 mm). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 [as synonym for *Isorhipis potanini*] (China: Gansu). —Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China: Gansu).

Distribution. China (Gansu).

### **Genus *Melasis* Olivier, 1790**

*Melasis* Olivier, 1790, *Col.* 2, N. 30: 1. Type species: *Hispa flabellicornis* Fabricius, 1775 [= *Elater buprestoides* Linnaeus, 1761]. —Latreille, 1796, *Préc. Car. Gén. Insect., Dis. Nat.*: 41. —Leconte, 1853a, *Trans. Am. Phil. Soc.*, 10: 408–412. —Kiesenwetter, 1858, *Nat. Insect. Deut.*: 175. —Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 6–8, 55–57. —Van Horn, 1909, *Proc. Entomol. Soc. Wash.*, 11: 55. —Roubal, 1956, *Mém. Acad. Sci., Art. Belles-Lettres Dij.*, 2(4): 192. —Olexa, 1963, *Entomol. Blät.*, 59(2): 89. —Suzuki & Lucht, 1983, *Entomol. Rev. Japan*, 38(1): 41. —Leiler, 1976, *Entomol. Blät. Biol. Syst. Käfer*, 72(1): 11. —Muona, 2002, *Am. Beet.*, 2: 155. —Sánchez-Ruiz & Jesús de la Rosa, 2003, *Bol. S. E. A.*, 32: 1–4. —Muona, 2007, *Catal. Pal. Col.*, 4: 84. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 189–190.

Distribution. China (Taiwan).

### ***Melasis sinensis* Lucht, 1982**

*Melasis sinensis* Lucht, 1982, *Entomol. Blät. Biol. Syst. Käfer*, 78: 15 (China: Taiwan; holotype: ♂, 10 mm; paratype: ♀, in Collection Suzuki, Tokyo). —Suzuki & Lucht, 1983, *Entomol. Rev. Japan*, 38(1): 44. —Sánchez-Ruiz & Jesús de la Rosa, 2003, *Bol. S. E. A.*, 32: 4 (China: Taiwan). —Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China: Taiwan).

Distribution. China (Taiwan).

### ***Melasis tibialis* Lucht, 1982**

*Melasis tibialis* Lucht, 1982, *Entomol. Blät. Biol. Syst. Käfer*, 78: 17 (China: Taiwan; holotype: ♂, 9 mm; in Collection Suzuki, Tokyo). —Sánchez-Ruiz & Jesús de la Rosa, 2003, *Bol. S. E. A.*, 32: 4 (China: Taiwan). —Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China: Taiwan).

Distribution. China (Taiwan).

### **3.1.2 Tribe Calyptocerini Muona, 1993**

Calyptocerini Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–179 [no description, unavailable family-group name]. Type genus: *Calyptocerus* Guérin-Méneville, 1843.

Calyptocerini Muona, 1993, *Entomol. Scand. Suppl.*, 44: 43. Type genus: *Calyptocerus* Guérin-Méneville, 1843. —Silfverberg, 1996, *Sahlbergia*, 3(2): 43, 61. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 301. —Власов *et al.*, 2014, *Eur. Entomol. J.*, 13(2): 146. —Otto, 2015a, *Insect. Mundi*, 0404: 1, 2. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 184, 189, 191, 192. —Viñolas *et al.*, 2016, *Bull. Insect. Cat. Hist. Nat.*, 80: 106. —Seung & Lee, 2018a, *J. Asia. Pac. Biodivers.*, 11(2): 309, 310. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 3.

### **Genus *Calyptocerus* Guérin-Méneville, 1843**

*Calyptocerus* Guérin-Méneville, 1843, *Annl. Soc. Entomol. Fr.*, 2(1): 171 [in key], 177. pl. V. figs 9–14. Type species: *Calyptocerus leboucherii* Guérin-Méneville, 1843. —Muona, 1987, *Entomol. Scand.*, 18(1): 81. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167, 170, 175, 179. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Otto, 2015a, *Insect. Mundi*, 0404: 1, 2. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 18. —Otto, 2017a, *Rev. Per. Boil.*, 24(1): 23.

Distribution. China (Taiwan).

***Calypocerus favipunctatus* Lucht, 1986**

*Calypocerus favipunctatus* Lucht, 1986, *Entomol. Blät. Biol. Syst. Käfer*, 82: 103–106 (China: Taiwan; holotype: 12×4 mm, in TUA). —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 175 (China: Taiwan). —Muona, 2007, *Catal. Pal. Col.*, 4: 82 (China: Taiwan). —Otto, 2015a, *Insect. Mundi*, 0404: 2 (Southeast Asia).

Distribution. China (Taiwan), Southeast Asia.

**3.1.3 Tribe Epiphanini Muona, 1993**

Epiphanini Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167 [No description, unavailable family-group name]. —Bouchard *et al.*, 2011, *Zookeys*, 88: 301.

Epiphanini Muona, 1993a, *Entomol. Scand. Suppl.*, 44: 45. Type genus: *Epiphanis* Eschscholtz, 1829 [Bouchard & Bousquet (2020) referred case (Art. 55. 3. 1) to remove the senior homonym Epiphanidae Herring, 1913]. —Muona, 1993b, *Entomol. Blät.*, 89(1): 20. —Muona, 2007, *Catal. Pal. Col.*, 4: 83. —Majka, 2007, *Zootaxa*, 1636: 36. —Thieren *et al.*, 2009, *Lambillionea CLK*, 4: 3–23. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 301. —Webster *et al.*, 2012, *Zookeys*, 179: 80–81. —Viñolas *et al.*, 2012, *Orsis*, 226: 158. —Власов *et al.*, 2014, *Eur. Entomol. J.*, 13(2): 146. —Webster *et al.*, 2016, *Zookeys*, 573: 282. —Webster, 2016, *Zookeys*, 573: 448. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 205–207. —Young & Otto, 2017, *Great Lakes Entomol.*, 50(2): 50. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 86. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 3.

**Genus *Hylis* Gozis, 1886**

*Hylis* Gozis, 1886, *Rech. Esp. Typ. Que. Anc. Gen.*: 21 [as a replacement name for *Nematodes* Eschscholtz, 1836 and *Hypocoelus* Lacordaire, 1857]. Type species: *Eucnemis procerulus* Mannerheim, 1823. —Kiesenwetter, 1858, *Nat. Insect. Deut.*: 175 (*Hypocoelus*). —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167. —Buchholz, 1992, *Wia. Entomol.*, 11(1): 17–20. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 83. —Kopecky & Mertlik, 2008, *Elateridarium*, 10: 45. —Iurzun, 2008, *Heter. Rev. Entomol.*, 8(2): 239. —Muona, 2012, *Kol. Run.*, 82: 287–288.

*Elatocoelus* Hyslop, 1921, *Proc. USNM.*, 58: 644 [as a replacement name for *Hypocoelus* Reitter, 1902]. Type species: *Hypocoelus mathiesseni* Reitter, 1906. —Muona, 1987, *Entomol. Scand.*, 18(1): 81. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 83.

*Hypohylis* Reitter, 1911, *Fauna Ger.*, 3: 203. Type species: *Hypocaelus matthiesseni* Reitter, 1906. —Muona, 1987, *Entomol. Scand.*, 18(1): 83. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 83

Distribution. China (Northeast), Russia (Far East), Japan.

***Hylis harmandi* (Fleutiaux, 1923)**

*Hypocoelus harmandi* Fleutiaux, 1923, *Annls. Soc. Entomol. Fr.*, 91: 326 [in key], 327 (Japan: Tokyo; monotype: 5  $\frac{2}{3}$  mm, in MHNP). —Muona, 2007, *Catal. Pal. Col.*, 4: 83 (China: Northeast; Russia (Far East); Japan).

Distribution. China (Northeast), Russia (Far East), Japan (Tokyo).

***Hylis japonicus* (Fleutiaux, 1902)**

*Hypocoelus japonicus* Fleutiaux, 1902a, *Bull. Mus. Natl. Hist. Nat.*, 8: 24–25 (Japan; syntype: 4.3 mm). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Northeast; Japan).

Distribution. China (Northeast), Japan.

**Genus *Epiphanis* Eschscholtz, 1829**

*Epiphanis* Eschscholtz, 1829b, *Zool. Atlas, Enth. Abb. Besch. Thier. Währ. Flot. Kotz. Reise Welt, Russ. Kais. Krieg. Pred. Jah.*, 4: 9. Type species: *Epiphanis cornutus* Eschscholtz, 1829. —Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 41, 58. —Muona, 1983, *Ann. Entomol. Fen.*, 49: 61. —Muona, 1987, *Entomol. Scand.*, 18(1): 83. —Bousquet, 1991, *Check. Beet. Can. Alas.*: 187. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–180. —Muona, 2002, *Am. Beet.*, 2: 154–155. —Thieren *et al.*, 2009, *Lambillionea CLK*, 4: 3–4. —Otto, 2017b, *Zootaxa*, 4278(1): 6, 8. —Otto, 2017c, *Insect. Mundi*, 0569: 1.

*Ceratotaxia* Sharp, 1908, *Fan. Haw.*, 3(5): 399. Type species: *Ceratotaxia tristis* Sharp, 1908. —Muona, 1987, *Entomol. Scand.*, 18(1): 84. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 1983, *Annls. Entomol. Fen.*, 49: 61.

*Prospotropis* Abeille de Perrin, 1898, *Bull. Soc. Entomol. Fr.*, 1898: 36. Type species: *Prospotropis devillei* Abeille de Perrin, 1898 [= *Epiphanis cornutus* Eschscholtz, 1829]. —Sainte-Claire-Deville, 1921, *Bull. Soc. Entomol. Fr.*, 1921: 127–130. —Muona, 1987, *Entomol. Scand.*, 18(1): 88. —Muona, 2002, *Am. Beet.*, 2: 155.

Distribution. China, Russia (Far East), Japan, Turkey, Europe.

***Epiphanis cornutus* Eschscholtz, 1829**

*Epiphanis cornutus* Eschscholtz, 1829b, *Zool. Atlas, Enth. Abb. Besch. Thier. Währ. Flot. Kotz. Reise Welt, Russ. Kais. Krieg. Pred. Jah.*, 4: 9–10. (American; monotype: 5.72 mm; in Elaterides). — LeConte, 1869, *Annls. Mag. Nat. Hist.*, 4(24): 371 (Canada). — Muona, 1983, *Ann. Entomol. Fen.*, 49: 61. — Muona, 1987, *Entomol. Scand.*, 18(1): 81. — Muona, 2002, *Am. Beet.*, 2: 155 (American). — Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China; Russia (Far East); Japan; Nearctic Region). — Mertlik *et al.*, 2007, *Elateridarium*, 1: 92–94 (Turkey). — Gerend *et al.*, 2007, *Ferrantia*, 50: 270, 286 (German). — Thieren *et al.*, 2009, *Lambillionea CLK*, 4: 1–16 (Belgique). — Lemperiere & Marage, 2010, *Insect Con. Div.*, 3(3): 239, 241 (France). — Otto, 2011, *Col. Bull.*, 65(3): 327 (American). — Darby, 2014, *Br. J. Entomol. Nat. Hist.*, 27: 32 (England). — Young & Otto, 2017, *Great Lakes Entomol.*, 50(2): 50 (American).

*Epiphanis cristatus* LeConte, 1852, *Proc. Acad. Nat. Sci. Phil.*, 6: 45. — Bousquet, 1991, *Check. Beet. Can. Alas.*: 187 (Canada). — Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China; Russia (Far East); Japan).

*Prosopotropis devillei* Abeille de Perrin, 1898, *Bull. Soc. Entomol. Fr.*, 1899: 36. — Fleutiaux, 1920c, *Bull. Soc. Entomol. Fr.*, 1920: 187 (Indochina). — Sainte-Claire-Deville, 1921, *Bull. Soc. Entomol. Fr.*, 1921: 127, 130 (Europe). — Muona, 1987, *Entomol. Scand.*, 18(1): 81. — Muona, 2007, *Catal. Pal. Col.*, 4: 84 (China; Russia (Far East); Japan).

Distribution. China, Russia (Far East), Japan, Nearctic Region, Algeria, Bulgaria, England, German, France, Italy, Turkey, American.

**3.1.4 Tribe Dirhagini Reitter, 1911**

Dirrhagini [sic] Reitter, 1911, *Fauna Ger.*, 3: 202 [in key], 204. Type genus: *Dirhagus* Latreille, 1834 [stem: Dirhag-; incorrect spelling]. — Reitter, 1921, *Wien. Entomol. Zeit.*, 38(4–8): 79. — Muona, 1993b, *Entomol. Blät.*, 89(1): 20. — Muona, 2007, *Catal. Pal. Col.*, 4: 82. — Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 301. — Otto, 2012a, *Col. Bull.*, 66(3): 219. — Kovalev, 2016, *Zool. Ros.*, 25: 278. — Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 3, 6, 11.

Microrhaginae Fleutiaux, 1919, *Voy. Ch. Alluaud R. Jeannel Afr. Orien., Rés. Sci.*, 6: 114. Type genus: *Microrhagus* Dejean, 1833. — Muona, 2007, *Catal. Pal. Col.*, 4: 82. — Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 301.

Dirrhaginae[sic]: Fleutiaux, 1947, *Not. Entomol. Chin.*, 11: 4 [in key], 56. Type genus: *Dirhagus* Latreille, 1834.

Dirrhagitae: Cobos, 1958, *Acta Zool. Li.*, 15: 111 [as subfamily]. Type genus: *Dirhagus* Latreille, 1834. — Cobos, 1959, *Misc. Zool.*, 1(2): 78.

Arhipini[sic] Cobos, 1964, *Rev. Espan. Entomol.*, 40–3, 4 (1965): 396–407 [stem: Arrhipid-; incorrect spelling]. — Muona, 2007, *Catal. Pal. Col.*, 4: 82. — Brüstle *et al.*, 2010, *Cladistics*, 26(1): 14. — Bouchard *et al.*, 2011, *Zookeys*, 88: 301. — Bouchard & Bousquet, 2020, *Zookeys*, 922: 86.

**Genus *Farsus* Jacquelin du Val, 1860**

*Farsus* Jacquelin du Val, 1860, *Gen. Col. Eur.*, 3: 116. Type species: *Hylochaes unicolor* Latreille, 1834 [= *Elater dubius* Piller & Mitterpacher, 1783]. — Fleutiaux, 1947, *Not. Entomol. Chin.*, 11: 57. — Mertlik *et al.*, 2009, *Elateridarium*, 3: 1–6. — Németh & Otto, 2016, *Elateridarium*, 10: 133–135. — Muona, 2007, *Catal. Pal. Col.*, 4: 82.

*Rhagomerus* Iablokoff-Khnzorian, 1964, *Dok. Akad. Nauk Arm. SSR*, 39: 162. Type species: *Rhagomerus obesus* Iablokoff-Khnzorian, 1964. — Muona, 1987, *Entomol. Scand.*, 18(1): 79–92. — Muona, 1993, *Entomol. Scand. Suppl.*, 44: 45. — Muona, 2007, *Catal. Pal. Col.*, 4: 82.

Distribution. China (Sichuan), Turkey, Albania Bulgaria, Bosnia, Herzegovina, Czech Republics, Slovak Republic.

***Farsus obenbergeri* Roubal, 1941**

*Farsus obenbergeri* Roubal, 1941, *Cas. Ces. Spo. Entomol.*, 38: 12 (China: Sichuan, Chongqing; monotype: 5 mm). — Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Sichuan, Chongqing). — Muona, 2007, *Catal. Pal. Col.*, 4: 82 (China: Sichuan). — Németh & Otto, 2016, *Elateridarium*, 10: 133 (China: Sichuan).

Distribution. China (Sichuan, Chongqing).

**Genus *Microrhagus* Dejean, 1833**

*Microrhagus* Dejean, 1833, *Cat. Col. Dej. Deux. Edit.*, 2: 85. Type species: *Elater pygmaeus* Fabricius, 1792. — Latreille, 1834, *Annls. Soc. Entomol. Fr.*, 3: 130. — Kiesenwetter, 1858, *Nat. Insect. Deut.*: 175. — Fleutiaux, 1901, *Annls. Soc. Entomol. Fr.*, 70: 636. — Méquignon, 1925a, *Bull. Soc. Entomol. Fr.*, 1925: 187. — Olexa, 1975, *Entomol. Blät. Biol. Syst. Käfer*, 71: 162 [*Microrhagus* Boisduval & Lacordaire, 1835(sic)]. — Muona, 1987, *Entomol. Scand.*, 18(1): 79–92. — Muona, 1995a, *Entomol. Fen.*, 6(1): 39–41. — Muona, 2002, *Am. Beet.*, 2: 155. — Dodelin *et al.*, 2003, *Publ. Soc. L. Lyon*, 72(9): 294. — Muona, 2007, *Catal. Pal. Col.*, 4: 82. — Mertlik, J., 2008, *Elateridarium*, 2: 72. — Otto, 2013b, *Insect. Mundi*, 0307: 1–6. — Bousquet & Bouchard, 2013a, *Zookeys*, 282: 20. — Kovalev, 2013, *Proc. Zool. Inst. PAH*, 317(3): 268–269. — Otto, 2015b, *Insect. Mundi*, 0421: 1–24.

- Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 1–18. —Kovalev, 2016, *Zool. Ros.*, 25: 277–278. —Seung & Lee, 2018c, *Zookeys*, 781: 81–94.
- Microrrhagus* Reitter[sic], 1911, *Fauna Ger.*, 3: 204. Type species: *Microrrhagus hummleri* Reitter, 1911. —Reitter, 1921, *Wien. Entomol. Zeit.*, 38(4–8): 79. —Olexa, 1963, *Entomol. Blät.*, 59(2): 88, 89 [as subgenus].
- Dirrhagus* Latreille, 1834, *Annls. Soc. Entomol. Fr.*, 3: 130. Type species: *Elater pygmaeus* Fabricius, 1792. —Fleutiaux, 1901, *Annls. Soc. Entomol. Fr.*, 70: 636. —Knull, 1946, *Annls. Entomol. Soc. Am.*, 39: 246–247. —Fleutiaux, 1947, *Not. Entomol. Chin.*, 11: 63. —Cobos, 1964, *Rev. Espan. Entomol.*, 40–3, 4 (1965): 394–426. —Olexa, 1975, *Entomol. Blät. Biol. Syst. Käfer*, 71: 161 [as synonym for *Dirrhagus* Reitter, 1911]. —Muona, 1987, *Entomol. Scand.*, 18(1): 79–86. —Muona, 1995a, *Entomol. Fen.*, 6(1): 39–41. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Mertlik, 2008, *Elateridarium*, 2: 72. —Bousquet & Bouchard, 2013a, *Zookeys*, 282: 18.
- Aulacostenus* Motschulsky, 1870, *Hor. Soc. Entomol. Ros.*, 6 (Suppl.): 117. Type species: *Aulacostenus pavidus* Motschulsky, 1870. —Muona, 1987, *Entomol. Scand.*, 18(1): 81. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 82.
- Arhagus* Méquignon, 1925a, *Bull. Soc. Entomol. Fr.*, 1925: 187 [as subgenus]. Type species: *Microhagus pyrenaeus* Bonvouloir, 1872. —Muona, 1987, *Entomol. Scand.*, 18(1): 81 [as genus]. —Muona, 2002, *Am. Beet.*, 2: 155 [as genus]. —Muona, 2007, *Catal. Pal. Col.*, 4: 82 [as genus].
- Dichodirrhagus* Méquignon, 1925b, *Bull. Soc. Entomol. Fr.*, 1925: 240 [as subgenus; no record in Méquignon, 1925b: 187–188, the genus name in *Bull. Soc. Entomol. Fr.*, 1925: 240.]. Type species: *Microhagus pyrenaeus* Bonvouloir, 1872. —Olexa, 1975, *Entomol. Blät. Biol. Syst. Käfer*, 71: 161 [as synonym for *Arhagus* Méquignon, 1925] —Muona, 1987, *Insect Sys. Evol.*, 18(1): 81. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Mertlik, 2008, *Elateridarium*, 2: 76.
- Emyrrhagus* Olexa, 1975, *Entomol. Blät. Biol. Syst. Käfer*, 71: 162 [as subgenus]. Type species: *Microrrhagus emyi* Rouget, 1856. —Muona, 1987, *Entomol. Scand.*, 18(1): 81. —Muona, 2002, *Am. Beet.*, 2: 155. —Muona, 2007, *Catal. Pal. Col.*, 4: 82. —Mertlik, 2008, *Elateridarium*, 2: 72, 119.

Distribution. China (Fujian), Russia (Far East), Turkey, Europe, North America.

### ***Microrrhagus klapperichi* (Lucht, 1984)**

*Dirrhagus klapperichi* Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 289 (China: Fujian; holotype: ♀, 6×2 mm, in MAK; paratypes: ♀, in SM). —Muona, 2007, *Catal. Pal. Col.*, 4: 82 (China: Fujian).

Distribution. China (Fujian).

### ***Microrrhagus savioi* (Fleutiaux, 1925)**

*Arhagus savioi* Fleutiaux, 1925a, *Bull. Soc. Entomol. Fr.*, 1925: 177 (China: Fujian; syntype: ♂, 4.25 mm; ♀, 6 mm, in BMNH). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Fujian). —Muona, 2007, *Catal. Pal. Col.*, 4: 83 (China: Fujian).

Distribution. China (Fujian).

## **3.2 Subfamily Eucneminae Eschscholtz, 1829**

Eucnemides Eschscholtz, 1829b, *Zool. Atlas, Enth. Abb. Besch. Thier. Währ. Flot. Kotz. Reise Welt, Russ. Kais. Krieg. Pred. Jah.*, 4: 9–10. Type genus: *Eucnemis* Ahrens, 1812. —Leconte, 1853a, *Trans. Am. Phil. Soc.*, 10: 410, 412. —Saunders, 1836, *Trans. Roy. Entomol. Soc. Lond.*, 1(3): 150. —LeConte, 1852, *Proc. Acad. Nat. Sci. Phil.*, 6: 45–49. —LeConte *et al.*, 1852, *Proc. Acad. Nat. Sci. Philadelphia*, 6: 229. —Horn, 1886, *Trans. Am. Entomol. Soc. Proc. Entomol. Sec. Acad. Nat. Sci.*, 13: 6. —Fleutiaux, 1896a, *Annal. Mus. Civ. Sto. Nat. Gen.*, 36: 555–606. —Fleutiaux, 1902b, *Bull. Soc. Entomol. Fr.*, 1902: 193–194. —Hyslop, 1917, *Annls. Entomol. Soc. Am.*, 1917, 10(3): 242. —Fleutiaux, 1919, *Voy. Ch. Alluaud R. Jeannel Afr. Orien.*, *Rés. Sci.*, 6: 112. —Fleutiaux, 1945, *L'Abeille: J. Entomol.*, 34: 149–274. —Fleutiaux, 1947, *Not. Entomol. Chin.*, 11: 3–66. —Muona, 2007, *Catal. Pal. Col.*, 4: 85. —Hoffman *et al.*, 2009, *Banisteria*, 34: 29. —Bouchard *et al.*, 2011, *Zookeys*, 88: 303. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 1–3, 5–11.

### **3.2.1 Tribe Dyscharachthini Muona, 1993**

Dyscharachthini Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–179 [no description, unavailable family-group name]. —Bouchard *et al.*, 2011, *Zookeys*, 88: 303.

Dyscharachthini Muona, 1993a, *Entomol. Scand. Suppl.* 44: 50. Type genus: *Dyscharachthis* Blackburn, 1900. —Muona, 1993b, *Entomol. Blät.*, 89(1): 23. —Muona, 2007, *Catal. Pal. Col.*, 4: 85. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 303. —Vahtera *et al.*, 2015, *Biol. Data J.*, 3: 7. —Otto, 2017a, *Rev. Peru. Biol.*, 24(1): 15.

**Genus *Dyscharachthis* Blackburn, 1900**

*Dyscharachthis* Blackburn, 1900, *Trans. Proc. Roy. Soc. Vic.*, 12: 216 [in key], 217. Type species: *Dyscharachthis brevipennis* Blackburn, 1900. —Muona, 2007, *Catal. Pal. Col.*, 4: 85. —Muona J., 2011, *Col.*, 2: 61. —Vahtera *et al.*, 2015, *Biol. Data J.*, 3: 1, 7. —Otto, 2017a, *Rev. Peru. Biol.*, 24(1): 15.

*Galloisius* Fleutiaux, 1923, *Annls. Soc. Entomol. Fr.*, 91: 294. Type species: *Galloisius amplicollis* Fleutiaux, 1923. —Muona, 1987, *Entomol. Scand.*, 18(1): 84. —Muona, 1993a, *Entomol. Scand. Suppl.*, 44: 49 [as a synonym of *Dyscharachthis* Blackburn, 1900].

Distribution. China (Southeast, Taiwan), Japan.

***Dyscharachthis amplicollis* (Fleutiaux, 1923)**

*Galloisius amplicollis* Fleutiaux, 1923, *Annls. Soc. Entomol. Fr.*, 91: 295 (Japan; Singapore; syntype: 4.0–5.5 mm, in MHNP). —Muona, 1987, *Entomol. Scand.*, 18(1): 84. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 175 (Japan). —Muona, 2007, *Catal. Pal. Col.*, 4: 85 (China: Taiwan, Southeast; Japan).

*Dyscharachthis amplicollis* Muona, 1993a, *Entomol. Scand. Suppl.*, 44: 49.

Distribution. China (Southeast, Taiwan), Japan.

**3.2.2 Tribe Galbitini Muona, 1991**

*Galbites* Blanchard, 1845, *His. Insect.*, 2: 71 [in key, unavailable name, not subsequently latinized]. Type genus: *Galba* Latreille, 1829. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87.

Gabini [sic] Beaulieu, 1919, *Le Nat. Can.*, 46: 191 [as synonym for *Galbites* Fleutiaux, 1918, permanently invalid]. Type genus: *Galba* Latreille, 1829. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87.

*Pterotarsini* Cobos, 1964, *EOS: Rev. Espan. Entomol.*, 4: 294. Type genus: *Pterotarsus* Guérin-Ménéville, 1831. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 303.

*Galbitini* Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167 [no description, unavailable family-group name].

*Galbitini* Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 19. Type genus: *Galbites* Fleutiaux, 1918. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50. —Muona, 2011, *Col.*, 2: 62–63. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 250, 272, 273, 280. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 3, 7, 11.

**Genus *Galbites* Fleutiaux, 1918**

*Galba* Latreille, 1829, *Règ. Anim. Dist. Apr. Organ.*, 4: 451. Type species: *Galba marmorata* Guérin-Ménéville, 1830. —Muona, 1987, *Entomol. Scand.*, 18(1): 84. —Fleutiaux, 1918, *Bull. Soc. Entomol. Fr.*, 1918: 59. —Suzuki, 2012, *Sayab., N. S.*, 6: 7.

*Galbites* Fleutiaux, 1918, *Bull. Soc. Entomol. Fr.*, 1918: 59. Type species: *Galba marmorata* Guérin-Ménéville, 1830. —Muona, 1987, *Entomol. Scand.*, 18(1): 79, 84. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–179. —Muona & Teräväinen, 2008, *Col. Bull.*, 62(4): 477.

Distribution. China (Taiwan), Laos, Cambodia, Thailand, India, Bhutan, Philippines, Malaysia, Singapore, Indonesia, Brunei, New Caledonia, Papua New Guinea, Bosnia Herzegovina, Republic of Belau, Solomon Islands.

***Galbites australiae* (Lea, 1919)**

*Galba australiae* Lea, 1919, *Proc. Linn. Soc. N. S. W.*, 43: 741 (syntype: 11–14 mm, in SAM). —Muona, 2007, *Catal. Pal. Col.*, 4: 85 (China: Taiwan; Bosnia Herzegovina). —Suzuki, 2012, *Sayab., N. S.*, 6: 7. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 391 (Laos).

*Pterotarsus mouhoti* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 303 [in key], 305 (Laos; Thailand; Vietnam). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 29 (Australia; Bhutan; India; Laos; Papua New Guinea; Philippines; Solomon Islands; Thailand). —Suzuki, 2012, *Sayab., N. S.*, 6: 8 (China: Taiwan). —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 391 (Laos).

*Pterotarsus bakeri* Fleutiaux, 1926, *Annls. Soc. Entomol. Fr.*, 95: 36 [in key], 37 (Philippines; Celebes). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 29 (Australia; Bhutan; India; Laos; Papua New Guinea; Philippines; Solomon Islands; Thailand). —Suzuki, 2012, *Sayab., N. S.*, 6: 8 (China: Taiwan).

*Galbites australiae*: Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 29 (Australia; Bhutan; India; Laos; Papua New Guinea; Philippines; Solomon Islands; Thailand). —Muona, 2007, *Catal. Pal. Col.*, 4: 85 (China: Taiwan; Bosnia Herzegovina). —Suzuki, 2012, *Sayab., N. S.*, 6: 8. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 185, 274–276 (Laos).

Distribution. China (Taiwan), Vietnam, Bhutan, India, Laos, Papua New Guinea, Philippines, Solomon Islands, Thailand, Bosnia Herzegovina.



***Galbites chevrolati* Fleutiaux, 1923**

*Pterotarsus chevrolati* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 304 [in key], 308 (Thailand; Philippines; Indonesia; syntype: 5.5–13mm, in MNHN). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan).

*Galbites chevrolati* Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 25 (China: Taiwan; Indonesia; Cambodia; Thailand; Philippines). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan).

Distribution. China (Taiwan), Indonesia, Cambodia, Thailand, Philippines.

***Galbites chrysocoma* (Hope, 1845)**

*Galba chrysocoma* Hope, 1845, *Trans. Entomol. Soc. Lon.*, 4: 14 (China: Guangdong; monotype: 8.0×2.5 mm). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (Malaysia; Indonesia; Laos; Philippines). —Tuominen *et al.*, 2011, *Biological names and taxonomies on the semantic web—managing the change in scientific conception, Extended Semantic Web Conference*: 261. —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China).

*Pterotarsus chrysocomus* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 303 [in key], 305 (China; Malacca; Asian Archipelago; Philippines; Laos). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 30 (China; Indonesia; Malaysia; Papua New Guinea; Philippines; Singapore).

*Pterotarsus chrysocomus* var. *Puniceus* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 305 (China; Malacca; Asian Archipelago; Philippines; Laos). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 30 (China; Indonesia; Malaysia; Papua New Guinea; Philippines; Singapore).

*Galbites chrysocoma*: Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 30 (China; Indonesia; Malaysia; Papua New Guinea; Philippines; holotype: ♂, 8.0–13.0mm, ♀, 10.5–18.0mm, in MHNP). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China). —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 275 (Laos).

Distribution. China (Guangdong), Asian Archipelago, Laos, Philippines, Malaysia, Indonesia, Papua New Guinea, Singapore, Oriental Region.

***Galbites sauteri* Muona, 1991**

*Galbites sauteri* Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 27 (China: Taiwan; Philippines; holotype: ♂, in NMW; Paratype: 6♀, 1♂, in BPBM, MHNP, NMW; 9.0–12.5mm). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan).

Distribution. China (Taiwan), Philippines.

***Galbites tomentosa* (Montrouzier, 1855)**

*Galba tomentosa* Montrouzier, 1855, *Annls. Sci. Phys. Nat. Lyon*, 7: 13 (Papua New Guinea; syntype: 0.85 mm). —Fleutiaux, 1927a, *Bull. Soc. Entomol. Fr.*, 1927: 236 (Papua New Guinea). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan). —Suzuki, 2012, *Sayab., N. S.*, 6: 7, 11 (China: Taiwan).

*Galbites tomentosa*: Muona, 1991, *Entomol. Scand. Suppl.*, 39: 21 (China: Taiwan; Australia; Indonesia; Malaysia; Papua New Guinea; Salomon Island; lectotype: ♀, in MHNP; syntype: 5♂, 6♀, 11 not sexed, 6.5–10.0mm). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan). —Vahtera *et al.*, 2009, *Cladistics*, 25(2): 157 (Salomon Island). —Suzuki, 2012, *Sayab., N. S.*, 6: 7–12 (China: Taiwan).

Distribution. China (Taiwan), Malaysia, Indonesia, Papua New Guinea, Australia, Salomon Islands.

***Galbites tuberculata* (L. Redtenbacher, 1867)**

*Galba tuberculata* L. Redtenbacher, 1867, *Col. Reise. Öster. Freg. Nov. Erde. Jahren 1857, 1858, 1859 Befeh. Com. B. von Wüllerstorff-Urbair*: 90 (Lectotype: ♂, 10.16×3.81 mm, in NMW, Designated by Fleutiaux, 1924b: 304). —Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 301. —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 41 (China: Taiwan; Indonesia; Papua New Guinea; Brunei; Philippines; Thailand). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan).

*Pterotarsus funebris* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 304 [as a synonym for *Pterotarsus tuberculata*] (Indonesia; New Guinea; Philippines; India). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 41 (China: Taiwan; Indonesia; Papua New Guinea; Brunei; Philippines; Thailand).

*Pterotarsus similis* Cobos, 1985, *EOS: Rev. Espan. Entomol.*, 61: 18 (Papua New Guinea). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 41 (China: Taiwan; Indonesia; Papua New Guinea; Brunei; Philippines; Thailand).

*Galbites tuberculata*: Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 41 (China: Taiwan; Indonesia; Papua New Guinea; Brunei; Philippines; Thailand). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China: Taiwan). —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 280 (Laos).

Distribution. China (Taiwan), Laos, Thailand, Philippines, Malaysia, Indonesia, Brunei, Papua New Guinea, Solomon

Islands.

### ***Galbites wallacei* (Perroud & Montrousier, 1864)**

- Galba wallacei* Perroud & Montrousier, 1864, *Annls. Soc. Linn. Lyon*, 11: 98 (India: Kanala; syntype: 8–12 mm×2.5–4.5 mm, in MHNP). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 34 (China; Europe; India; Indonesia; Brunei; Malaysia; New Caledonia; Papua New Guinea; Philippines; Singapore; Solomon Islands; Thailand; San Cristobal). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China).
- Galba sericata* Fleutiaux, 1896d, *Mém. Soc. Entomo. Fr.*, 9: 298 (New Guinea; in MHNP). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 34 (China; Europe; India; Indonesia; Brunei; Malaysia; New Caledonia; Papua New Guinea; Philippines; Singapore; Solomon Islands; Thailand; San Cristobal).
- Pterotarsus wallacei* Fleutiaux, 1924b, *Annls. Soc. Entomol. Fr.*, 92: 301, 303 [in key], 306 (China: Taiwan; Brunei; Philippines; Sumatra; Malaysia; Indonesia; Australian; New Caledonia). —Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 34 (China; Europe; India; Indonesia; Brunei; Malaysia; New Caledonia; Papua New Guinea; Philippines; Singapore; Solomon Islands; Thailand; San Cristobal).
- Galbites wallacei*: Muona, 1991b, *Entomol. Scand. Suppl.*, 39: 34 [in key] (China; Europe; India; Indonesia; Brunei; Malaysia; New Caledonia; Papua New Guinea; Philippines; Singapore; Solomon Islands; Thailand; San Cristobal). —Lawrence *et al.*, 2007, *Insect Syst. Evol.*, 38(2): 207 (Malaysia). —Vahtera *et al.*, 2009, *Cladistics*, 25(2): 149, 151 (Indonesia). —Muona, 2007, *Catal. Pal. Col.*, 4: 86 (China).

Distribution. China (Taiwan), Europe, India, Indonesia, Brunei, Malaysia, New Caledonia, Papua New Guinea, Philippines, Singapore, Solomon Islands, Thailand, San Cristobal, Australian, New Caledonia.

## **3.3 Subfamily Macraulacinae Fleutiaux, 1923**

- Macraulacinae Fleutiaux, 1923, *Annls. Soc. Entomol. Fr.*, 91: 292 [in key]. Type genus: *Macraulacus* Bonvouloir, 1872. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–172. —Muona, 1993b, *Entomol. Blät.*, 89(1): 26. —Sánchez-Ruiz *et al.*, 2002, *Bol. S. E. A.*, 31: 173. —Baena *et al.*, 2003, *Bol. S. E. A.*, 31: 176. —Lawrence *et al.*, 2007, *Insect Syst. Evol.*, 38(2): 207, 208, 220. —Lawrence *et al.*, 2011, *Annls. Zool.*, 61(1): 7. —Muona, 2007, *Catal. Pal. Col.*, 4: 87. —Lawrence *et al.*, 2011, *Col. Beetles*, 2: 4. —Majka, 2007, *Zootaxa*, 1636(1): 38, 41. —Irurzun, 2008, *Heter. Rev. Entomol.*, 8(2): 236, 247. —Jesús de la Rosa, 2008, *Bol. S. E. A.*, 42: 368. —Muona & Teräväinen, 2008, *Col. Bull.*, 62(4): 476–478. —Hoffman *et al.*, 2009, *Banisteria*, 34: 29. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 305. —Chittaro & Blanc, 2012, *Mitt. Sch. Entomol. Ges.*, 85: 98. —Webster *et al.*, 2012, *Zookeys*, 179: 80, 84. —Otto, 2012b, *Col. Bull.*, 66(3): 285. —Viñolas *et al.*, 2012, *Orsis*, 226: 158. —Aleksseev, 2013, *Zool. Ecol.*, 23(1): 7. —Otto, 2013c, *Col. Bull.*, 67(2): 97. —Otto, 2013d, *Col. Bull.*, 67(1): 50. —Otto & Kovalev, 2013, *Col. Bull.*, 67(4): 600. —Otto, 2015a, *Insect. Mundi*, 0404: 4. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 8–23. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 186, 285. —Seung *et al.*, 2017, *J. Asia. Pac. Entomol.*, 20(2): 569–570. —Otto, 2017d, *Insect. Mundi*, 0545: 1–2. —Otto, 2017e, *Insect. Mundi*, 0558: 2. —Kovalev, 2018, *Entomol. Rev.*, 98(9): 1181. —Otto, 2018, *Insect. Mundi*, 0623: 3–4. —Otto & Young, 2018, *Great Lakes Entomol.*, 50(2): 50. —Otto, 2019, *Insect. Mundi*, 0702: 2–3. —Gemminger & Harold, 1869, *Catal. Col. Huc. Descr. Syn. Syst.*, 5: 1462. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 1–3, 5–11. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87 [Fornacini Beaulieu, 1919 and Dromaeolini Beaulieu, 1919 take precedence over the valid subfamily and tribe names Macraulacinae/-ini Fleutiaux, 1923, but Bouchard & Bousquet suggested the preserve usage of Macraulacinae/-ini Fleutiaux, 1923 as valid].
- Fornacini Beaulieu, 1919, *Le Nat. Can.*, 46: 191. Type genus: *Fornax* Laporte, 1835. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87.
- Dromaeolini Beaulieu, 1919, *Le Nat. Can.*, 46: 191. Type genus: *Dromaeolus* Kiesenwetter, 1858. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87.

### **3.3.1 Tribe Macraulacini Fleutiaux, 1923**

- Macraulacini Fleutiaux, 1923, *Annls. Soc. Entomol. Fr.*, 91: 290. Type genus: *Macraulacus* Bonvouloir, 1872. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 167–172. —Muona, 1993b, *Entomol. Blät.*, 89(1): 30. —Sánchez-Ruiz *et al.*, 2002, *Bol. S. E. A.*, 31: 173. —Baena *et al.*, 2003, *Bol. S. E. A.*, 31: 176. —Lawrence *et al.*, 2007, *Insect Syst. Evol.*, 38(2): 207, 208, 220. —Muona, 2007, *Catal. Pal. Col.*, 4: 87. —Majka, 2007, *Zootaxa*, 1636(1): 38, 41. —Irurzun, 2008, *Heter. Rev. Entomol.*, 8(2): 236, 247. —Jesús de la Rosa, 2008, *Bol. S. E. A.*, 42: 368. —Muona & Teräväinen, 2008, *Col. Bull.*, 62(4): 476–478. —Hoffman *et al.*, 2009, *Banisteria*, 34: 29. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 305. —Lawrence *et al.*, 2011, *Annls. Zool.*, 61(1): 7. —Lawrence *et al.*, 2011, *Col. Beetles*, 2: 4. —Chittaro & Blanc, 2012, *Mitt. Sch. Entomol. Ges.*, 85: 98. —Webster *et al.*, 2012, *Zookeys*, 179: 80, 84. —Otto, 2012b, *Col. Bull.*, 66(3): 285. —Viñolas *et al.*, 2012, *Orsis*, 226: 158. —Aleksseev, 2013, *Zool. Ecol.*, 23(1): 7. —Otto, 2013c, *Col. Bull.*, 67(2): 97. —Otto, 2013d, *Col. Bull.*, 67(1): 50. —Otto & Kovalev, 2013, *Col. Bull.*, 67(4): 600. —Otto, 2015a, *Insect. Mundi*, 0404: 4. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 8–23. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 186, 285. —Seung *et al.*, 2017, *J. Asia. Pac. Entomol.*, 20(2): 569–570. —Otto, 2017d, *Insect. Mundi*, 0545: 1–2. —Otto, 2017e, *Insect. Mundi*, 0558: 2. —Kovalev, 2018, *Entomol. Rev.*, 98(9): 1181. —Otto, 2018, *Insect. Mundi*, 0623: 3–4. —Otto & Young, 2018, *Great Lakes Entomol.*, 50(2): 50. —Otto, 2019, *Insect. Mundi*, 0702: 2–3. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87. —Muona & Teräväinen, 2020, *Pap. Avulsos. Zool.*, 60: 3.

Fornaxini Cobos, 196, *EOS: Rev. Espan. Entomol.*, 40(3–4): 294 [not in prevailing usage]. Type genus: *Fornax* Laporte, 1835. —Seung *et al.*, 2017, *J. Asia. Pac. Entomol.*, 20(2): 570. —Bouchard *et al.*, 2011, *Zookeys*, 88: 50, 305. —Bouchard & Bousquet, 2020, *Zookeys*, 922: 87.

### Genus *Procladidus* Fleutiaux, 1921

*Procladidus* Fleutiaux, 1921b, *Annls. Soc. Entomol. Belg.*, 61: 80. Type species: *Di cladus favrei* Fleutiaux, 1911. —Muona, 1987, *Entomol. Scand.*, 18(1): 88. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 168, 170, 171. —Muona, 2007, *Catal. Pal. Col.*, 4: 87. —Otto, 2015a, *Insect. Mundi*, 0404: 4. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 290, 293.

Distribution. China (Taiwan), Japan, Vietnam.

### *Procladidus coomani* Fleutiaux, 1927

*Procladidus coomani* Fleutiaux, 1927b, *Bull. Soc. Zool. Fr.*: 134–135 (Vietnam; syntype: 17 mm). —Lucht, 1984b, *Entomol. Bas.*, 9: 177. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 175. —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Taiwan). —Suzuki & Chou, 2012, *Sayab. N. S.*, 8: 37. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 182, 293, 413.

Distribution. China (Taiwan), Japan, Vietnam.

### Genus *Pseudochapianus* Lucht, 1987

*Pseudochapianus* Lucht, 1987, *Entomol. Blät. Biol. Syst. Käfer.*, 83: 34. Type species: *Pseudochapianus lopatini* Lucht, 1987. —Muona, 2007, *Catal. Pal. Col.*, 4: 87.

Distribution. China (Northwest).

### *Pseudochapianus rugosus* (Cobos, 1965)

*Chapianus rugosus* Cobos, 1964, *EOS: Rev. Espan. Entomol.*, 40 (3–4): 363–365 (China: Xinjiang; Holotype: ♀, 7 mm). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Yining). —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Northeast Territory). *Pseudochapianus rugosus* Lucht, 1987, *Entomol. Blät. Biol. Syst. Käfer.*, 83: 34 (as synonym for *Chapianus rugosus* Cobos, 1964).

Distribution. China (Xinjiang).

### Genus *Raapia* Fleutiaux, 1899

*Raapia* Fleutiaux, 1899, *Annal. Mus. Civ. Sto. Nat. Gen.*, 19: 569. Type species: *Raapia galboides* Fleutiaux, 1899. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 168. —Kovalev, 2018, *Entomol. Rev.*, 98(9): 1181. —Muona, 2007, *Catal. Pal. Col.*, 4: 87.

Distribution. China (Taiwan).

### *Raapia sauteri* Fleutiaux, 1929

*Raapia sauteri* Fleutiaux, 1929, *Bull. Soc. Entomol. Fr.*, 1929: 206 (China: Taiwan; syntype: 7.0–8.5 mm). —Matsumura, 1930, *Insecta Matsumurana*, 4(4): 254 (China: Taiwan). —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 175 (New Guinea). —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Taiwan). —Suzuki & Heish, 2014, *Sayab. N. S.*, 14: 4–7 (China: Taiwan). —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 341, 342 (Laos). —Kovalev, 2018, *Entomol. Rev.*, 98(9): 1181, 1185 (China: Taiwan; Laos).

Distribution. China (Taiwan), New Guinea, Laos.

### Genus *Scython* Laporte, 1835

*Scython* Laporte, 1835, *Rev. Entomol. (G. Silb.)*, 3: 167 [in key]. Type species: *Scython bicolor* Laporte, 1835. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 168. —Muona, 2007, *Catal. Pal. Col.*, 4: 87.

Distribution. China (Taiwan, Hong Kong), Malaysia.

### *Scython coloratus* Bonvouloir, 1872

*Scython coloratus* Bonvouloir, 1872, *Annls. Soc. Entomol. Fr.*, 10 (Suppl.): 493 [in key], 494 (syntype: ♀♂, 10–13 mm, pl. 24, fig. 6 ♂; fig. 7 ♀). —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Taiwan).

Distribution. China (Taiwan), Malaysia, Singapore.

***Scython maculicollis* Bonvouloir, 1872**

*Scython maculicollis* Bonvouloir, 1872, *Anns. Soc. Entomol. Fr.*, 10 (Suppl.): 502 (China: Hong Kong; syntype: 8–9 mm). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Hong Kong; Malaysia; Singapore). —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Hong Kong).

Distribution. China (Hong Kong), Malaysia, Singapore.

**Genus *Serrifornax* Fleutiaux, 1926**

*Serrifornax* Fleutiaux, 1926, *Anns. Soc. Entomol. Fr.*, 95: 45 [in key, as subgenus]. Type species: *Fornax subflabellatus* Fairmaire, 1880. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 168. —Muona, 2002, *Am. Beet.*, 2: 156. —Muona, 2007, *Catal. Pal. Col.*, 4: 87. —Vahtera *et al.*, 2015, *Biodivers. Data J.*, 3: 1, 15, 18. —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 291, 318. —Otto, 2017a, *Rev. Per. Boil.*, 24(1): 17. —Otto, 2017b, *Zootaxa*, 4278(1): 6, 15.

Distribution. China (Taiwan), Laos.

***Serrifornax tumidicollis* (Redtenbacher, 1867)**

*Fornax tumidicollis* Redtenbacher, 1867, *Col. Reise. Öster. Freg. Nov. Erde. Jahren 1857, 1858, 1859 Befeh. Com. B. von Wullerstorf-Urbair*: 92 (Indonesia: Java; syntype: 7 mm×2 mm). —Muona, 2007, *Catal. Pal. Col.*, 4: 87 (China: Taiwan; Oriental Region). —Otto, 2016, *Entomol. Basil. Col. Frey*, 35: 318–320 (Laos).

*Serrifornax tumidicollis* Miwa, 1931, *Trans. Nat. His. Soc. Form.*, 21: 315–325 (China: Taiwan).

Distribution. China (Taiwan), Laos.

**Genus *Fornax* Laporte, 1835**

*Fornax* Laporte, 1835, *Rev. Entomol.*, 3: 172. Type species: *Fornax rujicollis* Laporte, 1835. —Muona, 1987, *Ent. Scand.*, 18(1): 79, 84. —Muona, 1991a, *Aust. Syst. Bot.*, 4(1): 168. —Vahtera *et al.*, 2009, *Cladistics*, 25(2): 158–160. —Muona, 2002, *Am. Beet.*, 2: 155. —Otto, 2012a, *Col. Bull.*, 66(3): 222. —Otto, 2015a, *Insect. Mundi*, 0404: 4, 7. —Otto, 2017a, *Rev. Per. Boil.*, 24(1): 17. —Seung *et al.*, 2017, *J. Asia. Pac. Entomol.*, 20(2): 569. —Otto, 2018, *Insect. Mundi*, 0623: 1, 3–5.

Distribution. China (Yunnan), Russia (Far East), Japan.

***Fornax prosternalis* Fleutiaux, 1925**

*Fornax prosternalis* Fleutiaux, 1925b, *Bull. Mus. Natl. Hist. Nat.*, 31: 178 (China: Yunnan; syntype: 19 mm, in MHNP). —Lucht, 1984a, *Bonn. Zool. Beitr.*, 35: 293 (China: Yunnan).

Distribution. China (Yunnan).

**Funding** This research was supported by the National Natural Science Foundation of China to Shihong Jiang (31772511) and Post-doctoral Foundation Project of Shenzhen Polytechnic (6020330013K0).

**References**

- Abdullah, M. 1971. On the primitive and derivative characters of the families of beetles (Coleoptera). *Beiträge zur Entomologie*, 21: 503–506.
- Abeille de Perrin, E. 1898. Description d'un nouveau genre d'eucnemide de France. *Bulletin de la Société Entomologique de France*, 1898: 35–36.
- Ahrens, A. 1812. Beiträge zur Kenntnis Deutscher Käfer. 8. (Mit Bemerkungen von Kunze). *Neue Schriften der Naturforschenden Gesellschaft zu Halle*, 2(2): 1–40.
- Alekseev, V.I. 2013. The beetles (Insecta: Coleoptera) of Baltic amber: the checklist of described species and preliminary analysis of biodiversity. *Zoology and Ecology*, 23(1): 5–12.
- Baena, M., Coello, P., Castro, A., Castro, A. 2003. Nuevas localidades andaluzas de *Anelastidius Feisthameli* (Graells, 1846) (Coleoptera: Eucnemidae). *Boletín de la Sociedad Entomológica Aragonesa (S. E. A.)*, 31: 175–177.
- Beaulieu, G. 1919. Monographie des melasides du Canada. *Le Naturaliste Canadien*, 46: 185–191.
- Blanchard, E. 1845. *Histoire des Insectes: traitant de leurs moeurs et de leurs métamorphoses en général et comprenant une nouvelle classification fondée sur leurs rapports naturels. Tome second.* Librairie de F. Didot Frères, Paris. pp. 1–524. pls. 11–20.

- Blackburn, T. 1900. On some new genera and species of Australian Coleoptera, with description of new genera and species. *Transactions and Proceedings of the Royal Society of Victoria*, 12: 217.
- Bocak, L., Kundrata, R., Fernández, C.A., Vogler, A.P. 2016. The discovery of Iberobaeniidae (Coleoptera: Elateroidea): a new family of beetles from Spain, with immatures detected by environmental DNA sequencing. *Proceedings of the Royal Society B: Biological Sciences*, 283(1830): 1–7.
- Bonvouloir, H.A.de. 1871. Monographie de la Famille des Eucnémides, 1st part. *Annales de la Société entomologique de France*, 40 (Supplement): 1–288, pls. 1–21.
- Bonvouloir, H.A.de. 1872a. Monographie de la Famille des Eucnémides, 2nd part. *Annales de la Société entomologique de France*, 40 (Supplement): 289–416, pls. 22–28. [July 1972]
- Bonvouloir, H.A.de. 1872b. Monographie de la Famille des Eucnémides, 3rd part. *Annales de la Société entomologique de France*, 40 (Supplement): 417–560, pls. 29–36. [December 1972]
- Bonvouloir, H.A.de. 1875. Monographie de la Famille des Eucnémides, 4th part. *Annales de la Société entomologique de France*, 40 (Supplement): 561–907, pls. 37–42.
- Bouchard, P., Bousquet, Y. 2020. Additions and corrections to “Family-group names in Coleoptera (Insecta)”. *ZooKeys*, 922: 65–139.
- Bouchard, P., Bousquet, Y., Davies, A.E., Alonso-Zarazaga, M.A., Larence, J.F., Lyal, C.H.C., Newton, A.F., Reid, C.A.M., Schmitt, M., Ślipiński, S.A., Smith, A.B.T. 2011. Family-group names in Coleoptera (Insecta). *ZooKeys*, 88: 1–972.
- Bouget, C., Leseigneur, L. 2005. Effets des tempêtes sur les coléoptères saproxyliques. Le cas des Eucnemidae dans quelques forêts feuillues d'Ile-de-France. *Bulletin mensuel de la Société linnéenne de Lyon*, 74(3): 81–92.
- Bousquet, Y. 1991. *Family Eucnemidae: false click beetles. Checklist of Beetles of Canada and Alaska*. Research Branch, Agriculture Canada Publication, Ottawa. pp. 186–188.
- Bousquet, Y., Bouchard, P. 2013a. The genera in the second catalogue (1833–1836) of Dejean's Coleoptera collection. *ZooKeys*, 282: 1–219.
- Bousquet, Y., Bouchard, P. 2013b. The genera in the third catalogue (1836–1837) of Dejean's Coleoptera collection. *ZooKeys*, 282: 221–239.
- Bousquet, Y., Bouchard, P., Davies, A.E., Sikes, D.S. 2013. Checklist of beetles (Coleoptera) of Canada and Alaska. *ZooKeys*, 360: 1–44.
- Broun, T. 1880. *Manual of the New Zealand*, Printed at the Office of James Hughes, Lambton Quay, Wellington. pp. 277–279.
- Bruch, C. 1911. Catálogo sistemático de los coleópteros de la República Argentina. Pars V. Familias Buprestidae, Trixagidae, Monommidae, Eucnemidae, Elateridae. *Revista del Museo de La Plata*, 17: 226–260.
- Brustel, H., van Meer, C. 2008. Nouvelles observations de *Microrhagus pyrenaeus* (Bonvouloir, 1872) (Coleoptera Eucnemidae). *L'Entomologiste*, 64(2): 75–78.
- Brüistle, L., Alarukka, D., Muona, J., Teräväinen, M. 2010. The phylogeny of the Pantropical genus *Arrhipis* Bonvouloir (Coleoptera, Eucnemidae). *Cladistics*, 26(1): 14–22.
- Brüistle, L., Muona, J. 2009. Life-history studies versus genetic markers—the case of *Hylochaes cruentatus* (Coleoptera, Eucnemidae). *Journal of Zoological Systematics and Evolutionary Research*, 47(4): 337–343.
- Buchholz, L., Królik, R. 1992. *Hylis procerulus* (Mannerheim, 1823)(Coleoptera, Eucnemidae) in Bialowiecka primeval forest. *Wiadomości Entomologiczne*, 11(1): 17–20.
- Burakowski, B., Buchholz, L. 1991. Review of the European species of the Genus *Hylis* Gozis (Coleoptera, Eucnemidae) with description of new species. *Annales of the Upper Silesian Museum-Entomology*, 2: 103–125.
- Власов, Д. В., Никитский, Н.Б., Vlasov, D.V., Nikitsky, N.B. 2014. Фауна жуков-древоедов (Coleoptera, Elateroidea, Eucnemidae) Ярославской области. *Евразийский Энтомологический Журнал*, 13(2): 145–148.
- Володченко, А.Н., Сажнев, А.С., Удоденко, Ю.Г. 2018. Дополнения к фауне жесткокрылых (Coleoptera) государственного природного заповедника «Воронинский» (Тамбовская область). *Eversmannia*, 53: 10–15.
- Chaboo, C.S. 2015. Beetles (Coleoptera) of Peru: A survey of the families. Part I. Overview. *Journal of the Kansas Entomological Society*, 88(2): 135–140.
- Chang, H., Kirejtshuk, A., Ren, D. 2010. New fossil elaterids (Coleoptera: Polyphaga: Elateridae) from the Jehol biota in China. *Annals of the Entomological Society of America*, 103(6): 866–874.
- Chang, H., Muona, J., Hanyong, P., Li, X., Chen, W., Teräväinen, M., Ren, D., Yang, Q., Zhang, X., Jia, S. 2016. Chinese Cretaceous larva exposes a southern Californian living fossil (Insecta, Coleoptera, Eucnemidae). *Cladistics*, 32(2): 211–214.
- Chang, H., Zhang, F., Ren, D. 2008. A new genus and two new species of fossil Elaterids from the Yixian Formation of Western Liaoning, China (Coleoptera: Elateridae). *Zootaxa*, 1785: 54–62.
- Chassain, J., Sautière, C. 2007. Nouvelle contribution à la connaissance de la faune Entomologique des Antilles françaises (Coleoptera Elateridae et Eucnemidae). *L'Entomologiste*, 63: 141–144.
- Chevrolat, L.A.A. 1867. Coléoptères de l'île de Cuba (suite). Notes, synonymies et descriptions d'espèces nouvelles. Septième mémoire. Famille des buprestides, throschides, eucnémides et élatérides. *Annales de la Société Entomologique de France*, 7: 571–616.
- Cobos, A. 1958. Estudio sobre los Eucnemidos (Col.) en la colección de la fundación Miguel Lillo de Tucumán. *Acta Zoológica Lilloana*, 15: 103–118.
- Cobos, A. 1959. Materiales para el conocimiento de los Eucnemidae y Throscidae (Coleoptera) ibéricos. *Miscel lania Zoológica*, 1(2): 77–82.

- Cobos, A. 1961. Sobre la Posicion sistematica de Genero *Potergus* Bonvouloir y Revision de las Categorías Supragenericas de la Familia Throscidae (Coleoptera). *Institut royal des Sciences Naturelles de Belgique*, 35: 1–6.
- Cobos, A. 1964. Materiales para el estudio de la familia Eucnemidae. Primera Parte (Coleoptera). *EOS: Revista Espanola de Entomologia*, 40(3–4): 289–435. [1965]
- Collett, N.G., Neumann, F.G. 1995. Effects of two spring prescribed fires on epigeal Coleoptera in dry sclerophyll eucalypt forest in Victoria, Australia. *Forest Ecology and Management*, 76(1–3): 69–85.
- Costa, C. 1984. Note on the bioluminescence of *Balgus schnusei* (Heller, 1974) (Trixagidae, Coleoptera). *Revista Brasileira de Entomologia*, 28: 397–398.
- Costa, C., Vanin, S.A., Lawrence, J.F., Ide, S. 2003. Systematics and cladistic analysis of Cerophytidae (Elateroidea: Coleoptera). *Systematic Entomology*, 28(3): 375–407.
- Costa, C., Vanin, S.A., Rosa, S.P. 2014. Description of a new genus and species of Cerophytidae (Coleoptera: Elateroidea) from Africa with a cladistic analysis of the family. *Zootaxa*, 3878(3): 248–260.
- Darby, M. 2014. Pitfall trap surveys of beetles in Langley Wood National Nature Reserve, Wiltshire. *British Journal of Entomology and Natural History*, 27: 27–43.
- Dejean, P.F.M.A. 1833. Catalogue des Coléoptères de la Collection de M. le comte Dejean. Deuxieme edition. *Livraison*, 2: 1–443.
- Dodelin, B., Lempérière, G., Leseigneur, L. 2003. Biologie et distribution de deux espèces d'Eucnemidae associées aux bois morts en forêts de montagne (sud-est de la France)(Coleoptera). *Bulletin mensuel de la Société linnéenne de Lyon*, 72(9): 294–300.
- Dušánek, V. 2008. In search for endemic species of the Crimea peninsula (Coleoptera, Elateridae). *Elateridarium*, 2: 138–155.
- Dušánek V. 2009. Elateridae, Throscidae and Melasidae (Coleoptera) in the Labe river floodplane between Vysoká nad Labem - Němčice (Czech Republic, Eastern Bohemia). *Elateridarium*, 3: 145–173.
- Dušánek, V. 2011. Elateridae, Lissomidae, Melasidae and Throscidae (Coleoptera) in the Zábřeh territory (Czech Republic), *Elateridarium*, 5: 205–231.
- Eschscholtz, J.F.G.von. 1829a. Elaterites, Eintheilung derselben in Gattungen. *Thon's Entomologisches Archiv*, 2(1): 31–35.
- Eschscholtz, J.F.G.von. 1829b. *Zoologischer Atlas, enthaltend Abbildungen und Beschreibungen neuer Thierarten, während des Flottcapitains von Kotzebue zweiter Reise um die Welt, auf der Russisch-Kaiserlichen Kriegsschlupf Predpriaetië in den Jahren 1823–1826, IV<sup>e</sup>. Erstes Heft*, G. Reimer, Berlin. pp. 6–15.
- Eschscholtz, J.F.G.von. 1836. Études Entomologiques, ou Descriptions d'Insectes Nouveaux et Observations sur la Synonymie. *Revue Entomologique, Publiée par Gustave Silbermann*, Tome IV: 5–60.
- Evans, M.E.G. 1972. The jump of the click beetle (Coleoptera, Elateridae) - a preliminary study. *Journal of Zoology*, 167(3): 319–336.
- Fernández, J.M.D. 2013. Registros interesantes de coleópteros para España (Insecta: Coleoptera). 2<sup>a</sup> nota. *Archivos Entomológicos*, 8: 277–286.
- Fleming, J. 1821. Insecta. In: Napier, M. (eds.), *Supplement to the fourth, fifth, and sixth editions of the Encyclopaedia Britannica, with preliminary dissertations on the history of the sciences: illustrated by engravings, vol. 5*. Printed for Archibald Constable and Co., Edinburgh. pp. 41–56.
- Fleutiaux, E. 1894. Supplément au «Catalogus Coleopterorum» de Gemminger et Harold, V, 1869, *Annales de la Société Entomologique de Belgique*, 38: 687–690.
- Fleutiaux, E. 1896a. Eucnémides Austro-Malais du Musée Civique de Gênes. *Annali del Museo Civico di Storia Naturale di Genova*, 36: 555–606.
- Fleutiaux, E. 1896b. Eucnémides nouveaux. *Mémoires de la Société Entomologique de France*, 9: 300–315.
- Fleutiaux, E. 1896c. Monommidae, Trixagidae et Eucnemidae. *Annali del Museo Civico di Storia Naturale di Genova*, 36: 533–544.
- Fleutiaux, E. 1896d. Collection des Eucnemidae du Museum d'Histoire Naturelle de Paris. *Mémoires de la Société Entomologique de France*, 9: 278–299.
- Fleutiaux, E. 1899. Eucnémides et Elatérides Récoltés a l'île Nias par M. U. Raap en 1897 et 1898. *Annali del Museo Civico di Storia Naturale di Genova, Serie 2*, 39: 569–572. [1898]
- Fleutiaux, E. 1901. Essai d'une classification des Melasinae (Eucneminae des auteurs). *Annales de la Société Entomologique de France*, 70: 637–664.
- Fleutiaux, E. 1902a. Deuxieme liste des Cicindelidae, Elateridae et Melasidae (Eucnemidae) recueillis au Japon par M. J. Harmand. *Bulletin du Museum National d'Histoire Naturelle (Paris)*, 8: 18–25.
- Fleutiaux, E. 1902b. Eucnémides et Elatérides nouveaux des îles Mascareignes (Col.). *Bulletin de la Société Entomologique de France*, 1902: 193–194.
- Fleutiaux, E. 1911. Revision des Trixagidae, Melasidae et Elateridae (Col.). *Annales de la Société Entomologique de France*, 80: 235–264. [1912]
- Fleutiaux, E. 1918. Noms nouveaux pour quatre genres de Melasidae (Col.). *Bulletin de la Société Entomologique de France*, 1918: 59.
- Fleutiaux, E. 1919. Elateridae, Trixagidae et Melasidae. *Voyage de Ch. Alluaud et R. Jeannel en Afrique orientale (1911–1912), Résultats Scientifiques, Insectes Coleoptera*, 13: 3–118, pls. VIII.
- Fleutiaux, E. 1920a. Études sur les Melasidae (Coleoptera - Serricornia), Première Partie. *Annales de la Société Entomologique de Belgique*, 60: 93–104.

- Fleutiaux, E. 1920b. Descriptions de deux Melasidae nouveaux de l'Inde anglaise. *Bulletin de la Société Entomologique de France*, 1920: 188–189.
- Fleutiaux, E. 1920c. Note sur le Prosopotropis Devillei Ab. (Col. Melasidae). *Bulletin de la Société Entomologique de France*, 1920: 187–188.
- Fleutiaux, E. 1921a. Deux genres nouveaux de coléoptères (Melasidae). *The Philippine Journal of Science*, 18: 71–72.
- Fleutiaux, E. 1921b. Études sur les Melasidae (Coleoptera Serricornia). Deuxième-Nuevième partie. *Annales de la Société Entomologique de Belgique*, 61: 23–41, 68–87, 91–104, 124–145, 169–192, 223–242, 281–309, 383–387.
- Fleutiaux, E. 1923. Les Melasidae du Japon (Coléoptères). *Annales de la Société Entomologique de France*, 91: 291–328. [1922]
- Fleutiaux, E. 1924a. Genre nouveau et espèces nouvelles de Melasidae du Tonkin. *Bulletin de la Société Entomologique de France*, 1924: 156–158.
- Fleutiaux, E. 1924b. Remarques sur les espèces du genre Pterotarsus Guérin (Galba aut.) (Coleoptera Melasidae). *Annales de la Société Entomologique de France*, 92: 301–309.
- Fleutiaux, E. 1925a. Description d'un Melasidae Nouveau la Chine oriental. *Bulletin de la Société Entomologique de France*, 1925: 177–178.
- Fleutiaux, E. 1925b. Deux nouveaux Melasidae, de la Collection du Museum national d' Histoire Naturelle de Paris. *Bulletin du Museum National d'Histoire Naturelle*, 31: 178–180.
- Fleutiaux, E. 1926. Catalogue raisonné des Melasidae des Iles Philippines. *Annales de la Société Entomologique de France*, 95: 29–90.
- Fleutiaux, E. 1927a. Sur plusieurs Mélasides et Élatérides douteux de Montrouzier. *Bulletin de la Société Entomologique de France*, 1927: 236–237.
- Fleutiaux, E. 1927b. Addition aux Melasidae de l'Indochine Française (Insectes: Coléoptères). II. Habitats nouveaux pour les espèces déjà citées. *Bulletin de la Société Zoologique de France*, 1927: 134–138.
- Fleutiaux, E. 1929. Melasidae nouveaux (Col.). *Bulletin de la Société Entomologique de France*, 1929: 206–209.
- Fleutiaux, E. 1945. Révision des Eucnémides Africains. *L'Abeille: Journal d'Entomologie*, 37: 149–274.
- Fleutiaux, E. 1947. Révision des Eucnémides (Coléoptères) de l'Indo-chine Française. *Notes d'Entomologie Chinoise*, 11: 1–68.
- Ford, Jr.E.J., Spilman, T.J. 1979. Biology and immature stages of Dirrhagofarsus lewisi, a species new to the United States (Coleoptera, Eucnemidae). *The Coleopterists' Bulletin*, 33(1): 75–84.
- Geller, H., Bellmann, C. 1974. Verzeichnis der in Fichtenbaumhölzern des Tharandter Waldes vorkommenden Staphyliniden (Coleoptera, Staphylinidae). *Hercynia-Ökologie und Umwelt in Mitteleuropa*, 11(4): 394–404.
- Gemminger, M., Harold, B.de. 1869. Buprestidae, Trixagidae, Monommidae, Eucnemidae, Elateridae, Cebrionidae. *Catalogus Coleopterorum Hucusque Descriptorum Synonymicus et Systematicus*, Tome V: 1347–1608.
- Gerend, R., Köhler, F., Braunert, C. 2007. Käfer–coléoptères–Coleoptera. *Ferrantia*, 50: 265–296.
- Gillerfors, G. 1986. Contribution to the Coleopterous Fauna of the Azores. *Boletim do Museu Municipal do Funchal*, 38: 17–27.
- Gozis, M. des. 1886. Recherche de l'Espèce Typique de Quelques Anciens Genres. In: Gozis, M.des., (eds.), *Rectification Synonymiques et Notes Diverses*, Montlucon, Herbin. pp. 1–40.
- Guérin-Ménéville, F.E. 1831. *Iconographie du règne animal de G. Cuvier: Insectes. Premier ordre*. J. B. Baillière, Paris & London. 576 pp.
- Guérin-Ménéville, F.E. 1843. Revue critique de la tribu des eucnémides. *Annales de la Société Entomologique de France*, 2(1): 163–197.
- Hardersen, S., Culletti, G., Leseigneur, L., Platia, G., liberti, G., Leo, P., Cornacchia, P., Gatti, E. 2014. Spatio-temporal analysis of beetles from the canopy and ground layer in an Italian lowland forest. *Bulletin of Insectology*, 67(1): 87–97.
- Hilszczański, J., Plewa, R., Jaworski, T., Sierpiński, A. 2015. *Microrhagus pyrenaeus* Bonvouloir, 1872 - a false click beetle new for the fauna of Poland with faunistic and ecological data on Eucnemidae. *Spixiana*, 38(1): 77–84.
- Hoffman, R.L., Otto, R.L., Vigneault, R. 2009. An annotated list of the false click beetles of Virginia (Coleoptera: Eucnemidae). *Banisteria*, 34: 25–32.
- Hope, F.W. 1845. On the entomology of China, with descriptions of the new species sent to England by Dr. Cantor from Chusan and Canton. *Transactions of the Entomological Society of London*, 4: 4–17. [1845–1847]
- Horn, G.H. 1886. A monograph of the species of the sub-families Eucneminae, Cerophytinae and Perothopinae inhabiting the United States. *Transactions of the American Entomological Society and Proceedings of the Entomological Section of the Academy of Natural Sciences*, 13: 5–58.
- Horn, G.H. 1890. Fam. Eucnemidae. *Biologia Centrali-Americana, Insecta, Coleoptera*. Vol. III. Part. 1.Serricorni: 210–258. [1882–1897]
- Hyslop, J.A. 1917. The phylogeny of the Elateridae based on larval characters. *Annals of the Entomological Society of America*, 10(3): 241–263.
- Hyslop, J. A. 1921. Genotypes of the elaterid beetles of the world. *Proceedings of the United States National Museum*, 58: 621–680.
- Iablokoff-Khnzorian S.M. 1964. Novye rody i vidy zhestkokrylykh iz Zakavkaz'ya i Sredney Azii. *Zoologicheskii Sbornik Akademii Nauk Armyanskoy SSR*, 13: 151–186.
- Irurzun, J.I.R. 2008. Elementos para el conocimiento de los eucnémidos del norte de España y actualización del catálogo de especies ibéricas (Coleoptera: Elateroidea: Eucnemidae). *Heteropterus Revista de Entomología*, 8(2): 233–252.

- Irurzun, J.I.R., Pérez-Moreno, I., San Martín, A.F. 2007. *Crepidophorus mutilatus* (Rosenhauer, 1847), *Aulonthroscus laticollis* (Ribinsky, 1897) e *Isoriphis nigriceps* (Mannerheim, 1823): tres destacables Elateroidea de distribución discontinua, nuevos para la fauna ibérica (Coleoptera: Elateridae, Throscidae, Eucnemidae). *Boletín Sociedad Entomológica Aragonesa*, 1(41): 397–401.
- Jacquelin du Val, C. 1860. Famille des Euenemides. *Genera des Coléoptères d'Europe*, 3: 112–121. [1859–1863]
- Jesús de la Rosa, J. 2008. Algunas citas Interesantes de Eucnémidos de la Península Ibérica (Coleoptera: Eucnemidae). *Boletín de la Sociedad Entomologica Aragonesa (S. E. A.)*, 42: 367–369.
- Jeuniaux, C. 1951. Notes sur la faune des Hautes-Fagnes en Belgique, XXII Coleoptera: Elateridae. *Bulletin et Annales de la Société Entomologique de Belgique*, 87(9–10): 206–228.
- Johnson, P.J. 2015. A new species of *Drapetes* Megerle (Coleoptera: Elateridae), with taxonomic summaries and a key to the species of northern North America. *Insecta Mundi*, 0445: 1–13.
- Johnson, P.J. 2017. A New Species of *Dodecaciis* Schwarz (Coleoptera: Elateridae) from Madre de Dios, Peru. *Revista Peruana de Biología*, 24(3): 243–248.
- Kanda, K., Gomez, R.A., van Driesche, R., Miller, K.B., Maddison, D.R. 2016. Phylogenetic placement of the Pacific Northwest subterranean endemic diving beetle *Stygoporus oregonensis* Larson & LaBonte (Dytiscidae, Hydrophorinae). *ZooKeys*, 632: 75–91.
- Kiesenwetter, E.A.H.von. 1858. *Naturgeschichte der Insecten Deutschlands, Erste Abtheilung, Coleoptera, Vierter Band*. Verlag der Nicolaischen Buchhandlung, Berlin. pp. 1–384.
- Knull, J.N. 1957. A new species of *Vitellius* from the United States (Coleoptera: Eucnemidae). *The Ohio Journal of Science*, 57(1): 9–10.
- Knull, J.N. 1946. A new species of *Dirhagus* with notes on other Eucnemidae (Coleoptera). *Annals of the Entomological Society of America*, 39: 246–247.
- Kofler, A. 1974. Zweiter Beitrag zur Käferfauna (Insecta: Coleoptera) des Lechtales (Tirol: Österreich). *Berichte des Naturwissenschaftlich-medizinischen Vereins in Innsbruck*, 61: 107–119.
- Kolbe, W. 1992. Fremdländeranbau und Käfervorkommen. Untersuchungsergebnisse aus dem Staatsforst Burgholz in Wuppertal. *Naturwissenschaftlicher Verein Wuppertal und FUHLROTT-Museum Wuppertal*, 45: 83–94.
- Komosiński, K., Palińska, K. 2006. Saproksyliczne chrząszcze (Coleoptera) próchnowisk rezerwatu, Las Warمیński” na Pojezierzu Mazurskim. *Wiadomości Entomologiczne*, 25 (Supplement 2): 99–106.
- Kopecky, T., Mertlik, J. 2008. První nálezy druhu *Hylis simonae* (Olexa, 1970) (Coleoptera: Melasidae) na Slovensku First records of *Hylis simonae* (Olexa, 1970) (Coleoptera: Melasidae) from Slovakia. *Elateridarium*, 2: 45–51.
- Kovalev, A.V. 2013. Two new species of the tribe Dirhagini (Coleoptera: Eucnemidae) from Palaearctic region. *Proceedings of the Zoological Institute PAH*, 317(3): 268–274.
- Kovalev, A.V. 2016. Two new species of *Microrhagus* from the Russian Far East with notes on some Palaearctic Dirhagini (Coleoptera: Eucnemidae). *Zoosystematica Rossica*, 25: 277–290.
- Kovalev, A.V. 2018. A New Species of the Genus *Raapia* Fleutiaux, 1899 (Coleoptera, Eucnemidae) from Continental Malaysia. *Entomological Review*, 98(9): 1181–1185.
- Kovalev, A.V. 2019. A review of the genus *Anelastes* Kirby, 1819 (Coleoptera: Eucnemidae) of the Palaearctic fauna. *Zootaxa*, 4683(1): 97–119.
- Kraatz, G. 1871. Ueber die europäisch-deutschen Throscus-Arten. *Berliner Entomologische Zeitschrift*, 15(2–3): 141–142.
- Kriby, W. 1819. A century of insects including several new genera described from his cabinet. *Transactions of the Linnean Society of London*, 12: 384, pls. 21. 2. [1818]
- Kugelann J.G. 1794. Verzeichniss der in einigen Gegenden Preussens bis jetzt entdeckten Kaferarten, nebst kurzen Nachrichten von denselben. *Neuestes Magazin für die Liebhaber der Entomologie*, 1(5): 513–582.
- Kundrata, R., Bocak, L. 2011. The phylogeny and limits of Elateridae (Insecta, Coleoptera): is there a common tendency of click beetles to soft-bodiedness and neoteny? *Zoologica Scripta*, 40(4): 364–378.
- Kundrata, R., Bocakova, M., Bocak, L. 2013. The phylogenetic position of Artematopodidae (Coleoptera: Elateroidea), with description of the first two Eurypogon species from China. *Contributions to Zoology*, 82(4): 199–221.
- Kundrata, R., Bocakova, M., Bocak, L. 2014. The comprehensive phylogeny of the superfamily Elateroidea (Coleoptera: Elateriformia). *Molecular Phylogenetics and Evolution*, 76: 162–171.
- Lacordaire, J.T. 1835. Division des Insectes en Ordres. *Faune Entomologique des environs de Paris*, 1: 103–696.
- Lacordaire, J.T. 1852. Synopsis of the Parnidae of the United States. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 6(1): 45.
- Lacordaire, J.T. 1857. *Histoire Naturelle des Insectes des Genera des Coléoptères, ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes*. Tome Quatrième. Librairie Encyclopédique de Roret, Paris. pp. 91–128.
- Laporte, F.L.N., Caumont, de. 1835. Études Entomologiques, ou Descriptions d'Insectes Nouveaux et Observations sur la Synonymie. *Revue Entomologique (G. Silbermann)*, 3: 157–181.
- Laporte, F.L.N., Caumont, de. 1836. Études Entomologiques, ou Descriptions d'Insectes Nouveaux et Observations sur la Synonymie. *Revue Entomologique (G. Silbermann)*, 4: 5–60. [1838]
- Laporte, F.L.N., Caumont, de. 1840. *Histoire Naturelle des Insectes Coléoptères, avec une introduction renfermant l'anatomie et la physiologie des animaux articulés par M. Brullé*. Tome Premier. P. Dumenil, Paris. pp. 1–324.



- Latreille, P.A. 1797. Classe Premiere Coleopteres. In: Latreille, P.A. (eds.), *Précis des caractères génériques des insectes, disposés dans un ordre naturel*. Del'Imprimerie de F. Bourdeaux, Paris. pp. 1–78.
- Latreille, P.A. 1829. Crustacés, Arachnides et Partie des Insectes. In: Latreille, P.A. (eds.), *Le Règne Animal Distribué d'Après son Organisation, pour Servir de Base à l'Histoire Naturelle des Animaux et d'Introduction à l'Anatomie Comparée, Avec Figures Dessinées d'Après Nature. Nouvelle édition; revue et augmentée, Tome IV*. Déterville Libraire et Crochard Libraire, Paris. pp. 1–584.
- Latreille, P.A. 1834. Distribution méthodique et naturelle des genres de diverses tribus d'insectes coléoptères, de la famille des Serricornes. *Annales de la Société Entomologique de France*, 3: 113–170.
- Lawrence, J.F., Beutel, R.G., Leschen, R.A., Slipinski, A. 2011. 1. Changes in classification and list of families and subfamilies. In: Leschen, R.A.B., Beutel, R.G., Lawrence, J.F., Slipinski, A. (eds.), *Handbook of Zoology, Arthropoda: Insecta, Coleoptera Beetles, Vol. 2: Morphology and Systematics (Elateroidea, Bostrichiformia, Cucujiformia partim)*. Walter de Gruyter GmbH & Co. KG, Berlin/New York. pp. 1–656.
- Lawrence, J.F., Newton, A.F. 1995. *Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names)*. Muzeum i Instytut Zoologii PAN, Warszawa. pp. 780–913.
- Lawrence, J.F., Ślipiński, A., Seago, A.E., Thayer, M.K., Newton, A.F., Marvaldi, A.E. 2011. Phylogeny of the Coleoptera based on morphological characters of adults and larvae. *Annales zoologici. Museum and Institute of Zoology, Polish Academy of Sciences*, 61(1): 1–217.
- Lawrence, J., Muona, J., Teräväinen, M., Ståhls, G., Vahtera, V. 2007. Anischia, Perothops and the phylogeny of Elateroidea (Coleoptera: Elateriformia). *Insect Systematics and Evolution*, 38(2): 205–239.
- Lea, A.M. 1919. Descriptions of new species of Australian Coleoptera. Part 16. *Proceedings of the Linnean Society of New South Wales*, 43: 715–749.
- LeConte, J.L. 1852. Synopsis of the Eucnemides of temperate North America. *Proceedings Academy Natural Sciences Philadelphia*, 6: 45–49.
- LeConte, J.L. 1853a. Revision of the Elateridae of the United States. *Transactions of the American Philosophical Society*, 10: 405–508.
- LeConte, J.L. 1853b. Descriptions of Twenty new species of Coleoptera inhabiting the United States. *Proceedings Academy Natural Sciences Philadelphia*, 6: 226–236.
- LeConte, J.L. 1853c. Synopsis of the Atopida, Rhipiceridae and Cyphonidae of the United States. *Proceedings Academy Natural Sciences Philadelphia*, 6: 350–357.
- Leconte, J.L. 1869. List of Coleoptera collected in Vancouver's Island by Henry and Joseph Matthews, with descriptions of some new species. *The Annals and Magazine of Natural History*, 4(24): 369–385.
- LeConte, J.L. 1886. Coleoptera of the US Coast Survey Expedition to Alaska, Under Charge of Mr. George Davidson. *Transactions of the American Entomological Society*, 2: 59–64.
- LeConte, J.L., Woodhouse, S.W., Hallowell, E. 1852. Descriptions of Twenty New Species of Coleoptera Inhabiting the United States; Description of a New Species of Pouched Rat, of the Genus *Dipodomys*, Gray; On Some New Reptiles from California. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 6: 225–239.
- Leiler, T.E. 1976. Zur Kenntnis der Entwicklungsstadien und der Lebensweis nord-und mitteleuropäischer Eucnemiden (Col.). *Entomologische Blätter für Biologie und Systematik der Käfer*, 72(1): 10–50.
- Leksono, A.S., Takada, K., Koji, S., Nakagoshi, N., Anggraeni, T., Nakamura, K. 2005. Vertical and seasonal distribution of flying beetles in a suburban temperate deciduous forest collected by water pan trap. *Insect Science*, 12(3): 199–206.
- Lempriere, G.U.Y., Marage, D. 2010. The influence of forest management and habitat on insect communities associated with dead wood: a case study in forests of the southern French Alps. *Insect Conservation and Diversity*, 3(3): 236–245.
- Leseigneur, L. 1978. Les Hypocoelus (Col. Eucnemidae) de la faune de France, Systématique et distribution. *L'Entomologiste*, 34(3): 105–123.
- Leseigneur, L. 2010. Les Elateroidea (Coleoptera) de la Région Rhône - Alpes: les taupins ne manquent pas de ressort! *Publications de la Société Linnéenne de Lyon*, 2(1): 153–158.
- Leseigneur, L., Steffen, J. 1992. Les Hypocoelus (Coleoptera Eucnemidae) sont-ils des insectes rares? *Publications de la Société Linnéenne de Lyon*, 61(4): 93–100.
- Levesque, C., Levesque, G.Y. 1993. Abundance and seasonal activity of Elateroidea (Coleoptera) in a raspberry plantation and adjacent sites in southern Quebec, Canada. *The Coleopterists' Bulletin*, 47(3): 269–277.
- Lucht, W. 1979. Coleoptera Westfalica: Familia Cerophytidae und Familia Eucnemidae. *Abhandlungen aus dem Landesmuseum für Naturkunde zu Münster*, 41(1): 29–38.
- Lucht, W. 1982. Zwei neue *Melasis*-Arten aus Taiwan (Col. Eucnemidae). *Entomologische Blätter für Biologie und Systematik der Käfer*, 78: 15–19.
- Lucht, W. 1984a. *Dirhagus klapperichi* n. Sp. Eine neue Eucnemidenart aus China (Coleoptera, Eucnemidae). *Bonner Zoologische Beiträge*, 35: 289–294.
- Lucht, W. 1984b. Eine neue Procladius-Art aus dem Naturhistorischen Museum Basel (Coleoptera, Eucnemidae, Eucneminae). *Entomologica Basiliensia*, 9: 173–178.
- Lucht, W. 1986. *Calyptocerus favipunctatus* n. Sp. Aus Taiwan (Col., Eucnemidae, Melasinae). *Entomologische Blätter für Biologie und Systematik der Käfer*, 82: 103–106.

- Lucht, W. 1987. Die Gattungen *Chapianus* Fleutiaux und *Pseudochapianus* n. Gen. (Col. Eucnemidae, Eucneminae) nebst Beschreibung je einer neuen Art. *Entomologische Blätter für Biologie und Systematik der Käfer*, 83: 33–34.
- Lucht, W., Otto, M. 1993. Különböző csápú bogarak II. - Diversicornia II. Álpattanóbogarak, tövisnyakú bogarak, Merevbogarak - Cerophytidae, Eucnemidae, Throscidae. *Magyarország Állatvilága (Fauna Hungariae)*, VIII, 3: 1–33.
- Luqman, H.A., noor Nasuha, A.A., Dzulhlimi, M.N, Nurul Fatihah, A. L., Muhamad Fahmi, M.H., Teo, T.M., Idris, A.B., Izfa Riza, H. 2018. Diversity and composition of beetles (Order: Coleoptera) in three different ages of oil palms in Lekir oil Palm Plantation, Perak, Malaysia. *Serangga*, 23(1): 58–71.
- Majka, C.G. 2007. The Eucnemidae (Coleoptera) of the Maritime Provinces of Canada: new records, observations on composition and zoogeography, and comments on the rarity of saproxylic beetles. *Zootaxa*, 1636(1): 33–46.
- Mannerheim, C.G. 1823. *Eucnemis: Insectorum Genus, Monographice Tractatum Iconibusque Illustratum*. Ex Officina Directorii Institutionis Publicae, Petropoli. pp. 1–44.
- Marché, I.I., Jordan, D. 2017. New Records of Coleoptera from Wisconsin. *The Great Lakes Entomologist*, 50(1): 6–10.
- Mathew, G., Shamsudeen, R.S.M., Chandran, R. 2005. Insect fauna of Peechi-vazhani wild life sanctuary, Kerala, India. *Zoos' Print Journal*, 20(8): 1955–1960.
- Matsumura, S. 1930. New Species of Insects from Japan described during the Year 1929. *Insecta matsumurana*, 4(4): 253–256.
- Méguignon, A. 1925a. Étude synonymique sur les Melasidae (Col.) (2<sup>e</sup> note). *Bulletin de la Société Entomologique de France*, 1925: 187–188.
- Méguignon, A. 1925b. Description de deux *Rhizophagus* nouveaux de l'Europe meridionale (Col. Nitidulidae). *Bulletin de la Société Entomologique de France*, 1925: 13–15.
- Mertlik, J. 2008. The species of the family Melasidae (Coleoptera: Elateroidea) Czech and Slovak Republics. *Elateridarium*, 2: 69–137.
- Mertlik, J. 2011. New data on the distribution of three species of the family Lissomidae and Melasidae (Coleoptera). *Elateridarium*, 5: 55–58.
- Mertlik, J. 2015. Review of Cerophytidae, Elateridae, Eucnemidae, Lissomidae and Throscidae (Coleoptera) in the Ore Mountains and Low Ore Mountains (Czech Republic), with special emphasis on the saproxylic species of broadleaved forests. *Elateridarium*, 9: 40–110.
- Mertlik, J., Jeniš, I., Zbuzek, B. 2007. New records on the distribution of some species of the family Eucnemidae (Coleoptera). *Elateridarium*, 1: 92–96.
- Mertlik, J., Jeniš, I., Zbuzek, B. 2009. New records on the distribution of some species of the family Melasidae (Coleoptera) - II. *Elateridarium*, 3: 1–6.
- Mertlik, J., Pelikán, J. 2013. New data about *Hylis olexai* (Coleoptera: Eucnemidae) for the area of the Czech Republic and Slovakia. *Elateridarium*, 7: 45–54.
- Mertlik, J., Platia, G. 2008. Catalogue of the family Cebriionidae, Elateridae, Lissomidae, Melasidae and Throscidae (Coleoptera) from Turkey. *Elateridarium*, 2: 1–40.
- Miwa, Y. 1931. A study on the lucanid Coleoptera from the Japanese Empire 1. *Transactions of the Natural History Society of Formosa*, 21: 315–325.
- Montrouzier, X. 1855. Essai sur la faune de l'île de Woodlark ou Moïou. In: Montrouzier, X. (eds.), *Annales des Société Physiques et Naturelles, d'Agriculture et d'Industrie, Société Royale d'Agriculture, Histoire Naturelle et Arts Utiles de Lyon. Tome VII, Première Partie*. Treuttel et Wurtz Libraires Rue de Lille, Paris. pp. 1–114.
- Moraal, L.G., Burgers, J., Vorst, O. 2003. *Hylis foveicollis* (Coleoptera: Eucnemidae), een dood-houtkever nieuw voor de Nederlandse fauna. *Entomologische Berichten*, 63(2): 36–39.
- Motschulsky, V.de. 1870. Genres et espèces d'Insectes publiés dans différents ouvrages par Victor Motschoulsky. *Horae Societatis Entomologicae Rossicae*, 6 (Supplément): 1–118. [1868]
- Muona, J. 1983. *Ceratotaxia* Sharp, a synonym of *Epiphanis* Eschscholtz (Coleoptera, Eucnemidae). *Annales Entomologici Fennici*, 49: 61–62.
- Muona, J. 1985. The African species of the genus *Arrhipis* (Coleoptera: Eucnemidae). *Entomologica Scandinavica*, 16(1): 5–11.
- Muona, J. 1987. The generic names of the beetle family Eucnemidae (Coleoptera). *Entomologica Scandinavica*, 18(1): 79–92.
- Muona, J. 1988. A Review of the Genus *Melanoscython* Fleutiaux (Coleoptera, Eucnemidae), with Descriptions of New Species. *Elytra*, 16(1): 17–22.
- Muona, J. 1991a. The Eucnemidae of South-east Asia and the Western Pacific-a Biogeographical Study. *Australian Systematic Botany*, 4(1): 165–182.
- Muona, J. 1991b. A revision of the Indomalasian tribe Galbitini new tribe (Coleoptera, Eucnemidae). *Entomologica Scandinavica Supplement*, 39: 5–67.
- Muona, J. 1993a. Review of the phylogeny, classification and biology of the family Eucnemidae (Coleoptera). *Entomologica Scandinavica Supplement*, 44: 1–133.
- Muona, J. 1993b. Eucnemidae and Throscidae from Baltic amber (Coleoptera). *Entomologische Blätter*, 89(1): 15–45.
- Muona, J. 1995a. Is *Microrhagus lindbergi* (Palm) (Coleoptera, Eucnemidae) a valid species?. *Entomologica Fennica*, 6(1): 39–41.
- Muona, J. 1995b. The Phylogeny of Elateroidea (Coleoptera), or which tree is best today? *Cladistics*, 11: 317–341.

- Muona, J. 2002. 56. Eucnemidae Eschscholtz 1829. In: Ross, H., Arnett, J. R., Michael, C., Thomas, Paul, E. S., Howard, F. J. (eds.), *American Beetles, Volume II: Polyphaga: Scarabaeoidea through Curculionoidea*, 2. United States, CRC Press, Florida. pp. 152–157.
- Muona, J. 2007. Family Eucnemidae Eschscholtz, 1829. In: *Catalogue of Palaearctic Coleoptera. Volume 4: Elateroidea - Derodontoidea - Bostrichoidea - Lymexyloidea - Cleroidea – Cucujoidea*. Apollo Books, Åmosen. pp. 81–87.
- Muona, J. 2011. 4.5. Eucnemidae Eschscholtz, 1829. In: Löbl, I., Smetana, A. (eds.), *Handbook of Zoology, Arthropoda: Insecta, Coleoptera Beetles, Vol. 2: Morphology and Systematics (Elateroidea, Bostrichiformia, Cucujiformia partim)*. Walter de Gruyter GmbH & Co. KG, Berlin/New York. pp. 1–287.
- Muona, J. 2012. Corrections to the Eucnemidae chapters in “Die Käfer Mitteleuropas, Larven” volumes 2, 4 (Coleoptera: Eucnemidae). *Koleopterologische Rundschau*, 82: 285–289.
- Muona, J. 2019. A review of the genus Eucnemis Ahrens (Coleoptera, Eucnemidae). *Entomologische Blätter für Biologie und Systematik der Käfer*, 115: 91–100.
- Muona, J., Alarukka, D. 2007. New Nomenclatorial and Taxonomic Acts, and Comments. In: Löbl, I., Smetana, A. (eds.), *Catalogue of Palaearctic Coleoptera. Volume 4: Elateroidea - Derodontoidea - Bostrichoidea - Lymexyloidea - Cleroidea – Cucujoidea*. Apollo Books, Åmosen. p.32.
- Muona, J., Brüstle, L. 2008. Observations on the biology of *Hylochaes cruentatus* (Gyllenhal) (Coleoptera: Eucnemidae). *Entomologica Fennica*, 19: 151–158.
- Muona, J., Teräväinen, M. 2008. Notes on the biology and morphology of false click-beetle larvae (Coleoptera: Eucnemidae). *The Coleopterists' Bulletin*, 62(4): 475–480.
- Muona, J., Teräväinen, M. 2020. A re-evaluation of the Eucnemidae larval characters (Coleoptera). *Papéis Avulsos De Zoologia*, 60: 1–13.
- Murry, A. 1868. List of Coleoptera received from Old Calabar, on the West Coast of Africa. *The Annals and Magazine of Natural History*, 2(4): 91–111.
- Németh, T., Dušánek, V., Mertlik, J., Kundrata, R. 2014. New distributional data on Elateroidea (Coleoptera: Elateridae, Eucnemidae and Omaliidae) for Albania, Montenegro and Macedonia. *Elateridarium*, 8: 112–117.
- Németh, T., Otto, R.L. 2016. Notes on the bionomics of *Farsus dubius* (Piller and Mitterpacher, 1783) (Coleoptera: Eucnemidae: Melasinae), with observations on its hypermetamorphic development. *Elateridarium*, 10: 133–144.
- Ohsawa, M. 2010. Beetle families as indicators of Coleopteran diversity in forests: a study using Malaise traps in the central mountainous region of Japan. *Journal of Insect Conservation*, 14(5): 479–484.
- Olexa, A. 1963. *Dirrhagus* (subg. *Microrrhagus*) palmi n. sp., eine neue Art aus dem Gebiete der Ost-Karpathen (Col. Eucnemidae). *Entomologische Blätter*, 59(2): 88–91.
- Olexa, A. 1975. Reklassifikation der Gattung *Dirrhagus* und verwandter Gattungen (Coleoptera-Eucnemidae). *Entomologische Blätter für Biologie und Systematik der Käfer*, 71: 155–164.
- Olivier, A.G. 1790. No. 30. Mèlasis. Caractère Générique. In: Olivier, A.G. (eds.), *Entomologie, ou histoire naturelle des insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères. Tome second*. De l’Imprimerie de Baudouin, Imprimeur de l’Assemblée Nationale, Paris. pp. 1–4.
- Otto, R.L. 2010. New records for seven rare Nearctic species of false click beetles (Coleoptera: Eucnemidae). *The Coleopterists' Bulletin*, 64(1): 92–94.
- Otto, R.L. 2011. New Wisconsin, USA records for three species of false click beetles (Coleoptera: Eucnemidae). *The Coleopterists' Bulletin*, 65(3): 327–329.
- Otto, R.L. 2012c. New USA State Records for Eight Species of False Click Beetles (Coleoptera: Eucnemidae). *The Coleopterists' Bulletin*, 66(4): 358–360.
- Otto, R.L. 2012a. Eucnemid larvae of the Nearctic region. Part I: Description of the larva of *Rhagomicrus bonvouloiri* (Horn, 1886) (Coleoptera: Eucnemidae: Melasinae: Dirrhagini), with notes on its biology. *The Coleopterists' Bulletin*, 66(3): 219–223.
- Otto, R.L. 2012b. Eucnemid larvae of the Nearctic region. Part II: Description of the mature larva of *Deltometopus amoenicornis* (Say, 1836) (Coleoptera: Eucnemidae: Macraulacinae: Macraulacini), with notes on its biology. *The Coleopterists' Bulletin*, 66(3): 285–289.
- Otto, R.L. 2013a. Description of a new species of *Adelorhagus* Horn, 1890 (Coleoptera: Eucnemidae) from Honduras with a key to the species. *Insecta Mundi*, 0297: 1–4.
- Otto, R.L. 2013b. A new North American species of *Microrrhagus* Dejean, 1833 (Coleoptera: Eucnemidae), with a key to the Nearctic species. *Insecta Mundi*, 0307: 1–6.
- Otto, R.L. 2013c. Eucnemid larvae of the Nearctic region. Part III: Mature larval descriptions for three species of *Onichodon* Newman, 1838 (Coleoptera: Eucnemidae: Macraulacinae: Macraulacini), with notes on their biology. *The Coleopterists' Bulletin*, 67(2): 97–106.
- Otto, R.L. 2013d. Description of the Male of *Coomanius lugubris* Fleutiaux, 1924 (Coleoptera: Eucnemidae: Macraulacinae: Nematodini). *The Coleopterists' Bulletin*, 67(1): 50–51.
- Otto, R.L. 2014. Eucnemid larvae of the nearctic region. Part IV: Description of the mature larva of *Entomophthalmus rufiolus* (LeConte, 1866) (Coleoptera: Eucnemidae: Melasinae: Dirrhagini), with notes on its biology. *The Coleopterists' Bulletin*, 68(2): 331–336.

- Otto, R.L. 2015a. A new genus and four new species of false click beetles (Coleoptera: Eucnemidae) from Southeast Asia. *Insecta Mundi*, 0404: 1–11.
- Otto, R.L. 2015b. Eucnemid larvae of the Nearctic region. Part V: Fifth instar larval descriptions for eight species of *Microrhagus* Dejean, 1833 (Coleoptera: Eucnemidae: Melasinae: Dirhagini), with descriptions of four new species and notes on their biology. *Insecta Mundi*, 0421: 1–46.
- Otto, R.L. 2016. The false click beetles (Coleoptera: Eucnemidae) of Laos. *Entomologica Basiliensia et Collectionis Frey*, 35: 181–427.
- Otto, R.L. 2017a. Beetles of Peru: a survey of the Families. Eucnemidae Eschscholtz, 1829. *Revista Peruana de Biología*, 24(1): 11–24.
- Otto, R.L. 2017b. The false click beetles (Coleoptera: Eucnemidae) of Hawai'i. *Zootaxa*, 4278(1): 1–78.
- Otto, R.L. 2017c. A revision of Phlegoninae (Coleoptera: Eucnemidae), with descriptions of a new genus and four new species. *Insecta Mundi*, 0569: 1–28.
- Otto, R.L. 2017d. Eucnemid larvae of the Nearctic Region. Part VII: Description of the larvae of *Nematodes penetrans* (LeConte, 1852) (Coleoptera: Eucnemidae: Macraulacinae: Nematodini), with notes on its hypermetamorphic life cycle. *Insecta Mundi*, 0545: 1–9.
- Otto, R.L. 2017e. Descriptions of six new species of false click beetles (Coleoptera: Eucnemidae: Macraulacinae), with new identification keys for one tribe and two genera. *Insecta Mundi*, 0558: 1–19.
- Otto, R.L. 2018. Descriptions of two new species of false click beetles (Coleoptera: Eucnemidae) from the Bahamas. *Insecta Mundi*, 0623: 1–8.
- Otto, R.L. 2019. Descriptions of two new elateroid beetles (Coleoptera: Eucnemidae, Elateridae) from Burmese amber. *Insecta Mundi*, 0702: 1–8.
- Otto, R.L., Gruber, J.P. 2016. Eucnemid larvae of the Nearctic region. Part VI: Descriptions of the fifth instar and prepupal larval stages of *Stethon pectorosus* LeConte, 1866 (Coleoptera: Eucnemidae: Eucneminae: Mesogenini), with notes on their biology. *Insecta Mundi*, 0474: 1–11.
- Otto, R.L., Kovalev, A.V. 2013. New group names for two genera within Eucnemidae (Coleoptera). *The Coleopterists' Bulletin*, 67(4): 600–601.
- Otto, R.L., Muona, J., McClarin, J. 2014. Description of *Dirrhagofarsus ernae* n. sp. with a key to the known *Dirrhagofarsus* species (Coleoptera: Eucnemidae). *Zootaxa*, 3878(2): 179–184.
- Otto, R.L., Young, D.K. 1998. Description of the larva of *Schizophilus subrufus* (Randall) (Coleoptera: Eucnemidae: Pseudomeninae), with notes on its natural history. *The Coleopterists' Bulletin*, 52(4): 306–312.
- Otto, R.L., Young, D.K. 2018. New Species Records for Wisconsin False Click Beetles (Coleoptera: Eucnemidae). *The Great Lakes Entomologist*, 50(2): 47–51.
- Özdikmen, H. 2008. New family group and genus group names for Eucnemidae (Coleoptera). *Munis Entomology and Zoology*, 3(2): 675–676.
- Peck, S.B., Thomas, M.C., Turnbow, Jr.R.H. 2014. The diversity and distributions of the beetles (Insecta: Coleoptera) of the Guadeloupe Archipelago (Grande-Terre, Basse-Terre, La Désirade, Marie-Galante, Les Saintes, and Petite-Terre), Lesser Antilles. *Insecta Mundi*, 0352: 1–151.
- Pérez-Moreno, I., Irurzun, J.I.R. 2010. Presencia de la Familia Cerophytidae en la Península Iberica y nuevas Localidades de Eucnemidae de los Generos *Nematodes* Berthold, 1827 e *Isorhipis* Lacordaire, 1835 (Coleoptera: Elateroidea). *Boletín de la Sociedad Entomológica Aragonesa (S. E. A.)*, 47: 413–417.
- Perroud, B.P., Montrousier, R.P. 1864. Essai sur la faune Entomologique de Kanala (Nouvelle- Calédonie) et description de quelques especes nouvelles ou peu connues. *Annales de la Société Linnéenne de Lyon*, 11: 46–257.
- Perty, M. 1833. *De Insectorum in America Meridionali Habitantium Vitae Genere, Moribus ac Distributione Geographica Observationes Nonnullae*. Spixio et Martio, Brasilia. pp. 1–46.
- Peschel, R. 2008. Zur Kenntnis der Käferfauna der Stadt Chemnitz in Sachsen—Ein Wasserbassin als Käferfalle (Coleoptera). *Sächsische Entomologische Zeitschrift*, 3: 113–119.
- Przewoźny, M. 2011. Rare and interesting beetles (Coleoptera) caught in the Sierakowski Landscape Park. *Badania Fizjograficzne, R. II - ser. C - Zoologia (C52)*, 2: 33–45.
- Rafinesque, C.S. 1815. *Analyse de la Nature, ou Tableau de l'Univers et Des Corps Organisés*. Palerme. pp. 1–224.
- Redtenbacher, L. 1868. Coleopteren. Bearbeitet. In: Redtenbacher, L. (eds.), *Coleopteren. Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wullerstorf – Urbair*. Zoologischer Theil. Zweiter Band. Aus Der Kaiserlich-Königlichen Hof- und Staatsdruckerei, Wien. pp. 1–249.
- Reitter, E. 1911. *Fauna Germanica Die Käfer des Deutschen Reiches. Nach der analytischen Methode bearbeitet. III Band*. K. G. Lutz' Verlag Stuttgart, German. pp. 1–436.
- Reitter, E. 1921. Bettimin Hugstabelle der Trixagidae, Eaeuemidae, Cerophytidae and Ptaylloceridae der palaearktischen Fauna. *Wiener Entomologische Zeitung*, 38(4–8): 65–90.
- Roubal, J. 1941. Popisy několika nových palaearktických Coleopter. Faunae palaearcticae coleopterorum novorum descriptions. *Časopis Československé Společnosti Entomologické*, 38: 10–14.
- Roubal, J. 1956. Catalogue des insectes coleopteres du Department de la Cote-d'Or. *Mémoires de l'Académie des Sciences, Arts et Belles-Lettres de Dijon*, 2(4): 113–195.

- Sagegami-Oba, R., Oba, Y., Ôhira, H. 2007. Phylogenetic relationships of click beetles (Coleoptera: Elateridae) inferred from 28S ribosomal DNA: insights into the evolution of bioluminescence in Elateridae. *Molecular Phylogenetics and Evolution*, 42(2): 410–421.
- Sainte-Claire-Deville, J. 1921. À propos des captures en Europe de l'*Epiphaniis cornutus* Eschs. ch. (Prosopotropis Devillei Ab.). *Bulletin de la Société Entomologique de France*, 1924: 127–131.
- Sánchez-Ruiz, A., de la Vega, J.L.Z., Irurzun, J.I.R. 2002. Distribución de *Anelastidius feisthameli* (Graëlls, 1846) en la Península Ibérica (Coleoptera: Eucnemidae). *Boletín de la Sociedad Entomológica Aragonesa (S. E. A.)*, 31: 173–175.
- Sánchez-Ruiz, A., Jesús de la Rosa, J. 2003. *Melasis Fermini* sp. nov., un nuevo Eucnemidae (Coleoptera) para la fauna Europea. *Boletín de la Sociedad Entomológica Aragonesa (S. E. A.)*, 32: 1–4.
- Saunders, S.S. 1836. Descriptions of some new Species of Coleopterous Insects lately received from Monte Video. *Transactions of the Royal Entomological Society of London*, 1(3): 149–157.
- Seibert, C.E. 1993. *A faunal survey of the Elateroidea of Montana*. Montana State University-Bozeman, College of Agriculture, Bozeman. pp. 1–318.
- Seidlitz, G. 1872. 11. Fam. Eucnemidae. In: Seidlitz, G. (eds.), *Fauna Baltica, Die Käfer (Coleoptera) der Ostseeprovinzen Russlands*. Druck und Verlag von H. Laakmann, Dorpat. pp. 106–109.
- Semenov, A. 1891. Diagnoses coleopterorum novorum ex Asia centrali et orientali. III. *Horae Societatis Entomologicae Rossicae*, 25–26(1890–1892): 262–382.
- Seung, J., Lee, S., Muona, J. 2017. Taxonomic review of Macraulacinae and Eucneminae (Coleoptera: Eucnemidae) from Korea. *Journal of Asia-Pacific Entomology*, 20(2): 569–575.
- Seung, J., Lee, S. 2018a. Two new records of false click beetle (Coleoptera: Eucnemidae) from Korea. *Journal of Asia-Pacific Biodiversity*, 11(2): 308–311.
- Seung, J., Lee, S. 2018b. Taxonomic review of tribe Xylobiini (Coleoptera: Eucnemidae: Melasinae) from Korea. *Journal of Asia-Pacific Entomology*, 21(1): 115–123.
- Seung, J., Lee, S. 2018c. Taxonomic review of genus *Microrhagus* Dejean, 1833 from Korea, with description of a new species (Coleoptera, Eucnemidae, Melasinae, Dirhagini). *ZooKeys*, 781: 81–95.
- Sharp, D. 1877. XXXIX.- On the Elateridae of New Zealand. *Journal of Natural History*, 19(113): 396–413.
- Sharp, D., Scott, H. 1908. Coleoptera. IV. Coleoptera (Various). In: Sharp, D., Scott, H. (eds.), *Fauna Hawaiiensis or the Zoology of the Sandwich (Hawaiian) Isles: being result of the exploration by the Joint Committee appointed by the Royal society of and carried on with the assistance of those bodies and of the trustees of the Bernice Pauahi Bishop Museum at Honolulu. Volume III. Part V*. Cambridge: at the university press, London. pp. 367–472. [1913]
- Silfverberg, H. 1996. Additions and Corrections to Enumeratio Coleopterorum Fennoscandiae, Daniae et Baltiae. *Sahlbergia*, 3(2): 33–62.
- Stein, J.P.E.F. 1877, Eucnemidae. In: Stein, J. P. E. F. (eds.), *Catalogi Coleopterorum Europae*. Libreria Nicolai, Berlin. pp. 91–92.
- Stierlin, G. 1886. Fauna Coleopterorum Helvetica: Die Käfer-Fauna der Schweiz nach der analytischen Methode. *Bolli and Böcherer*, 2: 1–662.
- Suzuki, W. 2012. Notes on three species of the genus *Galbites* Fleutiaux (Coleoptera, Eucnemidae) from Japan. *Sayabane N. S.*, 6: 7–12.
- Suzuki, W., Chou, W.I. 2012. Discovery of *Sarpedon bipectinatus* Fleutiaux (Coleoptera, Eucnemidae) from Taiwan, *Sayabane N. S.*, 8: 35–37.
- Suzuki, W., Hsieh, J.F. 2014. Rediscovery and redescription of *Raapia sauteri* Fleutiaux (Coleoptera, Eucnemidae) from Southern Taiwan. *Sayabane N. S.*, 14: 4–7.
- Suzuki, W., Lucht, W. 1983. A new species of the genus *Melasis* Olivier from Sachalin (Coleoptera, Eucnemidae). *Entomological Review of Japan*, 38(1): 41–44.
- Szoltys, H., Taszakowski, A. 2017. *Isorhipis nigriceps* (Mannerheim, 1823) - nowy dla fauny Polski gatunek chrząszcza (Coleoptera: Eucnemidae). *Acta Entomologica Silesiana*, 25: 1–5.
- Tamisier, J.P., Holliger, B., Delpy, D. 2006. Coléoptères saproxyliques nouveaux ou intéressants pour l'Ariège (Coleoptera Trogositidae, Nitidulidae, Cerambycidae, Erotylidae, Eucnemidae, Elateridae). *Bulletin de la Société Linnéenne de Bordeaux*, 140(34): 3–12.
- Thieren, Y., Smets, K., Warzée, N. 2009. Révision des Eucnemidae de Belgique (Coleoptera). *Lambillionea CLK*, 4: 1–23.
- Thomson, C.G. 1859. *Skandinaviens Coleoptera, synoptiskt bearbetade. Tom I*. Lundbergiska Boktryckeriet, Lund. 290 pp..
- Thomson, C.G. 1864. *Skandinaviens Coleoptera, synoptiskt bearbetade. Tom VI*. Lundbergiska Boktryckeriet, Lund. 386 pp.
- Tuominen, J., Laurene, N., Hyvönen, E. 2011. *Biological names and taxonomies on the semantic web—managing the change in scientific conception, Extended Semantic Web Conference*. Springer, Berlin, Heidelberg. pp. 255–269.
- Týr, V. 2014. Brouci (Coleoptera) Žihle a okolí. 8. část. Elateridae, Eucnemidae, Throscidae. *Západočeské Entomologické Listy*, 5: 1–11.
- Vahtera, V., Muona, J., Lawrence, J.F. 2009. Phylogeny of the Thylacosterninae (Coleoptera, Elateridae). *Cladistics*, 25(2): 147–160.
- Vahtera, V., Muona, J., Linna, A., Sääksjärvi, I.E. 2015. Nine genera of Eucnemidae (Coleoptera) new to Peru, with a key to Peruvian genera. *Biodiversity Data Journal*, 3: 1–30.
- Van Horn, R.W. 1909. Notes on some of the Eucnemidae of the eastern states. (Coleoptera, Eucnemidae). *Proceedings of the Entomological Society of Washington*, 11: 54–62.
- Viedma, M.G.de, Nelson, M.L. 2017. Current classification of the families of Coleoptera. *The Great Lakes Entomologist*, 8(3): 1–4.

- Viñolas, A., Batet, J.M., Soler, J. 2016. Noves o interessants localitzacions d'espècies de coleòpters per a la península Ibèrica i les illes Canàries (Coleoptera). *Butlletí de la Institució Catalana d'Història Natural*, 80: 101–112.
- Viñolas, A., Muñoz, J., Soler, J. 2012. Noves o interessants citacions de coleòpters per al Parc Natural del Montseny i per a la península Ibèrica (Coleoptera) (4a nota)<sup>1</sup>. *Orsis: organismes i sistemes*, 26: 149–185.
- Webster, R.P. 2016. Checklist of the Coleoptera of New Brunswick, Canada. *ZooKeys*, 573: 387–512.
- Webster, R.P., Sweeney, J.D., Merchant, I.de. 2012. New Coleoptera records from New Brunswick, Canada: Eucnemidae. *ZooKeys*, 179: 77–91.
- Webster, R.P., Webster, V.L., Alderson, C.A., Hughes, C.C., Sweeney, J.D. 2016. Further contributions to the Coleoptera fauna of New Brunswick with an addition to the fauna of Nova Scotia, Canada. *ZooKeys*, 573: 265–338.
- Westcott, R.L., LaBonte, J.R., Parsons, G.L., Johnson, P.J. 2006. New records and other notes for Oregon Coleoptera. *Zootaxa*, 1142: 1–33.
- Westwood, J.O. 1840a. *An Introduction to The Modern Classification of Insects; Founded on The Natural Habits and Corresponding Organization of The Different Families, Vol. 1* (1839). Longman, Orne, Brown, Green and Longmans, London. 462 pp.
- Westwood, J.O., 1840b. *An Introduction to The Modern Classification of Insects; Founded on The Natural Habits and Corresponding Organization of The Different Families, Vol. 2*. Longman, Orne, Brown, Green and Longmans, London. 587 pp.
- Wiranata, R.A., Himawan, T., Astuti, L.P. 2013. Identifikasi arthropoda hama dan musuh alami pada gudang beras Perum BULOG dan gudang gabah mitra kerja di Kabupaten Jember. *Jurnal Hama dan Penyakit Tumbuhan*, 1(2): 52–57.
- Wu, C.F. 1937. *Catalogus Insectorum Sinensium. Vol. 3*. The Fan Memorial Institute of Biology, Beijing. pp. 470–472.
- Young, D.K., Otto, R.L. 2017. New Species Records for Wisconsin False Click Beetles (Coleoptera: Eucnemidae). *Great Lakes Entomologist*, 50(2): 47–51.