

Research article

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On the identity of some taxa of Sericinae described by C. P. Thunberg and L. Gyllenhal (Coleoptera, Scarabaeidae)

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Abstract. The type specimens of a number of species of Sericinae described by C.P. Thunberg and L. Gyllenhal were revised. The study of the type material of the Zoological Museum of the Uppsala University revealed the identity of these forgotten species and resulted in five new combinations and four new synonymies: *Ablaberoides fuliginosus* (Thunberg, 1818) comb. n., *Ablabera haemorrhoea* (Thunberg, 1818) comb. n.; *Camanta caffra* (Thunberg, 1818) comb. n., *Maladera setifera* (Gyllenhal, 1817) comb. n., and *Microserica pusilla* (Thunberg, 1818) comb. n. [= *Microserica compressipes* (Wiedemann, 1823) syn. n.; *Microserica brenskei* Reitter, 1896 syn. n.; *Microserica pulchella* Brenske, 1899 syn. n.; *Microserica leopoldiana* Balthasar, 1932 syn. n.]. *Melolontha fuliginosa* Thunberg, 1818 resulted to be a senior primary homonym of *Melolontha fuliginosa* Fairmaire, 1889 (now *Exolontha fuliginosa*) for which a replacement name is proposed, *Exolontha neofuliginosa* Ahrens, nom. nov. *Ablabera clypeata* (Gyllenhal, 1817) and *Ablabera totta* (Thunberg, 1818) were removed from synonymy with *Ablabera splendida* (Fabricius, 1781). We designated lectotypes for *Melolontha setifera* Gyllenhal, 1817, *Trichius pusillus* Thunberg, 1818, *Melolontha fuliginosa* Thunberg, 1818, *Melolontha analis* Thunberg, 1818, *Melolontha haemorrhoea* Thunberg, 1818, *Melolontha clypeata* Gyllenhal, 1817, *Melolontha totta* Thunberg, 1818, and *Melolontha caffra* Thunberg, 1818.

Key words. Sericini, Ablaberini, species taxonomy, South Africa, Indonesia.

INTRODUCTION

During a research visit of the first author in the Stockholm Museum of Natural History in 2007, part of the type specimens of Sericinae (tribes Sericini and Ablaberini) described by the Swedish entomologists Carl Peter Thunberg and Leonard Gyllenhal preserved at Uppsala University were examined. In the preparation of further taxonomic revisions, the findings of that visit merit being published separately here since some of the species described by the two authors were forgotten or misunderstood. One reason for this is the fact that part of Thunberg's species were neglected ever since, as they did not appear in subsequent works of Blanchard (1850) and Burmeister (1855), or the first comprehensive world catalogue (Dalla Torre 1912). Thus, they were not regarded also by subsequent authors. A similar situation applies to a number of species described by L. Gyllenhal; types of Oriental species were never again examined by any of the subsequent authors, and thus, their exact geographical

provenience was never really understood. The taxonomic revision of these types resulted in some unexpected synonyms, lectotype designations for eight species, corrections and refinement of knowledge of the type localities, as well as new combinations, a new name and one new primary homonymy.

MATERIAL AND METHODS

The terminology and methods used for measurements, specimen dissection and genital preparation follow Ahrens (2004). Data from specimens examined are cited in the text with original label contents given in quotation marks (“ ”), multiple labels are separated by a slash (/). Male genitalia were detached and glued to a small pointed card and photographed in both lateral and dorsal view using a stereomicroscope Leica M125 with a Leica DC420C digital camera. Stacks of single focussed images were combined with the automontage software as

implemented in Leica Application Suite (V3.3.0). The resulting entirely focussed images were subsequently digitally edited.

ABBREVIATIONS

TMSA = Transvaal Museum (now Ditsong Museum), Pretoria, South Africa
 SMNS = Staatliches Museum für Naturkunde Stuttgart, Germany
 UUZM = Uppsala University, Zoological Museum, Sweden
 ZFMK = Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany

SUBFAMILY SERICINAE

Tribe Sericini

Maladera setifera (Gyllenhal, 1817) **comb. n.**
 (Fig. 1A–F)

Melolontha setifera Gyllenhal, 1817: 95; Wallin 1994: 9.
Serica setifera: Brenske 1898: 218; Dalla Torre 1912: 15;
 Krajcik 2012: 243; Ahrens & Fabrizi 2016: 273.

Type material examined. Lectotype (here designated). ♂ “Uppsala Univ. Zool. Mus. Gyllenhal saml. Typ nr. 1467/ c” (UUZM). Paralectotypes: 1 ♀ “Uppsala Univ. Zool. Mus. Gyllenhal saml. Typ nr. 1467/ b” (UUZM), 1 ♀ “Uppsala Univ. Zool. Mus. Gyllenhal saml. Typ nr. 1467/ a” (UUZM).

Additional material examined. 1 ♂, 3 ♀♀ “Indonesia C. Java Mt. Sumbing, VI.2006 St. Jakl leg.” (ZFMK), 1 ♂ “Indonesia W. Java Puncak near Boggor, 1500m, 8.–10.IV.1992, Eddi Samin leg.” (ZFMK).

Lectotype redescription. Length: 7.3 mm, length of elytra: 5.8 mm, width: 4.9 mm. Body oblong-oval, yellowish brown, antenna yellowish, dull, labroclypeus shiny, with a few robust setae on head, otherwise glabrous.

Labroclypeus short, wide and subrectangular, widest at base, lateral margins slightly convex, slightly convergent anteriorly, anterior angles strongly rounded, anterior margin straight, margins strongly reflexed; lateral margin and ocular canthus produce an indistinct angle; surface convexly elevated medially, finely, densely punctate, with a few erect, long setae; frontoclypeal suture distinctly incised and elevated, angled medially; smooth area anterior to eye convex, twice as wide as long; ocular canthus short and narrow (1/3 of ocular diameter), finely densely punctate, with a terminal seta. Frons dull, with moderately dense, coarse punctures, with a few sin-

gle setae beside eyes and behind frontoclypeal suture. Eyes moderately large, ratio diameter/interocular width: 0.62. Antenna with ten antennomeres; club with three antennomeres and straight, slightly longer than remaining antennomeres combined. Mentum elevated and slightly flattened anteriorly.

Pronotum moderately transverse, widest at middle, lateral margins moderately evenly convex and convergent anteriorly as well as posteriorly, anterior angles distinctly produced and sharp, posterior angles blunt, slightly rounded at tip; anterior margin straight, with fine marginal line, base without marginal line; surface moderately densely and finely punctate, with minute setae in punctures; anterior and lateral margin finely sparsely setose; hypomerone carinate, not produced ventrally. Scutellum wide, triangular, with fine, moderately dense punctures, impunctate on midline.

Elytra widest at middle, striae finely impressed, finely and densely punctate, intervals slightly convex, with fine, moderately dense punctures concentrated along striae and with minute setae in punctures, odd intervals (most abraded) with a few single long setae in robust punctures; epipleural edge fine, ending at anterior third of elytra, epipleura sparsely setose; apical border of elytra membranous, with a fine rim of microtrichomes (visible at ca 100x magnification).

Ventral surface dull, finely and densely punctate, nearly glabrous, metasternal disc sparsely covered with fine, short setae; metacoxa with a few longer setae laterally. Abdominal sternites finely and densely punctate, punctures with minute setae, each sternite with a transverse row of punctures each bearing a fine seta. Mesosternum between mesocoxae as wide as mesofemur. Ratio of length of metepisternum/metacoxa: 1/1.95. Pygidium moderately convex, dull, finely and densely punctate, with narrow smooth midline, with numerous long setae along apical margin.

Legs short and wide, dull; femora with two longitudinal rows of setae, finely and sparsely punctate. Anterior margin of metafemur acute, without adjacent serrated line, anterior row of setae complete; posterior serrated margin smooth, moderately widened at ventral apex, dorsal posterior edge smooth, neither serrate, glabrous. Metatibia short and wide, widest at middle, ratio of width/length: 1/2.25, sharply carinate dorsally, with two groups of spines, basal group shortly behind middle, apical group at three quarters of metatibial length, in basal half with a few short single setae subparallel to dorsal margin; lateral face longitudinally convex, superficially and sparsely punctate, along midline broadly smooth, with minute setae in punctures; ventral margin finely serrate, with five equidistant robust setae; medial face smooth and glabrous; apex finely serrate, shallowly sinuate interiorly near tarsal articulation. Tarsomeres dorsally impunctate, glabrous, neither laterally nor dorsally carinate, moderately setose ventrally; metatarsomeres with a strongly

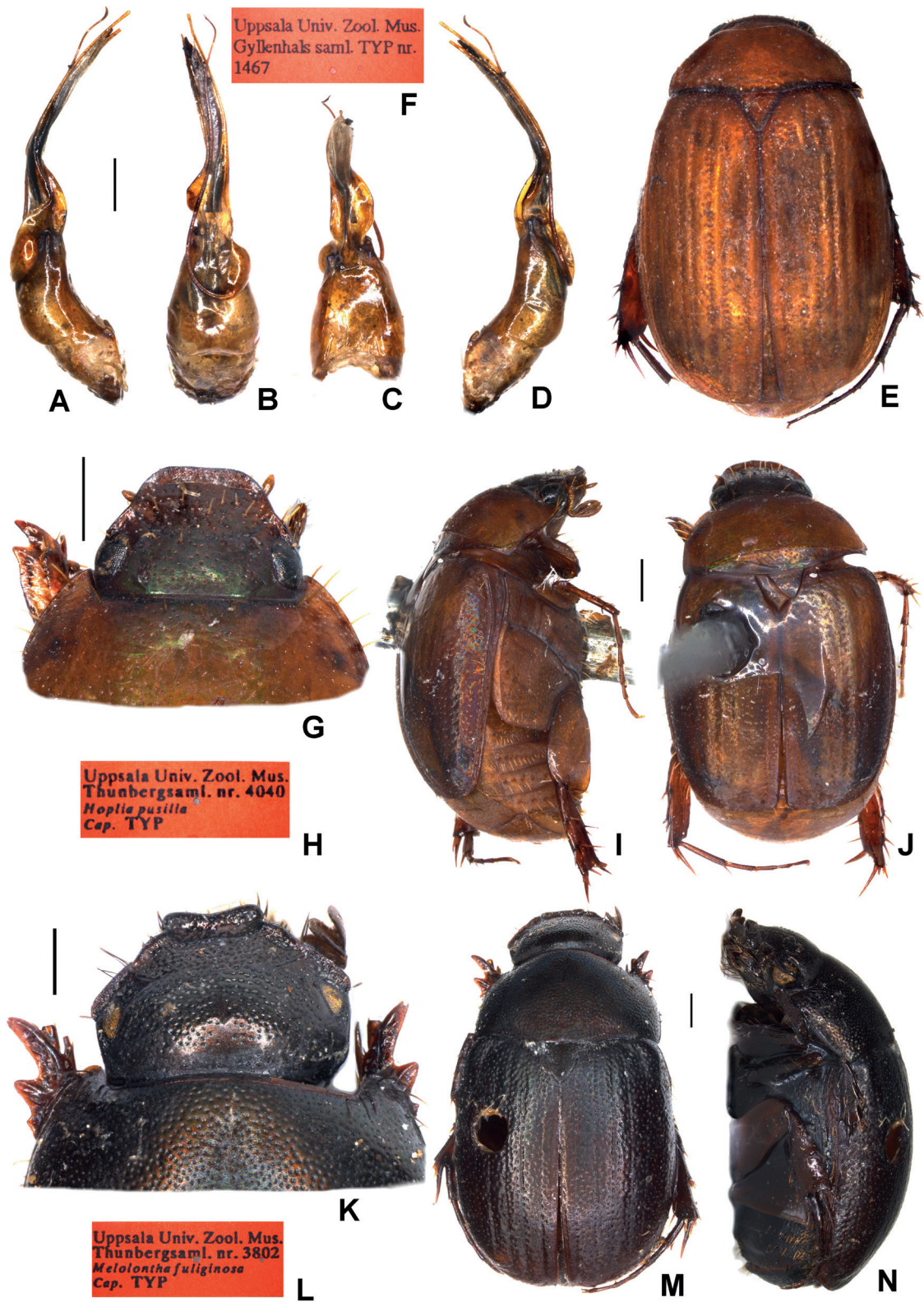


Fig. 1. A–F. *Maladera setifera* (Gyllenhal, 1817) (lectotype); G–J. *Microserica pusilla* (Thunberg, 1818) (lectotype); K–N. *Abalaberoideus fuliginosus* (Thunberg, 1818) (lectotype). A. Aedeagus, left side lateral view; D. Aedeagus, right side lateral view; B. Parameres, dorsal view; C. Parameres, ventral view; G, K. Head, dorsal view; E, J, M. Habitus, dorsal view; I, N. Habitus, lateral view; F, H, L. Specimen labels. Scale: 0.5 mm.

serrated ridge ventrally and a smooth subventral longitudinal carina, glabrous; first metatarsomere slightly shorter than following two tarsomeres combined and slightly longer than dorsal tibial spur. Protibia moderately long, bidentate; anterior claws symmetrical, basal tooth of both claws bluntly truncate at apex.

Remarks. The designated lectotype is the only male specimen of the syntype series. The paralectotypes nr. 1467a and 1467b belong to clearly different species, however, their identity remains unclear because they are female. Type nr. 1467a somewhat resembles *Maladera subspinos*a (Brenske, 1898) from northeastern India, while type nr. 1467b is very similar to *Maladera holosericea* (Scopoli, 1772), which definitively would not occur at the presumptive type locality in Asia. Originally, there were syntypes in the Schönherr collection too, however, none was presently found in the Stockholm Museum of Natural History.

In contrast to that, the original description mentions only two variants, one corresponding to the lectotype (var. β), and the other one to type nr. 1467a (nominal form). None of the characters of the latter contain species specific traits that are useful without the exact geographic provenience of the specimens, and, it cannot be excluded that the specimens of the type series have been collected in two completely different areas, as also the potential presence of *M. holosericea* in the labelled syntypes series suggests.

For long time it was believed that the species originated from India (Brenske 1898; Dalla Torre 1912) because the type locality was originally given as India orientalis (“habitat in India orientali”; Gyllenhal 1817). Since the designed lectotype fits to 100% recently collected and geographically well-defined material, the type locality could be more strictly circumscribed to Java. Indeed, the most important ports on the East India route were Cape, Batavia and Canton, and thus the two latter are the completely dominant places of origin for specimens labelled “India orientalis” in Swedish collections, and supporting the identification of the type locality as being Java (Mattias Forschage, pers. com.). This is further supported by geographically rather restricted distributions of species of the *M. thomsoni* species group, which includes *M. setifera*.

***Microserica pusilla* (Thunberg, 1818) comb. n.**
(Fig. 1G–J)

Trichius pusillus Thunberg, 1818: 437.

Melolontha compressipes Wiedemann, 1823: 91, **syn. n.**
Microserica compressipes: Brenske 1899: 186; Ahrens 2004: 53.

Microserica brenskei Reitter, 1896: 186, Ahrens 2004: 53, **syn. n.**

Microserica pulchella Brenske, 1899: 161, Ahrens 2004: 53, **syn. n.**

Microserica leopoldiana Balthasar, 1932: 113, Ahrens 2004: 53, **syn. n.**

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 4040 *Hoplia pusilla* Cap. TYP” (UUZM).

Remarks. This species was redescribed by Ahrens (2004). The here designated lectotype specimen was the only available syntype specimen. The lectotype is virtually identical in morphology and shape with female specimens of *Microserica compressipes* (Wiedemann, 1823), which was originally described from Java, and later recognized as a wider distributed species also occurring in Sumatra (Ahrens 2004). Although the lectotype of *M. pusilla* is a female specimen, the shape and punctuation of the labroclypeus and the shiny and sparsely punctate surface of the pygidium are very typical for this species, while in the entire Africa there is no species with these morphological characteristics. Thus, we consider the type locality (Cape of Good Hope; Thunberg 1818) erroneous, rather being from Indonesia than from southern Africa. The confusion between Cape and Java is not very unlikely, since these two ports on the East India route are the two main places where Thunberg collected on his trip abroad, staying in Cape for three years 1772–1775 and in Batavia for one month in 1775 (Mattias Forschage, pers. com.).

The lectotype is nearly entirely yellowish brown, without the lateral paired stains on the elytra, which often occur in females of *M. compressipes*. The entirely shiny and sparsely punctate pygidium is a key feature of all *Microserica* sensu stricto species, which occur only in the Oriental region.

***Ablaberoides fuliginosus* (Thunberg, 1818) comb. n.**
(Figs 1K–L, 2A–D)

Melolontha fuliginosa Thunberg, 1818: 426, not Fairmaire 1889: 22.

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. Nr. 3802 *Melolontha fuliginosa* Cap. TYP” (UUZM).

Additional material examined. 1 ♂ “X-DA4037 – South Africa, W. Cape: Goukamma Nat. Res. Dunes near Rondavell Chalet, 10m, 34°04'02.9"S; 22°56'50.8"E, 24.–26. xi.2013, lg. Ahrens, Eberle, Fabrizi” (ZFMK), 2 ♂, 1 ♀ “S.Afr.; Namaqualand Stallberg pass 30.27 S – 18.04 E / 5.9.1977; E–Y: 1384 grass netting leg. Endrödy-Younga” (TMSA), 1 ♂ “S.Afr.; W Cape Gamkaberg Nat. Res. 33.43 S – 21.56 E/ 8.12.1995; E–Y: 3176 fymbos flow-

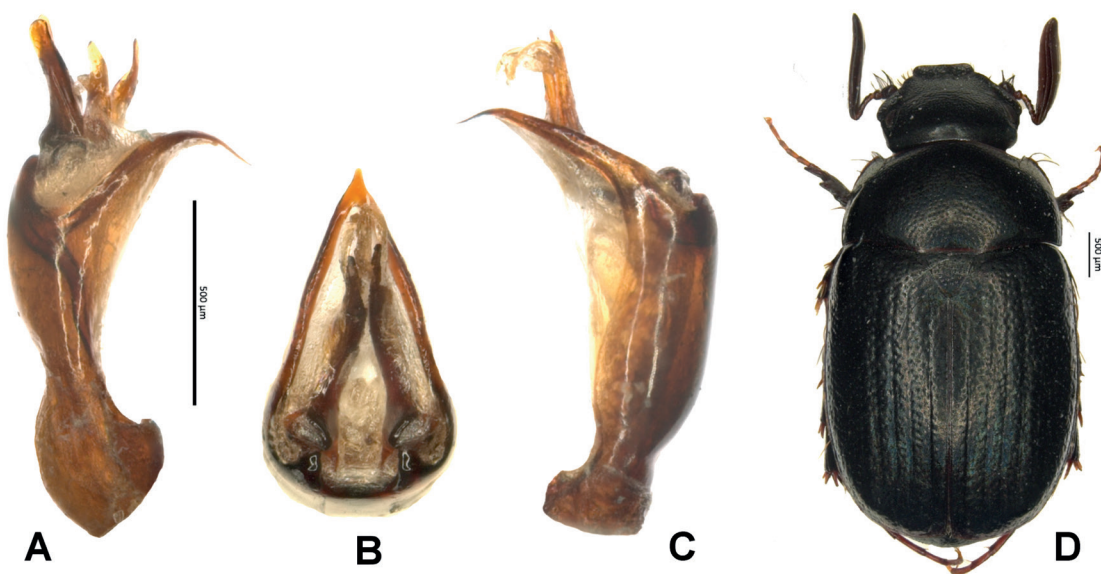


Fig. 2. A–D. *Ablaberoides fuliginosus* (Thunberg, 1818) (S. Afr.; W Cape, Gamkaberg Nat. Res.); **A.** aedeagus, left side lateral view; **C.** aedeagus, right side lateral view; **B.** parameres, dorsal view; **D.** habitus, dorsal view. Scale: 0.5 mm.

er leg. CL Bellamy" (TMSA), 5 ♂ "S.Afr.; Little Karoo Gamkaberg Nat. Res. 33.42 S – 21.54 E / 8–9.12.1995; E–Y: 3175 beating leg. CL Bellamy" (TMSA), 1 ♂ "S.Afr.; Cape Prov Tsitsikama 33.58 S – 24.10 E / For. & Coastal Nat. Park 9.3.1992; dung Janssen & Le Roux" (TMSA), 2 ♂ "S.Afr., S.W. Cape Ryspuntstrand 34.36 S – 20.19 E / 30.9.1984; E–Y: 2130 ground & vegetation leg. R. Müller" (TMSA), 1 ♂ "S.Afr., Cape-Karoo Farm Zwaartskraal 33.10S – 22.32E / 8.11.1978; E–Y: 1539 ground traps, 69 days leg. R. Oosthuizen A / ground traps with ferm. Banana bait" (TMSA), 1 ♂ "Assengaibos, La Motte, C.P.X 40 G. van Son" (TMSA), 1 ♂ "Uitenhage IX. 1950 K. Dickson" (TMSA), 2 ♂ "S.Afr., S.W. Cape Waenhuiskrans 34.39 S – 20.14 E / 30.9.1984; E–Y: 2129 grass netting leg. R. Müller" (TMSA), 1 ♂ "S.Afr.; Little Karoo Gamka Mt., 1000m 33.43 S – 21.56 E / 25.10.1993; E–Y: 2901 flow. Karoo veget. Leg. Endrödy-Younga" (TMSA), 1 ♂ "S. Afr; LittleKaroo Gamka Nat. Res. 33.43 S – 21.46 E / 8.11.1993; E–Y: 2950 flower. Vegetation leg. Endrödy-Younga" (TMSA), 2 ♂ "S.Afr., S.W. Cape Arniston, dunes 34.39 S – 20.13 E / 26.10.1983; E–Y: 2021 grass netting leg. Endrödy-Younga" (TMSA), 1 ♂ "WILDERNIS SE 34 23 Aa 3 - X - 1981 C. H. SCHOLTZ" (TMSA), 3 ♂, 1 ♀ "RSA, W Cape, Greyton env., 22.XI.2002, leg. M. Snížek, ex. Coll. Ahrens" (ZFMK), 1 ♂ "SOUTH AFRICA: Eastern Cape, R337, 43 km NE of Willowmore, 33°08'S 23°50'E 650m, 18.XI.1999 leg. M. Hauser" (SMNS).

Lectotype redescription. Length: 5.5 mm, length of elytra: 3.4 mm, width: 3.2 mm. Body short-oval, blackish, antenna black, surface with iridescent shine, with a few robust setae on head, otherwise glabrous.

Labroclypeus short, narrow and trapezoidal, widest at base, lateral margins convex and strongly convergent anteriorly but between labrum and clypeus deeply concavely sinuated, anterior angles sharp and reflexed, anterior margin bluntly sinuated medially and strongly reflexed; lateral margin of clypeus and ocular canthus produce an indistinct angle; surface flat, with a transverse carina shortly behind the lateral incision between labrum and clypeus, surface finely, very densely punctate, with a few erect setae in front of the carina; frontoclypeal suture distinctly incised and flat, angled medially and sublaterally; smooth area anterior to eye flat, as wide as long; ocular canthus moderately long and narrow, finely densely punctate, with a terminal seta; at apex touching the strongly produce posterior eye keel (which is as long as the ocular canthus). Frons shiny, with dense, coarse punctures, with a single seta beside each eye. Eyes very small, ratio diameter/interocular width: 0.24. Antenna with ten antennomeres; club with three antennomeres and straight, as long as remaining antennomeres combined. Mentum elevated and slightly convex anteriorly.

Pronotum moderately transverse, widest at base, lateral margins moderately evenly convex and convergent anteriorly, anterior angles distinctly produced and sharp, posterior angles blunt, slightly rounded at tip; anterior margin weakly convex, with robust marginal line, base with robust marginal line that is widely interrupted medially by nearly twice scutellar widths; surface densely and finely punctate, with minute setae in punctures; lateral margin finely sparsely setose; hypomeron carinate, not produced ventrally. Scutellum dull, wide, triangular, with fine, moderately dense punctures.

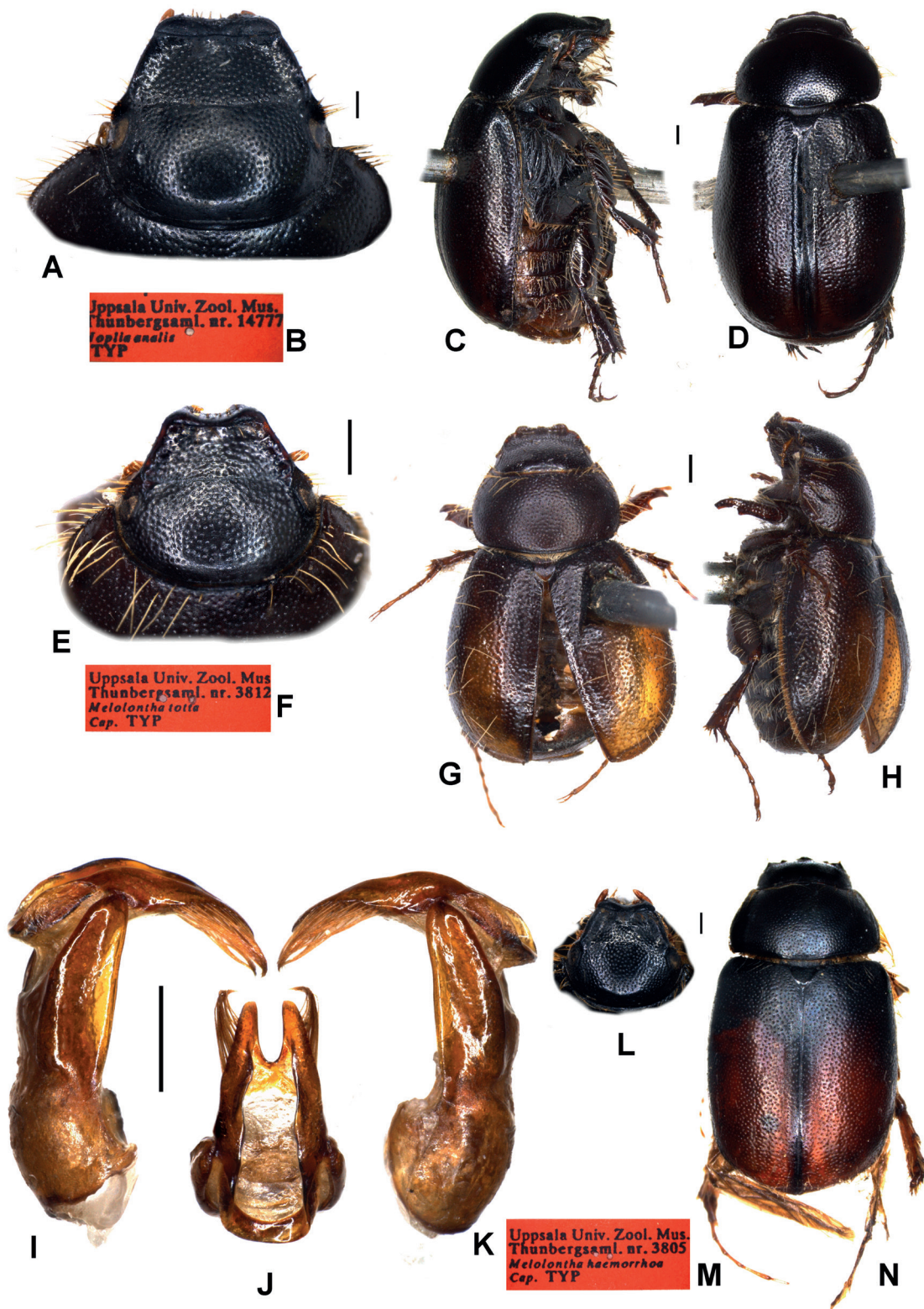


Fig. 3. A–D. *Ablabera analis* (Thunberg, 1818) (lectotype), E–H. *Ablabera totta* (Thunberg, 1818) (lectotype); I–N. *Ablabera haemorrhoea* (Thunberg, 1818) (lectotype); A, E, L. Head, dorsal view; C, H. Habitus, lateral view; D, G, N. Habitus, dorsal view; I. Aedeagus, left side lateral view; K. Aedeagus, right side lateral view; J. Parameres, dorsal view; B, F, M. Specimen labels. Scale: 0.5 mm.

Elytra widest at middle, striae finely impressed, finely and densely punctate, intervals flat, with fine, moderately dense punctures and with minute setae in punctures; epipleural edge fine, ending at blunt external apical angle of elytra, epipleura sparsely setose; apical border of elytra chitinous, without rim of microtrichomes (visible at ca 100x magnification).

Ventral surface dull, finely and densely punctate, nearly glabrous, metasternal disc sparsely covered with fine, short setae; metacoxa with a few longer setae laterally. Abdominal sternites finely and densely punctate, punctures with minute setae, each sternite with a transverse row of punctures each bearing a fine seta. Mesosternum between mesocoxae as wide as mesofemur. Ratio of length of metepisternum/metacoxa: 1/2.13. Pygidium moderately convex, dull, weakly shiny in apical half, coarsely and densely punctate, without smooth midline, with numerous short setae along apical margin.

Legs short and wide, dull; femora with two longitudinal rows of setae, finely and sparsely punctate, of which the posterior one is nearly completely reduced. Anterior margin of metafemur acute, without adjacent serrated line, anterior row of setae complete; posterior ventral margin smooth, strongly widened at ventral apex, dorsal posterior edge smooth, neither serrate, glabrous. Metatibia short and wide, widest at middle, ratio of width/length: 1/2.55, sharply carinate dorsally, with two groups of spines, basal group shortly before posterior quarter, apical group shortly behind middle of metatibial length; lateral face longitudinally convex, finely and sparsely punctate, along midline broadly smooth, with minute setae in punctures; ventral margin finely serrate, with four equidistant robust setae; medial face smooth and glabrous; apex finely serrate, distinctly concavely sinuate interiorly near tarsal articulation. Tarsomeres dorsally impunctate, glabrous, neither laterally nor dorsally carinate, moderately setose ventrally; metatarsomeres with a strongly serrated ridge ventrally and a smooth subventral longitudinal carina, with a few short setae; first metatarsomere as long as following tarsomere and slightly shorter than dorsal tibial spur. Protibia moderately long, tridentate; anterior claws symmetrical, basal tooth of both claws bluntly truncate at apex.

Remarks. The here designated lectotype specimen was the only available syntype specimen. The name is a primary senior homonym of *Melolontha fuliginosa* Fairmaire, 1889, currently placed under a different genus name as *Exolontha fuliginosa* (Fairmaire, 1889) (Li et al. 2010; Bezdek 2016). Given the rare use of the latter name, we see no reason to make a case to advocate a conservation of *Melolontha fuliginosa* Fairmaire, 1899. In consequence, we propose here a replacement name for the latter, *Exolontha neofuliginosa* Ahrens, **nom. nov.**

Tribe Ablaberini

Among the type material of Ablaberini described by C.P. Thunberg and L. Gyllenhal in the Stockholm Museum of Natural History, only species of the genera *Camenta* Erichson, 1847 and *Ablabera* Erichson, 1847 were found. Species of both genera await a comprehensive taxonomic revision and consequently, little can be said about the current status of the species at this moment. Thus, we decided to not include any redescription because a broader taxonomic knowledge of these genera is needed.

Ablabera analis (Thunberg, 1818)

(Fig. 3A–D)

Melolontha analis Thunberg, 1818: 427.

Ablabera analis: Blanchard 1850: 101; Péringuey 1904: 86; Dalla Torre 1912: 75.

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 14777 *Hoplia analis* TYP” (UUM).

Additional material examined. 1 ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 3326 *Hoplia analis* TYP” (UUM).

Remarks. The exact identity of this species and its potential synonymy is difficult to establish as male specimens are not available.

The specimen nr. 3326 of the supposed type series was not designated as paralectotype as not an *Ablabera* species, but appears to be a female of *Maladera holosericea* (Scopoli) which was mislabeled and which possibly is not part of the type series.

Ablabera clypeata (Gyllenhal, 1817) stat. rev.

(Fig. 4A–E)

Melolontha clypeata Gyllenhal, 1817: 70.

Ablabera clypeata: Blanchard 1850: 101; Burmeister 1855: 137; Péringuey 1904: 78; Dalla Torre 1912: 76.

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Gyllenhal saml. Typ nr. 1453/a” (UUM).

Remarks. The here designated lectotype specimen was the only available syntype specimen. No other syntype specimen was present in the Stockholm Museum.

Ablabera clypeata and *A. totta* (Thunberg, 1818) were listed by Péringuey (1904) as junior synonyms of *Ablabera splendida* (Fabricius, 1781). However, the examination of both Thunberg’s type specimens revealed that the types belong to different species and they are not *A.*

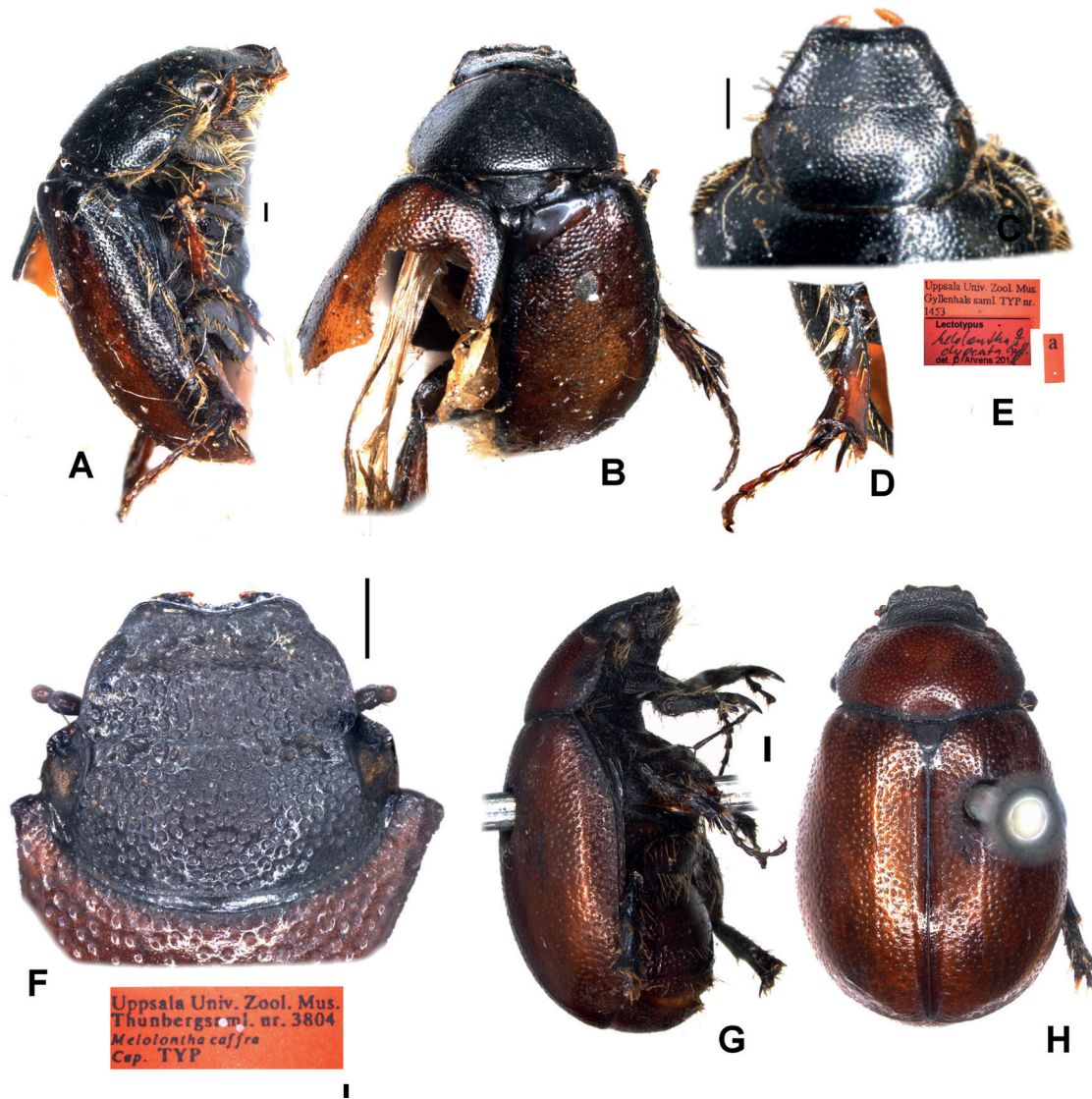


Fig. 4. A–E. *Ablabera clypeata* (Gyllenhal, 1817) (lectotype); F–I. *Camenta caffra* (Thunberg, 1818) (lectotype). A, G. Habitus, lateral view; B, H. Habitus, dorsal view; F, C. Head, dorsal view; D. Metatibia: lateral view; E, I. Specimen labels. Scale: 0.5 mm.

splendida. Since there is no evidence in previous works that either Péringuey (1904) or other authors examined the type of any of the tree species, it seems reasonable to treat them as valid taxa until the group is comprehensively revised.

***Ablabera haemorrhoea* (Thunberg, 1818) comb. n.**
(Fig. 3I–N)

Melolontha haemorrhoea Thunberg, 1818: 427.

Type material examined. Lectotype (here designated). ♂ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 3805 *Melolontha haemorrhoea* Cap. TYP” (UUZM).

Remarks. The here designated lectotype specimen was the only available syntype specimen.

***Ablabera totta* (Thunberg, 1818) stat. rev.**
(Fig. 3E–H)

Melolontha totta Thunberg, 1818: 428.

Ablabera totta: Péringuey 1904: 78; Dalla Torre 1912: 76.

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 3812 *Melolontha totta* Cap. TYP” (UUZM).

Remarks. See Remarks under *A. clypeata* (Gyllenhal, 1817). The here designated lectotype specimen was the only available syntype specimen.

***Camenta caffra* (Thunberg, 1818) comb. n.**
(Fig. 4F–I)

Melolontha caffra Thunberg, 1818: 427.

Type material examined. Lectotype (here designated). ♀ “Uppsala Univ. Zool. Mus. Thunbergsaml. nr. 3804 *Melolontha caffra* Cap. TYP” (UUZM).

Remarks. The here designated lectotype specimen was the only available syntype specimen.

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REFERENCES

- Ahrens D (2004) New species of the genus *Microserica* Brenske, 1894 from Sumatra and the Malay Peninsula, with notes on synonymy (Coleoptera, Scarabaeoidea, Melolonthidae). *Annali del Museo Civico di Storia Naturale “G. Doria”* 95: 35–63
- Ahrens D & Fabrizi S (2016) A Monograph of the Sericini of India (Coleoptera: Scarabaeidae). *Bonn Zoological Bulletin* 65: 1–355
- Balthasar V (1932) Une contribution à la connaissance des Scarabaeidae de la région Orientale. *Annales de la Société entomologique de Belgique* 72: 113–117
- Bezděk A (2016) *Melolonthini*. p. 226–236. In: Löbl, I. & Löbl, D. (Eds.), *Catalogue of Palaearctic Coleoptera*. Volume 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea. Revised and Updated Edition (2nd Edition). Leiden: Brill.
- Blanchard MÉ (1850) *Catalogue de la collection Entomologique. Classes des Insectes. Ordre des Coléoptères. part.: Melolonthidae, Tome I.* Muséum d’Histoire Naturelle de Paris, 128pp
- Brenske E (1898) Die *Serica*-Arten der Erde. II. *Berliner Entomologische Zeitschrift* 43: 205–403
- Brenske E (1899) Die *Serica*-Arten der Erde. III. *Berliner Entomologische Zeitschrift* 44: 161–272
- Burmeister H (1855) *Handbuch der Entomologie*. 4. Band. Besondere Entomologie, Fortsetzung. 2. Abteilung, Coleoptera Lamellicornia Phyllophaga chaenochela. Theodor Christian Friedrich Enslin, Berlin, 467pp.
- Dalla Torre KW (1912) Scarabaeidae: Melolonthinae I. In: Junk W & Schenkling S (eds): *Coleopterorum Catalogus* 45: 1–84
- Fairmaire L (1889) Coléoptères de l’intérieur de la Chine (5 partie). *Annales de la Société Entomologique de France* 6: 5–84
- Krajcik M (2012) Checklist of the World Scarabaeoidea. *Animax*, supplement 5: 1–278
- Gyllenhal L (1817) In: Schönherr CJ (1817) Appendix ad C. J. Schoenherr synonymia insectorum. Vol. 1, Part 3, sistens descriptiones novarum specierum, Scaris, 266pp.
- Li C-L, Yang P-S, Wang C-C (2010) Revision of the *Melolontha guttigera* Group (Coleoptera: Scarabaeidae) With a Key and an Annotated Checklist of the East and South-East Asian *Melolontha* Groups. *Annals of the Entomological Society of America* 103(3): 341–359
- Péringuey L (1904) Descriptive catalogue of the Coleoptera of South Africa. (Lucanidae and Scarabaeidae). *Transactions of the South African Philosophical Society* 13: 1–293
- Reitter E (1896) Uebersicht der mir bekannten palaearktischen, mit der Coleopteren-Gattung *Serica* verwandten Gattungen und Arten. *Wiener Entomologische Zeitung* 15: 180–188
- Thunberg CP (1818) *Coleoptera Capensia, antennis lamellatis, sive clave fissili instructa*. *Mémoires de l’Académie impériale des sciences de St. Pétersbourg* 6: 395–450
- Wallin L (1994) *Catalogue of type specimens*. 3. Entomology. Uppsala University, Museum of Evolution, Zoology section, 56pp.
- Wiedemann CRW (1823) Zweihundert neue Käfer von Java, Bengalen und dem Vorgebirge der guten Hoffnung. *Zoologisches Magazin* 2: 1–135