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Alexander S. Konstantinov

Kaniyarikkal Divakaran Prathapan

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NEW GENERIC SYNONYMS IN THE ORIENTAL FLEA BEETLES
(COLEOPTERA: CHRYSOMELIDAE)

A. S. KONSTANTINOV
Systematic Entomology Laboratory, USDA
c/o Smithsonian Institution P.O. Box 37012
National Museum of Natural History
MRC-168 Washington, D.C. 20013-7012, U.S.A.
alex.konstantinov@ars.usda.gov

AND

K. D. PRATHAPAN
Department of Entomology
Kerala Agricultural University
Vellayani P.O.
Trivandrum - 695 522, Kerala, INDIA
prathapankd@gmail.com

Abstract

The following new synonymys are proposed for the genera and species of flea beetles predominantly from the Oriental Region: *Pseudocrypta* Medvedev, 1996 and *Sebaethiella* Medvedev, 1993 = *Acrocrypta* Baly, 1862; *Bhutajana* Scherer, 1979 = *Aphthona* Chevrolat, 1836; *Burmaltica* Scherer, 1969 = *Aphthonaltica* Heikertinger, 1924; *Aphthonomorpha* Chen, 1934 and *Manobidia* Chen, 1934 = *Bikasha* Maulik, 1931; *Garuda* Scherer, 1969 = *Chalaenosoma* Jacoby, 1893; *Priostomus* Jacoby, 1884 = *Chaloenus* Westwood, 1862; *Throcoryssa* Maulik, 1928 = *Clitea* Baly, 1877; *Eucyclomela* Chen, 1934 and *Schenklingia* Csiki & Heikertinger, 1940 = *Halticorcus* Lea, 1917; *Luperaria* Medvedev, 1993 = *Laboissierella* Chen, 1933; *Lipraria* Medvedev, 1990 = *Lipromela* Chen, 1933; *Asiorella* Medvedev, 1990 = *Liprus* Motschulsky, 1860; *Docemasia* Jacoby, 1899 = *Luperomorpha* Weise, 1887; *Ceylonaltica* Doeberl, 1996 and *Mesopa* Jacoby, 1903 = *Micraphthona* Jacoby, 1900; *Martensomela* Medvedev, 1984 and *Nepalicrorepis* Scherer, 1969 = *Microcrepis* Chen, 1933; *Nepalicrorepis darjeelingensis* Scherer, 1969 = *Microcrepis politus* Chen, 1933; *Epithrella* Medvedev, 1993 and *Livoliella* Medvedev, 1997 = *Orthaltica* Crotch, 1873; *Chabriosoma* Chen, 1934 = *Phygasoma* Jacoby, 1898; *Letzuana* Chen, 1934 = *Phyllotreta* Chevrolat, 1836; *Kimotoa* Gruev, 1985 = *Sphaeroderma* Stephens, 1831; *Amydus* Chen, 1935, *Monodaltica* Bechyne, 1955, *Trachyaphthona* Heikertinger, 1924, and *Typhodes* Samuelson, 1984 = *Trachytetra* Sharp, 1886. Habitus and/or other morphological structures are illustrated for each genus under consideration.

The following new names are proposed: *Aphthona gerhardi* **new name** for *Aphthona nepalensis* (Scherer 1989); *Lanka philippina* **new name** for *Horaia bicolor* (Medvedev 1993); *Lanka ogloblini* **new name** for *Horaia fulva* (Medvedev 1993).

The following new combination is proposed: *Manobia nigra* (Scherer 1969).

Oriental flea beetles have been studied as long as flea beetles of any other zoogeographic region. Currently about 2,500 species have been described. They were originally placed in 302 genera, of which 220 currently are considered valid. Significant authors who described most of the generic diversity are: S. Chen - 43 genera, M. Jacoby - 43 genera, L. Medvedev - 41 genera, J. Weise - 14 genera, J. Baly - 19 genera, S. Maulik - 13 genera, and G. Scherer - 12 genera. Other

important authors are S. Kimoto (6 genera) and A. Samuelson (7 genera). Apparently, authors who produced less monographic, synthetic works of large faunas described many more genera than those who were involved with keys and revisions on a large scale, such as A. Samuelson (1973) who revised the flea beetles of Oceania and G. Scherer (1969) who treated the flea beetles of India. Analyses of large faunas stimulate a comparative approach, which helps to look for similarities and limits a descriptive urge which often places large and complex faunas in a state of chaos.

The flea beetles of the Oriental Region are in such a state of chaos. During an ongoing revision of the Oriental flea beetle genera, we examined a number of the type species as well as several representatives of many genera. This resulted in many synonyms that we are proposing below. Overall, it appears that there are two main categories of synonyms. The most common synonyms are the ones that are results of clear mistakes. In these cases a known taxon, being unfamiliar to an author, is described for the second time (for example, *Docemasia* Jacoby, *Asiorella* Medvedev, *Dentisterna* Medvedev). In other instances authors wrongly interpreted characters [for example, in describing *Aphthonaria*, Medvedev (1990) stated that, unlike *Aphthona*, it has the third metatarsomere entire, however the third metatarsomere in *Aphthona* is entire (Konstantinov 1998)]. The other kind of synonyms is not immediately obvious. They are the result of misinterpretation of characters and become obvious in a course of revisionary work that attempts to put generic classification in order. They require some changes in the generic concept and reevaluation of several characters that are used to separate flea beetle genera throughout the World and in the Oriental Region in particular. As a result, characters that vary greatly among species of large genera are not used to characterize genera, and the generic classification becomes more logical and user friendly.

Dissecting techniques and terminology follow Konstantinov (1998). The beetles are deposited in the following collections: The Natural History Museum, London, U.K. (BMNH); Bishop Museum, Honolulu, Hawaii, USA (BPBM); Museum of Comparative Zoology, Cambridge, Massachusetts, USA (MCZC); Museum National d'Histoire Naturelle, Paris, France (MNHN); Natural History Museum, Basel, Switzerland (NHMB); Natural History Museum, Geneva, Switzerland (NHMG); Private collection of L. Medvedev, Moscow, Russia (LMCM); Private collection of K. D. Prathapan, Trivandrum, India (PKDC); Senckenberg Museum, Frankfurt am Main, Germany (SMFD); Staatliches Museum für Naturkunde, Stuttgart, Germany (SMNS); National Museum of Natural History, Smithsonian Institution, Washington D. C. (USNM).

Acrocrypta Baly, 1862

(Figs. 1–6)

Acrocrypta Baly, 1862: 457 (type species *Acrocrypta mouhoti* Baly, 1862 by original designation).

Pseudocrypta Medvedev, 1996: 78 (type species *Pseudocrypta nigripennis* Medvedev, 1996 by original designation). **New synonym**

Sebaethiella Medvedev, 1993a: 16 (type species *Sebaethiella mindanaica* Medvedev, 1993 by original designation). **New synonym**

Describing *Acrocrypta*, Baly compared it to *Acroleuca* Chevrolat and distinguished it by “the shorter, more robust and much more dilated antennae, and ... the almost globular maxillary palpi, with their extremely short and nearly

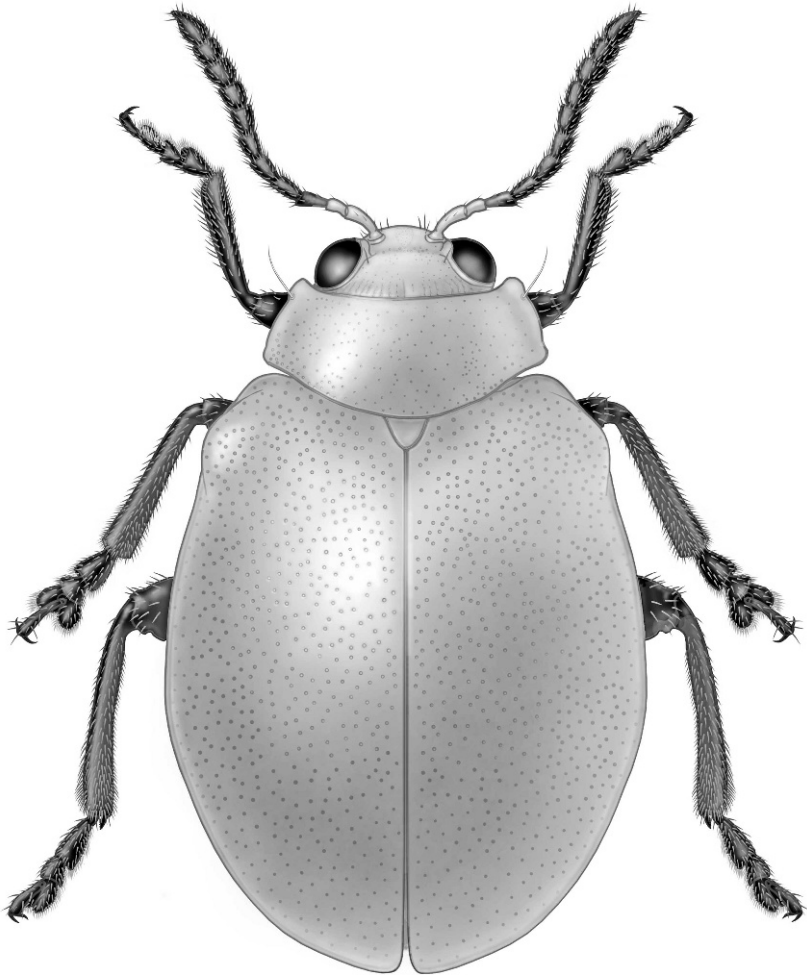
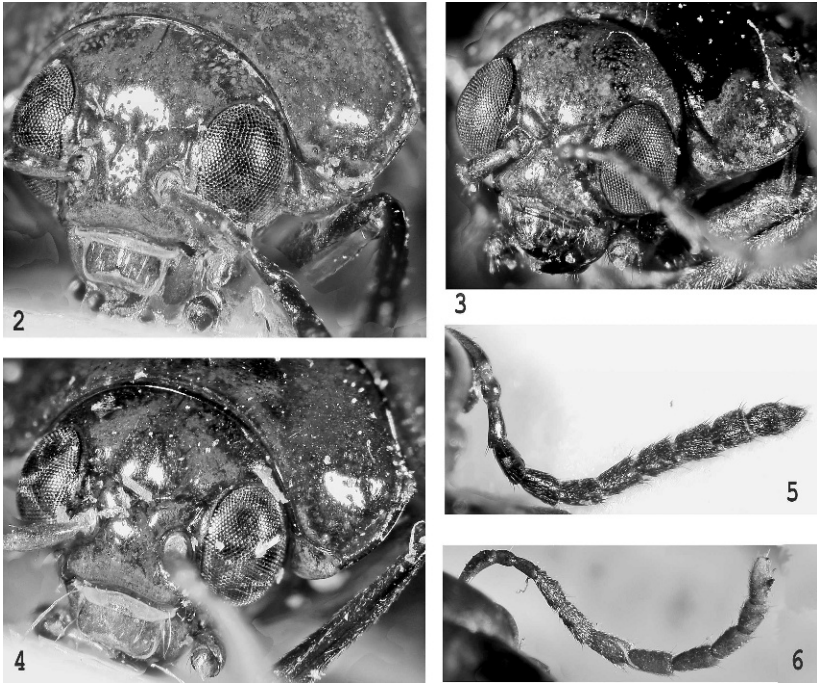


Fig. 1. *Acrocrypta mouhoti*, habitus.

hidden terminal joint.” He proposed two species from Cambodia, the type *A. mouhoti* and *A. dimidiata* Baly.

Proposing *Sebaethiella*, Medvedev (1993a) compared it with *Acrocrypta* but provided no features to distinguish them, except that it has the “general appearance of *Sebaethe*.” He also noted that “one of the species described below is transitional between this new genus and *Acrocrypta*....”

Proposing *Pseudocrypta*, Medvedev (1996) wrote a short key to separate it from *Acrocrypta* and *Sebaethiella*. Two characters are involved in separation of these genera: width of the frontal ridge (“wide,” antennal calli separated in *Acrocrypta* and “narrow,” antennal calli attingent in *Pseudocrypta* and *Sebaethiella*), and relative length of basal antennomeres 2, 3, and 4 (antennomere 4 about twice as long as 2 and 3 combined in *Pseudocrypta* and antennomere 4 as long as 2 and 3



Figs. 2–6. Details of morphology of *Acrocrypta* species. 2) head of *A. mouhoti*; 3) head of *A. nigripennis*; 4) head of *A. mindanaica*; 5) antenna of *A. mouhoti*; 6) antenna of *A. nigripennis*.

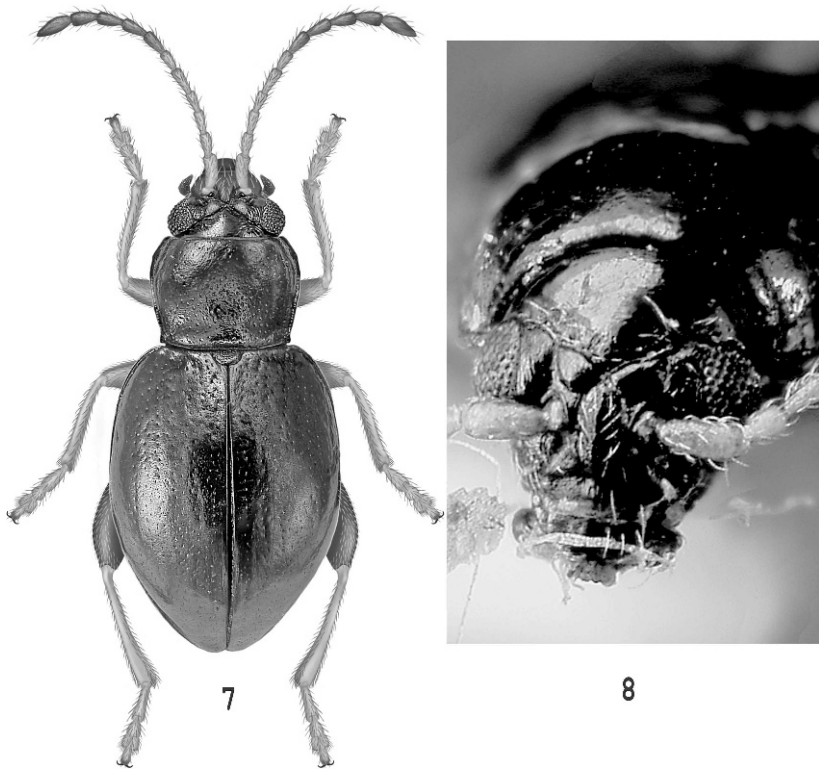
combined). Relative width of frontal ridge and length of antennomeres should not be used to separate genera in flea beetles because they vary greatly among species. In fact the frontal ridge of *Acrocrypta mouhoti* is not wider than in *Pseudocrypta* and *Sebaethiella* (Figs. 2, 3, 4). It extends between the antennal calli slightly separating them. Apart from that, there are no significant differences in the heads of beetles of all the three genera. The shape of the antennal calli, frontal and transfrontal ridges, all main sulci, and sutures are essentially the same. All three genera share a globose penultimate maxillary palpomere, a transverse pronotum without impressions, closed procoxal cavities, confused elytral punctures, and lack of a longitudinal furrow along the last visible abdominal tergite. All the tibiae are dorsally convex and ridged. Since the above genera are inseparable by any distinct character, we consider *Pseudocrypta* and *Sebaethiella* as synonyms of *Acrocrypta*.

Material examined:

Acrocrypta mouhoti: 1 female, India, Meghalaya State, Wesy Garo Hills, 1,100 m, 25°29'6"N 90°19'5"E, 9–17.V.1996, Jendek (USNM).

Pseudocrypta nigripennis: Paratype 1 female, Philippines, Dapitan, Mindanao, Baker (USNM); Philippines, Iligan, Mindanao, Baker (USNM).

Sebaethiella mindanaica: Paratypes 3 females, Philippines, Mindanao, 1991, Maramag prov, Portulin, 3. Jan. leg. Bolm (USNM).



Figs. 7–8. *Aphthona metallica*. 7) habitus; 8) head.

***Aphthona* Chevrolat, 1836**

(Figs. 7, 8)

Aphthona Chevrolat, 1836: 391 (type species *Altica cyparissiae* Koch, 1803, by subsequent designation Maulik, 1926).

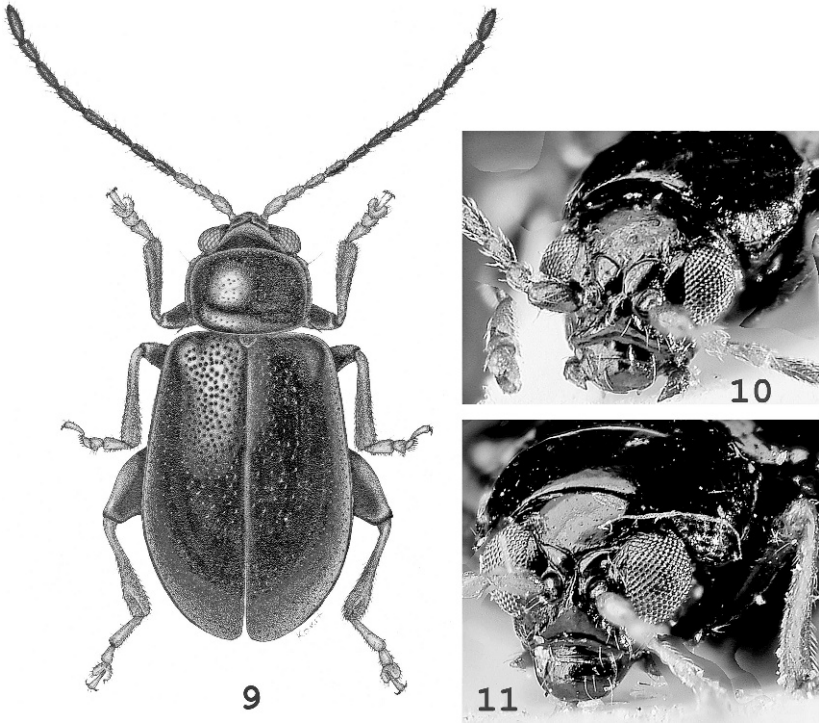
Bhutajana Scherer, 1979: 132 (type species *Bhutajana metallica* Scherer, 1979, by original designation). **New synonym**

Bhutajana metallica is clearly a wingless *Aphthona*, as it shares all characters of the head (Fig. 8), antennae, thorax, legs, elytra, and genitalia with *Aphthona*. It is particularly similar to the *Aphthona* species from the *hammarstroemi* group. As with many *Aphthona* species from the *hammarstroemi* group, *Bhutajana metallica* feeds on *Rosa* sp. in Bhutan. The weak impression on the prothorax and lack of hindwings, on which Scherer (1979) relied heavily in proposing this genus, are shared by several species of *Aphthona*.

Aphthona gerhardi **new name** is proposed here for *Aphthona nepalensis* (Scherer 1989) which is a secondary junior homonym of *A. nepalensis* Medvedev, 1984.

Material examined:

Aphthona cyparissiae: 2 males, 3 females, Canada, Alberta, Carston, 9.VII.1990, leg. H. Ziolkowski (USNM).



Figs. 9–11. Details of morphology of *Aphthonaltica* species. **9)** *A. angustata*, habitus; **10)** *A. angustata* head; **11)** *A. kambaitiensis*, head.

Aphthona hammarstroemi: 2 males, 2 females, Kazakhstan, Dzhambul (Aulie Ata), leg. I. Lopatin (USNM); 1 male, Dzhungar Alatau, 11.VIII.1989, leg. A. Tishechkin (USNM); male, Dzhungar Alatau, env. Alma-Ata, leg. V. Palij (USNM); male, Kirgizstan, Issyk Kul, Ton-Fluss (USNM); 12 males, 25 females Russia, Altai, Gorno-Altai, 20.VI.1989, leg. S. Saluk (USNM).

Bhutajana metallica: 1 male, 2 females, Bhutan, Wangdi Phodrang, 5 km E. Nobding, N27°32'38" E90°10'59", 2,863 m (PKDC).

***Aphthonaltica* Heikertinger, 1924**

(Figs. 9–11)

Aphthonaltica Heikertinger, 1924: 39 (type species *Graptodera angustula* Baly, 1878, by original designation).

Burmaltica Scherer, 1969: 122 (type species *Haltica kambaitiensis* Bryant, 1939, by original designation). **New synonym**

Scherer (1969) did not compare *Burmaltica* with *Aphthonaltica*, although these two genera exhibit remarkable similarity. The structure of the head is similar in all aspects (Figs. 10, 11): general shape of antennal calli well delimited by sulci; frontal ridge unusually short, narrowed between antennae, widening anteriorly to form a curved, anterofrontal ridge; pronotum much wider than long with

antebasal impression vaguely delimited on either end (Fig. 9); meso- and metatibia convex dorsally while metatibia tends to be flat towards apex. The following combination of other characters useful in generic diagnosis also suggests that they are congeneric: first metatarsomere about as long as rest of tarsi combined, procoxal cavities open, elytral punctures confused, and epipleuron extending beyond 2/3 of elytral length.

Material examined:

Aphthonaltica angustula: 1 male, 1 female, Japan, Honshu, Tokyo pref., Hachiojishi, Minami-Asakawa, Yamashita, 17.V.1992 (USNM); male, female, Japan, Kebe, 17.V.1955 (USNM); male, female, Japan, Takizawa Tage, Ikki-muri, Fukushima, 15.V.1949 (USNM).

Burmaltica kambaitiensis: Paratypes 2 females, N. E. Burma, Kambaiti, 2,000 m, 9/6.1934 Malaise (NHMB, BMNH).

***Bikasha* Maulik, 1931**

(Figs. 12–18)

Bikasha Maulik, 1931: 256 (type species *Bikasha tenuipunctata* Maulik, 1931, by original designation).

Aphthonomorpha Chen, 1934b: 357 (type species *Crepidodera collaris* Baly, 1877, by original designation). **New synonym**

Manobidia Chen, 1934b: 358 (type species *Manobidia antennata* Chen, 1934, by original designation). **New synonym**

Chen (1934b) described both *Aphthonomorpha* and *Manobidia* in the same paper. He implied that they differ in the shape of the antennal calli, stating that *Manobidia* has “prominent frontal tubercles, being separated from each other and sharply delimited behind” (p. 359). As can be seen from the figures (Figs. 13, 14, 15) there is no significant difference between *Aphthonomorpha* and *Manobidia* in the shape of the antennal calli. In both cases they are separated by a sulcus from the vertex and from each other, although in *Manobidia* the sulcus is slightly deeper. In other features they are inseparable from each other and from *Bikasha*. All of them have elytral punctures regularly or semiregularly arranged (Fig. 12). The lateral edge of the metatibia bears bristles and minute spines. The metabasitarsus in length is subequal to the rest of the tarsomeres combined (Figs. 16, 18).

Material examined:

Aphthonomorpha collaris: 2 males, 2 females, Vietnam, Tam-Dao, 900 m, 15.VI.193, O. Kabakov leg. (USNM).

Bikasha tenuipunctata: Paratypes 2 females, 1) Silhouette, 1908, Seychelles Exp.; 2) Percy Sladen Trust Expedn. B.M. 1927-444 (BMNH).

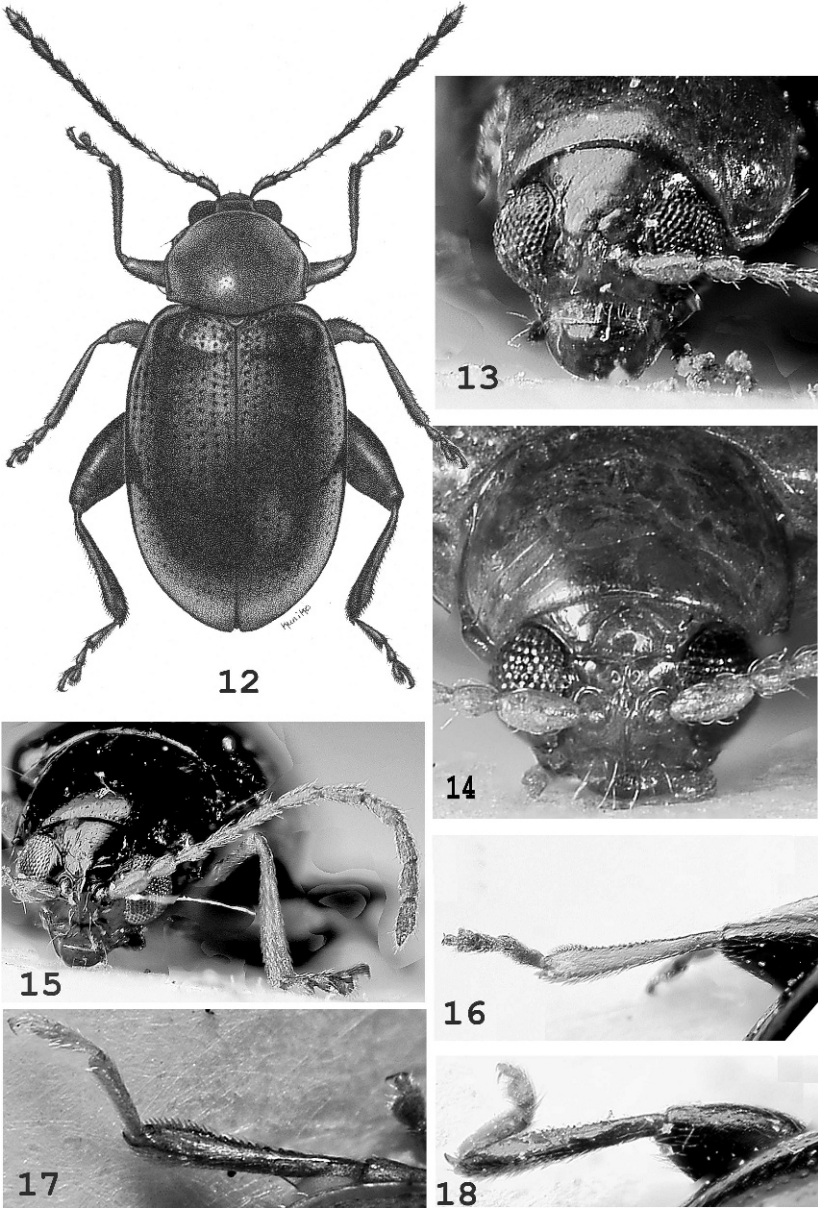
Manobidia antennata: Holotype 1 male, 1) Tonkin, ??? Tho, HOA-BIN, A. de Cooman; 2) TYPE; 3) *Manobidia antennata* S. H. Chen det. m. (MNHN).

***Chalaenosoma* Jacoby, 1893**

(Figs. 19–25)

Chalaenosoma Jacoby, 1893: 157 (type species *Chalaenosoma metallicum* Jacoby, 1893, by monotypy).

Garuda Scherer, 1969: 28 (type species *Garuda hindustanica* Scherer, 1969, by original designation). **New synonym**



Figs. 12–18. Details of morphology of *Bikasha* species. **12)** *B. collaris*, habitus; **13)** *B. collaris*, head; **14)** *B. antennata*, head; **15)** *B. tenuipunctata*, head; **16)** *B. tenuipunctata*, leg; **17)** *B. antennata*, leg; **18)** *B. collaris*, hind leg.

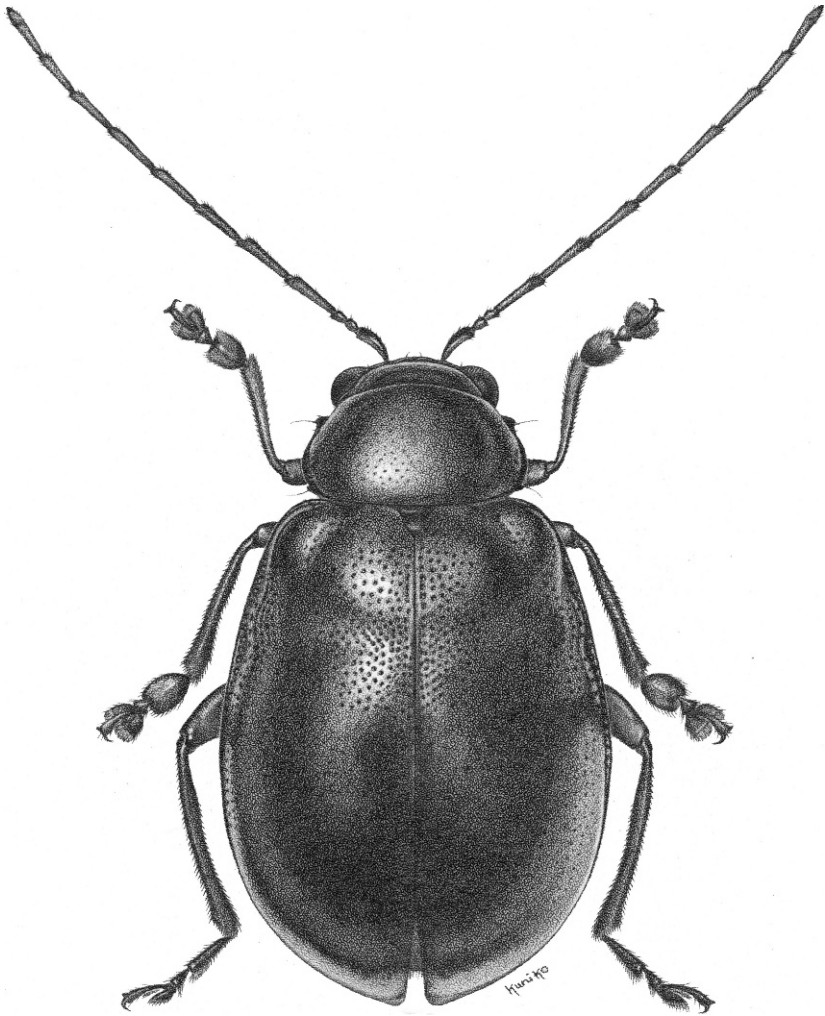


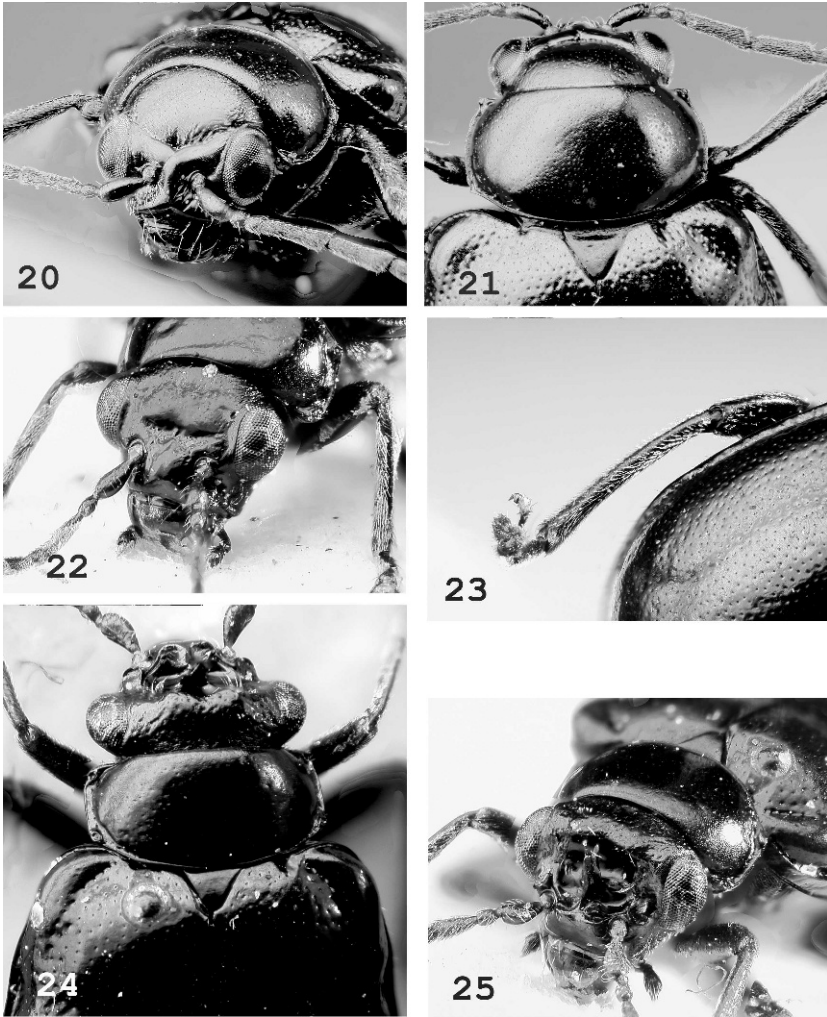
Fig. 19. *Chalaenosoma antennatum*, habitus.

Garuda is separated from *Chalaenosoma* by a horn above the wide frontal ridge present only in males (Scherer 1969) (Fig. 25). Width of the frontal ridge is highly variable among species. Even in combination with a feature present only in males, generic level placement of this taxon can not be justified. *Garuda* is inseparable from *Chalaenosoma* by all other characters (Figs. 20–25).

Material examined:

Chalaenosoma antennatum Jacoby: 1 female, India, Nilgiris, Coonour, 30.VII.1901, M. Maindron (USNM).

Chalaenosoma spp.: 10 males, 13 females, South India Western Ghats Karnataka, env. Madikeri, Temple Forest, 21.XI.2003 1,138 m, N12°27'31"E75°41'30", leg. Konstantinov, Prathapan, Saluk (USNM).



Figs. 20–25. Details of morphology of *Chalaenosoma* species. 20) *C. antennatum*, head; 21) *C. antennatum*, pronotum; 22) *C. hindustanicum*, female, head; 23) *C. antennatum*, leg; 24) *C. hindustanicum*, male, pronotum; 25) *C. hindustanicum*, male, head.

Garuda hindustanica: 2 males, 3 females, Nilgiri Hills, Andrewes (USNM).

***Chaloenus* Westwood, 1862**
(Figs. 26–30)

Chaloenus Westwood, 1862: 216 (type species *Chaloenus latifrons* Westwood, 1862 by present designation).

Priostomus Jacoby, 1884: 185 (type species *Priostomus unicostatus* Jacoby, 1884 by monotypy). **New synonym**

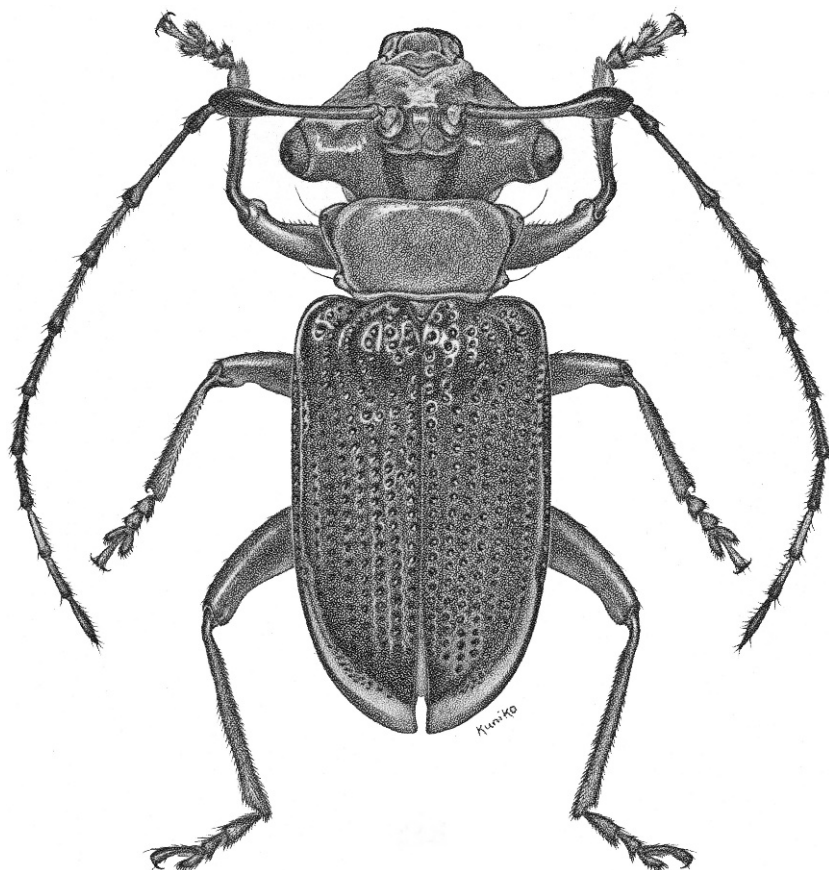
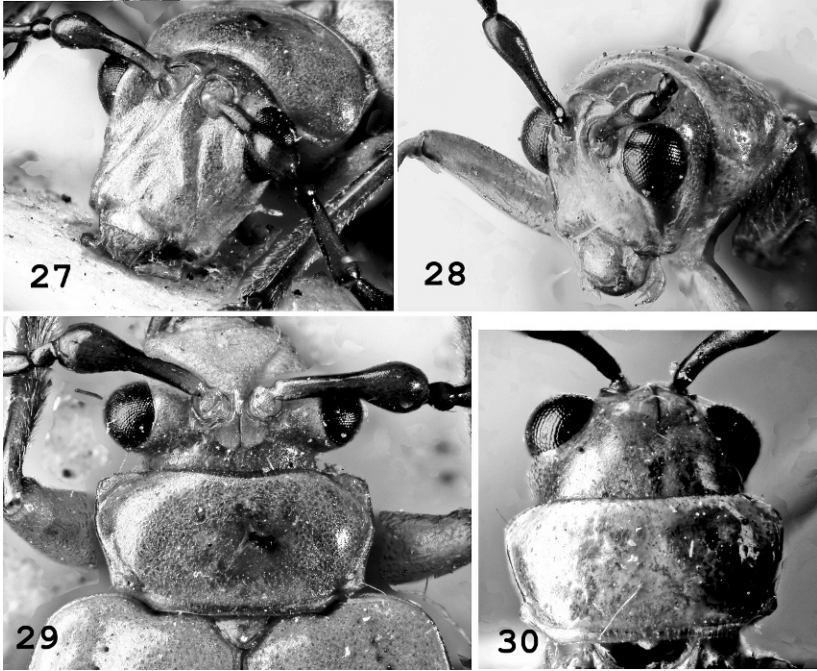


Fig. 26. *Chaloenus capitatus*, habitus.

We are not aware of any type species designation for *Chaloenus*. It was originally proposed with two species. The recent so called “revision” of the genus (Medvedev 2004) also failed to designate the type species and also erroneously dated it as 1861. We here designate *Chaloenus latifrons* Westwood as the type species of the genus.

Proposing *Priostomus*, Jacoby (1884) compared it with *Febra* Clark, however, it is most similar to *Chaloenus*. The differences between these taxa can be summarized as follows: *Priostomus* has transverse impressions on the prothorax, while *Chaloenus* lacks any impression. The elytron of *Priostomus* is strongly punctate throughout with punctures forming regular striae. Some *Chaloenus* have a few strong punctures in the post basal area of the elytron which tend to be regular, but the rest of the elytron is weakly punctate. Some other species have the elytra completely covered with punctures. We do not consider these differences important enough to keep these species in two separate genera. Interestingly, Medvedev’s concept of *Chaloenus* includes species with an impression on the



Figs. 27–30. Details of morphology of *Chaloenus* species. 27) *C. capitatus*, head; 28) *C. unicastatus*, head; 29) *C. capitatus*, pronotum; 30) *C. unicastatus*, pronotum.

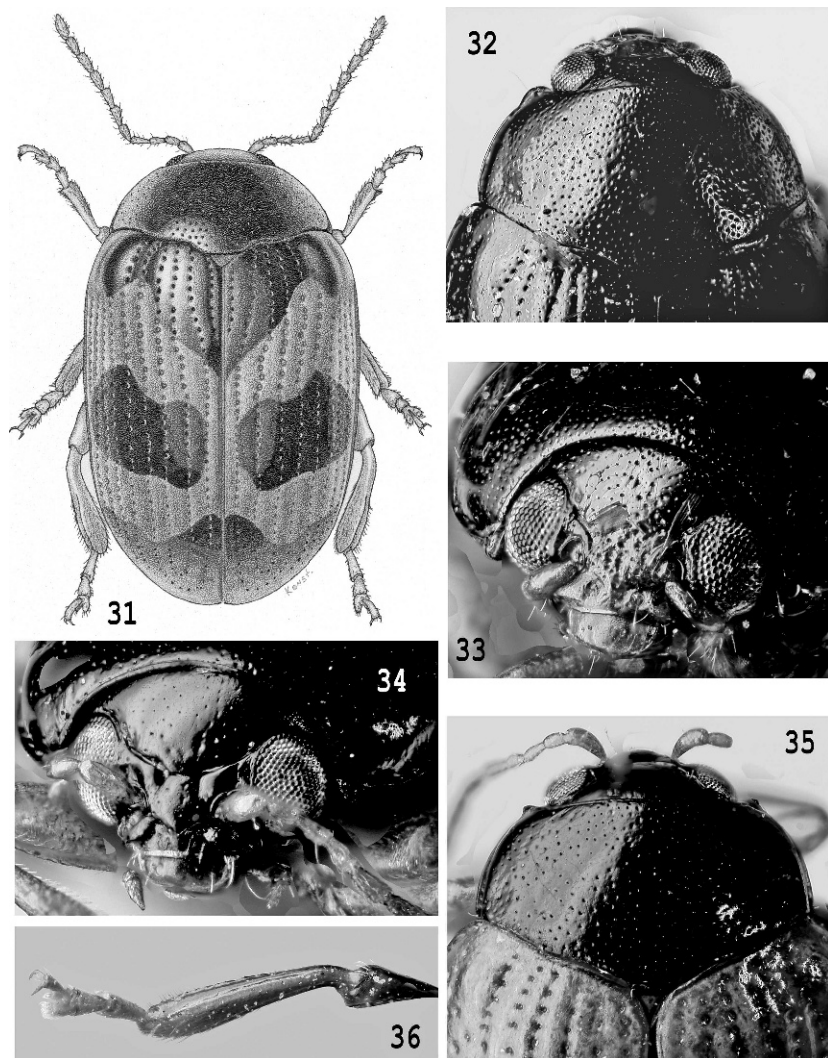
pronotum and with the elytra completely covered with punctures (Medvedev 2004). Both *Priostomus* and *Chaloenus* have extremely similar unique structure of the head (Figs. 27, 28), with laterally bulging eyes (Figs. 29, 30), antennal calli broadly connected and roughly quadrangular with slightly angulate ends entering interantennal space, frons flat, triangular, long, narrowed between antennal sockets and greatly widening and not forming ridge anteriorly, first antennomere long with characteristic club shape, second antennomere very short. They also share unique structure of elytron (Fig. 26): distinctly explanate margin, prominent humeral callus with distinct post basal depression and vertically oblique epipleuron. In both genera, all tibiae are dorsally convex and the last abdominal tergite lacks a longitudinal groove along middle. The general shape of the body is also the same. Because of the above unique features, we synonymize *Priostomus* with *Chaloenus*.

Material examined:

Chaloenus capitatus Jacoby: 1 female, Indonesia, Mentawai, Sipora, Sereinu, VO. 1894, Modigliani; 2) Mentawai, Sipora, Sereinu, V-VI.94, Modigliani; 3) 215; 4) F. Monros Collection; 1959; 5) *Chaloenus capitatus* Jac. (USNM).

Chaloenus furthi Medvedev: 1 male, Palawan, Cleopatra Needle Mt. P., Tanabank Riv. Val. 300 m, 20–22.12.1990 Bolm leg. (USNM).

Priostomus unicastatus: Syntype 1 male, 1) Java; 2) 1st Jacoby coll.; 3) Type 19370 (MCZC).



Figs. 31–36. Details of morphology of *Clitea* species. 31) *C. picta*, habitus; 32) *C. picta*, pronotum, 33) *C. picta*, head; 34) *C. citri*, head; 35) *C. citri*, pronotum; 36) *C. picta*, hind leg.

Clitea Baly, 1877

(Figs. 31–36)

Clitea Baly, 1877: 287 (type species *Clitea picta* Baly, 1877, by monotypy).

Throscoryssa Maulik, 1928: 161 (type species *Throscoryssa citri* Maulik, 1928, by original designation). **New synonym**

Proposing *Throscoryssa*, Maulik compared it to *Kamala* Maulik which is very distant from it, based on a variety of features including the head, thorax, legs,

antennae, and genitalia. *Throscoryssa* should have been compared to *Clitea*, which is similar to it morphologically and biologically: both feed on the leaves of Rutaceae as larvae and adults. *Throscoryssa* and *Clitea* have the same basic structure of the head, though the antennal calli are quadrangular and larger in *T. citri* (Figs. 33, 34). The combination of the following characters clearly suggests that they are congeneric: widely separated, laterally bulging eyes, narrow orbit, widely separated antennal sockets, antennal calli oblique and widely separated from each other, lacking suprafrontal sulcus, flat and wide frontal ridge forming discontinuous anterofrontal ridge raised on either side and flat in middle; prothorax weakly bisinuate with weak lobe in middle, anterior callosity transverse and wider than long and projecting forward (Figs. 31, 32, 35), scutellum triangular and smooth; elytron with highly regular, distinct punctures and flat lateral sides, epipleuron horizontal anteriorly and gradually narrowing towards posterior end, reaching near apex; all femora sulcate beneath for reception of tibia, all tibiae short, either edge of dorsal side distinctly margined and flat or concave, distally widening, armed with a spine; metafemora dorsoventrally flat; last visible abdominal tergite with longitudinal groove. Because of the above combination of unique characters, *Clitea* and *Throscoryssa* are considered synonyms.

Material examined:

Clitea picta: 1 female, Birmania, Bhamo, VI. 1886, coll. Fea (USNM).

Clitea metallica Chen: 1 male, Japan, Okinawa, 1898 (USNM).

Throscoryssa citri: Paratypes 8 females, 4 males, Shillong, Assam, 20.III.1926, C. P. Clausen (USNM).

Halticorcus Lea, 1917

(Figs. 37–42)

Halticorcus Lea, 1917: 319 (type species *Halticorcus platycerii* Lea, 1917, by monotypy).

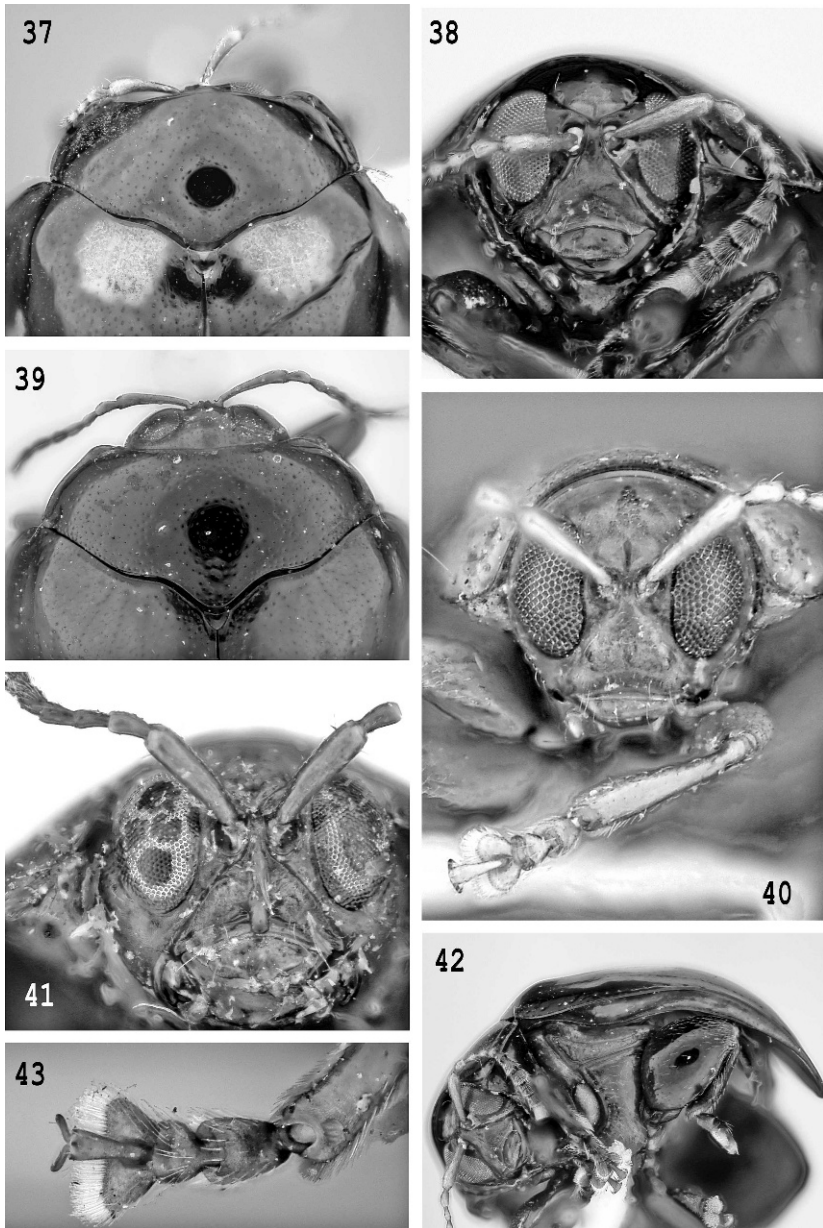
Eucycla Baly, 1876: 439 (type species *Eucycla quadripustulata*, Baly, 1876, designated by Maulik, 1926). Homonym of *Eucycla* Bonaparte, 1854 (Aves).

Eucyclomela Chen, 1934a: 73 (type species *Eucyclomela clypealis* Chen, by original designation). **New synonym**

Schenklingia Csiki & Heikertinger, in Heikertinger & Csiki, 1940: 516 (replacement name for *Eucycla* Baly). **New synonym**

Describing *Eucyclomela*, Chen (1934a) compared it with *Chilocoristes* Weise and *Eucycla* Baly. He suggested that it can be separated from the former by the “long first antennal segment and the small and slender maxillary palpi; from the latter, by the deeply concave epipleura and the entire third segment of the tarsi” (page 74). Contrary to Chen’s opinion, *Schenklingia* does have an entire third tarsomere (Fig. 40, 43). The structures of the epipleura also does not provide distinguishing characters. It is concavely oblique in all taxa under consideration and is slightly more so in *Eucyclomela* (Fig. 42).

All the above genera and *Halticorcus* share a number of important characters including an apparent hemispherical body shape, and a long first antennomere which is as long as the next three combined. Usually they are colored in shades of yellow or red with black spots. The frontal ridge is flat, anteriorly widened with lateral carinae forming a groove below the eyes for accommodating the antennae. The posterior margin of the pronotum is bisinuate (Figs. 37, 39). The legs are short and the dorsal surfaces of all tibiae are flat or depressed. *Eucyclomela clypealis*



Figs. 37-43. Details of morphology of *Halticorcus* species. 37) *H. platycerii*, pronotum; 38) *H. platycerii*, head; 39) *H. quadripustulatus*, pronotum; 40) *H. esaki*, head; 41) *H. clypealis*, head; 42) *H. platycerii*, ventral side of the body; 43) *H. clypealis*, metatarsus.

differs from the types of *Schenklingia* and *Halticorcus* in having a long projection on the frons (absent in *Halticorcus* and *Schenklingia*), which we consider as an aberrant modification. We hence treat all these names as synonyms.

Halticorcus platycerii was reported eating the fern *Platycerium grande* (Fee.) Kunze (Lea 1917). *Schenklingia* is also known to feed on ferns in India (Patra and Bera 2007).

Material examined:

- Eucyclomela clypealis*: Syntype 1 male, 1) Kuching, ap. 09; 2) Kuching J. I. A. Lewis 1910-116 (BMNH).
Eucyclomela clypealis f. *inornata*: Syntype 1 male, 1) Doherty; 2) Sumatra, Merang; 3) Frey Coll. 1905-100 (BMNH).
Halticorcus platycerii: Syntypes 1 male, 1 female, Stag horn fern. Sydney, N. S. W. W. Froggatt, 15.190; 2) Pres. by Imp. Bur. Ent. Brit Mus. 1922-108 (BMNH). 1 female, Australia, NSW. 15.II.96 T. Hawkeswood (BPBM).
Halticorcus zophos Samuelson: Holotype 1 male, Above Keqlsruq; 2) New Guinea (NE) Mt. Wilhelm 3,000 m, July 4. 1955 (BPBM).
Schenklingia quadripustulata: 1 female, 1) lar Wallace; 2) Baly Coll.; 3) Right hind leg mounted in balsam, S. Maulik 1929; 4) Abdominal contents in vial dissected by G. A. Samuelson, 1966 (BMNH).
Schenklingia esakii Chûjô: 1 male, 1 female, Japan, Ryukyu Isl. Okinawa, 1898 (USNM).
Schenklingia spp.: 3 males, 4 females, Nepal. Terrai, W Narayangadh, small valley, Rapti river 26.IV. 27°42.31'N 84°21.11'E, 2,000 Konstantinov, Lingafelter, Volkovitsh (USNM); male, Nepal. Pokhara env. Phewa Tal (lake), creek valley 23.IV. 28°17.82'N 83°49.11'E, 2,000 Konstantinov, Lingafelter, Volkovitsh (USNM).

***Laboissierella* Chen, 1933**

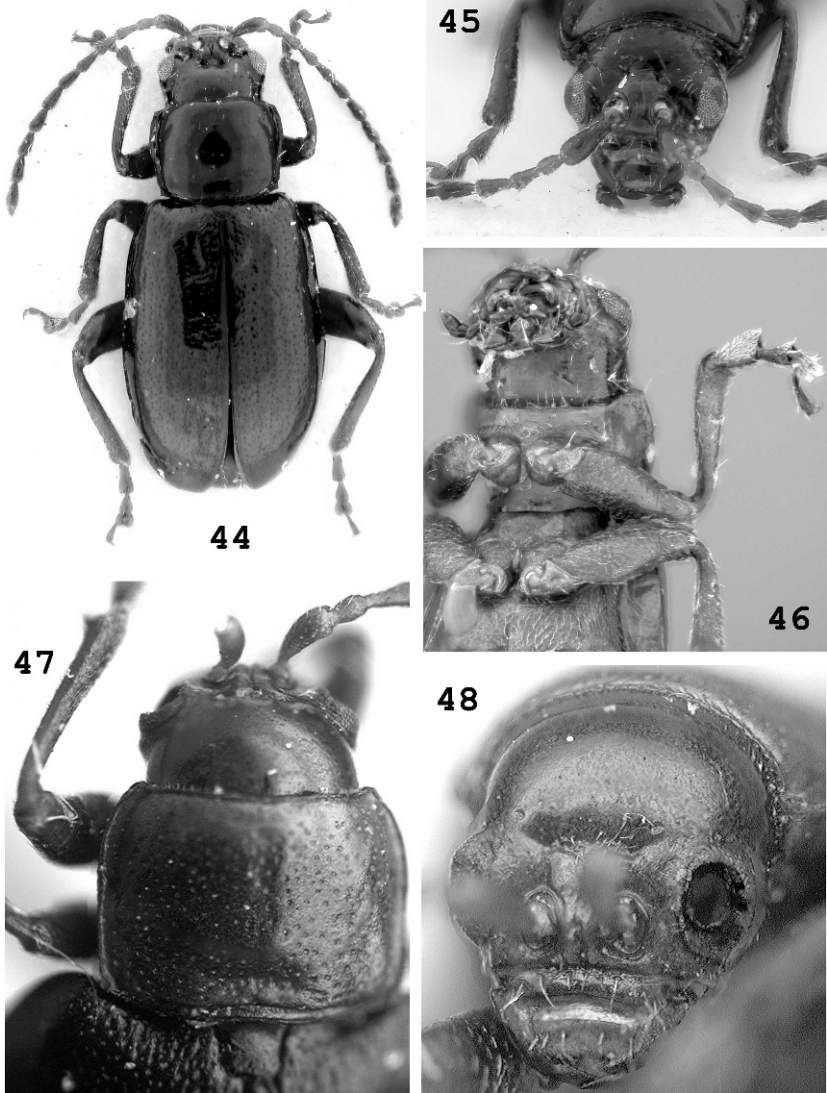
(Figs. 44–48)

- Laboissierella* Chen, 1933a: 384 (type species *Laboissierella cyanipennis* Chen, 1933, by monotypy).
Luperaria Medvedev, 1993b: 373 (type species *Luperaria elongata* Medvedev, 1993, by monotypy). **New synonym**

Describing *Luperaria*, Medvedev (1993b) compared it with *Luperomorpha* Weise and *Trachyaphthona* Heikertinger from which it is obviously different by a variety of features. He did not propose any unique characters for *Luperaria*. Comparison of *Luperaria elongata* with *Laboissierella cyanipennis* reveals that they are congeneric. Both *Luperaria* and *Laboissierella* have the same structures of the head (Figs. 45, 48), legs and pronotum (Figs. 44, 47), with the basal margin of the latter being separated by a deep furrow from the rest of pronotum. Even male genitalia are similar. The only difference between them is in the degree of the closure of the procoxal cavities. In *Laboissierella* they are closed, in *Luperaria* very narrowly open (Fig. 46). The procoxal cavities are known to vary in the degree of their closure in many genera of flea beetles.

Material examined:

- Laboissierella cyanipennis*: Holotype 1 male, 1) Sou?g, Prabung, Tonkin; 2) type; 3) Museum Paris, Coll. Generale; 4) *Laboissierella cyanipennis* n. g. n. sp. S. H. Chen det. (MNHN).
Luperaria elongata: Paratype 1 male, 1) China, N. Yunnan, 30 km N. of Lijiang, 3,000 m, 3.VII.1990. L. & M. Bocak ldt. (NHMB).

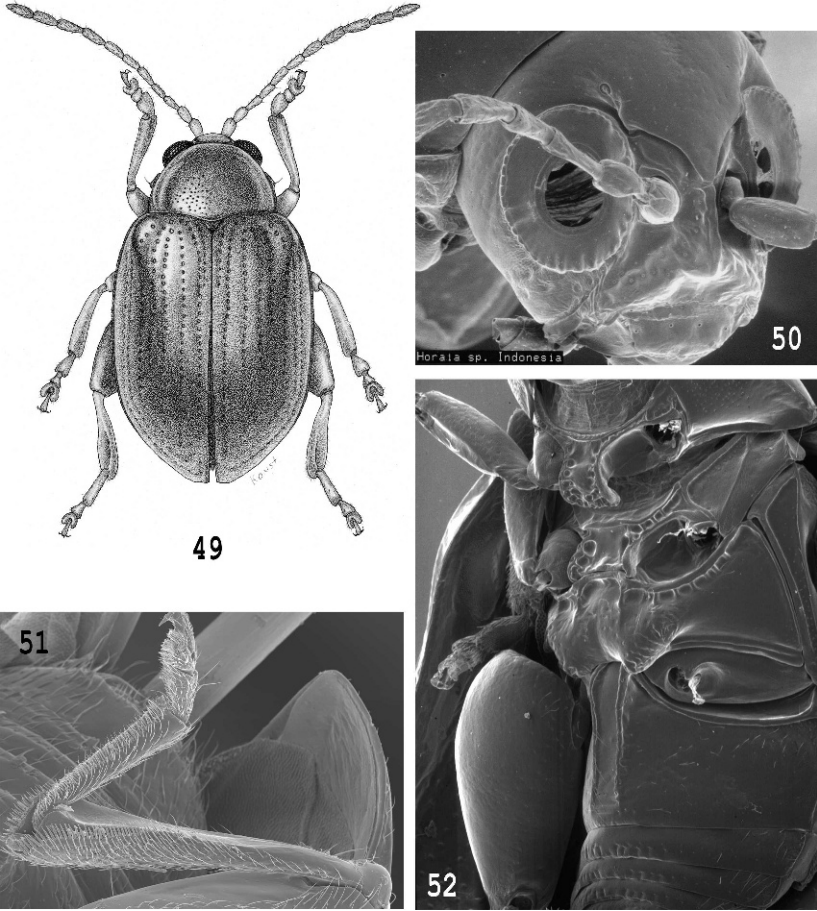


Figs. 44–48. Details of morphology of *Laboissierella* species. 44) *L. elongata*, habitus; 45) *L. elongata*, head; 46) *L. sp.*, prosternum; 47) *L. cyanipennis*, pronotum; 48) *L. elongata*, head.

Lanka Maulik, 1926
(Figs. 49–52)

Lanka Maulik, 1926: 304 (type species *Lanka brunnea* Maulik, 1926, by original designation).

Dentisterna Medvedev, 1993b: 353 (type species *Dentisterna bicolor* Medvedev, 1993, by original designation). Konstantinov and Vandenberg 1996: 320 (synonymy).



Figs. 49–52. Details of morphology of *Lanka* species. 49) *L. fulva*, habitus; 50) *L.* sp. head; 51) *L.* sp., hind leg; 52) *L.* sp., ventral side of the body.

Horaia Chûjô, 1937: 55 (type species *Horaia nigra* Chûjô, 1937, by original designation). Kimoto and Takizawa 1994: 337 (synonymy).

In their treatment of Japanese leaf beetles, Kimoto and Takizawa (1994) included *Horaia* species within *Lanka*, but provided no justification for it. Below we justify this synonymy and provide additional data for the taxa in question.

The name *Horaia* was first mentioned by Chûjô in 1935 in the key to the genera of flea beetles of the Japanese Empire. The full generic description and the description and designation of the type species were published later in March of 1937. Since the name was proposed after 1931, the correct date should be 1937.

Proposing *Horaia*, Chûjô (1937) compared it with *Lanka*, however, it is unclear if he had reliably identified specimens of *Lanka* or used a description of it. He used the following characters to distinguish *Horaia*: “the basal margin of pronotum with a median lobe and bisinuate on either sides of the lobe, the second

antennal joint distinctly thicker than any one of the following nine joints, the first tarsal joint of posterior legs longer than the two following combined together.”

Our comparison of the holotype of *Lanka brunnea* with a number of *Horaia* species, including *H. fulva* Chûjô, shows that the characters proposed by Chûjô to separate *Horaia* from *Lanka* are inadequate. The basal margin of the pronotum (Fig. 49) in both genera is the same. The second antennomere is slightly thicker than the third and fourth (Fig. 50), but certainly not thicker than 11th in *Horaia* or *Lanka*. The first metatarsomere in *Horaia* is as long as in *Lanka* (Fig. 51). *Horaia* and *Lanka* also share a number of unique features, including antennal calli strongly depressed, separated from each other by a narrow ridge; vertex raised above antennal calli; frontal ridge joining vertex inseparably; orbit narrow, situated much lower than its adjacent border with vertex (Fig. 50); elytral punctures regularly arranged (Fig. 49); subparallel ridges along the middle of the first abdominal sternite (Fig. 52); metatibia apically widening with flat dorsal surface (Fig. 51); and many more. Based on this, we here synonymize *Horaia* with *Lanka*.

Dentisterna was synonymized with *Horaia* some time ago (Konstantinov and Vandenberg 1996) however, Medvedev continued to treat it as valid, describing species. We would like to reiterate that *Dentisterna* and *Horaia* are indistinguishable by any character and should be treated as synonyms. Taking into consideration the synonymy of *Dentisterna*, *Horaia* and *Lanka* and the resultant secondary homonymy, we propose *Lanka philippina* **new name** for *Horaia bicolor* (Medvedev 1993) being a junior homonym of *Lanka bicolor* (Chûjô 1937) and *Lanka ogloblini* **new name** for *Horaia fulva* (Medvedev 1993) being a junior homonym of *Lanka fulva* (Chûjô 1937).

Material examined:

Lanka brunnea: Holotype 1 male, 1) Type; 2) Ceylon, G. Lewis, 1910-320; 3) Right leg mounted in balsam. S. Maulik, 1929; 4) *Lanka brunnea* Milk, Det. S. Maulik, n.g & n. s. 1924 (BMNH).

Horaia fulva: 1 male, 1) Rukyu Is. Lehigaki I, XII-20-30-52, C. E. Bohart; 2) *Horaia fulva* Chûjô J. L. Gressitt det. 196 (USNM).

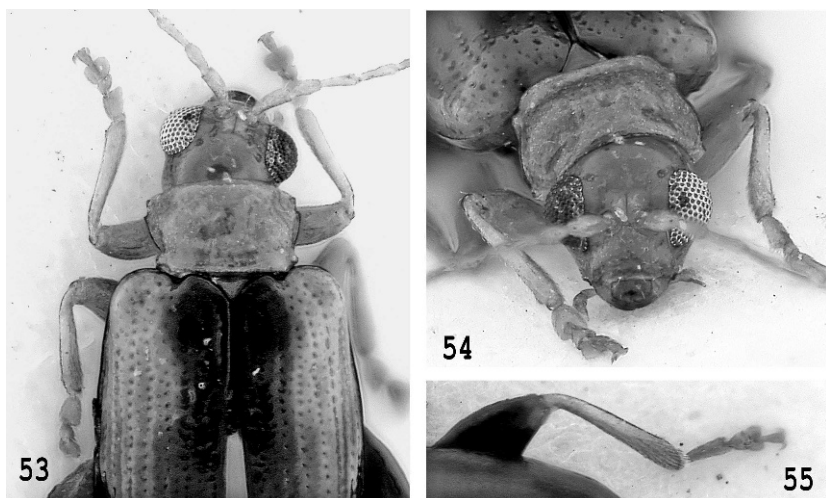
Lipromela Chen, 1933

(Figs. 53–55)

Lipromela Chen, 1933c: 144 (type species *Lipromela costata* Chen, 1933, by monotypy).

Lipraria Medvedev, 1990: 38 (type species *Lipraria variipennis* Medvedev, 1990, by original designation). **New synonym**

Describing *Lipraria*, Medvedev (1990) compared it to *Lipromorpha* Chûjô and Kimoto and *Eudolia* Jacoby and suggested that *Lipraria* differs from both “in the sculpture of prothorax with two transverse furrows” (Medvedev 1990, page 38). However, *Lipraria* is the most similar to *Lipromela*. *Lipraria* and *Lipromela* are inseparable by any reliable character. Both of them share the following characters, and hence are considered synonyms: antennal calli broadly connected, anterior ends entering in to interantennal space; eyes moderately small, lateral; frontal ridge narrow in interantennal space, widening anteriorly; anterofrontal ridge triangular, sharply raised laterally; vertex smooth, orbital sulcus distinct (Fig. 54); pronotum distinctly narrowed posteriorly with well developed transverse impressions proximally, distal impression varying from well developed to barely noticeable; scutellum moderately large and triangular; elytron distinctly



Figs. 53–55. *Lipromela variipennis*. 53) dorsal side of the body; 54) head; 55) hind leg.

broader than pronotum at base, humeral callus well developed with mesal depression as well as posterior depression, punctures arranged in striae with interspaces convex, forming raised ridges (Fig. 53); elytral margin characteristically broad; epipleuron broad, subvertical, narrowly reaching near apex; all the tibiae dorsally convex, slender (Fig. 55).

Material examined:

Lipromela costata: Holotype 1 female, 1) Museum Paris, Japon, Nippon Moyen, env. de Tokio, J. Harmand 1906; 2) type; 3) *Lipromela costata* n. g. n. sp. S. H. Chen det. (MNHN).

Lipraria variipennis: Holotype 1 male, 1) Holotypus; 2) Nepal -Expeditionen, Jochen Martens; 3) 406 Sankhua Sabha Distr, betw. Pahakhola and Karmarang, 1,800–1,500 m, cultural land, bushes, 4 June, 88, J. Martens & W. Schawaller leg.; 4) *Lipraria variipennis* m. L. N. Medvedev det. 1989 (SMNS).

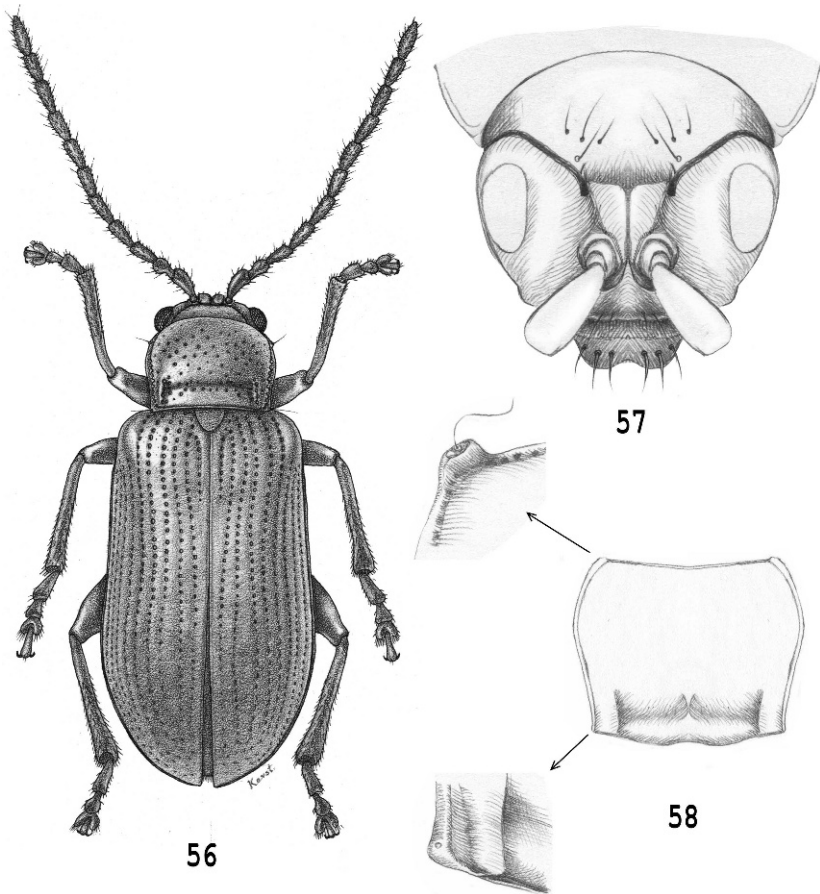
Liprus Motschulsky, 1860

(Figs. 56–58)

Liprus Motschulsky, 1860: 26 (type species *Liprus punctatostriatus* Motschulsky 1860, by monotypy).

Asiorella Medvedev, 1990: 31 (type species *Asiorella caraboides* Medvedev 1990, by original designation). **New synonym**

Describing *Asiorella*, Medvedev (1990) briefly compared it with *Crepidoderoides* Chûjô, which was only known to him by a description. He also mentioned a few structures that he considered unique for *Asiorella*. They are: “frontal tubercles, position of setiferous pore on prothorax, and unusual basal furrow” (Medvedev 1990). *Asiorella* has an unusually shaped head with a very short facial part (below the antennal sockets), long antennal calli, swollen area around the eye, and extremely short frontal ridge (Fig. 57). Also the orbital groove is very deep and continues on the posterior part of the eye. The second



Figs. 56–58. Details of morphology of *Liprus* species. 56) *L. nuchalis*, habitus; 57) *L. punctatostritatus*, head; 58) *L. punctatostritatus*, pronotum.

antennomere of *Asiorella* is much shorter than the third. The pronotum of *Asiorella* bears a very simple anterolateral callosity with a setiferous pore in the middle, and in the middle of the antebasal transverse impression there is a well developed longitudinal ridge across the impression (Fig. 58). However, since all these features are easily found in *Liprus*, we consider *Asiorella* to be a synonym of *Liprus*.

Material examined:

Asiorella caraboides: Holotype 1 male, 1) Holotypus; 2) Nepal-Expeditionen Jochen Martens; 3) 404 Sankhua Sabha Distr., above Pahakhola, 2,600–2,800 m, *Quercus semicarpifolia* Rhododendron, 31 May to 3 June 88, Martens & Schawaller; 4) *Asiorella caraboides* m. L. N. Medvedev det. 1989; 5) *Liprus caraboides* (Medvedev) det. A. Konstantinov 2000 (SMNS)
Liprus punctatostritatus: 1 male, Russia, Far East, Sideni (USNM).

Liprus nuchalis Gressitt & Kimoto: Holotype 1 male, 1) Fukien, S. China, Shaowu: Tachulan, 1,000 m. T. Maa; 2) May 6. 1943; 3) Holotypus male *Liprus nuchalis* Gressitt & Kimoto; 4) *Liprus* HOLO male, sp. nov. *nuchalis* G & K det. S. Kimoto; 5) 3323. (BPBM). Paratype 1 female. Labels: 1) Fukien, S. China, Shaowu: Tachfung, Jun 1–3, 1943, T. Maa; 2) Allotype female *Liprus nuchalis* J. L. Gressitt; 3) *Liprus nuchalis* female Gressitt & Kimoto, det. 1942; 4) *Liprus* sp. nov. det. S. Kimoto. (BPBM).

***Luperomorpha* Weise, 1887**

(Figs. 59–63)

Luperomorpha Weise, 1887: 202 (type species *Luperomorpha trivialis* Weise, 1887 [= *Phyllotreta funesta* Baly, 1874], by monotypy).

Docemasia Jacoby, 1899: 283 (type species *Docemasia coerulea* Jacoby, 1899).

New synonym

Describing *Docemasia*, Jacoby compared it with *Longitarsus* Latreille and *Cerotrus* Jacoby. Both genera are obviously different from *Docemasia* by a number of features. The type species of *Docemasia* can easily be identified as a *Luperomorpha* as it has all the salient features of the genus, like antennal calli merging posteriorly with the vertex (Figs. 59, 61), short second and third antennomeres (Figs. 60, 62), setae on the apex of the elytron, and structure of the metatibiae (Fig. 63).

Material examined:

Docemasia coerulea: Syntype 1 female, 1) Dohrn, Sumatra, Soekaranda; 2) Jacoby Coll. 1909-28a (BMNH).

Luperomorpha funesta: 1 male, Wladivostok, Ost-Asien, Hermann Fleish. (USNM).

Luperomorpha suturalis Chen: 1 female, Russia, Transbaikalia, pl. Dzhida, 20.VII.1928, Th. Lukjanovitsh (ZISP).

***Micraphthona* Jacoby, 1900**

(Figs. 64–70)

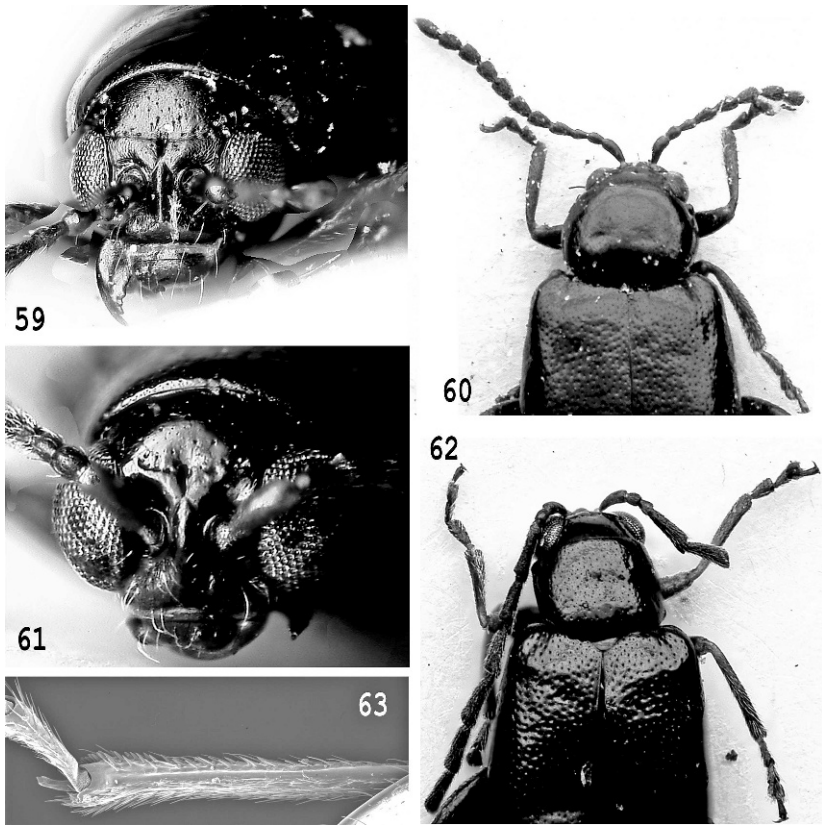
Micraphthona Jacoby, 1900: 125 (type species *Micraphthona nigrita* Jacoby, 1900 by monotypy).

Ceylonaltica Doeberl, 1996: 110 (type species *Ceylonaltica saueri* Doeberl, 1997 by original designation). **New synonym**

Mesopa Jacoby, 1903: 112 (type species *Mesopa fulvipes* Jacoby, 1903 by monotypy). **New synonym**

Jacoby (1903) compared *Mesopa* with *Micraphthona* and proposed the following characters to separate it: antennae “much more robust, the joints shorter and thickened, the anterior tibiae without spine and the posterior femora less strongly incrassate” (page 113). These characters are known to vary greatly among species of the same genus and, therefore, cannot be used to separate *Mesopa* from *Micraphthona*.

Describing *Ceylonaltica*, Doeberl compared it to *Mesopa* and mentioned that it can be separated by unnamed characters of the head and pronotum. He also compared it to *Chalaenosoma* and *Garuda* and proposed the following features: antennal calli poorly separated from vertex (well separated in *Chalaenosoma*), orbital line poorly developed (well developed in *Chalaenosoma*); pronotum with a fine anterior margin (no margin in *Chalaenosoma*); no transverse impression on



Figs. 59–63. Details of morphology of *Luperomorpha* species. **59)** *L. funesta*, head; **60)** *L. funesta*, pronotum; **61)** *L. coerulea*, head; **62)** *L. coerulea*, pronotum; **63)** *L. funesta*, metatibia.

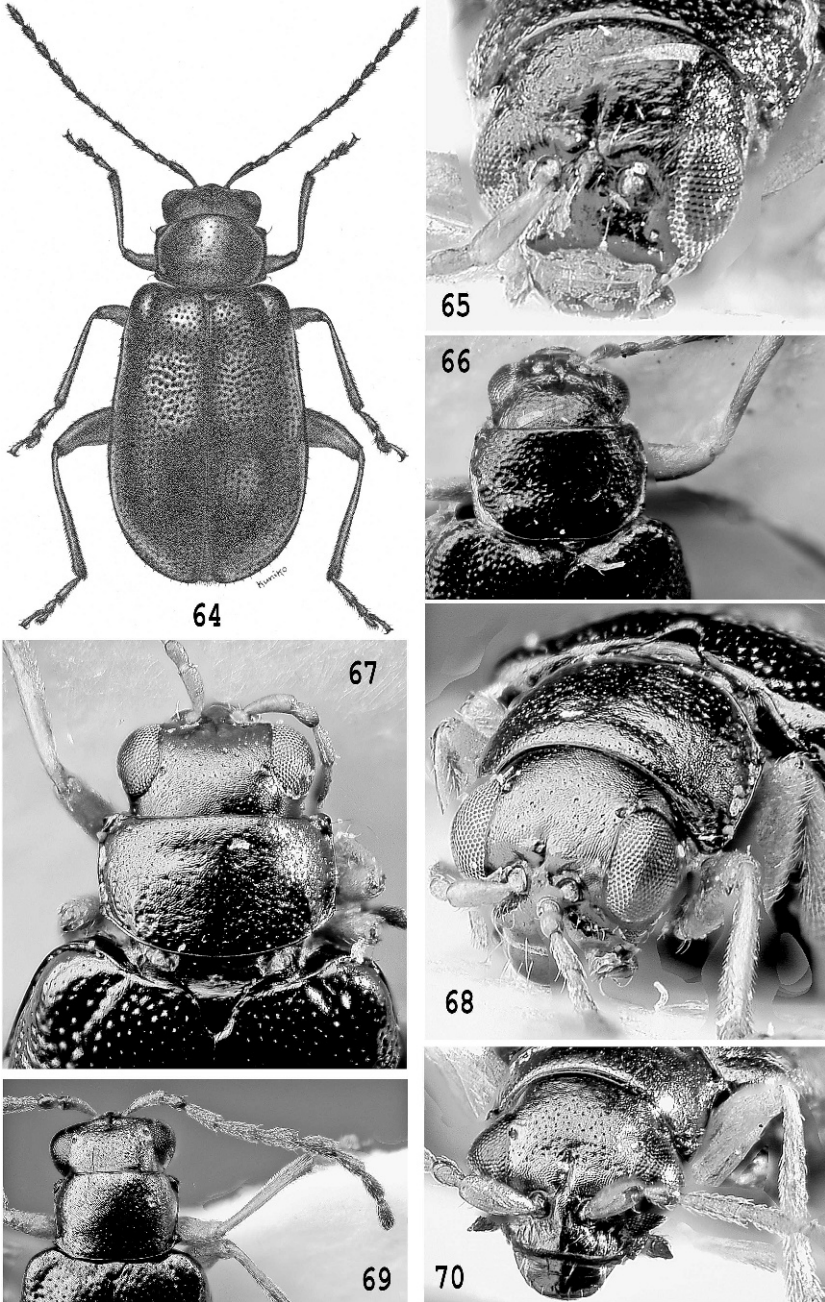
pronotum (fine impression in *Chalaenosoma*); and proportions of the second antennomere (Doeberl 1996).

Mesopa, *Micraphthona*, and *Ceylonaltica* have the same structure of the head (Figs. 65, 68, 70). They have closed procoxal cavities and narrow intercoxal prosternal process. All of them have the same kind of legs and lack a metatibial spine. Some variation is observed in the extent of development of depressions on the prothorax, which we consider as a variable character (Figs. 66, 67, 69). All of them are metallic, medium sized flea beetles with confused or semiregular elytral punctation. General structure of the male and female genitalia is similar across the group (spermatheca lacks a distinct duct, pump curved and not differentiated into horizontal and vertical portions; vaginal palpus fused in the middle with anteriorly directed branches).

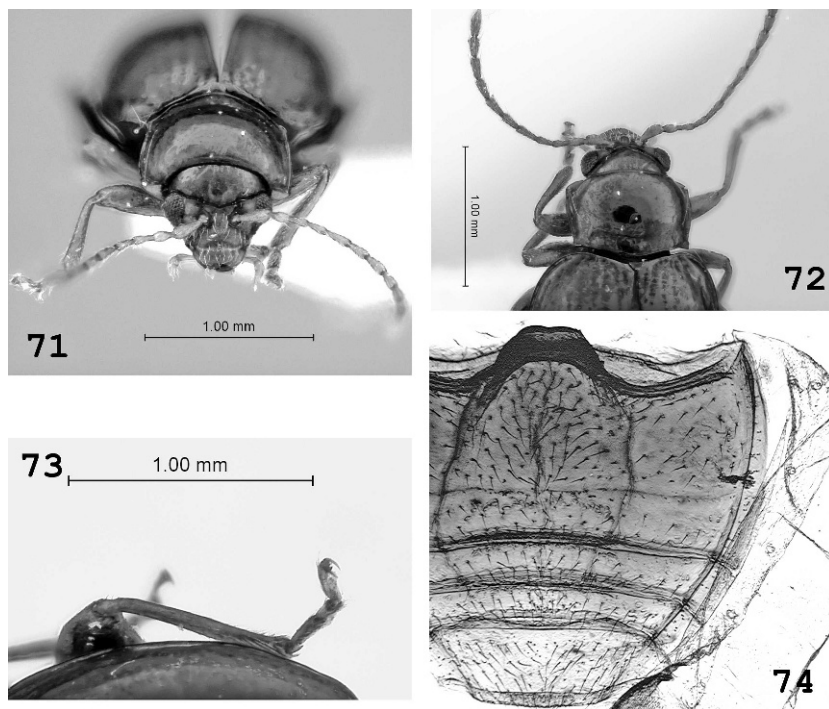
Material examined:

Ceylonaltica saueri: Paratype 1 female, Sri Lanka, Kaputale, 06°47'N 80°54'E, 24–28.IV.1994, leg. R. Sauer (USNM).

Mesopa fulvipes: Syntype 1 female, Nilgiri Hills (BMNH).



Figs. 64–70. Details of morphology of *Micraphthona* species. 64) *M. fulvipes*, habitus; 65) *M. nigrita*, head; 66) *M. nigrita*, pronotum; 67) *M. saueri*, pronotum; 68) *M. saueri*, head; 69) *M. fulvipes*, pronotum; 70) *M. fulvipes*, head.



Figs. 71–74. *Microcrepis polita*. 71) head; 72) pronotum; 73) metatibia; 74) abdominal ventrites.

Micraphthona nigrita: Syntype 1 female, Khasia Hills (BMNH).

***Microcrepis* Chen, 1933**

(Figs. 71–74)

Microcrepis Chen, 1933b: 449 (type species *Microcrepis polita* Chen, 1933, by monotypy).

Martensomela Medvedev, 1984: 61 (type species *Martensomela aptera* Medvedev 1984, by original designation). **New synonym**

Nepalicropis Scherer, 1969: 119 (type species *Nepalicropis darjeelingensis* Scherer, 1969, by original designation). **New synonym**

Proposing *Nepalicropis*, Scherer (1969) compared it to *Microcrepis*, but the comparison was made based on incorrectly identified specimens or original description. The study of the holotype of *Microcrepis polita* leaves no doubt that it is not only congeneric with *Nepalicropis*, but also conspecific with *Nepalicropis darjeelingensis*. Therefore, *Nepalicropis darjeelingensis* Scherer is a **new synonym** of *Microcrepis polita* Chen. That leaves *Microcrepis nigra* Scherer without generic placement. Our study revealed no significant differences with *Microcrepis sensu* Scherer and *Manobia* Jacoby, so we are transferring *Microcrepis nigra* to *Manobia* [*Manobia nigra* (Scherer 1969) **new combination**].

When describing *Martensomela*, Medvedev (1984) compared it with genera which are obviously not closely related (e.g., *Kamala* Maulik, *Podagricomela* Heikertinger, and *Panilurus* Jacoby); so, the distinguishing characters that he provides cannot be used to separate it from *Nepalicrorepis* and *Microcrepis*. Here we synonymize *Martensomela* with *Microcrepis* based on the following characters: all the head features including general proportions, sulci, and antennal calli are generally the same for both genera (Fig. 71); visible abdominal sternites 1 and 2 are fused together (Fig. 74) (apart from *Chaetocnema* Stephens, which is obviously different from taxa under consideration, this feature is known only in *Microcrepis*); the apical abdominal tergite has the same pattern of sclerotization; the metatibiae are extremely similar; and the pronotum of *Martensomela aptera* has traces of an antebasal transverse impression laterally (Fig. 72). Therefore, most of the structures of these genera demonstrate remarkable similarity. Unfortunately, female genitalia of the holotype of *Martensomela aptera* cannot be examined since they were lost by Medvedev. The only unusual feature of *Martensomela aptera* are the abnormally protruding anterior corners of anterolateral callosity; however, these corners are protruding to some degree in all species of *Nepalicrorepis*. Also the pronotum of *Martensomela aptera* lacks a transverse impression which is well developed in *Microcrepis polita*. However, *Microcrepis besucheti* (Scherer) has a poorly developed impression only visible because of the row of large punctures and *Microcrepis loebli* (Scherer) is dimorphic with respect to it.

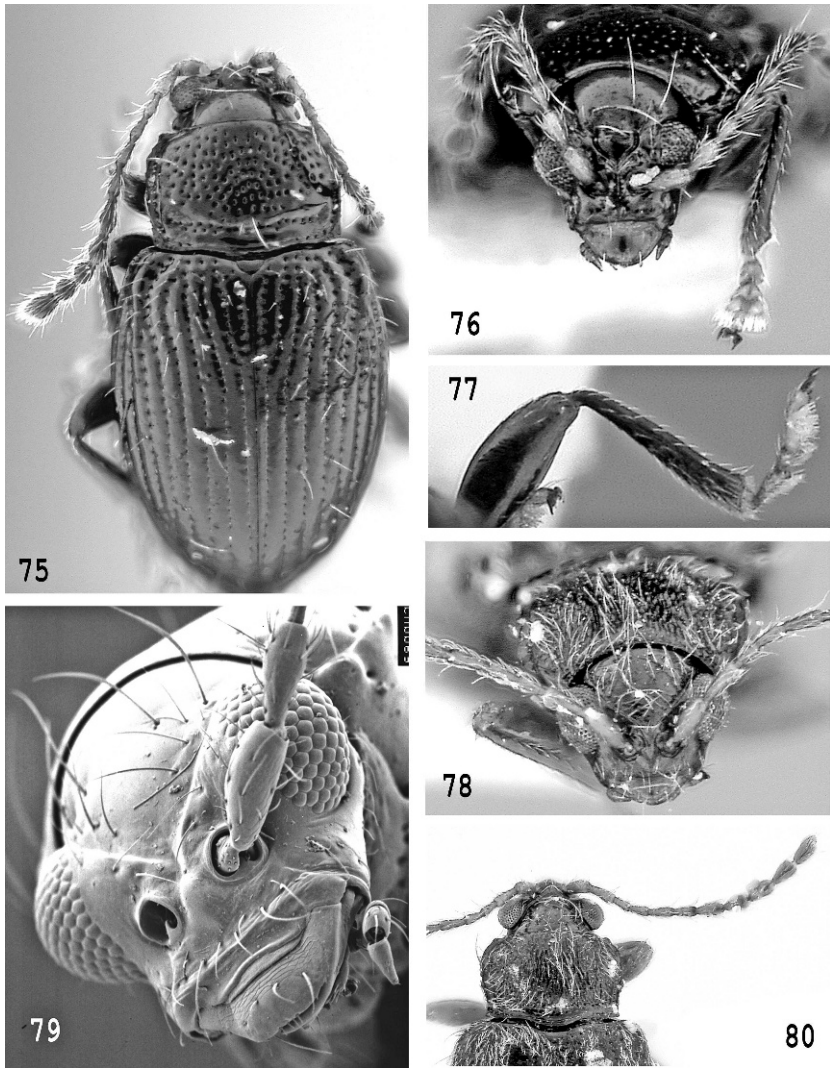
Material examined:

- Microcrepis polita*: Holotype 1 female, 1) Sikkim, Regenzeit, H. Fruhstorfer; 2) Museum Paris, Coll. H. Clavareau; 3) type; 4) *Microcrepis politus* n. g. n. sp. S. H. Chen det. (MNHN).
- Martensomela aptera*: Holotype 1 female, 1) Thodung/Those, 3,200 m 3–9.IV.1973; 2) Holotypus; 3) Holotypus; 4) *Martensomela aptera* m. L. N. Medvedev det. 1983; 5) Senckenberg Museum, Frankfurt/Main (SMFD).
- Nepalicrorepis darjeelingensis*: 1 female, 1) Singmari-Bhara-patea Bung 10.V.1975; 2) Distr. Darjeeling India, W. Wittmer; 3) *Nepalicrorepis darjeelingensis* Scherer det. Scherer, 1976. (NHMB).
- Nepalicrorepis himalayensis* Doeberl: Holotype 1 male, 1) E. Nepal Kosi, Val. Induwa Kola, 2,800 m, 15.IV.84, Löbl-Smetana; 2) Holotypus *Nepalicrorepis himalayensis* Doeberl, 1990 (NHMG). Paratype 1 female, same label as holotype.
- Nepalicrorepis schereri* Doeberl: Holotype 1 male, 1) Nepal Parbat Distr., Punhill at Ghoropani Pass 3,050–3,100 m, 8.X.83, Smetana & Löbl; 2) Holotypus *Nepalicrorepis schereri* Doeberl, 1990 (NHMG).

***Orthaltica* Crotch, 1873**

(Figs. 75–80)

- Orthaltica* Crotch, 1873: 69 (type species *Crioceris copalina* Fabricius 1801, by subsequent designation of Scherer, 1974).
- Livolia* Jacoby, 1903: 15 (type species *Livolia sulcicollis* Jacoby 1903, by subsequent designation of Scherer, 1974). Scherer 1974: 66 (synonymy).
- Epithrella* Medvedev, 1993a: 17 (Type species *Epithrella philippina* Medvedev, 1993, by original designation). **New synonym**
- Livoliella* Medvedev, 1997: 100 (type species *Livoliella luzonica* Medvedev 1997, by original designation). **New synonym**



Figs. 75–80. Details of morphology of *Orthaltica* species. 75) *O. borneoensis*, habitus; 76) *O. borneoensis*, head; 77) *O. borneoensis*, metatibia; 78) *O. philippina*, head; 79) *O. philippina*, pronotum; 80) *O. copalina*, head.

Describing *Epithrella*, Medvedev compared it with *Epitrix* Foudras and *Livolia* Jacoby. *Epitrix* is obviously different from *Epithrella* by a variety of features, but superficially similar because of presence of numerous hairs on the upper side of the body. Medvedev (1993a) proposed to separate *Epithrella* from *Livolia* by the “densely pubescent upperside and numerous setae on the vertex” (page 17). Later Medvedev (1996) synonymized *Orthaltica bakeri* Konstantinov, 1995 with *Epithrella philippina* Medvedev, 1993 (Medvedev 1996). Dorsal pubescence alone

should never be considered a character to justify generic status in flea beetles. Middle Asian *Psylliodes pubipennis* Lopatin is the only species of *Psylliodes* with dorsal pubescence. It is still a *Psylliodes*, and nobody ever attempted to erect a genus for it. The same is true for a Caucasian *Longitarsus pubescens* Weise. *Epithrella philippina* is still a *Orthaltica* in all characters except short dorsal pubescence (Figs. 78, 80).

Describing *Livoliella*, Medvedev (1997) compared it to *Livolia* and wrote the following: "This genus practically agrees with all characters of the genus *Livolia* and differs from the latter only in the absence of basal groove on prothorax. All but one species of *Livolia* have basal groove very distinct and deep; the Australian *L. vestita* Baly, 1877 has this groove rather shallow, but clear enough" (page 101). Clearly, *Livolia sensu* Medvedev is polymorphic regarding the presence of the groove on pronotum. Study of the paratype of *Livolia sulcicollis* shows that basal part of its pronotum has a few small indentations near the lateral margins.

Orthaltica, *Epithrella*, and *Livoliella* share the following important characters: vertex covered with punctures bearing long setae; antennal calli narrow, oblique and connected presenting the appearance of "V"; anterofrontal ridge flat (Figs. 76, 78, 79); pronotum with strong punctures; lateral margin of pronotum with small projections bearing characteristic setiferous pores (Fig. 80); elytral punctures regularly arranged, interstices more or less convex, lateral sides of elytron highly convex (Fig. 75), epipleuron subvertical, humerus strongly raised, with depression posteriorly. All the above genera lack a metafemoral spring as well as metafemoral spine at the apex (Fig. 77). They also share similar male and female genitalia.

Material examined:

- Livoliella luzonica*: Paratype 1 female, 1) Philippines, Sadsadan, 1,880 m, Bontoc Prov., Luzon, June 1, 1977, M. Sato leg.; 2) Paratype *Livoliella luzonica* m. L. Medvedev det. 1997 (LMCM).
- Livolia carolina* (Chujo): 1 female, 1) Palau Is. Babelthup I. Ngarard VII-16-53; 2) M-6362; 3) J. W. Beardsley collector; 4) *Livolia carolina* (Chujo) G. A. Samuelson det. 1970 (1 BPBM). female 1) Koror (NE) 40 m, limestone ridge Palau. XII-14-62; 2) Caroline Is., Pac. Sci. Bd. J. L. Gressitt; 4) *Livolia carolina* (Chujo) G. A. Samuelson det. 1970 (1 BPBM).
- Orthaltica borneoensis*: 1 female, 1) Borneo: Sabah, Mt. Kinabalu, N. P. Summit Trail, 2,050 m, IV-26-87; 2) Beating foliage D. E. Bright collector; 3) *Orthaltica borneoensis* det. A. Konstantinov (USNM).
- Orthaltica copalina*: 1 male, Iowa, Polk Co, W. Saylorville Lk. June 21–30, 1984, R. H. Schieferstein (USNM).
- Orthaltica philippina*: Paratype 1 female, 1) Imugin, N. Viskaya, Baker; 2) 8640; 3) Paratype *Orthaltica bakeri* Konstantinov (USNM).

***Phygasoma* Jacoby, 1898**

(Figs. 81–86)

- Phygasoma* Jacoby, 1898: 379 (type species *Phygasoma borneoense* Jacoby, 1898, by monotypy).
- Chabriosoma* Chen, 1934a: 69 (type species *Chabriosoma thoracicum* Chen, 1934, by original designation). **New synonym**

Describing *Chabriosoma*, Chen (1934a) compared it to *Phygasoma*. He proposed the following two characters to separate them: in *Chabriosoma* the "interantennal space broad, even"... and "posterior margin of prosternum

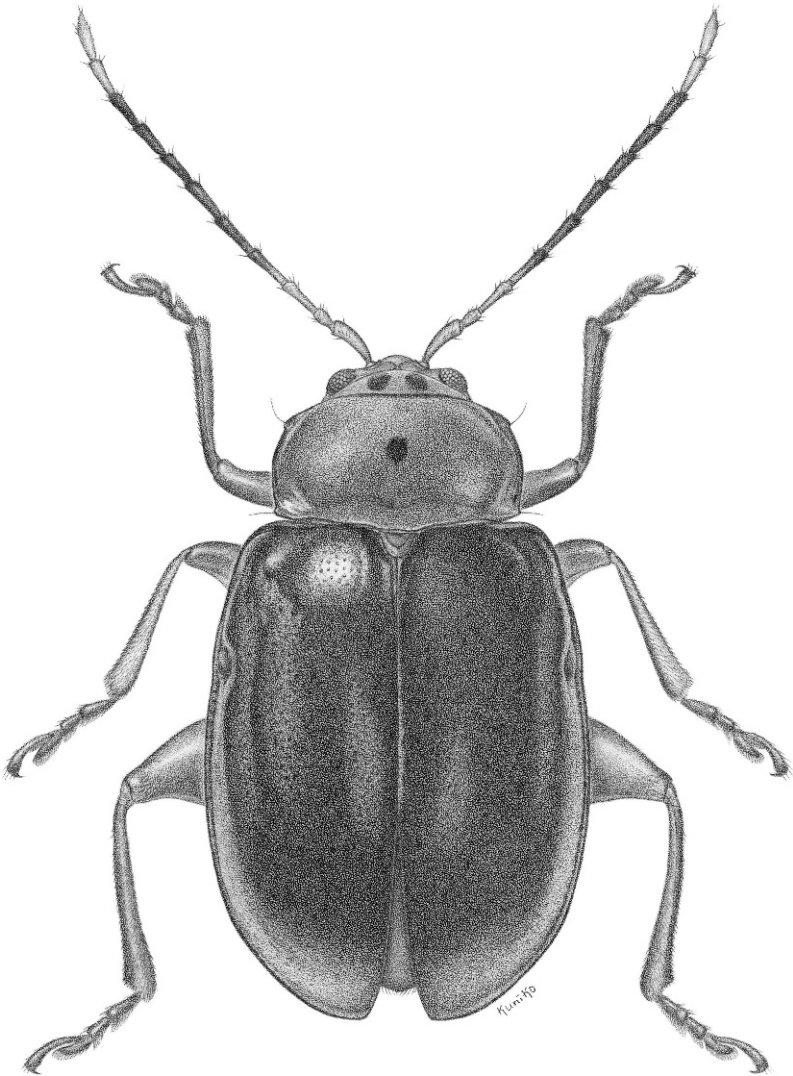
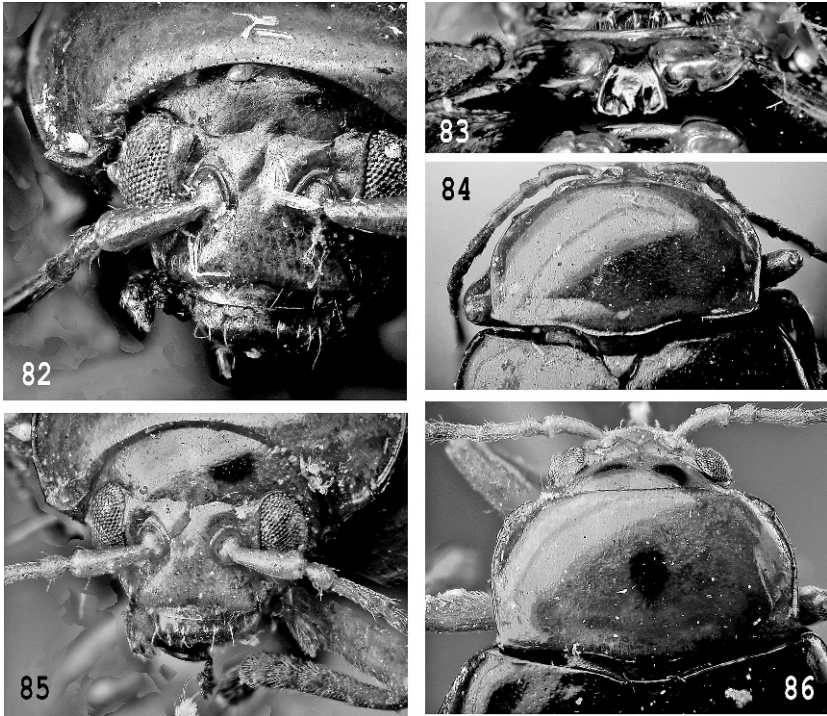


Fig. 81. *Phygasoma thoracicum*, habitus.

rounded at each side”; in *Phygasoma* “interantennal space much narrower, channelled” ... and “posterior margin of prosternum produced at each side.” (p. 70). Careful examination of the type specimens of both taxa could not confirm the above character states. In fact, heads and intercoxal prosternal processes of both type species are identical (Figs. 82, 83, 85). One possible explanation for this could be that Chen’s concept of *Phygasoma* was incorrect. His new species *Phygasoma castaneum* described in the same paper (Chen 1934a) (of which we also examined a paratype) is not congeneric with *Phygasoma borneoense*.



Figs. 82–86. Details of morphology of *Phygasoma* species. **82)** *P. borneense*, head; **83)** *P. borneense*, prosternum; **84)** *P. borneense*, pronotum; **85)** *P. thoracicum*, head; **86)** *P. thoracicum*, prosternum.

Material examined:

Chabriosoma thoracicum: Syntypes 1 male, 1 female, 1) Borneo, Kina Balu; 2) Whitehead; 3) Fry Coll. 1905 100.; 4) Cotype (BMNH).

Phygasoma borneense: Syntype 1 female, 1) Kina Balu; 2) 2nd Jacoby Coll.; 3) Type 19368; 4) *Phygasoma borneensis* Cotype Jac. (BMNH).

Phygasoma castaneum: Syntype 1 female, 1) Cotype; 2) Quop. W. Sarawak. G. E. Bryant, III. 1914; 3) G. Bryant Coll. 1919 147 (BMNH).

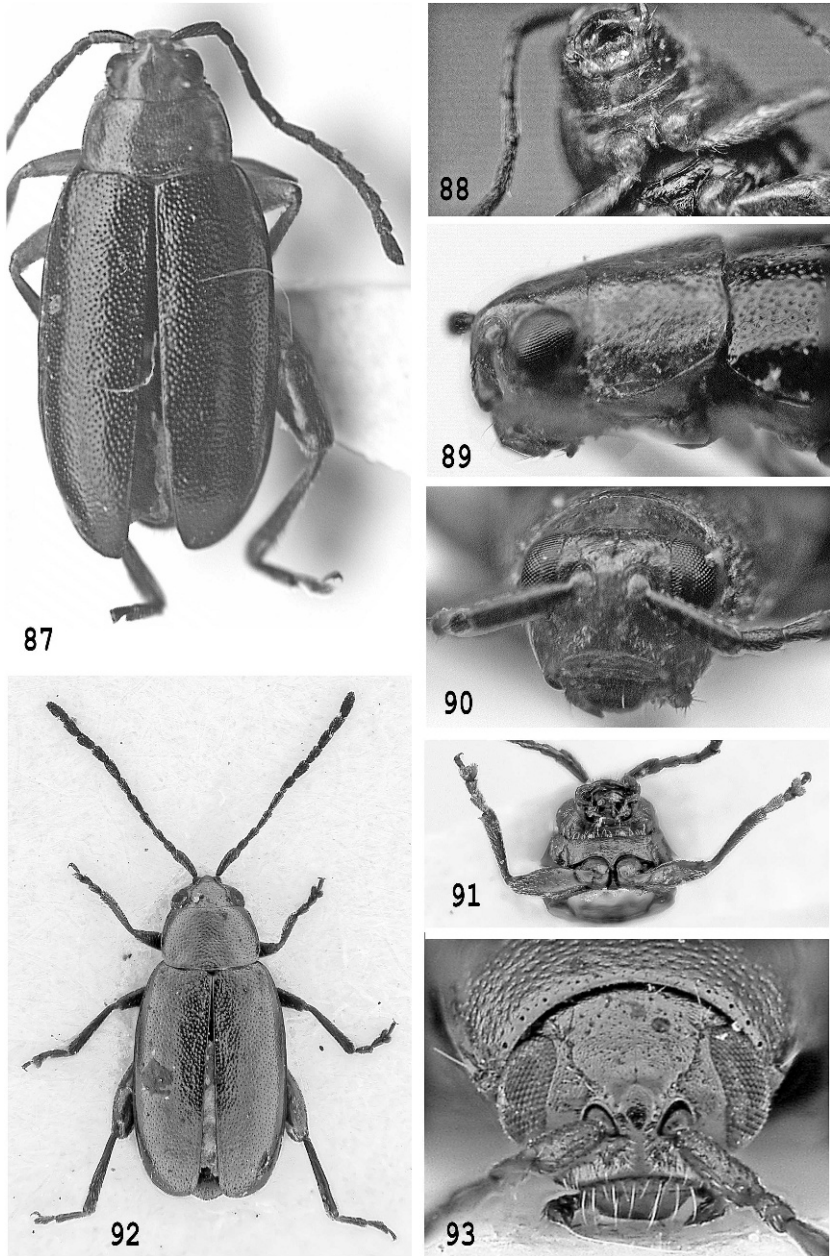
***Phyllotreta* Chevrolat, 1836**

(Figs. 87–93)

Phyllotreta Chevrolat in Dejean, 1836: 391 (type species *Chrysomela brassicae* Fabricius, 1787 = *P. exclamationis* Thunberg, 1784, Europe, designated by Chevrolat, 1845).

Letzuana Chen, 1934b: 340 (type species *Letzuana depressa* Chen, 1934, by monotypy). **New synonym**

Proposing *Letzuana*, Chen (1934b) suggested that it can be separated from all flea beetle genera based on the “very short ... and not dilated behind” intercoxal prosternal process. He suggested that it shares this intercoxal prosternal process



Figs. 87–93. Details of morphology of *Phyllotreta* species. 87) *P. depressa*, habitus; 88) *P. depressa*, prosternum; 89) *P. depressa*, head in lateral view; 90) *P. depressa*, head in frontal view; 91) *P. procera*, prosternum; 92) *P. depressa*, habitus; 93) *P. depressa*, head.

with *Letzuella* Chen and *Laotzeus* Chen, from which it is easily separated based on the variety of head characters (Figs. 89, 90).

Comparison of *Letzuana depressa* with several *Phyllotreta* species reveals that it shares all the synapomorphies of *Phyllotreta*, including general body shape (Figs. 87, 92), head (Figs. 89, 90, 93), most of thoracic structures (Figs. 88, 91) and even male genitalia. The short intercoxal prosternal process is also known to exist in *Phyllotreta* (for example another yet undescribed south Indian species). Based on all of these similarities, we synonymize *Letzuana* with *Phyllotreta*.

Material examined:

Letzuana depressa: Holotype 1 male, 1) Pondichery, ? Bosc; 2) Museum Paris, Coll. E. Fleutiaux; 3) type; 4) *Letzuana depressa* m. S. H. Chen det. (MNHN).

Phyllotreta sp.: 1 male, South India, Western Ghats, Karnataka, env. Madikeri, forest 21.XI.2003 1,052 m, N12°29'15"E75°41'58", leg. Konstantinov, Prathapan, Saluk (USNM).

Phyllotreta procera: 1 female. 1) Georgia, Vashlavanskii zapovednik, 15.V.1975, I. K. Lopatin, *Crambe* sp. (USNM).

Phyllotreta praticola Weise: 2 males, 3 females, Kirgizstan, Inn. Tien-Shan Naryn river valley, 13 km SEE Aktal, Artylysh R., 1,750–2,050 m, 41°23'N 75°12'E, 02.VI.2005 S. Saluk leg (USNM)

Sphaeroderma Stephens, 1831

(Figs. 94–97)

Sphaeroderma Stephens, 1831: 328 (type species *Altica testacea* Fabricius, 1775, by subsequent designation of Maulik, 1926).

Kimotoa Gruev, 1985: 152 (type species *Argopus splendens* Gressitt & Kimoto, 1963, by original designation). **New synonym**

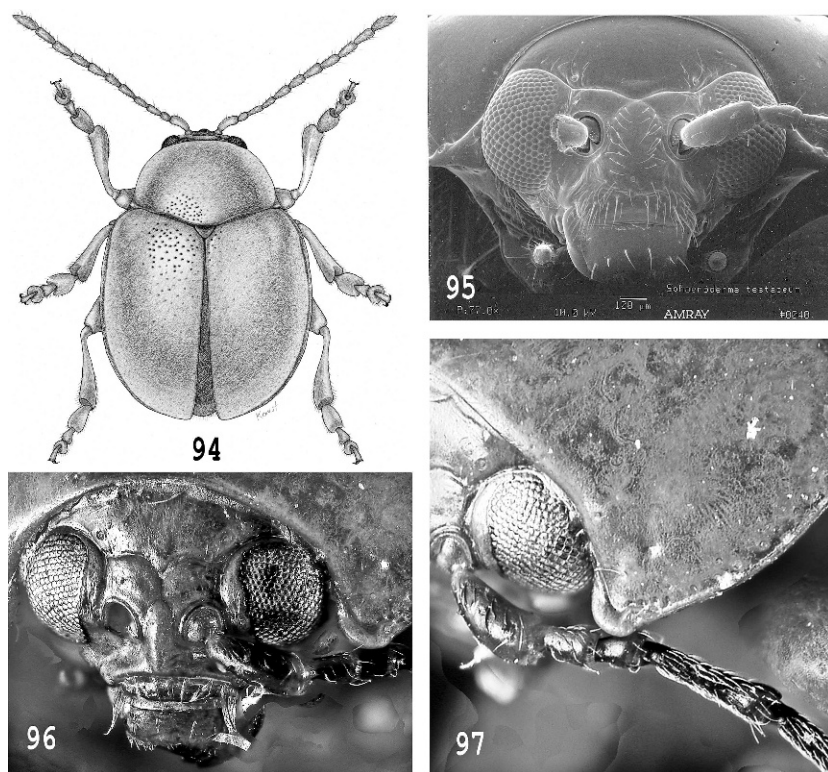
Describing *Kimotoa*, Gruev (1985) compared it with *Sphaeroderma*, *Argopus* Fischer and *Parargopus* Chen. The only character that Gruev (1985) uses to separate *Kimotoa* from *Sphaeroderma* is the length of the fourth antennomere. It is "much longer than 2 and 3 together" in *Kimotoa*. *Argopus* and *Parargopus* are obviously different from *Kimotoa* and *Sphaeroderma*.

Kimotoa is inseparable from *Sphaeroderma* by any important character. They have similar body shape (Fig. 94), general structure of the head (Figs. 95, 96), legs, and aedeagus: antennal calli subquadrate and delimited by weak sulci and triangular anterior ends entering into interantennal space; orbit narrower than antennal socket; orbital sulcus distinct; frontal ridge widening anteriorly; pronotum transverse, anteriorly narrower than posteriorly, posterior margin weakly lobed in middle, anterior callosity wider than long (Fig. 97); elytral epipleuron broad, subhorizontal; all tibiae widening distally; metatibia convex proximally, gradually turning concave distally, with a longitudinal ridge. We consider modifications of antennae insufficient to treat *Kimotoa* as a valid genus.

Material examined:

Argopus splendens: Holotype 1 male, 1) Pres. by Com. Inst. Ent. B.M. 1951-209; 2) China, Prov. Yunnan, Vallis flumin., Soling-ho; 3) *Kimotoa splendens* (Gres. et Kim.) comb. nov.; 4) *Kimotoa splendens* (Gres. et Kim.) comb. nov.; 5) Type species det. B. Gruev (BMNH).

Sphaeroderma testaceum: 1 male, 1 female, Belarus, Nalibokskaya Puscha, 19.VIII.1985, S. A. Matusevich (USNM).



Figs. 94–97. Details of morphology of *Sphaeroderma* species. **94)** *S. testaceum*, habitus; **95)** *S. testaceum*, head; **96)** *S. splendens*, head; **97)** *S. testaceum*, detail of pronotum.

Sphaeroderma fuscicorne Baly: 1 male, Russia, Far East, Ussuriiski zapovednik, 6.VII.1985, leg. A Pisanenko (USNM).

Sphaeroderma balyi Jacoby: 1 female, Russia, Kunashir Island, Tret'yakovo, 4.VII.1985, leg. S. Saluk (USNM).

***Trachytetra* Sharp, 1886**

(Figs. 98–104)

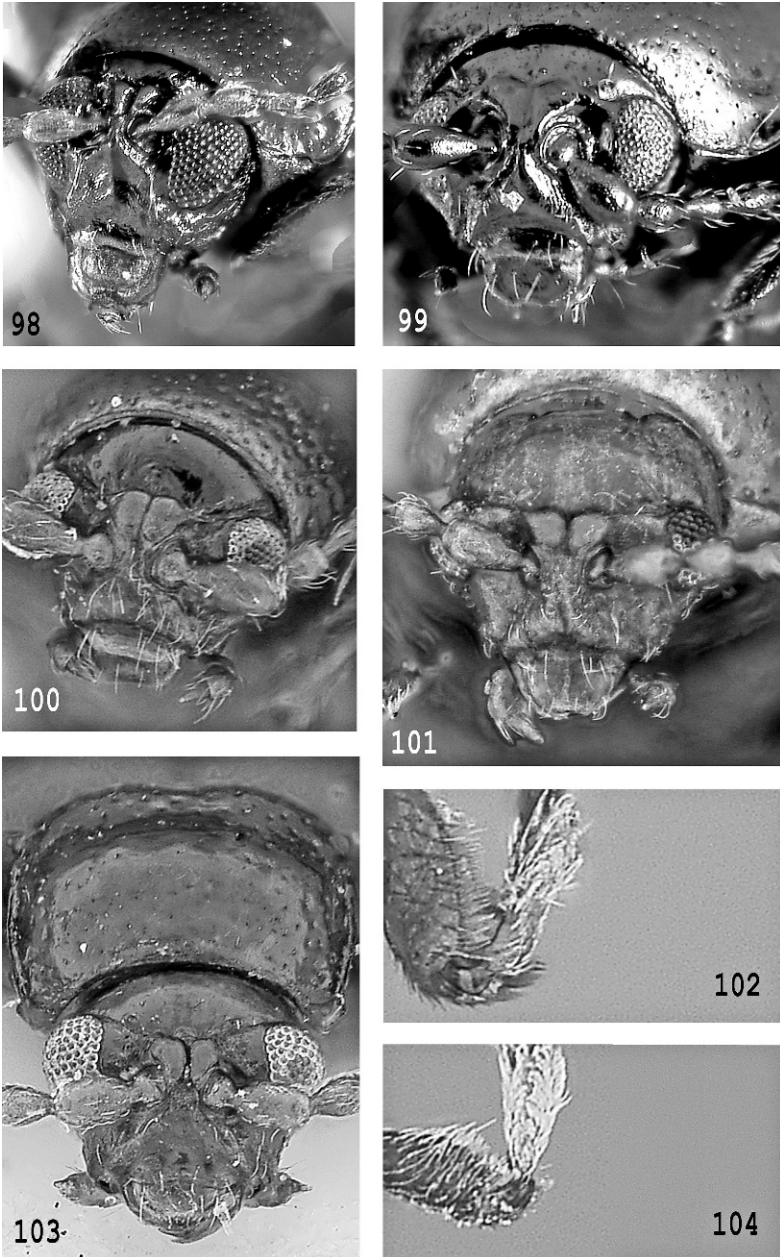
Trachytetra Sharp, 1886: 449 (type species *Phyllotreta rugulosa* Broun, 1880, by original designation).

Amydus Chen, 1935: 76 (type species *Amydus castaneus* Chen, 1935, by monotypy). **New synonym**

Monodaltica Bechyne 1955: 509 (*Monodaltica guineensis* Bechyne, 1955, by original designation). **New synonym**

Trachyaphthona Heikertinger, 1924: 34 (type species *Aphthona sordida* Baly, 1874, Japan, by monotypy). **New synonym**

Typhodes Samuelson, 1984: 32 (type species *Typhodes aetherius* Samuelson, 1984, by original designation). **New synonym**



Figs. 98–104. Details of morphology of *Trachytetra* species. **98)** *T. guineensis*, head; **99)** *T. aetheria*, head; **100)** *T. sordida*, head; **101)** *T. castanea*, head; **102)** *T. guineensis*, apex of the metatibia; **103)** *T. obscura*, head; **104)** *T. nigra*, apex of the metatibia.

Zipangia Heikertinger, 1924: 39 (type species *Haltica obscura* Jacoby, 1885, by monotypy).

Proposing *Monodaltica*, Bechyne (1955) mentioned that it has most of the characters of Aphthonini, but is similar to *Dibolia* Latreille by the metatibial spur being relatively wide with two sharp angles. However, the metatibial spur of *Monodaltica* is more similar to the spur of *Trachyaphthona sordida* than to one of *Dibolia* (Figs. 102, 104), and its apex is slanted and has one sharp angle and one fairly obtuse. That leaves no characters to separate *Monodaltica* from *Trachyaphthona*.

In the original description (Chen 1935), *Amydus* is compared to *Pseudaphthona* Jacoby, with which it has very little in common. In all features, *Amydus* is inseparable from *Trachyaphthona* (Fig. 101), except for the lack of a humeral calli which is a result of winglessness.

Trachytetra is inseparable from *Trachyaphthona*, but being an older name it should be treated as a senior synonym.

Proposing *Typhodes*, Samuelson compared it to *Trachytetra* and suggested to differentiate it “by ... abdominal sternum 1 as long as or longer than the remaining sterna, instead of distinctly shorter” (Samuelson 1984). However the long first abdominal sternite is not unique for *Typhodes*, it also occurs in some flightless species of *Trachyaphthona*. As all other genera under consideration here, *Typhodes* has a typical *Trachyaphthona* head (Figs. 98–101, 103), legs, pronotum (Fig. 103) and elytra, and it is considered as a synonym of *Trachytetra*.

Zipangia was already synonymized with *Trachyaphthona* (Ohno 1961), but was treated separately (Konstantinov and Vandenberg 1996) based on the presence of the impression on the pronotum. However, a shallow, poorly differentiated impression is a variable character in this group. Otherwise, *Zipangia* is inseparable from *Trachyaphthona* and *Trachytetra*.

Material examined:

Amydus castaneus: Holotype 1 male, 1) Mus. Nat. Hist., Harmand, Sikkim, 1890; 2) type; 3) *Amydus castaneus* m. S. H. Chen det. (MNHN)

Monodaltica guineensis: 1 female, 1) Exped. Mus. G. Frey, Franz. Guinea 1951, W. Afr. leg. Bechyne; 2) Foufa Djallon, Dalaba 1,200 m, 22.6.51; 3) F. Monros Collection 1959; 4) *Monodaltica guineensis* Bech. (USNM).

Trachyaphthona sordida: 1 female, Japan, Takao-san, 2.VII.1961 (USNM). 1 male, Japan, Ofune, 14.VI.36, Zhenzhurist (USNM).

Trachytetra frontalis: 1 male, 1 female. 1) New Zealand, North Is Huia, 17–27.XI.1981, H. & A. Howden (USNM).

Typhodes aetherius: Paratypes 1 female, 1 male, 1) New Guinea: NE nr. Lake Aunde, 3,350 m, 12.VI.1967; 2) G. A. Samuelson Collector, Bishop Museum; 3) Paratype *Typhodes aetherius* Samuelson (USNM).

Zipangia obscura: 1 female, 1 male, Japan, Nikko, 15.V.54 (USNM). 1 female, 1 male, Japan, Kyushu (USNM).

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Literature Cited

- Baly, J. S. 1862.** Descriptions of new genera and species of Phytophaga. *Journal of Entomology* 1:450–459.
- Baly, J. S. 1876.** Descriptions of new genera and species of Halticinae. *Transactions of the Entomological Society of London* 3:433–449.
- Baly, J. S. 1877.** Descriptions of new genera and of uncharacterized species of Halticinae. *Transactions of the Entomological Society of London* 4:157–184, 283–323.
- Bechyne, J. 1955.** Über die westafrikanischen Altíciden. *Entomologische Arbeiten aus dem Museum G. Frey, Tutzing* 6(2):486–568.
- Doeberl, M. 1996.** Beitrag zur Kenntnis der Altícinen der Orientalischen Region (Coleoptera, Chrysomelidae, Altícinae). *Entomologische Blätter* 92:110–115.
- Chen, S. H. 1933a.** Chrysomelidae (Coleoptera) nouveaux de l'Asie tropicale. 1 note. *Bulletin du Muséum Paris* 5(5):381–388.
- Chen, S. H. 1933b.** Chrysomelidae (Coleoptera) nouveaux de l'Asie tropicale. 2e note. *Bulletin du Muséum Paris* 5(5):449–456.
- Chen, S. H. 1933c.** Descriptions de deux Halticinae nouveaux de la Chine et du Japon. *Bulletin de la Société Entomologique de France* 38:143–144.
- Chen, S. H. 1934a.** On some species of Chrysomelidae (Col.) in the British Museum (continued). *Stylops* 3(4):6672–7378.
- Chen, S. H. 1934b.** Revision of the Halticinae (Col. Chrysomelidae) of Yunnan and Tonkin. *Sinensia* 5(3, 4):225–393.
- Chen, S. H. 1935.** Coleoptera Halticinae de la collection du Museum recueillis par le Dr. Hammond au Sikkim. *Bulletin de la Société Entomologique de France* 40:75–80.
- Chevrolat, L. 1836.** *In: Catalogue des Coléoptères de la collection de M. (P. E. Dejean, editor). le Comte Dejean, Paris. 443 pp.*
- Chevrolat, L. 1845.** *In: d'Orbigny, Dictionnaire Universal d'Histoire Naturelle. Paris. 6. 792 pp.*
- Chûjô, M. 1935.** Studies on the Chrysomelidae in the Japanese Empire (VIII) subfamily Halticinae 1. *Transactions of the Natural History Society of Formosa* 145:354–369.
- Chûjô, M. 1937.** Studies on the Chrysomelidae in the Japanese Empire (VIII) subfamily Halticinae 8. *Transactions of the Natural History Society of Formosa* 162:52–58.
- Crotch, G. R. 1873.** Materials for the study of the Phytophaga of the United States. *Proceedings of the Academy of Natural Sciences of Philadelphia* 25:19–83.
- Gressitt, J. L., and S. Kimoto. 1963.** The Chrysomelidae (Coleopt.) of China and Korea Part 2. *Pacific Insects Monograph* 1B:301–1026.
- Gruev, B. 1985.** Two new taxa of Altícinae from China (Coleoptera, Chrysomelidae). *Entomological Review, Japan* 40(2):125–127.
- Heikertinger, F. 1924.** Die Halticinengenera der Palaearktis und Nearktis. *Bestimmungstabelle. Koleopterologische Rundschau* 9:25–70.
- Heikertinger, F., and E. Csiki. 1940.** Chrysomelidae: Halticinae. *In: Coleopterorum Catalogus (W. Junk, editor). Pars 166 et 169. Gravenhage. 337–635 pp.*
- Jacoby, M. 1884.** *Priostomus* nov. gen. (Halticinae). *Stettiner Entomologische Zeitung* 45:185–186.
- Jacoby, M. 1885.** Descriptions of new genera and species of Phytophagous Coleoptera from the Indo-Malayan and Austro-Malayan subregions, contained in the Genoa Civic Museum. Second Part. *Annales del Museo Civico di Storia Naturale. Ser. 2(2):21–76.*
- Jacoby, M. 1887a.** Descriptions of some new genera and species of Phytophagous Coleoptera contained in the Leyden Museum. *Notes Leyden Museum* 9:229–244.
- Jacoby, M. 1887b.** Descriptions of the Phytophagous Coleoptera of Ceylon, obtained by Mr. George Lewis during the years 1881–82. *Proceedings of Zoological Society. London* 5:65–119.
- Jacoby, M. 1893.** Descriptions of some new genera and new species of Halticidae. *Transaction of the Entomological Society, London* 2:145–158.

- Jacoby, M. 1898.** New species of Phytophagous Coleoptera from Australia and the Malayan regions. *Annales de la Societe Entomologique de Belgique* 42:350–380.
- Jacoby, M. 1899.** Descriptions of the new species of Phytophagous Coleoptera obtained by Dr. Dohrn in Sumatra. *Entomologische Zeitung* 4(10–12):259–285.
- Jacoby, M. 1900.** New species of Indian Phytophaga principally from Mandar in Bengal. *Memoirs, Société Entomologique de Belgique* 7(3):95–140.
- Jacoby, M. 1903.** Descriptions of new genera and species of phytophagous Coleoptera obtained by Mr. H.- L. Andrewes and Mr. T.-R.-D. Bell at the Nilgiri Hills and Kanara. *Annales de la Société Entomologique de Belgique* 47:80–128.
- Jacoby, M. 1903.** A further contribution to our knowledge of African Phytophagous Coleoptera, Part II. *Transaction of the Entomological Society, London* 1903:15.
- Jacoby, M. 1904.** Another contribution to Indian phytophagous Coleoptera. *Annales de la Société Entomologique de Belgique* 48:380–406.
- Kimoto, S., and H. Takizawa. 1994.** Leaf Beetles (Chrysomelidae) of Japan. Tokai University Press, 539 pp.
- Konstantinov, A. S. 1995.** New species of *Clavicornaltica* and *Orthaltica* from the Australian and Oriental Regions (Coleoptera: Chrysomelidae: Alticinae). *Zoosystematica Rossica* 3(2):283–288.
- Konstantinov, A. S. 1998.** Revision of the Palearctic species of *Aphthona* Chevrolat and cladistic classification of the Aphthonini (Coleoptera: Chrysomelidae: Alticinae). *Memoirs on Entomology, International, Associated Publishers, Gainesville.* 429 pp.
- Konstantinov, A., and N. Vandenberg. 1996.** Handbook of Palearctic flea beetles (Coleoptera: Chrysomelidae: Alticinae). *Contributions on Entomology, International* 1(3):237–439.
- Lea, A. M. 1917.** Notes on some miscellaneous Coleoptera with descriptions of new species. Part III. *Transactions of Royal Society of South Australia* 41:121–320.
- Maulik, S. 1926.** Coleoptera. Chrysomelidae (Chrysomelinae and Halticinae). *In: The fauna of British India including Ceylon and Burma.* (A. E. Shipley, editor). Taylor and Francis, London. 442 pp.
- Maulik, S. 1928.** New chrysomelid beetles from India with a note on the scales of Coleoptera. *Proceedings of the Zoological Society of London* 1:151–161.
- Maulik, S. 1931.** Coleoptera, Chrysomelidae: Eumolpinae, Galerucinae and Halticinae. *The Transactions of the Linnean Society of London* 2. *Zoology* 8:241–260.
- Medvedev, L. N. 1984.** Chrysomelidae from the Nepal Himalayas, 1. Alticinae (Insecta: Coleoptera). *Senckenbergiana Biologica* 65:47–63.
- Medvedev, L. N. 1990.** Chrysomelidae from the Nepal Himalayas, II (Insecta: Coleoptera). *Stuttgarter Beiträge zur Naturkunde Ser. A (Biologie)* 453:1–46.
- Medvedev, L. N. 1993a.** Alticinae of the Philippine Islands (Coleoptera, Chrysomelidae). Part 2. *Russian Entomological Journal* 2(3–4):41–58, 2(5–6):11–32.
- Medvedev, L. N. 1993b.** New species of Chrysomelidae from South Asia from the Natural History Museum in Basel. *Entomologica Basiliensia* 16:359–376.
- Medvedev, L. N. 1996.** New data on Alticinae (Coleoptera, Chrysomelidae) from the Philippines. *Russian Entomological Journal* 5(1–4):65–83.
- Medvedev, L. N. 1997.** New and interesting Chrysomelidae (Coleoptera) from the Philippines collected by Dr. M. Sato. *Japanese Journal of Systematic Entomology* 3(1):99–104.
- Medvedev, L. N. 2004.** A revision of the genus *Chaloenus* Westwood, 1861 (Coleoptera: Chrysomelidae: Alticinae) from Oriental region. *Russian Entomological Journal* 13(4):245–252.
- Motschulsky, V. 1860.** Insectes des Indes orientales, et de contrees analogues. *Etudes Entomologiques* 8:25–118.
- Ohno, M. 1961.** On the species of the genus *Trachyaphthona* Heikertinger and the new genus *Sphaeraltica* (Coleoptera, Chrysomelidae). *Studies of the flea-beetles of Japan* (3). *Bulletin, Department of Liberal Arts Toyo University* 2:73–91.
- Patra, B., and S. Bera. 2007.** Herbivore damage to ferns caused by a Chrysomelid beetle from lower Gangetic plains of West Bengal, India. *American Fern Journal* 97(1):19–29.

- Samuelson, G. A. 1973.** Alticinae of Oceania (Coleoptera: Chrysomelidae). Pacific Insects Monograph 30, 165 pp.
- Samuelson, G. A. 1984.** Plant associated Alticinae from the Bismarck range, Papua New Guinea (Coleoptera: Chrysomelidae). *Esakia* 21:31–47.
- Scherer, G. 1969.** Die Alticinae des Indischen Subkontinentes (Coleoptera - Chrysomelidae). Pacific Insects Monograph 22, 251 pp.
- Scherer, G. 1974.** Review of North American species of *Orthaltica* with new generic synonymy (Coleoptera: Chrysomelidae: Alticinae). *The Coleopterists Bulletin* 28(2):65–72.
- Scherer, G. 1979.** Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Chrysomelidae, Subfa. Alticinae (1. Teil). *Entomologica Basiliensia* 4:127–139.
- Scherer, G. 1989.** Ground living flea beetles from the Himalayas (Coleoptera, Chrysomelidae, Alticinae). *Spixiana* 12(1):31–55.
- Sharp, D. 1886.** On New Zealand Coleoptera, with description of new genera and species. *Transactions Royal Dublin Society* 3(2):351–456.
- Stephens, J. F. 1831.** *Illustration of British entomology. IV. Mandibulata*, London. 408 pp.
- Weise, J. 1887.** Neue sibirische Chrysomeliden und Coccinelliden nebst Bemerkungen über früher beschriebene Arten. *Archiv für Naturgeschichte* 53:192–209.
- Westwood, J. O. 1862.** Description and figures of a new genus and species of Gallerucidae. *Journal of Entomology descriptive and geographical* 1:216–218.

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