

NEW CUPEDIDS FROM THE MIDDLE JURASSIC OF INNER MONGOLIA, CHINA (COLEOPTERA: ARCHOSTEMATA)

JINGJING TAN, DONG REN* and CHUNGKUN SHIH

*College of Life Science, Capital Normal University, 105 Xisanhuanbeilu, Haidian District, Beijing
100037, China*

**Corresponding author; e-mail: rendong@mail.cnu.edu.cn.*

Abstract.— One new genus including two new species of fossil cupedids assigned to family Cupedidae, *Gracilicupes crassicruralis* **gen.** and **sp. nov.** and *Gracilicupes tenuicruralis* **gen.** and **sp. nov.**, is described from the Middle Jurassic Jiulongshan Formation of eastern Inner Mongolia, China.



Key words.— Cupedidae, new genus, new species, Jurassic, Jiulongshan Formation, China.

LARVAL MORPHOLOGY AND CHAETOTAXY OF *PHILONTHUS* STEPHENS (COLEOPTERA: STAPHYLINIDAE: STAPHYLININAE) BASED ON DESCRIPTIONS OF EIGHT SPECIES FROM ARGENTINA

MARIANA R. CHANI-POSSE

Laboratorio de Entomología, Instituto Argentino de Investigaciones de las Zonas Áridas (IADIZA, CRICYT), Casilla de Correo 507, 5500 Mendoza, Argentina; e-mail: mchani@lab.cricyt.edu.ar

Abstract.— The third instar larva of eight *Philonthus* species from Argentina, *P. flavolim-batus* Erichson, *P. pauxillus* Solsky, *P. bicoloristylus* Chani-Posse, *P. sericans* (Gravenhorst), *P. bonariensis* Bernhauer, *P. longicornis* Stephens, *P. rectangulus* Sharp and *P. quadriceps* Boheman, are described (five for the first time), keyed and illustrated. Measurements of all larval instars and differences in chaetotaxic and non-chaetotaxic characters between first and third instar are given in tables and illustrated. A generic description based on literature is also included. Chaetotaxy descriptions for *Philonthus* species are elaborated based on Ashe and Watrous's system for setal patterns. Characters of systematic value at generic and specific levels are highlighted and discussed.



Key words.— *Philonthus*, larva, morphology, chaetotaxy, Argentina, Coleoptera, Staphylinidae, Staphylininae.

REMARKS ON THE BRENTID COLLECTION OF THE WARSAW MUSEUM AND INSTITUTE OF ZOOLOGY (COLEOPTERA: BRENTIDAE)

LUCA BARTOLOZZI and ALESSANDRA SFORZI

*Museo di Storia Naturale dell'Università degli Studi di Firenze, Sezione di Zoologia "La Specola",
via Romana 17, 50125 Firenze, Italy; e-mails: luca@unifi.it; alessandra@unifi.it*

Abstract.— The Warsaw Museum and Institute of Zoology contains an important collection of Coleoptera Brentidae. This material includes many types of species described by Richard Kleine, one of the most famous brentid specialists, whose collection, before the second World War, was held in Stettin. In our study of the collection, we designated lectotypes for the following species: *Baryrhynchus (Eupsalomimus) schroederi* Kleine, 1914; *Corporaalia baryrrhynchoides* Kleine, 1921; *Gyalostoma jucundum* Kleine, 1914; *Spatherhinus grandis* Kleine, 1914; *Eupsalithopsis spatherinoides* Kleine, 1914; *Amorphocephala intermedia* Kleine, 1918; *Cerobates (Cerobates) aequalis* Kleine, 1922; *Hypomiolispa bickhardti* Kleine, 1918; *Hypomiolispa dentigena* Kleine, 1918; *Hypomiolispa rugosa* Kleine, 1918; *Miolispa adversaria* Kleine, 1922; *Miolispa nigricollis* Kleine, 1919; *Paratrachelizus afflictus* Kleine, 1922; *Leptocymatium observans* Kleine, 1941; *Thaumastopsis separata* Kleine, 1941; *Heterothesis elegans* Kleine, 1914.



Key words.— Entomology, taxonomy, Coleoptera, Brentidae, types.

REVISION OF THE AUSTRALIAN COCCINELLIDAE (COLEOPTERA). PART 5. TRIBE SERANGIINI

ADAM ŚLIPIŃSKI¹ and DANIEL BURCKHARDT²

¹CSIRO Entomology, GPO Box 1700, Canberra, ACT 2601; e-mail: Adam.Slipinski@ento.csiro.au

²Naturhistorisches Museum, Augustinergasse 2, CH-4001 Basel, Switzerland;
e-mail: daniel.burckhardt@unibas.ch

Abstract.— The Australian members of the pantropical coccinellid tribe Serangiini are revised and placed in a single genus *Serangium* Blackburn with 14 recognized species. Eight new species are described from Australia: *S. bellum* **sp. nov.**, *S. howdenorum* **sp. nov.**, *S. glorious* **sp. nov.**, *S. magnum* **sp. nov.**, *S. monteithi* **sp. nov.**, *S. nitidum* **sp. nov.**, *S. sculptum* **sp. nov.** and *S. yam* **sp. nov.** The following new synonyms are established: *Serangium bicolor* Blackburn, 1895 (= *S. maculigerum* Blackburn, 1892); *S. hirtuosum* Blackburn, 1892 (= *S. mysticum* Blackburn, 1889) *S. nigrum* Lea, 1902 (= *S. mysticum* Blackburn, 1889); *S. maestum* Lea, 1902 (= *S. mysticum* Blackburn, 1889); *Serangium punctipenne* Lea, 1902 is transferred to *Cycloscymnus* Blackburn (**new combination**). Nomenclatural history, diagnoses and distributional information are provided for each species.

The world genera of Serangiini are discussed and three valid genera are recognized: *Serangium* Blackburn, *Serangiella* Chapin and *Delphastus* Casey. The remaining three genera are synonymized as follows: *Catana* Chapin, 1940 and *Catanella* Miyatake, 1961b with *Serangium* Blackburn, 1889 (**new synonyms**) and *Microserangium* Miyatake, 1961a with *Serangiella* Chapin, 1940 (**new synonym**). An updated checklist of the species of *Serangium* Blackburn and *Serangiella* Chapin is included.



Key words.— Entomology, taxonomy, world checklist, review, Coccinellidae, Serangiini, *Serangium*, *Catana*, *Serangiella*, Australia.

COMPARATIVE STUDY OF FEMALE GENITALIA IN PEDININI (SENSU IWAN 2004) (COLEOPTERA: TENEBRIONIDAE: PEDININI), WITH NOTES ON THE CLASSIFICATION

MAŁGORZATA BANASZKIEWICZ

*Museum and Institute of Zoology, Polish Academy of Sciences, Wilcza 64, 00-679 Warsaw, Poland;
e-mail: banasziewicz@miiz.waw.pl*

Abstract.— A total number of 70 species representing 44 genera of all the subtribes within the tribe Pedinini sensu Iwan 2004 (Dendarina, Eurynotina, Platynotina, Pedinina, Melambiina, Loensina, Leichenina, Pythiopina) have been examined. The terminology of the female genital structures has been standardized. The use of the internal female genitalia in the classification of Tenebrionidae is presented. The features of the opatrinoid type of ovipositor (sensu Tschinkel and Doyen 1980) (1) dorso-lateral position of gonostylus; (2) 4 lobes of coxites; (3) paraproct partly enclosing the 1st lobe of coxite; (4) transverse orientation of baculus of 1st lobe of coxite are characterized for the examined taxa.



Key words.— Coleoptera, Tenebrionidae, Pedinini, Melambiina, Eurynotina, Dendarina, Platynotina, Loensina, Pythiopina, Leichenina, darkling beetles, female genitalia, ovipositor, bursa copulatrix, classification, taxonomy.

REVISION OF AFRICAN *ECTATEUS* GROUP (COLEOPTERA:
TENEBRIONIDAE: PLATYNOTINA). PART IV.
QUADRIDERES LUIGII, NEW SPECIES FROM KENYA

DARIUSZ IWAN

*Museum and Institute of Zoology, Polish Academy of Sciences, Wilcza 64, 00-679 Warszawa,
Poland; e-mail: darek@miiz.waw.pl*

Abstract.— *Quadrideres luigii*, new species from Kenya is described, illustrated and compared with their relatives. Lectotype and paralectotypes are designated for *Selinus femineus* Lesne, 1922.



Key words.— Entomology, taxonomy, new species, Coleoptera, Tenebrionidae, Platynotina, *Quadrideres*, Africa.

A REVIEW OF THE NEW WORLD SPECIES OF THE SHORE-FLY GENUS *LEPTOSILOPA* CRESSON (DIPTERA: EPHYDRIDAE)

WAYNE N. MATHIS¹ and TADEUSZ ZATWARNICKI²

¹*Department of Entomology, PO Box 37012, MRC 169; Smithsonian Institution, Washington, D. C. 20013-7012, USA; e-mail: mathisw@si.edu*

²*Department of Biosystematics, University of Opole, ul. Oleska 22, 45-052 Opole, Poland; e-mail: zatwar@uni.opole.pl*

Abstract.— The 12 New World species of *Leptopsilopa* are reviewed, including the following new species (type localities noted parenthetically): *L. andiana* (Peru. Huánuco: Espensa, [11 km N Huánuco]), *L. flavicoxa* (Belize. Stann Creek: Cockscomb Basin Wildlife Sanctuary [16°47'N, 88°30'W]), *L. martharum* (United States. Texas. Jim Wells: Mathis (7.5 km S; Nueces River; 28°02.2'N, 97°52.2'W; 15 m), and *L. placentia* (Belize. Stann Creek: Placentia Lagoon, Rum Point; 16°32'N, 88°21'W). Lectotypes are designated for *Psilopa similis* Coquillett, *Psilopa varipes* Coquillett, and *Psilopa metallina* Becker. The monophyly of *Leptopsilopa* is established, but only if the Old World species are excluded. The genus is most closely related to a lineage of species currently included in the genus *Psilopa* (the *dupla* group, including *P. metallina*), which is rendered paraphyletic by the recognition of *Leptopsilopa* as an included, monophyletic lineage. The New World species are arranged into two monophyletic species groups, the *atrimana* and the *similis* groups. Of the 12 species now recognized, 10 occur in the neotropics, where other undescribed species will probably be discovered.



Key words.— Shore flies, Ephydriidae, *Leptopsilopa*, review, New World.

NEW SYNONYMS OF EUROPEAN CERATOPOGONIDAE (DIPTERA)

RYSZARD SZADZIEWSKI¹ and PATRYCJA DOMINIĄK²

Department of Invertebrate Zoology, University of Gdańsk, Al. Marszałka Piłsudskiego 46, 81-378
Gdynia, Poland; e-mail: ¹szadz@sat.ocean.univ.gda.pl, ²pdominitrox@interia.pl

Abstract.— Twenty new synonyms are proposed for four species of Ceratopogonidae: *Atrichopogon rostratus* (Winnertz, 1852), *Bezzia annulipes* (Meigen, 1830), *Dasyhelea flavifrons* (Guérin, 1833) and *Dasyhelea saxicola* (Edwards, 1929). *Atrichopogon transversalis* Kieffer, 1918, *A. ventralis* Kieffer, 1918, *A. homopterus* Kieffer, 1919, *A. coracellus* Kieffer, 1919 and *A. nigriventris* Kieffer, 1919 are junior synonyms of *Ceratopogon rostratus* Winnertz, 1852. *Bezzia digramma* Kieffer, 1925 is junior synonym of *Ceratopogon annulipes* Meigen, 1830. *Ceratopogon obscurus* Winnertz, 1852, *C. versicolor* Winnertz, 1852, *C. dufouri* Laboulbène, 1869, *C. hippocastani* Mik, 1888, *Dasyhelea brevitibialis* Goetghebuer, 1919, *D. goetghebueri* Kieffer, 1919, *D. lignicola* Kieffer, 1919, *D. sensualis* Kieffer, 1919, *D. paludicola* Kieffer, 1925, *D. oppressa* Thomsen, 1935 and *D. septuosa* Borkent, 1997 are junior synonyms of *Ceratopogon flavifrons* Guérin, 1833. *Dasyhelea geleiana* Zilahi-Sebess, 1931, *D. tecticola* Remmert, 1953 and *D. karelica* Glukhova et Brodskaya, 1997 are junior synonyms of *Tetrastoma saxicola* Edwards, 1929. *Culicoides karajevi* Dzhafarov, 1961 is treated as a junior synonym of *Culicoides semimaculatus* Clastrier, 1958.



Key words.— Diptera, Ceratopogonidae, synonymy, Europe.

**PROTOORBELLIA HOFFEINSORUM GEN. AND SP. NOV.,
A NEW HELEOMYZID GENUS AND SPECIES OF THE
TRIBE ORBELLIINI GORODKOV FROM BALTIC AMBER
(DIPTERA: HELEOMYZIDAE)**

ANDRZEJ J. WOŹNICA

*Department of Zoology and Ecology, Agricultural University of Wrocław, Koźuchowska 5b,
PL 51-631 Wrocław, Poland; e-mail: woznica@ozi.ar.wroc.pl*

Abstract.— The first finding of representative of the tribe Orbelliini as inclusion is presented with description of a new genus *Protoorbella* for a new species *Protoorbella hoffeinsorum* from Baltic amber. The taxonomic position and relationship within the tribe Orbelliini is discussed. A key to the all genera within the tribe is presented.



Key words.— Diptera, Heleomyzidae, *Protoorbella*, new genus, new species, phylogeny, Eocene, Baltic amber, Baltic Sea coast, Kaliningrad Region, Yantarnyĭ district.

FALLOMYRMA GEN. NOV., A NEW MYRMICINE ANT GENUS (HYMENOPTERA: FORMICIDAE) FROM THE LATE EOCENE EUROPEAN AMBER

GENNADY M. DLUSSKY and ALEXANDER RADCHENKO

¹Moscow State University, Vorobëvy gory, 119899, Moscow, Russia; e-mail: dlusskye@mail.ru
²Museum and Institute of Zoology, Polish Academy of Sciences, 64, Wilcza str., 00-679, Warsaw, Poland; e-mail: rad@public.icyb.kiev.ua

Abstract.— *Fallomyrma*, a new monotypic ant genus from the Rovno, Saxonian, and Danish ambers (Late Eocene), and a new species, *F. transversa*, are described. The taxonomic position and morphological similarity of the new genus to other genera is discussed.



Key words.— ants, Formicidae, Myrmicinae, *Fallomyrma*, taxonomy, new genus, new species, Rovno amber, Saxonian amber, Scandinavian amber, Late Eocene.

REVIEW OF THE BAMBOO DELPHACID GENUS *MALAXA* MELICHAR (HEMIPTERA: FULGOROIDEA: DELPHACIDAE) FROM CHINA

XIANGSHENG CHEN^{1, 2}, XIAOFEI LI¹, AIPING LIANG^{2*} and LIN YANG¹

¹Institute of Entomology, Guizhou University, Guiyang, Guizhou Province, 550025, P.R. China

²Institute of Zoology, Chinese Academy of Sciences, 19 Zhongguancun Road, Beijing 100080, P.R. China

*To whom the correspondence and reprint requests should be addressed

Abstract.— The genus *Malaxa* Melichar, 1914 (Hemiptera: Fulgoroidea: Delphacidae: Tropidocephalini) feeding exclusively on bamboo (Bambusoideae), containing 4 species: *M. delicata* Ding et Yang, 1986 (Guizhou: Guiyang; Yunnan: Mongban; Zhejiang: Hangzhou; Fujian: Huangkeng), *M. hunanensis* Chen **sp. nov.** (Hunan: Zhangjiajie), *M. fusca* Yang et Yang, 1986 (Taiwan: Nantou) and *M. semifusca* Yang et Yang, 1986 (Taiwan: Nantou; Hualian; Guizhou: Daozhen) from China is here reviewed. The male of *M. fusca* Yang et Yang, collected from Nantou County of Taiwan, is reported and described for the first time. The main morphological characters and male genitalia of 4 species are described and illustrated. A key to species in the genus from China is provided.



Key words.— *Malaxa*, bamboo delphacids, Hemiptera, new species, China.

**A NEW GENUS *WAGHILDE* GEN. NOV. REPRESENTING
A NEW TRIBE OF THE PLANTHOPPER FAMILY
ACHILIDAE FROM THE EOCENE BALTIC AMBER
(HEMIPTERA: FULGOROMORPHA)**

JACEK SZWEDO

*Department of Systematics and Zoogeography, Museum and Institute of Zoology, Polish Academy
of Sciences, Wilcza 64, PL 00-679 Warszawa, Poland; e-mail: szwedo@miiz.waw.pl*

Abstract.— A new genus and species of extinct Achilidae — *Waghilde baltica* **gen.** and **sp. nov.**, from the Eocene Baltic amber is described. It represents a new tribe of Achilinae – *Waghildini* **trib. nov.** The relationships of *Waghildini* and its placement among recently recognized tribes of Achilinae is discussed.



Key words.— Achilidae, *Waghildini*, new tribe, *Waghilde*, new genus, *Waghilde baltica*, new species, Eocene, Baltic amber, fossils, classification, phylogeny

FOSSIL MAYFLY COLLECTIONS OF THE MUSEUM FÜR
NATURKUNDE, HUMBOLDT UNIVERSITY BERLIN.
I. *ELECTROLETUS SOLDANI* GEN. AND SP. NOV.
(EPHEMEROPTERA: AMELETIDAE)
FROM THE EOCENE BALTIC AMBER

ROMAN J. GODUNKO^{1*} and CHRISTIAN NEUMANN²

^{1*}State Museum of Natural History, National Academy of Sciences of Ukraine, Teatral'na str. 18,
79008 Lviv, Ukraine; e-mail: godunko@museum.lviv.net; godunko@seznam.cz

²Institut für Paläontologie, Museum für Naturkunde, Humboldt-Universität zu Berlin,
Invalidenstrasse 43, 10115 Berlin, Germany; e-mail: christian.neumann@museum.hu-berlin.de

Abstract.— *Electroletus soldani* gen. and sp. nov. from Eocene Baltic amber is described and illustrated. The presence of an elongate lateroparapsidal suture of the mesonotum, sublateroscutum and submedioscutum of the mesonotum with traces of the pigmented area, a backwards-stretched medially mesonotal suture, the dissimilar claws and a 5-segmented paracercus undoubtedly define the systematic position of *Electroletus* gen. nov. within the family Ameletidae McCafferty, 1991. The new genus differs from other genera of Ameletidae by combination of the following characters: pterostigmatic area of fore wings with 11–12 simple, not anastomosed veins; cubital field of fore wings with one pair of intercalaries; tarsi of middle and hind legs are longer than tibiae; tarsal segment I of all legs is the longest; styliger plate with median protuberance. Type specimen belongs to W. Simon's collection, which is hosted in the Museum für Naturkunde, Institute of Palaeontology, Humboldt University, Berlin.



Key words.— Ephemeroptera, Ameletidae, *Electroletus*, *Electroletus soldani*, Eocene, Baltic amber.

A NEW MAYFLY FAMILY (INSECTA: EPHEMEROPTERA) FROM EOCENE BALTIC AMBER

NIKITA J. KLUGE¹, ROMAN J. GODUNKO^{2*} and WIESŁAW KRZEMIŃSKI³

¹St Petersburg University, Universitetskaya nab. 7, RU-199034 St Petersburg, Russian Federation;
e-mail: kluge@FK13889.spb.edu

^{2*}State Museum of Natural History, National Academy of Sciences of Ukraine, Teatral'na str. 18,
79008 Lviv, Ukraine; e-mail: godunko@museum.lviv.net

³Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Sławkowska str. 17,
31016 Kraków, Poland; e-mail: krzeminski@muzeum.pan.krakow.pl

Abstract.— The female imago specimen belonging to a new species *Baba lapidea* **gen.** and **sp. nov.** and a new family Babidae **fam. nov.** from Eocene Baltic amber is described and illustrated. This insects combines characters common with Fimbriatotergaliae (on fore wing MP₂ and CuA curved near base; on hind wing MA lacks triad; first tarsal segment shortened and fused with tibia) with a plesiomorphy never found in Fimbriatotergaliae (mesonotal suture transverse). Possibly, *Baba* **gen. nov.** represents a sister taxon of Fimbriatotergaliae Kluge, 2004.



Key words.— Phylogeny, Insecta, Ephemeroptera, Babidae, new family, *Baba*, new genus, *Baba lapidea*, new species, Eocene, Baltic amber.

REVISION OF THE SPECIES OF *NEOCHAULIODES* WEELE, 1909 FROM YUNNAN (MEGALOPTERA: CORYDALIDAE: CHAULIODINAE)

XINGYUE LIU and DING YANG*

Department of Entomology, China Agricultural University, Beijing 100094, China

**To whom correspondence and reprint requests should be addressed;*

e-mail: dyangcau@yahoo.com.cn.

Abstract.— The species of the genus *Neochauliodes* from Yunnan are revised. The following three species are described as new to science: *Neochauliodes bicuspidatus*, *N. parvus* and *N. punctatolus*. A key to the species of the genus from Yunnan is presented.



Key words.— Corydalidae, Chauliodinae, *Neochauliodes*, new species, Yunnan.

OBTUSOECIA (HALOCYPRIDA: MYODOCOPA: OSTRACODA) A BIPOLAR PLANKTONIC OCEANIC GENUS. TAXONOMY, BATHYMETRY AND ZOOGEOGRAPHICAL DISTRIBUTION

MARTIN V. ANGEL¹ and KATARZYNA BLACHOWIAK-SAMOLYK²

¹ George Deacon Division, National Oceanography Centre, Southampton, SO14 3ZH UK;
e-mail: mva@noc.soton.ac.uk (Corresponding author)

²Arctic Ecology Group, Institute of Oceanology, Polish Academy of Sciences, 81-712 Sopot,
Powstancow Warszawy 55, Poland; e-mail: kasiab@iopan.gda.pl

Abstract.— Full detailed descriptions of the two species of *Obtusoecia*, one of two planktonic halocyprid ostracod genera that are bipolar, demonstrate that the taxonomic separation of these two forms formerly considered to be conspecific, is valid. The segregation of the genus from *Porroecia* is also validated. The value of characters of limbs other than the first and second antennae particularly in defining halocyprid genera is emphasised. Zoogeographical distributions of the two species based on comprehensive compilations of both published and unpublished data show that *O. obtusata* is confined to the North Atlantic, whereas *O. antarctica* has an Antarctic circumpolar distribution. Detailed bathymetric profiles show that *O. obtusata* is a shallow mesopelagic species that is overwhelmingly dominant at depths of 50–200 m in subpolar seas, and shows limited ability to submerge at lower depths, so that it is restricted to seas that have a marked seasonal cycle of turn-over and stratification. It is postulated that the bathymetric distributions of the two species are similar, also that *O. antarctica* is more likely to be ancestral to *O. obtusata* than vice versa.



Key words.— *Obtusoecia*, halocyprid ostracods, taxonomy, bathymetry, zoogeography, bipolarity.

EOCENE TERRESTRIAL SNAILS (GASTROPODA) FROM BALTIC AMBER

EWA STWORZEWICZ¹ and BEATA M. POKRYSZKO²

¹*Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Sławkowska 17, 31-016
Kraków, Poland; e-mail: stworzewicz@isez.pan.krakow.pl*

²*Museum of Natural History, Wrocław University, Sienkiewicza 21, 50-335 Wrocław, Poland;
e-mail: bepok@biol.uni.wroc.pl*

Abstract.— Contrary to insects, snails only rarely become embedded in amber. Snail inclusions dealt with in this paper come from Baltic amber: five represent species described at the end of the 19th c., whose status has now been revised, two are of uncertain position, one is a *Leiostylia* – a genus not previously found in amber, and one – *Propupa hoffeinsorum* **gen.** and **sp. nov.**, with its unique apertural barriers – may prove an important link in further studies on the origin, evolution and distribution of pupilloids. Reasons for the rarity of snail inclusions and geographical affinities of the Baltic amber snails are discussed. A catalogue of Baltic amber snails is provided.



Key words.— Terrestrial Gastropoda, Baltic amber, Eocene, taxonomy.