

DESCRIPTION OF A NEW TARDIGRADE, *MACROBIOTUS BARBARAE* (EUTARDIGRADA: MACROBIOTIDAE) FROM THE DOMINICAN REPUBLIC

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Abstract.— A moss sample collected in the Dominican Republic contained tardigrades and their eggs, including adults and eggs of a new species, *Macrobotus barbarae* **sp. nov.** The new species belongs to the *harmsworthi* group and it is most similar to *M. ovostriatius* Pilato et Patanè, 1998 and *M. pseudonuragicus* Pilato *et al.*, 2004 in the character of egg areolation. It differs from *M. ovostriatius* above all by larger body size and wider buccal tube, better developed oral cavity armature (the first band of teeth is present and the second band of teeth forms a ring of triangular teeth) and indentation of hind lunulae. *M. barbarae* **sp. nov.** differs also from *M. pseudonuragicus* in details of the egg projections (in *M. pseudonuragicus* the terminal portion of processes is short, not elongated and divided into several short points whereas in the new species the terminal parts are elongated and generally not divided). Differences between the new species and other similar members of the *harmsworthi* group are also discussed.



Key words.— Tardigrada, new species, *Macrobotus barbarae* **sp. nov.**, *harmsworthi* group, Dominican Republic.

A NEW SPECIES OF *MICRODALYELLIA*
(RHABDITOPHORA: RHABDOCOELA: DALYELLIIDAE)
FROM TEMPORAL FRESHWATER ROCK POOLS
IN UTAH, USA

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Abstract.— A new species of *Microdalyellia* Gieysztor, 1938 is described from a temporal freshwater pool in Utah, USA. This new species is characterized by the detailed structure of the stylet, which is of the *Microdalyellia*-type and consists of a crossbeam that carries two proximal shafts, two distal branches each carrying 5-7 hollow spines, and a median process in between both these spiniferous branches. The most remarkable feature is the presence of a second connection (or crossbeam) between both shafts, giving the proximal part of the stylet the appearance of a plate with a large window. The species' affinities within the taxon Dalyelliidae Graff, 1905 are discussed. Following the discussion, *Gieysztoria rastafariae* Therriault and Kolasa, 1999 is transferred to the taxon *Microdalyellia*, because of the presence of a *Microdalyellia*-type stylet, which closely resembles that of the newly described species.



Key words.— taxonomy, new taxa, Platyhelminthes, 'Turbellaria', Dalytyphloplanida, *Microdalyellia*, *Gieysztoria*, rock pools, North America.

MESOCYCLOPS BOSUMTWII SP. NOV.
(COPEPODA: CYCLOPIDAE) FROM GHANA

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Abstract.— A new *Mesocyclops* species, *M. bosumtwii*, is described from Lake Bosumtwi, Ghana. It is proposed that *M. bosumtwii* belongs to the Madagascar-African “*major-pilosus-insulensis* species group”. A key for African species of the genus *Mesocyclops* is proposed.



Key words.— Copepoda, Cyclopidae, *Mesocyclops bosumtwii*, taxonomy, Lake Bosumtwi, Ghana.

NOMENCLATURAL NOTES ON TENEBRIONID BEETLES OF THE PALAEARCTIC REGION (INSECTA: COLEOPTERA)

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Abstract.— This paper deals with nomenclatural problems in family-group and genus-group names in Palaearctic Tenebrionidae. Tribolini, Amarygmini and Mycetocharina were first made available in *Faunula monacensis cantharologica* (Gistel, 1848). Neopachypterina nomen novum is proposed as a replacement name for Pachypterina Medvedev, 1968 which is based on a junior homonym. The type genus of this subtribe is *Neopachypterus* nomen novum (replacement name for *Pachypterus* Lucas, 1846, not Swainson, 1839: Pisces). The available name *Imatismus* Dejean, 1834 is given priority over *Himatismus* Erichson, 1843 and *Curimosphena* Gebien, 1920. A list of new combinations for *Imatismus* is given. References are given to preserve the usage of Erodini Bilberg, 1820, Epitragini Blanchard, 1845, Adesmiini Lacordaire, 1859, *Metaclisa* Jacquelin du Val, 1861 and *Pachyscelis* Solier, 1836 which are threatened by recently discovered older names.



Key words.— Coleoptera, Tenebrionidae, darkling beetles, nomenclature, family-group names, genus-group names.

**TWO NEW SPECIES OF THE GENUS *ANCHOPHTHALMOPS*
KOCH, 1956 FROM KENYA AND TANZANIA
(COLEOPTERA: TENEBRIONIDAE: PLATYNOTINA)**

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Abstract.— Two new species of the genus *Anchophthalmops* Koch, 1956: *A. bartolozzii* sp. nov. and *A. uhligi* sp. nov. from East Africa are described and illustrated. The distribution map is presented.



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

DESCRIPTION OF THE THIRD LARVAL STAGE OF *MORICA HYBRIDA* CHARPENTIER, 1825 (TENEBRIONIDAE: PIMELIINAE: AKIDINI)

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Abstract.— The morphology of the third larval stage of *Morica hybrida* Charpentier, 1825 (Tenebrionidae: Pimeliinae, Akidini) is described and illustrated. The description is based on diagnostic characters of Tenebrionidae classification on head, legs and ninth abdominal segment. The larva of *Morica hybrida* shows numerous affinities with previously described larvae of Pimeliinae and is clearly included within tribe Akidini. The larva of *M. hybrida* shows a high similarity with the larva of *M. favieri*, although they differed by the presence or absence of additional small spines in distal part of ninth abdominal segment, and the shape of the margin of labrum. In addition, similarities with larvae of *Akis* spp. corroborates the proximity of these two Mediterranean genera of Akidini.



Key words.— Larval description, *Morica hybrida*, Akidini, Pimeliinae, Tenebrionidae, Spain.

NEW SYNONYMIES AND LECTOTYPE DESIGNATIONS IN THE NEOTROPICAL TRIBES NYCTELIINI, PRAOCINI, AND SCOTOBIINI (COLEOPTERA: TENEBRIONIDAE)

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Abstract.— Seven new synonymies within the genus *Praocis* Eschscholtz, 1829 (Praocini) are proposed: *P. audouini* Solier, 1840 with *P. sanguinolenta* Gay et Solier, 1840; *P. rufitarsis* Gay et Solier, 1840 with *P. tibialis* Gay et Solier, 1840; *P. submetallica* Guérin-Ménéville, 1834 with *P. subaenea* Erichson, 1834; *P. chevrolati coquimboana* Kaszab, 1969 with *P. chevrolati subcostata* Gay et Solier, 1840; *P. convexa* Germain, 1855 with *P. pleuroptera* Gay et Solier, 1840; *P. denseciliata* Fairmaire, 1883 with *P. striolicollis* Fairmaire, 1883; and *P. compacta* Fairmaire, 1883 with *P. inermis* Burmeister, 1875. Two new synonymies within the genus *Nyctelia* Latreille, 1825 (Nycteliini) are proposed: *N. planicauda* Fairmaire, 1905 with *N. laticauda* Burmeister, 1877 and *N. bifoveata* Fairmaire, 1905 with *N. vageimpressa* Fairmaire, 1904. *Praocis elliptica* Philippi et Philippi, 1864 stat. rev., placed prior to this study as a synonym of *P. submetallica*, is reinstated as a valid name. *Praocis concinna* Burmeister, 1875 is rediscovered and assigned to the subgenus *Postpraocis* Kulzer. Lectotypes are designated for 66 nominal species of the Neotropical tribes Nycteliini, Praocini, and Scotobiini (Coleoptera: Tenebrionidae), including all the species treated in the synonymies.



Key words.— Coleoptera, Tenebrionidae, Nycteliini, Praocini, Scotobiini, new synonymies, lectotype designations.

A REVISION OF *EUANOMA* AND *PSEUDEUANOMA* (COLEOPTERA: DRILIDAE)

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Abstract.— The genera *Euanoma* Reitter, 1889 and *Pseudeuanoma* Pic, 1901 are revised. Both genera are classified in the family Drilidae along with *Paradrilus* Kiesenwetter, 1865, *Drilus* Olivier, 1790, *Malacogaster* Bassi, 1834 and *Selasia* Castelnau, 1836. All known species are redescribed and the following three new species are described, *Euanoma curvata* **sp. nov.**, *E. svihlai* **sp. nov.**, and *E. marketae* **sp. nov.** *Phaeopterus graecus* Pic, 1901 is transferred from Omalidae to Drilidae and the new combination *Euanoma graeca* (Pic, 1901) is proposed; *Euanoma semitestacea* (Pic, 1907) **comb. nov.** is transferred from *Pseudeuanoma* Pic, 1901. *Pseudeuanoma ionica semiobscura* Pic, 1901 and *Pseudeuanoma subimpressa* Pic, 1901 are made junior subjective synonyms of *Pseudeuanoma ionica* Pic, 1901. The identification key for males of World genera of Drilidae and species of *Euanoma* Reitter, 1889 and *Pseudeuanoma* Pic, 1901 is given. The zoogeography and relationships between species and genera are discussed.



Key words.— Coleoptera, Drilidae, new species, new combinations, new synonyms, key, Palearctic Region.

REDESCRIPTION OF FIRST AND LAST INSTAR LARVA OF *CISTUDINELLA OBDUCTA* (BOHEMAN, 1854) (COLEOPTERA: CHRYSOMELIDAE: CASSIDINAE)

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Abstract.— First and last instar larvae of *Cistudinella obducta* (Boheman, 1854) are described and figured in detail. Discussion on its taxonomic position and comparative data with other taxa of the tribe Physonotini are given. Structure of larva of *Cistudinella* suggest that it is not close to *Physonota* and its relatives and should be placed in the tribe Ischyrosonychini as was proposed earlier.



Key words.— Coleoptera, Chrysomelidae, Cassidinae, Physonotini, *Cistudinella obducta*, larva, Neotropics.

THE STRUCTURE OF THE SPERMATHECAE OF SELECTED GENERA OF STOLAINI AND EUGENYSINI (COLEOPTERA: CHRYSOMELIDAE: CASSIDINAE) AND ITS TAXONOMIC SIGNIFICANCE

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Abstract.— Spermathecae of 43 nominal and one unidentified species of Cassidinae belonging to the tribes Eugenysini (two genera) and Stolaini (four genera) have been studied and figured. Spermathecae of particular genera are characterized by a set of constant and distinct characters and in many cases they are also diagnostic for species. No correlation was observed between the degree of sexual dimorphism within the species and the complexity of spermathecal structure. The distinctive structure of the spermatheca in the monotypical subgenus *Pseudomoplata* Spaeth, 1952 of the genus *Echoma* Chevrolat, 1837 suggests that the taxon should be excluded from the genus *Echoma*. The spermatheca of *Paraselenis marginipennis* (Spaeth, 1907), the only member of the subgenus *Pseudechoma* Spaeth, 1913 of the genus *Paraselenis* Spaeth, 1913, is more similar to the spermathecae of some members of the genus *Omaspides* Chevrolat, 1837 than to any other member of *Paraselenis* and *Pseudechoma* and should probably be transferred to the genus *Omaspides*.



Key words.— morphology, spermathecae, Coleoptera, Chrysomelidae, Cassidinae, Stolaini, Eugenysini, Neotropics.

***DOEBERLIA SUBOPACA*, A NEW GENUS AND SPECIES
OF LEAF-BEETLES FROM CHINA (COLEOPTERA:
CHRYSOMELIDAE: CHRYSOMELINAE)**

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Abstract.— *Doeberlia subopaca*, a new genus and species of leaf-beetles from China is described and illustrated.



Key words.— Coleoptera, Chrysomelidae, Chrysomelinae, *Doeberlia subopaca*, new genus, new species, description, China.

NEW MESOZOIC COCKROACHES (BLATTARIA: BLATTULIDAE) FROM JEHOL BIOTA OF WESTERN LIAONING IN CHINA

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Abstract.— *Macaroblattula ellipsoides* **gen. et sp. nov.**, *Elisama cuboides* **sp. nov.** and *E. extenuata* (Ren, 1995) of the dominant cockroach family Blattulidae are described from the Late Jurassic/Early Cretaceous Yixian Formation of western Liaoning in China. Forewing venation of *E. extenuata* reveals low variation (CV for total number of veins = 6.22), which indicates active flight of this advanced taxon. Presence of *Macaroblattula* **gen. nov.** suggests a generic variation and high adaptability of the family. Taxonomic composition supports the transitional Late Jurassic/Early Cretaceous age of the Yixian Formation and dominance of the family Blattulidae within assemblage indicates their significance in food chain.



Key words.— Insecta, Blattodea, Blattulidae, variability, new genus, new species, Late Jurassic/Early Cretaceous boundary, Jehol Biota, Yixian Formation, China.

REVIEW OF THE SUBGENUS *PARAGREENIDEA*
RAYCHAUDHURI OF *GREENIDEA* SCHOUTEDEN WITH
DESCRIPTION OF ONE NEW SPECIES (HEMIPTERA:
APHIDIDAE: GREENIDEINAE)

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Abstract.— The aphid subgenus *Paragreenidea* Raychaudhuri, 1956 is reviewed, and one new species, *Greenidea (Paragreenidea) cayratiae* Qiao et Zhang **sp. nov.** on *Cayratia japonica* from Fujian Province, China is described here. Keys to the four known species worldwide, and descriptions of apterous and alate viviparous females and four stages larvae of the new species are also given. Type specimens of the new species are deposited in the Zoological Museum, Institute of Zoology, Chinese Academy of Sciences, Beijing, China (ZMCAS).



Key words.— Aphididae, Greenideinae, *Greenidea*, *Paragreenidea*, new species, China.

A NEW STEGELYTRINE LEAFHOPPER GENUS (HEMIPTERA: CICADELLIDAE) FROM SOUTH EAST ASIA

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Abstract.— A new stegelytrine genus from South East Asia, *Trunchinus* **gen. nov.**, and three new species (*T. laosensis* **sp. nov.**, *T. sinuatus* **sp. nov.** and *T. medius* **sp. nov.**) are illustrated and described. A key to stegelytrine genera is given. The morphological variation found within this genus and its similarities and differences to other stegelytrine genera are discussed. The known host plants of Stegelytrinae are given and 'mud-puddling' behavior in the new genus and other taxa is discussed.



Key words.— Hemiptera, Cicadellidae, *Trunchinus*, *Trunchinus laosensis*, *Trunchinus sinuatus*, *Trunchinus medius*, Oriental Region, new genus, new species, mud-puddling.

NEW SPECIES OF PTYCTIMOUS MITES (ACARI: ORIBATIDA: ORIBOTRITIIDAE, STEGANACARIDAE) WITH SOME NEW RECORDS FROM AUSTRALASIAN REGION

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Abstract.— The ptyctimous soil mites from Australasian Region were studied. Seven new species of four genera were found, all of them originate from Australian Subregion; Oribotritiidae: *Oribotritia parachichijimensis* **sp. nov.**, *O. paracorporaali* **sp. nov.**, *Acrotritia paradivida* **sp. nov.** and Steganacaridae: *Austrophthiracarus paralargus* **sp. nov.**, *A. foaensis* **sp. nov.**, *Notophthiracarus paraunicarinatus* **sp. nov.** and *N. thorn-tonensis* **sp. nov.** The descriptions of these new species are given. Sixty six new localities were studied and in all fifty ptyctimous species were found. Thirty eight species were found in new localities (26) in Australian Subregion and 21 species in new localities (40) on the Pacific Islands. Only nine species were found in both subregions. Fifteen species were noted to extend their geographical ranges within the Australasian Region. The list of species with new localities and the geographical ranges of six species have been extended.



Key words.— Acari, Oribatida, Oribotritiidae, Steganacaridae, new species, new localities, Australasian Region.

REVISION OF *HYPOLAGUS* (MAMMALIA: LAGOMORPHA) FROM THE PLIO-PLEISTOCENE OF POLAND: QUALITATIVE AND QUANTITATIVE STUDY

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Abstract.— The extinct rabbits, *Hypolagus beremendensis* (Kormos, 1930) and *Hypolagus brachygnathus* (Petényi, 1864) were the most abundant European representatives of *Hypolagus* (Leporidae, Archeolaginae). In Poland their fossil remains are known from rich accumulations filling karst forms of the Kraków-Wieluń Upland and Świętokrzyskie Mountains. Review of the Polish Plio-Pleistocene (Ruscinian to Biharian) material from seven localities and the description of new specimens from six localities are given. The history of research on the Central European *Hypolagus* is summarised and the emended differential diagnoses with synonymy are provided for each species, accompanied by descriptions of the type material. On the basis of over 11,000 specimens, the quantitative analysis (descriptive statistics and ANOVA), as well as the detailed study of tooth enamel pattern (P2 and p3 morphotype analysis) and the bone morphology were conducted, which enabled to assess the intra- and interspecific variability. *H. beremendensis*, the smaller and gracile species persisted from the Late Pliocene (MN 15, Weże 1 locality) to the earliest Pleistocene (Kamyk locality). In Kamyk it co-occurred with the larger, robust, and predominant *H. brachygnathus*, which survived in Poland until the end of the Biharian (Zalesiaki 1A locality). Palaeoecology and adaptations of both species and the possible causes of their extinction are discussed.



Key words.— Leporidae, Archaeolaginae, *Hypolagus beremendensis*, *Hypolagus brachygnathus*, Biharian, Villányian, Ruscinian, Europe, taxonomy, neotype, morphology.