

# COLLEMBOLA (HEXAPODA) FROM EASTERN CARPATHIANS, ROMANIA, WITH DESCRIPTION OF *HYMENAPHORURA IONI* SP. NOV.

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**Abstract.**— The study of Collembola communities from the protected areas Codrul Secular Giupalău and Peștera Liliecilor in the Eastern Carpathians in Romania revealed 69 collembolan species belonging to 44 genera. In Codrul Secular Giupalău 57 species were identified. Of these, five are new for the fauna of Romania and one species, *Hymenaphorura ioni* sp. nov., is new for science and its description is presented. In the natural reserve Peștera Liliecilor 25 species of Collembola were identified, being the first data concerning the group in this area.



**Key words.**— natural reserves, new species, chaetotaxy.

# A REVIEW OF *ANDOTYPUS* AND *AUSTROTYPUS* GEN. NOV., RYGMODINE GENERA WITH AN AUSTRAL DISJUNCTION (HYDROPHILIDAE: RYGMODINAE)

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**Abstract.**— The taxonomy and morphology of species related to the genus *Andotypus* Spangler, 1979 (Coleoptera: Hydrophiloidea: Hydrophilidae: Rygmodinae) are reviewed in detail. *Austrotypus* **gen. nov.** is established for *A. nothofagi* **sp. nov.** (eastern Australia) and *A. peruanus* **sp. nov.** (Peru), both of which share the same morphology of the mouthparts and mesoventrite. The genus *Andotypus* is found to be endemic to central and southern Chile, containing two species: *A. ashworthi* Spangler, 1979 and *A. araucariae* **sp. nov.** *Andotypus perezdearcei* Moroni, 2000 is found to belong to the genus *Dactylosternum* Wollaston, 1854 (Hydrophilidae: Sphaeridiinae: Coelostomatini), and is a junior subjective synonym of the introduced species *D. abdominale* (Fabricius, 1792). Adults of all species of *Andotypus* and *Austrotypus* are (re)described in detail and important characters are illustrated. Larval morphology and head chaetotaxy is described and illustrated in detail for *Andotypus ashworthi* and *Austrotypus nothofagi*, revealing differences in head morphology and abdominal tergites which support the separate status of both genera. The taxonomic position of the genera within the Rygmodinae is briefly discussed, but should be corroborated by formal phylogenetic analysis. We hypothesize that the austral disjunct distribution of *Austrotypus* as well as current distribution of *Andotypus* are results of the break-up of Gondwana combined with changes of climate in austral South America, Antarctica and Australia during the Cenozoic. *Andotypus* and *Austrotypus* represent an independently evolved lineage of dung- and carrion-associated beetles native to the southern temperate zone, and the fact that their larvae largely resemble those of *Sphaeridium* Fabricius, 1775 suggests that they may represent a partial ecological analogue of the Old World medium-sized coprophilous hydrophilids of the tribe Sphaeridiini. The syntopical co-occurrence of *Austrotypus nothofagi* with four similarly colored scarabaeoid dung-inhabiting beetles (*Onthophagus sydneyensis* Blackburn, 1903, *O. arrilla* Matthews, 1972, *Lepanus ustulatus* (Lansberge, 1874) and *Liparochrus nanus* Paulian, 1980) suggests that *Austrotypus nothofagi* may be a member of a mimetic complex formed by these species.



**Key words.**— water scavenger beetles, taxonomy, morphology, immature stages, new genus, new species, vicariance, climatic niche, niche conservatism, Australia, Chile, Peru.

# NEW SPECIES OF THE *ECTATEUS* GENERIC GROUP (TENEBRIONIDAE: PEDININI)

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**Abstract.**— *Ectateus vinolasi* **sp. nov.** and *Quadrideres blaszaki* **sp. nov.**, two new Afrotropical Platynotina species are described and illustrated. The distribution map is presented.



**Key words.**— Coleoptera, Tenebrionidae, Pedinini, *Ectateus*, *Quadrideres*, Africa, entomology, taxonomy, new species.

# NOTES ON ULTRAPSAMMOPHILOUS ERODIINI FROM IRAN (COLEOPTERA: TENEBRIONIDAE: PIMELIINAE)

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**Abstract.**— The redescriptions of *Hyalarthrodis monodi* (Pierre, 1974) and *Hyalerodius jirofti* Kaszab, 1979, species hitherto known from single and damaged specimens, are supplemented based on the newly accessed material. The structure of male genitalia of these taxa is described for the first time. The key to the Asian genera of the *Arthrodis*-like Erodiini is modified to include new diagnostic characters. New distributional records for the studied species are provided. The evolutionary adaptations to the ultrapsammophilous lifestyle within Tenebrionidae are discussed.



**Key words.**— Coleoptera, Tenebrionidae, Pimeliinae, Erodiini, *Hyalarthrodis*, *Hyalerodius*, Iran, Lut Desert, Kerman, Yalan Dunes.

# A REVIEW OF THE GENUS *CRYPTOLAEMUS* MULSANT (COLEOPTERA: COCCINELLIDAE: COCCINELLINAE: COCCIDULINI) FROM NEW GUINEA

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**Abstract.**— The genus *Cryptolaemus* Mulsant endemic to New Guinea / Australasia is reviewed. Thirty-two new species (*C. tetrahedron*, *C. simulatus*, *C. sigmoidus*, *C. distinctus*, *C. pulchellus*, *C. dualis*, *C. ambiguus*, *C. sedlaceki*, *C. iodes*, *C. purpureus*, *C. parvus*, *C. prominens*, *C. metallicus*, *C. magnificus*, *C. splendidus*, *C. regalis*, *C. splendens*, *C. riedeli*, *C. dubius*, *C. trochanteratus*, *C. similis*, *C. aeruginosus*, *C. bicolor*, *C. asymmetricus*, *C. incertus*, *C. typicus*, *C. incrassatus*, *C. robustus*, *C. fraternus*, *C. atratus*, *C. guineensis*, *C. gressitti*, **spp. nov.**) are described and illustrated. *Cryptolaemus concinnus* Weise is redescribed and the male genitalia are illustrated. Besides *montrouzieri*-group and *subviolaceus*-group, four more species groups are tentatively recognized based on male genitalia and other characters: *iodes*-group, *magnificus*-group, *riedeli*-group, and *bicolor*-group, and some of the species are unassociated with any of these groups. A key is provided to the males of the species of *Cryptolaemus* from New Guinea, mainly based on genitalia. Presence of a stridulatory apparatus is reported from species of the *riedeli*-group, which is the first of its kind in Coccinellidae.



**Key words.**— *Cryptolaemus*, Coccinellidae, Coleoptera, new species, revision, redescription

# DESCRIPTIONS OF THREE NEW CANTHARID SPECIES RELATED TO *THEMUS* (*THEMUS*) *SENENSIS* (PIC, 1922) (COLEOPTERA: CANTHARIDAE)

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**Abstract.**— *Themus* (*T.*) *senensis* (Pic, 1922) is redescribed and three new species related to it are described, *T.* (*T.*) *senensomimus* **sp. nov.** (China, Thailand), *T.* (*T.*) *bilobatus* **sp. nov.** (Laos, Vietnam) and *T.* (*T.*) *dalatensis* **sp. nov.** (Vietnam). Each species is provided with illustrations of aedeagus and abdominal sternite VIII of female. *T.* (*T.*) *senensis* is also presented with female genitalia and the new species with habitus of both sexes. A key and a distribution map of the above four species are presented.



**Key words.**— Taxonomy, *Themus* (*T.*) *senensis*, new species, key, distribution map, Oriental Region.

# ENIGMATIC MESOZOIC BARK-GNAWING BEETLES (COLEOPTERA: TROGOSSITIDAE) FROM THE JIULONGSHAN FORMATION IN CHINA

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**Abstract.**— Two enigmatic genera of Trogossitidae are described and illustrated from well-preserved impression fossils from the Middle Jurassic Jiulongshan Formation collected at Daohugou Village, Shantou Township, Ningcheng County, Inner Mongolia, China. Both new genera, *Marginulatus* **gen. nov.** (type species *M. venustus* **sp. nov.**) and *Latitergum* **gen. nov.** (type species *L. glabrum* **sp. nov.**) are placed in Trogossitidae incertae sedis because they have a mixture of characters that do not allow for them to be easily placed in the current classification of Trogossitidae.



**Key words.**— Trogossitidae, new taxa, fossil, Middle Jurassic, Daohugou fauna, China.

# A NEW SPECIES OF THE GENUS *MIRAX* HALIDAY, 1833 (HYMENOPTERA: BRACONIDAE: MIRACINAE) FROM IRAN

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**Abstract.**— *Mirax caspiana* sp. nov. from Iran is described and illustrated. The new species is characterized by having the second metasomal tergite aciculate, the width of face 1.2 times longer than height of face and clypeus combined, the penultimate flagellomere twice as long as wide and the malar space as long as basal width of mandible. A key to the species of the genus *Mirax* Haliday in the West Palaearctic Region is provided.



**Key words.**— parasitic wasps, identification key, West Palaearctic.



# THREE NEW SPECIES OF THE GENERA *ASPILOTA* FOERSTER AND *SYNALDIS* FOERSTER FROM NORTH EUROPE (HYMENOPTERA: BRACONIDAE: ALYSIINAE)

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**Abstract.**— Illustrated descriptions are given for three new North European species of the genera *Aspilota* and *Synaldis*: *Aspilota spiracula* **sp. nov.** from Denmark, *Synaldis agaricae* **sp. nov.** from Denmark, Finland and the Netherlands, and *Synaldis machairum* **sp. nov.** from Denmark.



**Key words.**— Parasitoids, Braconidae, Alysiinae, *Synaldis*, *Aspilota*, new species, North Europe.

# RECENT DISPERSAL AND DIET RELAXATION MIGHT EXPLAIN THE MONOTYPIC AND ENDEMIC GENUS *MONTROUZIERANA* SIGNORET, 1861 IN NEW CALEDONIA (HEMIPTERA: FULGOROMORPHA: TROPIDUCHIDAE)

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**Abstract.**— The planthopper genus *Montrouzierana* Signoret, 1861 (Hemiptera: Fulgoromorpha: Tropiduchidae) and its only known endemic species to New Caledonia, *M. oxycephala* (Montrouzier, 1861), are redescribed. Illustrations of diagnostic characters including male and female genitalia are provided. The systematic position of the genus is briefly discussed. Morphological characters and distribution data suggest a recent dispersal event to New Caledonia, probably from Australia, linked with a possible relaxation/inhibition of ancestral constraints on feeding behaviour.



**Key words.**— Morphology, taxonomy, systematics, endemism, Tropiduchidae, Australasian/Pacific Region.