

MORPHOLOGICAL AND MOLECULAR FEATURES OF *PUNCTODERA STONEI* BRZESKI, 1998 (NEMATODA: HETERODERIDAE) – SPECIES ASSOCIATED WITH ROOTS OF GRASSES

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Abstract.— This article provides morphological and molecular characteristics of *Punctodera stonei* Brzeski, 1998. Comparison of partial sequences of 18S and 28S rDNA genes from *P. stonei* sampled in Poland and *Punctodera* sp. from Canada showed their 100% similarity. This is the first report on the occurrence of *P. stonei* outside of Europe. We provide data on morphology of males and 2nd stage juveniles of this species and an identification key to males of the genus *Punctodera* Mulvey et Stone, 1976. Moreover, the paper presents evolutionary relationships of *P. stonei* within the family Heteroderidae.



Key words.— Second stage juvenile, Canada, identification key, male, Poland, *Punctodera stonei*, 18S rDNA, 28S rDNA.

CHARACTERIZATION OF EUROPEAN POPULATIONS OF *APORCELLA VITRINUS* (THORNE ET SWANGER, 1936) WITH SEM OBSERVATIONS AND FIRST REPORT OF ITS MALE (NEMATODA: DORYLAIMIDA: APORCELAIMIDAE)

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Abstract.— European populations of *Aporcella vitrinus*, mainly collected in natural habitats of southeastern Iberian Peninsula are studied and described, including SEM observations and the first report of the male. They are characterized by its body 1.20–1.86 mm long, lateral chord bearing gland bodies, lip region offset by weak constriction and 11–13 μm broad, odontostyle 12–13 μm long, neck 333–374 μm long, pharyngeal expansion 149–185 μm long or 44–51% of total neck length, uterus simple and 28–48 μm long or 0.6–1.2 times the corresponding body diameter, pars refringens vaginae absent, $V = 48\text{--}53$, tail convex conoid (21–31 μm , $c = 45\text{--}77$, $c' = 0.9\text{--}1.4$), spicules 43 μm long, and six irregularly spaced ventromedian supplements with hiatus. European specimens are compared to type American ones, but do not differ significantly from these although morphometrical ranges are wider in European material. SEM pictures show a symmetrically biradial lip region pattern, totally similar to that found in *Aporcelaimellus*.



Key words.—*Aporcelaimellus*, *Aporcella*, description, dorylaims, morphology, SE Iberian Peninsula, taxonomy.

**NEW SPECIES OF ORIBATID MITES OF THE
FAMILIES PARAKALUMMIDAE AND GALUMNIDAE
(ACARI: ORIBATIDA) FROM XIAO HINGGAN
MOUNTAINS, NORTHEASTERN CHINA**

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Abstract.— Two new species of oribatid mites, *Sandenia (Porokalumma) elongata* **sp. nov.** (Parakalummidae) and *Pergalumna distincta* **sp. nov.** (Galumnidae), are described and illustrated from Xiao Hinggan Mountains in Northeastern China.



Key words.— Oribatida, Parakalummidae, Galumnidae, *Sandenia*, *Pergalumna*, new species, Xiao Hinggan Mountains, China.

COLLECTION OF ORIBATID MITES (ACARI: ORIBATIDA) FROM DONG NAI BIOSPHERE RESERVE OF SOUTHERN VIETNAM, WITH DESCRIPTION OF THREE NEW SPECIES

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Abstract.— The present study is based on materials collected during Russian-Vietnamese expedition in July 2012 in Dong Nai Biosphere Reserve of Southern Vietnam. An annotated checklist of oribatid mite taxa from tropical forest is presented. It includes 113 species from 74 genera and 38 families. *Carabodes samoensis*, *Mochlozetes ryukyuensis*, *Otocephus excelsus*, *Pergalumna hauseri*, *Suctobelbella sexsetosa*, *Tuberemaeus perforatoides* and the genera *Carabodes*, *Mochlozetes* are first records from Vietnam; *C. samoensis* and *M. ryukyuensis* are recorded for the first time from the Oriental region. Three new species – *Dolicheremaeus contactus* **sp. nov.** (Tetracondylidae), *Unguizetes latus* **sp. nov.** (Mochlozetidae) and *Galumnella tiunovi* **sp. nov.** – are described from soil. *Dolicheremaeus contactus* **sp. nov.** is distinguishable from other species of the genus by the presence of the following character states in combination: sensilli bacilliform; all condyles present, and lateral prodorsal and notogastral condyles densely contacted with each other; 10 pairs of notogastral setae of medium size, straight, barbed; adanal lyrifissures located in paraanal position; adanal setae inserted nearly to margin of the ventral plate. *Unguizetes latus* **sp. nov.** is distinguishable from other species of the genus by the presence of the following character states in combination: sensilli clavate; rostrum rounded; distinct translamella absent; lamellae with lateral tooth; prolamellar line developed; pteromorphs well developed; porose areas *A1* rounded, *Aa*, *A2*, *A3* oval; five pairs of genital plates present. *Galumnella tiunovi* **sp. nov.** is distinguishable from other species of the genus by the presence of the following character states in combination: prodorsum with two large teeth laterally; sensilli setiform; rostral setae developed, lamellar and interlamellar setae represented by alveoli; body surface microfoveolate, without reticular pattern; genital setae inserted in two rows on each plate; postanal porose area absent.



Key words.— oribatid mites, *Dolicheremaeus*, *Unguizetes*, *Galumnella*, new record, checklist, fauna, Dong Nai Biosphere Reserve, Vietnam.

A REVIEW OF HOST-PARASITE ASSOCIATIONS BETWEEN TERRESTRIAL PARASITENGONA (ACTINOTRICHIDA: PROSTIGMATA) AND BUGS (HEMIPTERA)

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Abstract.— The data on host-parasite associations between Hemiptera and terrestrial Parasitengona mites are summarized and supplemented with new records. The species names of parasitic mites are verified according to the most recent data. Altogether, representatives of 26 parasitengone genera are known to parasitize bugs. The systematics of the hemipteran hosts is provided in the form of appendix.



Key words.— Erythraeoidea, Trombidioidea, Hemiptera, hosts, parasites.

THREE NEW SPECIES OF *THALASSAPHORURA* BAGNALL, 1949 (COLLEMBOLA: ONYCHIURIDAE) FROM NORTHWEST CHINA

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Abstract.— *Thalassaphorura* is reported for the first time in Northwest China. Four members of the genus were recorded, including three new species (*T. qinlingensis* sp. nov., *T. bisetosa* sp. nov., *T. petiti* sp. nov.) and one known species (*T. pomorskii* Sun, Chen et Deharveng, 2010). All three new species possess modified chaetae (male ventral organ) on ventral tube – a character rarely present in congeners. Apart from this, *T. bisetosa* sp. nov. is characterized by a unique feature – only two small dental chaetae on the furcal area, which differentiates it from all other known *Thalassaphorura*.



Key words.— Taxonomy, furcal area, male ventral organ.

CHINESE SPECIES OF THE GENUS *NEUROCRASSUS* ŠNOFLAK, 1945 (HYMENOPTERA: BRACONIDAE: DORYCTINAE), WITH A KEY TO ASIAN SPECIES

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Abstract.— The Chinese species of the genus *Neurocrassus* Šnoflak, 1945 are reviewed. Four new species, *N. densipilosus* **sp. nov.**, *N. elongatus* **sp. nov.**, *N. flaviceps* **sp. nov.**, and *N. ontsiroides* **sp. nov.**, are described and illustrated. *Neurocrassus opis* (Belokobylskij, 1998) and *N. pseudopalliatius* Belokobylskij and Maeto, 2009 are recorded in the fauna of China for the first time. A revised key to Asian species of the genus *Neurocrassus* is provided.



Key words.— Ectoparasitoids, Doryctinae, new species, new records, key for determination

***PEYRIERASUS* GEN. NOV. – A NEW GENUS OF
FLATIDAE (HEMIPTERA: FULGOROMORPHA) FROM
SOUTHEASTERN MADAGASCAR**

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Abstract.— The paper describes a new flatid genus, *Peyrierasus* **gen. nov.**, and a new species *P. philippiae* **sp. nov.** from Anosyan mountains of southeastern Madagascar. Additionally, the illustrations of the female internal genital structures are provided.



Key words.— Entomology, taxonomy, mountain fauna, endemism.

A NEW SPECIES OF *BEZZIA* KIEFFER FROM ARGENTINEAN PATAGONIA (DIPTERA: CERATOPOGONIDAE)

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Abstract.— *Bezzia galesa* Spinelli, a new Patagonian species, is described in all stages and illustrated by using binocular, phase-contrast and scanning electron microscopy. Immatures were collected associated to submerged filamentous algae in an unnamed pond in western Chubut province, Argentina, and reared to adults in the laboratory. Adults and immatures of this new species are compared with the most similar species *Bezzia ventanensis* Spinelli, *Bezzia roldani* Spinelli et Wirth and *Bezzia blantoni* Spinelli et Wirth. Details on the rearing process and feeding behavior in laboratory are given.



Key words.— *Bezzia galesa*, new species, adult, immatures, western Patagonia.

PHYLOGENY AND CLASSIFICATION OF RHIPICERINAE (COLEOPTERA: RHIPICERIDAE) WITH A REVIEW OF THE AUSTRALIAN TAXA

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Abstract.— Phylogenetic relationships within the family Rhipiceridae were investigated to elucidate the relationships between genera and subgenera of Rhipicerinae. Eleven ingroup taxa and three outgroups were included in cladistic analysis, based on 34 characters derived from adult morphology. Phylogenetic analysis confirms that Rhipicerinae are monophyletic and may be divided into four genera: *Oligorhipis* (**stat. nov.**), *Polymerius*, *Polytomus* (**stat. rev.**) and *Rhipicera*. All genera of Rhipicerinae are thoroughly described, illustrated and key to their identification is provided. Species level reviews and keys are provided for *Oligorhipis* and *Rhipicera*. Two new species are described: *Oligorhipis vanemdeni* **sp. nov.** (Western Australia) and *Rhipicera carinata* **sp. nov.** (Western Australia). *Rhipicera abdominalis* Klug, 1825, *R. cyanea* Castelnau, 1834, *R. dalmani* Westwood, 1837 and *R. marginata* Kirby, 1818 are transferred to *Polytomus* Dalman (**comb. nov.**). *Agathorhipis bifossata* Fauvel, 1904 and *Ptiocerus vestitus* Castelnau, 1840 are transferred to *Oligorhipis* Guérin-Méneville, 1843 (**comb. nov.**). *Agathorhipis* Guérin-Méneville, 1843 is synonymised with *Rhipicera* Latreille, 1817 (**syn. nov.**) and *Rhipicera (Agathorhipis) neglecta* Emden, 1925 with *Rhipicera femorata* Kirby, 1819 (**syn. nov.**). The neotype of *Rhipicera reichei* Guérin-Méneville, 1843 is designated to stabilize the taxonomic identity of this species.



Key words.— Rhipiceridae, biogeography, Australia, Chile, New Caledonia, keys, new species

REVIEW OF THE SUBGENUS *ALLOSTETHORUS* OF *STETHORUS* (COLEOPTERA: COCCINELLIDAE) FROM CHINA

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Abstract.— The subgenus *Allostethorus* Iablokoff-Khnzorian, 1972 of *Stethorus* Weise, 1885 from China is herein reviewed. Seventeen species of subgenus *Allostethorus* are documented from China, including eight new species described here: *S. (A.) brevifolius* **sp. nov.**, *S. (A.) gangliiformis* **sp. nov.**, *S. (A.) inflatus* **sp. nov.**, *S. (A.) magnus* **sp. nov.**, *S. (A.) strenus* **sp. nov.**, *S. (A.) tunicatus* **sp. nov.**, *S. (A.) uncinellus* **sp. nov.**, and *S. (A.) xinglongicus* **sp. nov.** Diagnoses, detailed descriptions, illustrations and distributions are provided for each species and a key to Chinese species is given.



Key words.— Coleoptera, Coccinellidae, *Stethorus*, subgenus *Allostethorus*, new species, China.

NEW SPECIES AND NEW RECORDS OF THE *PSELAPHODES* COMPLEX OF GENERA (STAPHYLINIDAE: PSELAPHINAE: TYRINI) FROM CHINA

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Abstract.— Four new species of the *Pselaphodes* complex of genera (Pselaphinae: Tyrini) from China are described and illustrated: *Labomimus bannaus* Yin et Li, **sp. nov.** (Yunnan), *Labomimus jiudingensis* Yin et Nomura, **sp. nov.** (Sichuan), *Linan uenoi* Yin et Nomura, **sp. nov.** (Guangxi) and *Pselaphodes kishimtoi* Yin et Nomura, **sp. nov.** (Guizhou). New provincial records are provided for *Pselaphodes linae* Yin et Li, *P. miraculum* Yin, Li et Zhao, *P. nomurai* Yin, Li et Zhao and *P. parvus* Yin, Li et Zhao, with new illustrations of habitus and/or male diagnostic features given for the latter three species.



Key words.— Coleoptera, taxonomy, *Labomimus*, *Linan*, *Pselaphodes*, distribution.

FOUR NEW SPECIES OF *INDALMUS* GERSTAECKER, 1858 (COLEOPTERA, ENDOMYCHIDAE) FROM CHINA

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Abstract.— Four new species of *Indalmus* from China: *Indalmus circumdatus* **sp. nov.**, *I. guizhouensis* **sp. nov.**, *I. medogensis* **sp. nov.** and *I. yunnanensis* **sp. nov.** are described and illustrated. The key to the species of *Indalmus* known in China is given.



Key words.— Coleoptera, Cucujoidea, taxonomy, new species, China.

***CALOMICRUS VELAI* SP. NOV. FROM IRAN AND
REDESCRIPTION OF *C. KOENIGI* (JACOBSON, 1897)
(CHRYSOMELIDAE, GALERUCINAE, LUPERINI)**

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Abstract.— *Calomicrus velai* Bezděk **sp. nov.** from Iran is described, illustrated and compared with related species. *Calomicrus koenigi* (Jacobson, 1897) is redescribed based on primary type material and recently collected specimens. *Luperus kasikoporanus* (Pic, 1912) is confirmed as synonym of *Calomicrus koenigi*. Lectotypes are designated for *Luperus koenigi* Jacobson, 1897 and *L. kasikoporanus* Pic, 1912.



Key words.— Coleoptera, Chrysomelidae, Galerucinae, *Calomicrus*, taxonomy, new species, lectotype designation, Turkey, Iran.

REDISCOVERY, REDESCRIPTION AND NEOTYPE DESIGNATION OF *ALPHASIDA (GLABRASIDA) NITIDA* (BEDEL, 1918) (COLEOPTERA: TENEBRIONIDAE)

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Abstract.— The little known species *Alphasida (Glabrasida) nitida* Bedel, 1918, described from eastern Morocco based on the unique type specimen, is rediscovered by numerous specimens from the type locality. The peculiar ecology of this species is indicated. Its systematic position in the subgenus *Glabrasida* Escalera, 1910 within the genus *Alphasida* Escalera, 1905 is confirmed. A redescription of this species based on both sexes is given and a neotype is designated.



Key words.— Coleoptera, Tenebrionidae, Asidini, *Alphasida (Glabrasida) nitida*, rediscovery, redescription, neotype designation, ecology, eastern Morocco.

***LEPIDOCAULINUS* GEN. NOV. *MIRABILIS* SP. NOV.
FROM THAILAND (COLEOPTERA: TENEBRIONIDAE:
STENOCHIINAE)**

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Abstract.— *Lepidocaulinus* gen. nov. and its type species *L. mirabilis* sp. nov. (Coleoptera: Tenebrionidae: Stenochiinae) are described from Thailand. The new genus is related to *Pigeocaulinus* Kaszab, 1984 (= *Leprocaulinus* Kaszab, 1982, not *Leprocaulinus* Uvarov, 1940), and to *Hexarhopalus* Fairmaire, 1891. *Pigeocaulinus sumatranus* Kaszab, 1984 is considered as a new synonym of *Pigeocaulinus krikkeni* (Kaszab, 1982). Neotype is designated for *Pigeocaulinus sumatranus* Kaszab, 1984.



Key words.— Tenebrionidae, Stenochiinae, *Lepidocaulinus*, *Leprocaulinus*, *Pigeocaulinus*, new genus, new species, neotype, taxonomy, Thailand, Cambodia.

X-RAY MICROTOMOGRAPHY AS A TOOL FOR TAXONOMIC INVESTIGATIONS: PROTHORACIC SKELETAL STRUCTURE IN SOME TENEBRIONIDAE (COLEOPTERA)

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Abstract.— An X-ray microtomographic analysis of the prothoracic skeleton structure of seven Platynotina species is presented. The investigated taxa represent different morphological types of pronotal discs. *Tenebrio molitor* was used as a reference model to all taxonomic considerations. The anatomical evidence gathered and analyzed in this study indicates that lateral indentations of nota, which are visible in most of the *Ectateus* generic group representatives, corresponds with a placement of the attachments of the pleural apophyses to the bottom of pronotal disc. Therefore, they should be defined as the apophyseal depressions. Furthermore, the main observed differences between the thoracic structure of the species with conspicuous apophyseal depressions and convex pronotal nota concerns the height of the pronotal disc and the elevation of its edges. The current investigations did not revealed any significant modifications of the endoskeletal structure between the prothoraces with or without the basal indentations. The study shows that X-ray microtomographic analysis is a powerful, non-destructive tool for the taxonomic considerations and that it can be safely applied to the name-bearing types. Furthermore, the application of this method, even to the dried entomological material, may provide many advantages over traditional morphological investigations.



Key words.— Platynotina, darkling beetles, *Tenebrio molitor*, *Ectateus* generic group, pronotum, pleural apophysis