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OBSERVATIONS ON *DISCOMYCTUS LONGICAUDATUS* (IMAMURA, 1931) THORNE, 1939 (NEMATODA) WITH FIRST REPORT OF ITS MALE

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Abstract.— *Discomyctus longicaudatus* (Imamura, 1931) Thorne, 1939 is redescribed on the basis of LM and SEM studies. The male is reported for the first time. The diagnosis of the genus *Discomyctus* is emended and a diagnostic compendium of its species is provided.

Key words.— Compendium, description, *Discomyctus longicaudatus*, male, taxonomy.

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DESCRIPTION OF THE IMMATURE STAGES OF *SERICUS SUBAENEUS* (W. REDTENBACHER, 1842) (COLEOPTERA: ELATERIDAE) WITH NOTES ON BIOLOGY AND DISTRIBUTION

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Abstract.— The previously unknown immature stages of the European elaterid *Sericus subaeneus* (W. Redtenbacher) species are described and illustrated. Larvae of this species were found feeding on underground pedicels of mosses growing on clay soils in mountain forests. The larva is very similar to *Sericus brunneus* (L.), sharing tridentate nasale and bifid mandibular apex. The larval description of the latter species is amended.

Key words.— Coleoptera, Elateridae, *Sericus*, immature stages, biology, distribution.

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RESCUE BEHAVIOUR SHOWN BY WORKERS OF *FORMICA SANGUINEA* LATR., *F. FUSCA* L. AND *F. CINEREA* MAYR (HYMENOPTERA: FORMICIDAE) IN RESPONSE TO THEIR NESTMATES CAUGHT BY AN ANT LION LARVA

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Abstract.— We report the results of field observations and experiments demonstrating that workers of *Formica sanguinea* Latr. and *F. cinerea* Mayr caught by a larva of an ant lion (*Myrmeleon formicarius* L.) can induce rescue behaviour in their nestmates. Typical rescue behaviour involves both the attempts to pull away the attacked ant by tugging at its limbs, and rapid, intense digging behaviour. In natural mixed colonies of *F. sanguinea* and *F. fusca* L., enslaved *F. fusca* workers display rescue behaviour when their heterospecific nestmate is caught by an ant lion larva. On the other hand, we did not observe nestmate rescue behaviour in monospecific *F. fusca* colonies. These data suggest that workers of *F. sanguinea* and *F. cinerea* caught by an ant lion emit some signals which summon their nestmates to arrive at their rescue. Workers of *F. fusca* either do not emit such signals, or their danger signals fail to elicit rescue behaviour in other ants. Expression of rescue behaviour in the studied ant species is discussed in the context of their life strategies, of their position in the interspecific competitive hierarchy, and of our knowledge about nestmate rescue behaviour, and signals eliciting alarm and digging behaviour in ants.

Key words.— Ants, *Formica sanguinea*, *Formica fusca*, *Formica cinerea*, mixed colonies, social parasitism, slavery, cross-specific communication, co-operation, ant lions, *Myrmeleon formicarius*.

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DESCRIPTION OF A NEW SPECIES OF *STYPHACUS* FAIRMAIRE, 1901 (COLEOPTERA: TENEBRIONIDAE: PLATYNOTINI)

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Abstract.— A tenebrionid beetle, preserved in the Zoological Museum "La Specola" of the University of Florens, belonging to the genus *Styphacus* Fairmaire (1901), (Opatrinae: Platynotini) recently revised by Iwan (1996) is described and figured in this paper.

Key words.— Madagascar, Coleoptera, Tenebrionidae, Opatrinae, Platynotyni, *Styphacus*, new species.

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THE GENUS *XANTHOMUS* MULSANT, 1854 (COLEOPTERA: TENEBRIONIDAE), ITS EVOLUTIONARY HISTORY AND CONSERVATION SIGNIFICANCE

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Abstract.— The species of the genus *Xanthomus* Mulsant, 1854 are keyed. *Xanthomus ghidinii* Canzoneri (**syn. nov**.) and *Xanthomus pallidus* ssp. *residuus* Canzoneri (**syn. nov.**) are conspecific with *Xanthomus pallidus* (Curtis). *Xanthomus viklundi* **sp. nov.** (Tunisia), *Xanthomus grimmi* **sp. nov.** (Italy and Sicily) and *Xanthomus israelsoni* **sp. nov.** (Canary Islands) are described. Types of *Xanthomus pellucidus* Mulsant and Rey, 1856, are preserved in the Muséum national d'Histoire naturelle, Paris from which a lectotype and paralectotypes are designated. Six presumptive syntypes of *Xanthomus pellucidus* were found in the Rey collection in Muséum d'Histoire naturelle, Lyon, and one in the Naturhistoriska riksmuseet, Stockholm. These were examined and designated paralectotypes. Two *Helops pallidus* Curtis in the Museum of Victoria, Melbourne, are designated lectotype and paralectotype respectively, of *Xanthomus pallidus*. Two female *Helops testaceus* Küster, 1850, in the Haag Rutenberg collection, Zoologische Staatssammlung, München, have also been designated lectotype and paralectotype, and their synonymy with *Xanthomus pallidus* is confirmed. Biogeographical hypotheses concerning the Palaeozoic origin and subsequent distribution of *Xanthomus* are discussed. The genus is regarded as having high conservation significance, and populations have been affected and are threatened by anthropogenic impact on littoral systems and processes.

Key words.— Coleoptera, Tenebrionidae, *Xanthomus,* synonyms, new species, key, evolution, biogeography, conservation.

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A REDESCRIPTION OF *VALGELEPHANTIA HOMOCOMUM* (BERLESE, 1918) (ACARI: PARASITENGONA: MICROTROMBIDIIDAE) WITH A KEY TO ACTIVE INSTARS OF ALL KNOWN GENERA OF VALGOTHROMBIINAE GABRYŚ, 1999

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Abstract.— *Valgelephantia homocomum* (Berlese, 1918) is redescribed basing on the type material. Taxonomic position of *Valgelephantia* Gabryś, 1999 is discussed. A key to active instars of all known genera of Valgothrombiinae Gabryś, 1999 is provided.

Key words.— Acarology, taxonomy, Valgothrombiinae, *Valgelephantia homocomum*, key.

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LAEMOSTENUS (*PRISTONYCHUS*) *ANDREEVI* SP. NOV. (COLEOPTERA: CARABIDAE: SPHODRINI) FROM NORTH-EASTERN GREECE

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Abstract.— *Laemostenus* (*Pristonychus*) *andreevi* **sp. nov.** (type locality: cave Mavri Trypa, Zygos Village, Kavala District, NE Greece) is described by a single female. The new species is compared with, and distinguished, from *Laemostenus* (*Pristonychus*) *conspicuus* (Waltl).

Key words.— Coleoptera, Carabidae, *Laemostenus*, new species, taxonomy, Greece.

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ABDOMINAL TRICHOBOTHRIAL PATTERN AND ITS TAXONOMIC AND PHYLOGENETIC SIGNIFICANCE IN CYDNIDAE (HEMIPTERA: HETEROPTERA). III. SEHIRINAE

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Abstract.— The paper is the third part of the series dealing with abdominal trichobothria in the family Cydnidae, in which their number and arrangements in adults of the subfamily Sehirinae are described and illustrated. The abdominal trichobothrial pattern of two species of *Dismegistus* Amyot et Serville (the pentatomoid genus of uncertain systematic position, usually placed within Sehirinae) is also studied. Three types of abdominal trichobothrial patterns are recognised within Sehirinae (contrary to earlier data suggesting a single uniform type for the subfamily). The taxonomic and phylogenetic significance of the abdominal trichobothria in Sehirinae is briefly discussed.

Key words.— Insecta, Hemiptera, Heteroptera, Cydnidae, Sehirinae, *Dismegistus*, morphology, abdominal trichobothria, adults, phylogeny.

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A REDESCRIPTION OF *TROMBIDIUM LATUM* C.L. KOCH, 1837 (ACARI: ACTINOTRICHIDA: TROMBIDIOIDEA) WITH CHARACTERISTICS OF ALL ACTIVE INSTARS

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Abstract.— *Trombidium latum* C.L. Koch, 1837 is redescribed on the basis of adult instar. Morphological data on deutonymphs are provided. Larvae are described for the first time. A female, from which larvae were obtained by experimental rearing, has been designated as neotype. *T. latum*, closely related to *T. holosericeum* (Linnaeus, 1758) and *T. geniculatum* (Feider, 1955), is associated with semi-open habitats.

Key words.— Acarology, taxonomy, life history, neotype, Trombidiidae, *Trombidium*, *T. latum*.

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A REDESCRIPTION OF *SUCIDOTHROMBIUM SUCIDUM* (L. KOCH, 1879) (ACARI: ACTINOTRICHIDA: MICROTROMBIDIIDAE) WITH CHARACTERISTICS OF ALL ACTIVE INSTARS

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Abstract.— A redescription of *Sucidothrombium sucidum* (L. Koch, 1879), based on female is given. Morphological data on deutonymphs are provided. Larvae are described for the first time. A female, from which larvae have been obtained by experimental rearing, has been designated the neotype.

Key words.— Acarology, taxonomy, life history, neotype, Microtrombidiidae, *Sucidothrombium*, *S. sucidum*.

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NEW DATA ON UKRAINIAN OLIGAPHORURINI (COLLEMBOLA: ONYCHIURIDAE) WITH DESCRIPTION OF THREE NEW SPECIES OF *MICRAPHORURA* BAGNALL, 1949

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Abstract.— Three new species of *Micraphorura* Bagnall, 1949 from Ukraine are described. *Micraphorura uralica* (Khanislamova, 1986) is a new combination. *Micraphorura pieninesis* Weiner, 1988 is new for the Ukrainian fauna. A key for Ukrainian Oligaphorurni is given.

Key words.— Collembola, Oligaphorurini, *Micraphorura*, new species, key, Ukraine.

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AN APPRAISAL OF *MYRMICA BERGI* RUZSKY, 1902 AND RELATED SPECIES (HYMENOPTERA: FORMICIDAE)

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Abstract.— An ecological survey of North Mongolian *Myrmica* yielded a species similar to, but quite distinct from *M. bergi* and its close relative *M. gallienii*. The Mongolian species conformed to the type specimen of *M. bergi* subsp. *divergens*. Therefore it is raised to species status and a redescription of the workers and first descriptions of the queens and males are provided. *M. bergi* was known to be unusually variable for *Myrmica* species, at times different regional populations have been described as separate species, subspecies or varieties. A morphometric analysis of *M. bergi* shows that there is both a valid morphological and geographical basis to the "old" forms. This is discussed in terms of the formation of the steppe zone and the isolation of the Mongolian and Siberian steppes, which left *M. divergens* as the only representative of the *scabrinodis*-group of *Myrmica* species east of Lake Baikal. It is hypothesised that periodic interruptions of the western steppes by transgressions of the Caspian Sea, sufficiently isolated bordering populations of *M. bergi* to produce the geographical patterns in morphological variation seen today.

Key words.— Ants, taxonomy, *Myrmica bergi*, *M. divergens*, *M. gallienii,* steppe–zone, biogeography.

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HOST SPECIFICITY OF *MACULINEA TELEIUS* BGSTR. AND *M. NAUSITHOUS* BGSTR. (LEPIDOPTERA: LYCAENIDAE) THE NEW INSIGHT

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Abstract.— *Maculinea teleius* Bgstr. and *M. nausithous* Bgstr. larvae are obligatory social parasites of *Myrmica* Latr. ants spending most of their immature life inside ant nests and praying on ant brood. Studies were made to determine host-ant specificity of *M. teleius* and *M. nausithous* in Poland. Research was performed on: two isolated sites of *M. teleius*, one isolated site of *M. nausithous* and one site where populations of both species occurred as a part of the metapopulation system. Our findings showed that *M. nausithous* is the more specialized species living exclusively in nests of *M. rubra* L. while *M. teleius* seemed to be more plastic and adapted to local ants. Its larvae were recorded in nests of four *Myrmica* species with the highest frequency in *M. rubra* colonies. *M. gallienii* Bondr. was detected for the first time as a host-ant of *M. teleius* (or any *Maculinea* van Eecke species). The frequency of *M. teleius* larvae in *M. gallienii* nests was similar to that observed in *M. scabrinodis* Nyl. – the 'classic' host-ant of *M. teleius* in Europe. Results are discussed with respect to *Maculinea* biology and conservation.

Key words.— *Maculinea teleius*, *Maculinea nausithous*, myrmecophily, *Myrmica*, host-specificity.

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A CONTRIBUTION TO THE ORIENTAL GENUS *BECCARIOLA* ARROW, WITH DESCRIPTION OF A NEW SPECIES FROM INDIA (COLEOPTERA: ENDOMYCHIDAE)

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Abstract.— *Beccariola sikkimensis* **sp. nov**. from India (Sikkim) is described and illustrated. A key to the mainland Asian species and a checklist of the world species of *Beccariola* are provided. New distributional data for some species are reported.

Key words.— Entomology, taxonomy, new species, key, checklist, Coleoptera, Cucujoidea, Lycoperdininae.

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PRIONCHULUS BREVICAUDATUS SP. NOV. (NEMATODA: MONONCHINA) FROM POLAND

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Abstract.— *Prionchulus brevicaudatus* **sp. nov.** is described and illustrated from Poland. The females are characterized by medium body length (2.35–2.42 mm); rounded lip region with very small, almost invisible, labial and cephalic papillae; size of the buccal cavity (39–40 × 23–24 μm); shape of dorsal tooth (pointed with sharp apex); lower position of dorsal tooth apex (situated in 22.5–25.6% of the buccal cavity length); plump, short and conical tail (70–78 μm long, c = 31.0–33.6; c' = 1.4–1.6); short genital branches (G_1 =7.2–8.5%, G_2 = 6.9–7.9%); uterus without muscular sphincter and spermatheca; transverse vulva lying in a longitudinally elongated depression. *P. brevicaudatus* sp. nov. differs from all hitherto described species of *Prionchulus* by having the plump, short and conical tail, transverse vulva lying in a longitudinally elongated depression and in the combination of other characters listed above.

Key words.— Description, morphology, nematodes, new species, taxonomy, Poland.

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THE KRAKATAU ISLANDS (INDONESIA) AS A MODEL-AREA FOR ZOOGEOGRAPHICAL STUDY, A SALTICIDAE (ARACHNIDA: ARANEAE) PERSPECTIVE

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Abstract.— Since 1883-volcanic eruption, 44 salticid species have been recorded on the Krakatau Islands. Of 36 species found during 1984–91 surveys, Anak Krakatau had the richest fauna of 28 species, 22 species were recorded on Rakata, 20 on Panjang and 16 on Sertung. Of all the species eight ones were found on all the islands and 13 on only one island. The data for Panjang investigated at two time intervals (1883–1931 and 1931–1984/1991), showed a stable number of species (18 and 20 respectively) and a very high changeover rate (13 species gained, 11 lost). Sumatra and Java were the main sources of colonisation. No correlation between area and species diversity was found: despite the smallest area, the salticids of Anak Krakatau appeared the most diverse – partly as the result of the highest biota variety and dynamics. To consider the Krakatau Islands a "good colonisation model" for Salticidae, much effort has to be made standardising collecting methods, selecting appropriate habitats and research time-intervals.

Key words.— Island biogeography, Krakatau, Salticidae.

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ZOOGEOGRAPHY OF SALTICIDAE (ARACHNIDA: ARANEAE) OF NEW ZEALAND – FIRST APPROACH

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Abstract.— According to our unpublished data some 30 genera and 200 species of Salticidae can be expected in New Zealand. The fauna is highly endemic, both on a generic and a specific levels. The most diverse are two groups of genera: *Trite minax* [=*planiceps*] and "*Trite*" *auricoma* are the best known representatives of every group. The relationships between Salticidae of New Zealand and Australia, are limited to single representatives of *Opisthoncus*, *Holoplatys*, *Ocrisiona*, *Helpis*, "*Lycidas*", "*Clynotis*" and *Hypoblemum*. Wide-spread genera are represented by *Neon* and *Bianor* and pantropical *Hasarius adansoni* is found in the warmer climate of North Island. To a limited extent New Zealand is a source of fauna for other Pacific archipelagos, for example species of *Trite* are found in New Caledonia and Caroline Islands.

Key words.— Biogeography, Salticidae, New Zealand.