THE GENUS \textit{NESOLOTIS} MIYATAKE, 1966 
(COLEOPTERA: COCCINELLIDAE) FROM CHINA, 
WITH DESCRIPTIONS OF EIGHT NEW SPECIES

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\textbf{Abstract.}— Species of the genus \textit{Nesolotis} Miyatake (Coleoptera: Coccinellidae: Sticholotidinae) endemic to China are reviewed, and the genus is removed from synonymy of \textit{Sticholotis} Crotch. The following eight species are described as new to science: \textit{N. magnipunctata} Wang et Ren, \textit{sp. nov.}, \textit{N. gladiiformis} Wang et Ren, \textit{sp. nov.}, \textit{N. denticulata} Wang et Ren, \textit{sp. nov.}, \textit{N. nigra} Wang et Ren, \textit{sp. nov.}, \textit{N. centralis} Wang et Ren, \textit{sp. nov.}, \textit{N. quadratimaculata} Wang et Ren, \textit{sp. nov.}, \textit{N. cordiformis} Wang, Ren et Chen, \textit{sp. nov.} and \textit{N. daweishanensis} Wang, Ren et Chen, \textit{sp. nov.} A diagnosis of the genus and a key to known species from China are also provided.

\textbf{Key words.}— Coleoptera, Coccinellidae, Sticholotidinae, \textit{Nesolotis}, new species, China.

\textbf{INTRODUCTION}

The genus \textit{Nesolotis} (Sticholotidinae: Sticholotidini) was erected by Miyatake in 1966, with \textit{Nesolotis impunctata} from Japan as the type species. Seven species of the genus \textit{Nesolotis} have been described throughout the world: Four species, \textit{N. impunctata} Miyatake (1966), \textit{N. punctifrons} Miyatake (1966), \textit{N. amabilis} (Kamiya, 1965) and \textit{N. azumai} Sasaji (1967) from Ryukyu, Japan; one species, \textit{N. tamdaoensis} (Hoàng, 1982) from Vietnam; two species, \textit{N. tsunekii} Sasaji (1967) and \textit{N. shorozui} Sasaji (1967) from Taiwan, China. The male genitalia of the latter two species were described by Yang (1972).

In this paper, \textit{Nesolotis} is reported from mainland China for the first time, with descriptions of eight new species. A key to the known species of this genus from China is also provided.

\textbf{MATERIALS AND METHODS}

The specimens examined were collected from the forests of China. All specimens were preserved in 85% ethanol. External morphology was observed with a Zeiss Stemi 2000-cs dissecting stereo microscope. All the measurements were made by following Ślipiński (2004). Male and female genitalia were dissected, cleared in 10% solution of NaOH by boiling for several minutes, and examined with an Olympus BX51 compound microscope.

Type specimens designated in the present paper are deposited at the Department of Entomology, South China Agriculture University (SCAU), Guangzhou. Images were photographed using a Qimagin 5.0 RTV digital camera, connected to the dissecting microscope, having a Coolsnap-Procf & CRI Micro*Color (0.65X C-mount) digital camera. Image-Pro Plus 5.1 Chinese software was used to capture images from
INTRODUCTION

The Oriental genus *Macroilleis* Miyatake (1965) belongs to a relatively small group of true ladybird beetles (Coccinellini) that graze on conidia of mildew fungi. This mycophagous group has been traditionally recognized as a separate tribe named Psylloborini or Halyziini (Sasaji 1971) but more recently Iablokoff-Khnzorian (1979), Pope (1989) and Slipinski (2007) included it within the expanded Coccinellini. That placement was strongly supported by molecular data (Giorgi et al. 2009) which recovered three included genera of Halyziini nested within Coccinellini.

The type species of *Macroilleis* was first described from China as *Halyzia hauseri* by Mader (1930). Miyatake (1965) recorded it from Taiwan and noticed several differences between *H. hauseri* and other *Halyzia* species and created a new genus, *Macroilleis*, to accommodate it. Since its establishment, *Macroilleis* remained monotypic until *Thea chapuisi* Crotch was added to that genus by Kovář (2007). Strangely, Iablokoff-Khnzorian (1979), who recognized *Macroilleis* as a valid genus in his monograph of the oriental Coccinellini, did not notice obvious similarities between *M. hauseri* and *T. chapuisi*. He placed *T. chapuisi* in a new subgenus, *Archilleis*, within the genus *Illeis*. Kovář (2007) discovered the true relationships of these taxa and synonymized *Archilleis* with *Macroilleis* in his catalogue of Palaearctic Coccinellidae.

Here we provide a redescription of the genus *Macroilleis* and the two known species, including the female of *Macroilleis chaupuisi*, and describe a new species from Borneo that differs from both previously known species by its uniformly coloured elytra without any markings.

MATERIALS AND METHODS

Specimens examined were obtained from several institutions through the courtesy of the curators indicated in parentheses:

ANIC – Australian National Insect Collection, CSIRO Entomology, Canberra;

BMNH – The Natural History Museum, London (R. Booth);

BPBM – Bernice P. Bishop Museum, Honolulu, Hawaii (S. Myers);
A NEW SPECIES AND NEW RECORDS OF THE GENUS
NALASSUS MULSANT, 1854 (COLEOPTERA: TENEBRIONIDAE: HELOPINI) FROM TURKEY

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Abstract.—A new species *Nalassus bozdagus* sp. nov. is described from the Aegean Region of Turkey (Bozdag ridge). The new species differs from all known *Nalassus* in the following characters: the hair spot on first and second abdominal sternites of male is absent, temple grooves are absent, exoskeleton very strongly sclerotized. New records of *Nalassus* Mulsant, 1854 from Turkey are provided. Two species new for the fauna of Turkey: *Nalassus (Helopondrus) gloriosus* (Faldernmann, 1837) and *N. (Helopocerodes) faldermanni* (Faldernmann, 1837).

Key words.—Coleoptera, Tenebrionidae, Helopini, *Nalassus*, new species, new records, Turkey.

INTRODUCTION

The genus *Nalassus* Mulsant, 1854 is represented in the fauna of Turkey by 3 subgenera: the nominative one, *Helopoceroders* Reitter, 1922, and *Helopondrus* Reitter, 1922. Two species of the nominative subgenus are known from Northwestern Anatolia and Thracia. Three species of the subgenus *Helopondrus* inhabit Northeastern Turkey (Nabozhenko 2008). Three species of *Helopocerodes* are known from Eastern and Northern Turkey (Reitter 1922, Nabozhenko 2001). After our investigations the new species *Nalassus bozdagus* sp. nov. was found in the mountain range Bozdag (Aegean region of Anatolia). This species cannot be included in any of the known subgenera but it seems to be closest to the subgenus *Helopocerodes*. Such assumption is based on the structure of male antennomeres, which are visibly thicker than in female. The new species differs from all known *Nalassus* by the following characters: the hair spot on first and second abdominal sternites of male is absent, temple grooves are absent, exoskeleton very strongly sclerotized. *N. bozdagus* has sexual dimorphism: female is much more massive, large and more convex than male. Habitually the new species is similar with representatives of the genus *Probaticus* Seidlitz, 1896. This species might be included in a new subgenus, however the additional material is necessary to prove this idea.

The following species of *Nalassus* new for the fauna of Eastern Anatolia are recorded: *N. (Helopondrus) gloriosus* (Faldernmann, 1837) and *N. (Helopocerodes) faldermanni* (Faldernmann, 1837). Now 9 species of the genus *Nalassus* are known from Turkey.

MATERIAL AND METHODS

This study is based on material collected by the authors and on material from the collection of Zoological Department of Ege University (ZDEU, Bekir Keskin), Hungarian Natural History Museum (HNHM, Otto Merkl), private collections of P. Zahradnik, M. Nabozhenko.
BRACHYPSECTRA KADLECII SP. NOV. FROM WESTERN IRAN – THE FIRST PALAEARCTIC MEMBER OF THE FAMILY BRACHYPSECTRIDAE (INSECTA: COLEOPTERA: ELATERIFORMIA)

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Abstract.— Brachypsectra kadleci sp. nov. from Zagros Mts., western Iran, a new species of the genus Brachypsectra LeConte, 1874, is described and illustrated. Based on the pectinate club formed by six antennomeres, the new species is closely related to both the previously known Oriental Brachypsectra, described by Blair (1930). Brachypsectra kadleci sp. nov. represents the first record of the family Brachypsectridae in the Palaeartic region.

Key words.— Coleoptera, Brachypsectridae, Brachypsectra, new species, Palaeartic region, Iran.

INTRODUCTION

The elateriform family Brachypsectridae contains a single genus Brachypsectra LeConte, 1874 with so far only four formally described extant species: Brachypsectra fulva LeConte, 1874 from south-western USA and northern Mexico, B. vivafosile Woodruff, 2004 from Dominican Republic, B. lampyroides Blair, 1930 from southern India and B. fuscula Blair, 1930 from Singapore. In addition, a formally undescribed Brachypsectra known only from the larva occurs in Australia, and a fossil species B. moronei Branham, 2006 was described from Miocene Dominican Amber (Costa et al. 2006). The adults can be recognised based on the relatively flat body, large prominent eyes, antennae forming serrate to pectinate club, and free abdominal ventrites.

Brachypsectra was originally included in the family Rhipiceridae (LeConte 1874) because of its similarity with the genus Zenoa Say, 1835 (currently classified in the family Callirhipidae). Subsequently Horn (1881) created a tribe Brachypsectrini within the family Dascillidae. Blair (1930) associated newly described Oriental species with LeConte’s genus and proposed its raising to family rank. Crowson (1955) first placed Brachypsectridae in Cantharoidea, then Crowson (1973) classified Brachypsectridae in his new superfamily Artematopoidea, but Kasap and Crowson (1975) returned the family to Cantharoidea. More recently Lawrence (1988) included Artematopodidae in his expanded Elateroidea (= Artematopoidae-Elateroidea-Cantharoidea complex sensu Lawrence and Newton (1982)).

During organisation of collection of the late Dr. Stanislav Kadlec, I found a single male of Brachypsectra from western Iran, which belonged to a species hitherto unknown to science. Therefore I am providing its formal description.

MATERIAL AND METHODS

The material studied was examined under an Olympus SZX12 stereoscopic microscope. The genitalia
REVISIONAL STUDY ON THE GENUS MIMAstra
(COLEOPTERA: CHRYSOMELIDAE: GALERUCINAE).
PART 2.

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Abstract.—Three new species of Mimastra Baly, 1865, are described, illustrated and compared with related taxa: M. strejceki sp. nov. (Indonesia: Java), M. andrewesi sp. nov. and M. nilgiriensis sp. nov. (both India: Tamil Nadu state). Haplosoma longicornis Allard, 1888 and Trichomimastra itoi Takizawa, 1986 are transferred to Mimastra (comb. nov.). For the reason of homonymy, a new name M. jacobyi nom. nov. is proposed for M. longicornis Jacoby, 1892 (nec M. longicornis (Allard, 1888)). The lectotypes are designated for M. arcuata Baly, 1865 and H. longicornis Allard, 1888. The drawings of both male and female genitalia are presented for all species. Mimastra arcuata is reported for the first time from Myanmar.

Key words.—Taxonomy, new species, synonymy, Coleoptera, Chrysomelidae, Galerucinae, Mimastra, Oriental Region.

INTRODUCTION

The genus Mimastra is distributed in Oriental and eastern Palearctic regions. The whole genus has never been revised. In older literature, besides the original descriptions, this genus is included only in regional keys not covering whole distributional area, such as India and Myanmar (Maulik 1936), China (Gressitt and Kimoto 1963) or Thailand, Vietnam and Laos (Kimoto 1989). High number of insufficiently described species – genitalia has not been studied and pictured in most of species – requires time-consuming examination of relevant primary types. Due to this fact the results are published in a series of papers.

The genus Mimastra is distributed predominantly in the Oriental Region and adjacent countries of Palearctic Region – Pakistan, India, Himalayan subregion, China, SE Asia, islands of Malaysia and Indonesia, Philippines. Nowadays, 49 species is treated as valid (Zhang et al. 2006, Bezděk 2007, Bezděk 2009).

According to the shape of protarsomere in male, the genus Mimastra can be divided into three „work“ groups: with protarsomere discoidal, with protarsomere hook-like, and with protarsomere normal, unmodified. I started the revision with species with normal protarsomer in male. The first contribution was published last year (Bezděk 2009) including the revision of the type material of 12 previously described species (1 species was resurrected from synonymy and 3 species were synonymized) and the descriptions of 3 new species. The presented paper is its continuation. Until now, 19 valid species was revised and/or described. The revision of the rest of species with normal protarsomer in male (ca 25 taxa) will be published in subsequent two or three papers. The identification key to all species is planned as a final output after the whole revision.

MATERIAL AND METHODS

All morphological measurements were made by an ocular grid of the MBS-10 binocular microscope at
INTRODUCTION

The monotypic genus *Orophiopsis* was erected for *Orophiopsis fausti* Quedenfeldt, based on specimens collected in Quango Gebiet (Angola) (Quedenfeldt 1889). Later Emden (1936, 1944) and Dalla Torre et al. (1937) included it in the Strophosomini within the Brachyderinae, and according to the most recent classification of Alonso-Zarazaga and Lyal (1999) it has been placed in the Brachyderini within the Entiminae.

According to Emden (1936, 1944) *Orophiopsis*, *Podionops* Schoenherr, 1847 and *Baladeus* Fauvel, 1862 differ from the remaining genera of the Strophosomini (sensu Emden) in the presence of distinctly developed humeri (in the remaining taxa the humeri are absent or vestigial). *Orophiopsis* and *Podionops* differ distinctly from *Baladeus* in their 6-segmented antennal funicle (7-segmented in *Baladeus*) and distribution: *Baladeus* occurs in New Caledonia, the remaining genera are known from Africa.

*Orophiopsis* differs from *Podionops* in having larger size (13.7 mm compared to 6.1 mm, respectively), stouter and more contrastingly coloured body (body slender, strongly elongate, underside and upper-side uniformly brown in *Podionops*), presence of humeral tubercles (tubercles absent in *Podionops*), pronotum nearly as long as wide (pronotum 1.4× longer than wide in *Podionops*), presence of individually variable ribs and grooves on the head (one narrow median groove on frons and rostrum in *Podionops*) and by the presence of an eyelid (eyes located on peduncle-like parts of head but not covered by lid from above in *Podionops*).

Due to courtesy of Dr. H. M. André (MRAC), Dr. D. Iwan (MIZW) and Dr. R. Krause (SMTD) I could examine about a dozen specimens of the genus, including two representing a previously undescribed species. Its description is presented below.

The materials used in this study come from the following collections:

- **JK** – Zoological Institute, University of Wrocław, Przybyszewskiego 63/77, 51-148 Wrocław, Poland, e-mail: kaniajar@biol.uni.wroc.pl
- **MIZW** – Museum and Institute of Zoology, PAS, Warszawa, Poland
- **MRAC** – Musee Royal de l’Afrique Centrale, Tervuren, Belgium
- **SMTD** – Zoologisches Museum, Humboldt Universität, Germany

Abbreviations:

- **aew** – width of elytra at base,
- **apw** – width of pronotum at apex,
- **arw** – rostrum width at antennal base,
- **asl** – length of antennal scape,
- **asw** – width of antennal scape at apex,
- **bl** – body length (excluding rostrum),
- **bpw** – pronotum width at base,
- **brw** – rostrum width at base,
- **el** – length of elytra,
INDIRECT EFFECTS IN BOREAL ANT ASSEMBLAGES: TERRITORIAL WOOD ANTS PROTECT POTENTIAL SLAVES AGAINST ENSLAVING ANTS

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Abstract.— The facultative enslaver Formica sanguinea Latr. uses as slaves F. fusca L. and other species of the subgenus Serviformica For. Earlier observations have shown or suggested that strong territorial wood-ant species, by defending their own territories, interfere with raids by F. sanguinea such that colonies of potential slave species gain protection against raids. At the population level, such protection should be visible as higher nest densities of F. fusca within than outside wood-ant territories, when both areas are within raiding distance of F. sanguinea. Here we tested this hypothesis by mapping nest densities of F. fusca. As expected, nest densities of F. fusca were higher within than outside wood-ant territories. In contrast, nest densities of two aggressive species, Lasius platythorax Seifert and L. niger (L.), unsuitable as slaves, were as expected lower within than outside wood-ant territories. Our results concur with earlier studies based on pitfall trapping, baiting experiments, and in situ observations on raids. The results also show that the positive impact of indirect protection provided by wood ants against raids may outweigh the direct negative impact of wood ants on F. fusca nesting within their territories. We discuss the geographic and habitat cooccurrences of wood ants, enslavers and potential slave species, and coverage of efficient indirect protection of potential slaves against raids.

Key words.— Competition hierarchy, dulosis, Formica fusca, Formica rufa-group, Formica sanguinea

INTRODUCTION

Competition is a controversial subject in ecology, and researchers have different views about its meaning and strength in various ecological communities (Connell 1983, Schoener 1983). Nevertheless, myrmecologists hold a convention that competition has an important role in structuring ant communities (Savolainen and Vepsäläinen 1988, Hölldobler and Wilson 1990, Punttila et al. 1996). Although ant community structure and assembly are also affected by resource distribution, disturbance, and physical and stochastic factors (Vepsäläinen and Pisanski 1982, Savolainen and Vepsäläinen 1988, Punttila et al. 1994, Andersen 1997, Cerdá et al. 1998, Parr et al. 2005, Dunn et al. 2007).

Vepsäläinen and Pisanski (1982) divided ant species living in northern temperate deciduous and boreal forest biomes into a three-tiered competition hierarchy. Territorial ant species are highest on this hierarchy. They defend their nests and food resources against...
INTRODUCTION

Cataglyphis is one of the keystone ant genera in arid zones of the Old World. It is distributed mainly in Palaearctic, while several species dwell in deserts and semi-deserts of Afrotropical and Oriental Regions (India and Pakistan). More than 100 species are known in this genus till now, and even 2 social parasites were described (Agosti 1994, Radchenko 1997b, Bolton et al. 2007).

Members of this genus are large (up to 13 mm) ants, and all of them inhabit open dry habitats (steppes, stony mountain slopes, various types of deserts and semi-deserts, etc.), reaching in mountains up to 3500–3700 m a.s.l.

Formerly genus Cataglyphis has been divided to several subgenera (e.g., see Bolton 1995), but more recently subgeneric division was refused and the genus was separated into several species groups and species complexes within them (Agosti 1990, Radchenko 1997a).

18 species of the genus Cataglyphis have been recorded for Iran till recently (Paknia et al. 2008, 2009), but in the newly collected material by one of the co-authors (O. Paknia) we found specimens that belong to two new species, which are described below. One of them belongs to the bicolor species-group and clearly differs from all known species of this group by its yellow colour (except of C. lunaticus), but well distinguishes from the latter by the longer scape, by the lower propodeum, which dorsal surface is distinctly longer than the posterior one, by the less abundant standing hairs on the alitrunk and petiole, and especially by the much longer propodeal spiracles. Taxonomic position of C. pubescens is less clear, it shares features of the cursor-, emeryi- and emmae-groups, while differs from all species of these groups by the dense and long depressed pubescence on the head and alitrunk.

MATERIAL AND METHODS

Material was collected from arid areas of the Central and Southern Iran (Fig. 1) during two field trips in spring and summer 2007 and 2008.
A NEW SUBGENUS AND THREE NEW SPECIES OF THE GENUS CAENOPHANES FOERSTER, 1862 (HYMENOPTERA: BRACONIDAE: DORYCTINAE) FROM THE NEW CALEDONIA AND PAPUA NEW GUINEA

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Abstract.—A new subgenus, Pacificophanes subgen. nov., of the genus Caenophanes Foerster with two new species C. (P.) baloghi sp. nov. (type species) and C. (P.) neocaledonicus sp. nov. are described from the New Caledonia. Additional new Austrolasian species of genus Caenophanes (Caenophanes), C. (C.) neoguineicus sp. nov. are described from Papua New Guinea. The short discussion about contents and distribution of the genus Caenophanes is presented.

Key words.—Hymenoptera, Braconidae, Doryctinae, Caenophanes, Pacificophanes, new subgenus, new species, New Caledonia, New Guinea.

INTRODUCTION

Caenophanes Foerster, 1862 is a small and rare doryctine genus widely distributed in the Old World. The members of this genus are known as ectoparasitoids of the larvae of xylophagous beetles of the families Bostrichidae, Cerambycidae, Curculionidae, and Scolytidae.

One of the main diagnostic character of this genus is largely or completely reduced first radiomedial vein of the fore wing. This feature is independently developed in several other doryctine taxa (Belokobylskij 2006) and particularly is characterized the worldwide distributed genus Heterospilus Haliday, 1836. For a long time the name Caenophanes considered as a junior synonym of Heterospilus (Shenefelt and Marsh 1976), but later these taxa were separated as independent and not related genera on the base of the following diagnostic characters (Belokobylskij 1993):

<table>
<thead>
<tr>
<th>Caenophanes Foerster</th>
<th>Heterospilus Haliday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The brachial (first subdiscal) cell of the fore wing is closed apico-posteriorly.</td>
<td>1. The brachial (first subdiscal) cell of the fore wing is open apico-posteriorly.</td>
</tr>
<tr>
<td>2. The hind wing of the male is always without stigma-like enlargement.</td>
<td>2. The hind wing of the male is usually with stigma-like enlargement.</td>
</tr>
<tr>
<td>3. The second metasomal suture usually absent.</td>
<td>3. The second metasomal suture usually present.</td>
</tr>
<tr>
<td>4. The propodeum usually with complete areolation and areola.</td>
<td>4. The propodeum without areolation and areola or only with basolateral areas.</td>
</tr>
<tr>
<td>5. The medial (basal) cell of the hind wing long and distinctly widened apically.</td>
<td>5. The medial (basal) cell of the hind wing short and almost not widened apically.</td>
</tr>
</tbody>
</table>
THREE NEW SPECIES OF THE GENUS *EVAZA* FROM HAINAN, CHINA (DIPTERA: STRATIOMYIDAE)

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Abstract.—The genus *Evaza* is recorded from Hainan for the first time with the following three new species: *Evaza zhangae* sp. nov., *E. flavimarginata* sp. nov. and *E. hainanensis* sp. nov. A key to separate them is presented.

Key words.— *Evaza*, Pachygastrinae, new species, China, taxonomy.

INTRODUCTION

The genus *Evaza* Walker belongs to the subfamily Pachygastrinae. It is distributed in the Palaearctic, Oriental and Australasian Regions. There are 56 known species, of which 3 species occur in the Palaearctic region, 26 in the Oriental and 34 in the Australasian (Woodley 2001). It can be identified by the following characters: Body black to brown. Eyes seemingly bare, contiguous for a long distance in male, narrowly separated in female; upper facets conspicuously larger than lower ones in male, but same in female. Lower frons with an area whitish tomentose. Antennal scape longer than wide; apical inner margin of pedicel conspicuously produced outward or gently curved; flagellum as long as wide, with slender and elongated apical arista. Palpus well developed and two-segmented. Thorax longer than wide, scutellum with 4 spines. Vein R₂+₃ arising behind r-m crossvein. Abdomen elongated and flattened (James 1969, Nagatomi 1975).

In the present paper three species from Hainan are described as new to science. A key to separate them is presented.

MATERIAL AND METHODS

The specimens were studied and illustrated with ZEISS Stemi 2000-c. Genitalic preparations were made by macerating the apical portion of the abdomen in cold 10% NaOH for 5–7 h, after examination it was transferred to fresh glycerine and stored in a microvial pinned below the specimen. The wing photographs of adults were taken with a digital camera (Nikon Coolpix 4500). Type specimens examined were deposited in the Entomological Museum of China Agricultural University, Beijing (CAU).

TAXONOMY

Key to species of the genus *Evaza* from Hainan

1. Scutellum wholly yellow to pale yellow; epandrium narrow, median portion of fused gonocoxites with a pair of small processes ............ *zhangae* sp. nov.
2. Scutellum black or yellowish brown, with posterior margin and spines yellow to pale yellow; epandrium wide, median portion of fused gonocoxites with one process ........................................ 2

2. Whitish tomentose part of lower frontal triangle trapezoid with lateral margin connected with eyes; apical inner margin of pedicel gently curved; upper margin of anepisternum yellow; median portion of fused gonocoxites with an obtusely angled triangular process, much shorter than lateral process ............... *flavimarginata* sp. nov.
A NEW SPECIES OF \textit{LYMANTRIA} HÜBNER FROM CHINA (LEPIDOPTERA: LYMANTRIIDAE)

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Abstract.— Fifty-three species of the genus \textit{Lymantria} in China have been recorded. One new species, \textit{L. flavala} Xu, Wu et Chen, is described based on the examination of the specimens deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS). Photographs of the adult and the genitalia of the new species are provided.

\textbf{Key words.}— Lepidoptera, \textit{Lymantria}, \textit{L. flavala}, new species, China.

\section*{INTRODUCTION}

The earliest record of the species description in \textit{Lymantria} Hübner, 1819, the type genus of Lymantriidae, dates to 1758 when Linnaeus described both \textit{L. dispar} (Linnaeus) and \textit{L. monacha} (Linnaeus). From various parts of the world, a total of 173 \textit{Lymantria} species have been described by Walker (1855a, b, 1865), Moore (1879), Swinhoe (1903), Turner (1915), Collenette (1932), Matsumura (1933), Holloway (1999), Schintlmeister (2004), Pogue and Schaefer (2007). Schintlmeister (2004) was the first to review the genus comprehensively and to adopt subgeneric taxa. In that review, the genus including 167 species divided into 12 subgenera. Pogue and Schaefer (2007) described three new species.

In China, the late Professor Chao Zhongling of the IZCAS devoted herself to the systematics and taxonomy of the family Lymantriidae. She made an eminent contribution to the study of Chinese Lymantriidae with the discovery of four new species (Chao 1984) and descriptions of 32 species (Chao 2003) of \textit{Lymantria}. So far, fifty-three species of the genus \textit{Lymantria} in China have been recorded.

\section*{MATERIALS AND METHODS}

Material examined for this study was largely based on the specimens preserved in IZCAS, Beijing and Institute of Animal and Plant Quarantine, Chinese Academy of Inspection and Quarantine (CAIQ), Beijing. Among the 53 species, 37 species (including the new species) were deposited in IZCAS; the new species also was deposited in CAIQ; other species were cited from references. Photographs of adults were taken with Canon EOS 400. Figures of genitalia were taken with steREO Discovery V12.

\section*{TAXONOMY}

\textit{Lymantria (Beatria) flavala} Xu, Wu et Chen, sp. nov. (Figs 1–2)

\textbf{Diagnosis.} The species is very similar to \textit{L. atemeles} Collenette, but differs from the latter by the black ground color of forewing and the diffuse patterns on forewing. The ground color is “pale gray to brown” in \textit{L. atemeles} described by Pogue et al. The male...
**Abstract.**— The Tertiary genus *Laasbium* Scudder, originally described with two species and as a lineage of staphylinid beetles (Coleoptera: Staphylinidae) from the Eocene-Oligocene boundary of Florissant, Colorado, is re-evaluated. Examination of the original series for *Laasbium agassizii* Scudder (type species) and *Laasbium sectile* Scudder reveal that these represent incompletely preserved earwigs (Dermaptera). The genus *Laasbium* is transferred to the order Dermaptera and comments provided on the classification of Florissant fossil earwigs, all previously placed in the genus *Labiduromma* Scudder. A lectotype is designated for *Laasbium agassizii* and the following six new genera erected to accommodate the diversity of Florissant fossil earwigs (authorship of all taxa is Engel and Chatzimanolis): *Petrolabis* (type species: *Labiduromma gurneyi* Brown), *Litholabis* (type species: *Labiduromma gilberti* Scudder), *Rupiforcifula* (type species: *Labiduromma scudderi* Brown), *Geroncolabis* (type species: *Labiduromma tertiaria* Scudder), *Spiladopygia* (type species: *Labiduromma exsultatum* Scudder), and *Paleocarcinophora* (type species: *Labiduromma lithophila* Scudder). The following new combinations are established: *Petrolabis gurneyi* (Brown), *Litholabis gilberti* (Scudder), *Rupiforcifula scudderi* (Brown), *Rupiforcifula labens* (Scudder), *Rupiforcifula inferna* (Scudder). “*Laasbium* sectile”, a poorly-preserved lateral compression, is considered genus incertae sedis.

**Key words.**— Dermaptera, Coleoptera, Staphylinidae, Neodermaptera, Tertiary, Paleogene, rove beetle, earwig, taxonomy

**INTRODUCTION**

In his large monograph on Tertiary Coleoptera, Samuel H. Scudder (1900) described the genus *Laasbium* for two species of putative rove beetles (Staphylinidae) from the Eocene-Oligocene boundary of Florissant, Colorado. *Laasbium* was said to resemble the paederine genus *Lathrobium* Gravenhorst, but features of the subfamily were not discernable. Herman (2001) noted that Scudder placed *Laasbium* between *Quedius* Stephens and *Leistotrophus* Perty and so transferred the genus to the Staphylininae. Scudder’s original description of the genus and the specimens mentioned little that is considered today of systematic
THE GENUS *NEOCHIAULIOIDES* VAN DER WEELE (MEGALOPTERA: CORYDALIDAE) FROM INDOCHINA, WITH DESCRIPTION OF THREE NEW SPECIES

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Abstract.—A faunistic review of the fishfly genus *Neochauleodes* van der Weele from Indochina is given, with 11 species recorded. Amongst them, three species are described as new to science: *Neochauleodes bachmanus* sp. nov., *Neochauleodes confusus* sp. nov., and *Neochauleodes tamdaoensis* sp. nov. *Neochauleodes orientalis* Yang et Yang, 1992 and *Neochauleodes yunnanensis* Navás, 1930 are synonymized with *Neochauleodes tonkinensis* (van der Weele, 1907).

Key words.—Corydalidae, Chauliodinae, *Neochauleodes*, new species, Indochina.

INTRODUCTION

The fishfly genus *Neochauleodes* van der Weele, 1909 which includes more than 40 species is the largest genus of the subfamily Chauliodinae, and is widely distributed in Oriental Asia, with a few records in eastern Palaearctic Asia. The genus is characterized by the antenna with distinct sexual dimorphism, the wings usually with transversely band-like markings medially, the straightly directed 1A and 2A, the male tenth sternum with length equal to the ninth plus tenth terga.

The taxonomy of the genus *Neochauleodes* is the result of work mainly by van der Weele (1905, 1906, 1907, 1909, 1910), Lestage (1927), and Kimmins (1954) in the first half of last century. However, after that many taxonomic problems of this genus remain and faunistic studies are lacking. Recently, the east Asian fauna of *Neochauleodes* was intensively studied by Liu and Yang (2005a, b, 2006), Liu et al. (2007), and Liu (2008), with 26 species recorded from China, Japan, and Korean Peninsula. Nevertheless, the fauna of *Neochauleodes* in south and southeast Asia are still poorly known with 19 species and subspecies, most of which lack revision or redescription since the early original description.

Indochina, which is composed of Myanmar, Thailand, Laos, Vietnam, and Cambodia, is a major component of southeast Asia, northwardly connecting to the mainland China and the Indian subcontinent, and southwardly extending as a peninsula. Due to the tropical and subtropical rainforest habitat, Indochina is one of the areas with extraordinarily rich biodiversity. Lestage (1927) made a revision of Megaloptera from Indochina, in which six species and subspecies of *Neochauleodes* were recorded, namely *Neochauleodes bowringi* (Melachlan), *Neochauleodes simplex* (Walker), *Neochauleodes sinensis sinensis* van der Weele, *Neochauleodes sinensis occidentalis* van der Weele, *Neochauleodes sinensis meridionalis* van der Weele, and *Neochauleodes tonkinensis* (van der Weele). No other revisionary work on *Neochauleodes* from Indochina has been made since, but four species, *Neochauleodes umbratus* Kimmins, *Neochauleodes moritii* Asahina, *Neochauleodes koreanus* van der Weele, and *Neochauleodes*
A NEW SPECIES OF *ANTENNOSEIUS* FROM AUSTRALIA
(ACARI: MESOSTIGMATA: ASCIDAE)

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Abstract.—*Antennoseius* (Vitzthumia) *ventrianalis* sp. nov. is the second species of *Antennoseius* described from Australia (Acarí: Ascidae). It is described from non-phoretic specimens collected from the soil surface. The new species is unique in having three pairs of ventral setae on the ventri-anal shield; the maximum observed in other species is two pairs. It is sexually dimorphic in the degree of fusion of the podonotal and opisthonal shields and some other minor characters.

Key words.—*Antennoseius*, Vitzthumia, Ascidae, Acari, Australia.

INTRODUCTION

The genus *Antennoseius* Berlese, 1916 was described to accommodate *Antennoseius delicatus* Berlese, 1916, collected from moss in France. The diagnostic features of this genus were the presence of two separate shields on the dorsal idiosoma, and legs I without claws and pulvilli. Thor (1930) then described a new genus *Vitzthumia* Thor, 1930, with type species *Vitzthumia oudemansi* Thor, 1930, which differed from *Antennoseius* by the presence of claws and pulvilli on leg I. Ryke (1962) reviewed the genus *Antennoseius* and noted that, with the exception of the claws and pulvilli on legs I, *V. oudemansi* possessed all of the characters of *Antennoseius*, and he therefore made *Vitzthumia* a synonym of *Antennoseius*. Brgettova (1977) considered *Antennoseius* to comprise two subgenera: *Antennoseius* s. str. (without claws on leg I) and *Vitzthumia* (with claws on legs I), and that taxonomic concept is still in use. Various authors have placed *Antennoseius* in the families Laelapidae, Halo-laelapidae, Phytoseiidae, Vitzthumiidae, Antennoseiidae, and Rhodacaridae, but we here follow the modern concept of placing it in a narrowly-conceived family Ascidae (Lindquist et al. 2009). The genus *Antennoseius* is of special interest because some species occur in two distinct female morphs – a phoretic female or smooth morph, and a free-living female or granular morph (Lindquist and Walter 1989; Beaulieu et al. 2008).

Mites of the genus *Antennoseius* are found in diverse microhabitats such as forest and meadow soil, litter, rotting wood, in bracket fungi, and in the nests of rodents and birds. Some species are phoretic on carabid beetles (Lindquist and Walter 1989; Gwiazdowicz 2007; Beaulieu et al. 2008; Gwiazdowicz and Haitlinger 2010). Two species have been reared in captivity, and were found to be predatory. *Antennoseius* (Vitzthumia) *janus* Lindquist and Walter 1989 fed on Collembola, nematodes and mites, and was also cannibalistic (Lindquist and Walter 1989), and *A. (V.) perseus* Beaulieu et al. 2008 also fed on some species of nematodes (Beaulieu et al. 2008).

A total of 60 species of *Antennoseius* has been described worldwide, including 18 species in the subgenus *Vitzthumia* (Beaulieu et al. 2008; Moraza and Kazemi 2009). Two of these species are included only provisionally because information about the presence
INTRODUCTION

Species of genus *Prozercon* are free-living and mostly associated with humus and soil, decomposed litter, leaf mould, plant parts, and among mosses. This genus based on number of species in Turkey and worldwide, is the second richest in the family Zerconidae. The genus is estimated to include around 100 species world-wide. So far, 20 species of genus *Prozercon* have been recorded from Turkey (Urhan and Ayyıldız 1992, 1996a, 1996b, 1996c, 1996d, Urhan 1998, 1999, 2002, 2008). In this paper, a new species *Prozercon celali*, is described on material collected during a survey on the systematic of zeronid mites in Honaz Mountain National Park (Turkey) as a contribution to understanding the acarine faunal richness of Turkey.

MATERIALS AND METHODS

Soil and litter samples were collected from the Honaz Mountain National Park and its near environment, Denizli, Turkey. They were placed in plastic bags, labelled and transferred to the laboratory. Samples were placed into Berlese funnels, and mites were extracted for 5–7 days according to their moisture content. At the end of this process, the contents of the funnels’ collecting bottles were transferred into Petri dishes and mites were separated under a stereo-microscope. They were placed in 60% lactic acid for clearing and mounted onto permanent microscope slides using a glycerine medium. The examination and drawing of mites were done using an Olympus BX50 microscope. Morphological terminology used in the description follows that of Sellnick (1958), Halašková (1969), Błaszak (1974) and Mašán and Fend’a (2004).

SYSTEMATICS

*Prozercon celali* sp. nov.

(Figs 1–4)

Type material. Holotype ♀. Turkey, Denizli, Honaz Mountain National Park, mixed forest, 37°39.725N, 29°14.687E, 1060 m, 26 June 2009, collected by R. Urhan. Sample of litter and soil underlying *Juniperus* sp.
ERIOPHYOID MITES (PROSTIGMATA: ERIOPHYOIDEA: ERIOPHYIDAE) FROM ICLEAND: ONE NEW SPECIES, AND THREE NEW MITE RECORDS

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Abstract.—One new species of eriophyoid mite is described from Iceland and new records of three species from Iceland are presented. Aceria reykjaviki sp. nov., collected from Alpine Mouse-ear Chickweed Cerastium alpinum L., was described as new for science. Aceria thomasi (Nalepa), Aculops thymi (Nalepa), and Aculus tetanothrix (Nalepa) were recorded for the first time in Iceland. Aculops thymi was recorded for the first time as infesting Thymus praecox Opiz. As former descriptions are deficient, supplementary descriptions of females and males are provided for all three species. Nymphs are characterized for A. thomasi and A. tetanothrix.

Key words.—Aceria reykjaviki, Aceria thomasi, Aculops thymi, Aculus tetanothrix, Alpine Mouse-ear Chickweed, Eriophyoidea, morphology.

INTRODUCTION

Obligately phytophagous eriophyoid mites are one of the most diverse groups among plant-feeding arthropods. The superfamily Eriophyoidea contains about 4,000 species and the current rate of description of new eriophyoid taxa remains high (Amrine et al. 2003, de Lillo and Skoracka 2010). Eriophyoid mites are of worldwide distribution. Their occurrence has been reported from each continent except Antarctica. China as well as North American and European countries remain the most intensively explored regions (Amrine 2003, de Lillo and Skoracka 2010). Except the tropics, which are the least explored regions with many undiscovered eriophyoid taxa (Amrine et al. 2003), also in Europe there are some regions where eriophyoid mites have not been investigated. Iceland is an example of such region.

The aim of this paper is to present one new species and three new mite records found in Iceland. Detailed morphological descriptions of females, and males and nymphs (if possible) of all four species are given. All three species found in Iceland have been described by Nalepa in the 19th century. As advanced microscopy has not been available in that time, former descriptions are deficient, supplementary descriptions of females and males are provided for all three species. Nymphs are characterized for A. thomasi and A. tetanothrix.

Key words.—Aceria reykjaviki, Aceria thomasi, Aculops thymi, Aculus tetanothrix, Alpine Mouse-ear Chickweed, Eriophyoidea, morphology.
INTRODUCTION

Nearly one-third of the world’s amphibian species (1856 species) are considered as threatened (Cox et al. 2006). Mediterranean basin has been characterized by a complex geological and climatic history that shaped the distribution and diversity of its biota, resulting in the formation of several areas of endemism and hot spots (De Jong 1998, Sanmartin 2003). Within this area, North Africa is designated as an important glacial refuge centre and a biodiversity hotspot; however, it suffers from outdated and incomplete information regarding the distribution and, in some cases, the taxonomic status of several amphibian species (Cox et al. 2006). Without basic systematic and distributional data, it is difficult to make objective and justifiable recommendations for conservation.

Prior studies of amphibian distribution in North Africa (Boulenger 1891, Mayet 1903, Schneider 1978) were understandably limited in geographical coverage and utilized the somewhat unstable morphology-based taxonomy in use at the time. Definitive assessments of amphibian diversity require exploration of previously unstudied regions, comprehensive surveys of poorly

MORPHOMETRIC AND KARYOLOGICAL DIFFERENTIATION AMONG POPULATIONS OF DISCOGLOSSUS PICTUS (DISCOGLOSSIDAE: ANURA) IN EASTERN NORTH AFRICA

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Abstract.— To assess karyological and morphometric diversity within Discoglossus pictus Otth 1837, morphometric and cytogenetic analyses were carried out on five populations from the northern Tunisia and Algeria. A total of eight morphometric adult traits were evaluated, tadpole oral disc structure was described and chromosome patterns were assessed by means of conventional staining and banding methods (C-, Ag-NOR and CMA3 banding). Karyological data indicated the same chromosome and chromatin characters among the five populations. We observed also the same oral disk structure (LTRF: 2/3) in all studied Discoglossus tadpoles. However, we found significant differences in morphometric parameters of the specimens from these localities. Discriminant Function Analysis (DFA) of morphometric variables correctly classified 88% of individuals to their original localities. The pattern of morphometric variation does not match the genetic observation, which suggests that body shape differences result from the phenotypic plasticity correlated with local climatic factors.

Key words.— Discoglossus pictus, North Africa, chromosome, morphometric variation.