

## **Eight new species of Pseudoliodini (Coleoptera: Leiodidae: Leiodinae) from the East and the Southeast Asia with new morphological, distributional and bionomical data**

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**Taxonomy, new species, keys, reviews, faunistics, bionomy, Coleoptera, Leiodidae, Leiodinae, Pseudoliodini, Pseudocolenis, Colenisia, Dermatohomoeus, Asia, China, Japan, Indonesia, Malaysia**

**Abstract.** *Pseudocolenis baliense* from Indonesia (Bali Island), *P. malaysica* from Malaysia (Pahang State), spp. nov., *P. mycophila* and *Dermatohomoeus minor* spp. nov. from China (Yunnan), *Colenisia strigipennis* sp. nov. from Japan (Amami Oshima), *Colenisia marginipennis*, *C. quatuorsignata* and *Dermatohomoeus subtilis* spp. nov. from Malaysia (Pahang State) are described and distinguished from similar species. A key to the determination of the Chinese, Japanese and Malaysian species of the genus *Colenisia* Fauvel, 1903 is presented. Reviews of all the known species of the genera *Pseudocolenis* Reitter, 1884 and *Dermatohomoeus* Hlisnikovský, 1963 species are provided. The genus *Pseudocolenis* is recorded from Malaysia newly. First record of *Dermatohomoeus terrenus* (Hisamatsu, 1985) from Awaji Island (Japan), *D. alesianus* Daffner, 1990, *Colenisia castanea* Švec, 2011 from China (Yunnan), *C. pygmaea* (Portevin, 1905) from China (Zhejiang) and *C. neglecta* Švec, 2013 from Malaysia is presented. Spermatheca of *Pseudocolenis crassicornis* Švec, 2009 and *P. torta* Švec, 2014 (both China, Yunnan) is illustrated for the first time. New distributional, bionomical and morphological data of *Pseudocolenis*, *Colenisia* and *Dermatohomoeus* species are presented.

### INTRODUCTION

The tribe Pseudoliodini Portevin, 1926 is widely distributed through the world (except of Antarctic). It comprises 10 genera with 198 species, known up to now, among them 134 species from East and South East Asia (East Asian Palaeartic and Oriental regions). The species belonging to the tribe are generally, with some exceptions, very small unobtrusive and uniformly shaped, difficult to be distinguished by the morphological characters.

Altogether 55 species of the genus *Pseudocolenis* Reitter, 1884 have been described up to now. They occur predominantly in the Asian Palaeartic realm - 42 species, nine species in the Oriental Region, five species are known from both Palaeartic and the Orientals Regions and one species is also known from the Australian Region. In this paper altogether three species new to science are described, among them one from the East Palaeartic and two from the Oriental Region. Therefore the number of the *Pseudocolenis* species is 58 at present.

The genus *Dermatohomoeus* Hlisnikovský, 1963 comprises altogether 56 species including the two new taxa described here - one species from the Palaeartic and the other from the Oriental Region. The species of the genus were reported from Afrotropical Region, Madagascar, Palaeartic, Oriental and also Australian Regions. The Palaeartic fauna comprises 14 species occurring predominantly in the southern part of China, Nepal and

North of India. Twenty-one species occur in the Oriental Region. The northernmost point of the occurrence in this genus seems to be Japanese island Honshu where *Dermatohomoeus terrenus* (Hisamatsu, 1985) was recorded. The species described originally as *Colenis terrena* Hisamatsu, 1985 was transferred to the genus *Dermatohomoeus* by Angelini & Švec (1998). This combination some other authors followed (Hoshina 1999, Park & Ahn 2007). On the other hand Perreau in Löbl & Löbl (2015) still kept without any explanation *D. terrenus* (Hisamatsu, 1985) for the member of the genus *Colenis*. Some other questions of the morphology and faunistics of this species are discussed in the paragraph “Taxonomy, new distributional, morphological and bionomical data, genus *Dermatohomoeus* Hlisenkovský, 1963”.

The species belonging to the genera *Pseudcolenis* and *Dermatohomoeus* are very similar to each other and morphologically uniform within the genus. The best way to the identification of the species is to assess male genitalia and in *Pseudcolenis* also their spermatheca. On the other hand spermatheca is generic specific but not enough specific on the species level in *Dermatohomoeus* being of the uniform shape resembling rugby ball with two parallel ridges on the distal surface. That is why no keys to the determination of the both genera are provided and no spermatheca of the *Dermatohomoeus* species is figured in the present paper. Instead brief reviews of all the known species of the both genera are presented.

On the other hand the morphological characters in the *Colenisia* Fauvel, 1903 species provide better possibility of their identification. So the key to the identification of the genus (Chinese, Japanese and Malaysian species) is presented in the paragraph “Taxonomy new distributional, morphological and bionomical data, genus *Colenisia* Fauvel, 1903”.

Despite this the genus *Colenisia* is taxonomically even less synoptic. Hoshina (1999) synonymised the genus *Colenisia* with the genus *Colenis* Erichson 1842 transferring Japanese species *Colenisia pecki* (Daffner, 1988) to the genus *Colenis* and *Colenisia miyatakei* (Hisamatsu, 1957) to the genus *Dermatohomoeus*. The mentioned nomenclatorial changes were not supported enough by arguments based on those characters that are specific for the genera concerned. Therefore neither the synonymy of *Colenisia* with *Colenis* nor the associated nomenclatorial changes are followed in the present paper. I joined the opinion of the authors who considered *Colenisia* for valid taxon (e.g. Perreau in Löbl & Löbl 2015, Newton 2016, Leschen 2000). Hoshina (1999) also described three Japanese *Colenis* taxa: *C. lunaris* Hoshina, 1999, *C. saikaidoensis* Hoshina, 1999 and *C. saikaidoensis onodai* Hoshina, 1999. The original descriptions do not provide information enough to judge which the genus to those species should be attributed.

Taking into account what is stated above, the genus *Colenisia* comprises 68 safely known species including those three species new to science described in this paper. Forty-seven of them occur in the Palaearctic and Oriental regions, fifteen of them have been recorded from continental China, further 9 species from Taiwan (Švec 2013), at least 4 from Japan and 5 from Malaysia. Some of the species occur in more than one country. Beside Palaearctic and Oriental Regions the genus was also recorded from the Afrotropical and Australian realms.

## MATERIAL AND METHODS

### Abbreviations:

MSBC Michael Schülke private collection, Berlin, Germany;

NMPC National Museum, Praha, Czech Republic;

ZSPC Zdeněk Švec private collection, Prague, Czech Republic.

The present work is based on the material collected by the Czech and the Chinese entomologists in Indonesia (Bali Island), Malaysia (Pahang State) and China (Sichuan and Yunnan), recently and also on the older Japanese material preserved in NMPC. Collecting sites from China, Yunnan are illustrated in Figs. 1, 2- Tongbiguan vicinity and Fig. 4 - Kongshu vicinity.

Some of the new and other Leiodinini species mentioned in the present paper were collected from Basidiomycota mushrooms. Two of them are documented in Figs. 3 and 5. According to the tentative determination by Jaroslav Landa (The Czech Mycological Society in Prague) the mushrooms belong most probably to the genera *Marasmius* Fries 1836 and *Gymnopus* (Persoon) Roussel 1806.

Collecting data cited in quotation marks are taken from the locality labels accompanying the examined examples. The individual locality labels are separated by double slash in this work. Each holotype or paratype is indicated by a red label bearing the status of the specimen (holotypus or paratypus respectively) name of the species, the name of the author, year 2022 attached to the same pin as the relevant specimen. The holotypes are preserved in NMPC, paratypes in NMPC and in ZSPC.

The specimens was relaxed in 4% acetic acid first, then rinsed in water and dissected in a drop of water. The genitalia of the holotypes and some paratypes were rinsed in 98 % ethyl alcohol, then put in a drop of clove oil to avoid of air bubbles inside the aedeagus and to make aedeagus transparent enough to observing the internal structures, then put in ethyl-alcohol and subsequently to water again. The genitalia intended to be mounted in polyvinylpyrrolidone were transferred through water first; the genitalia of some specimens were mounted in Euparal after transferring through ethyl-alcohol. The genitalia were put on the same label as the relevant specimen or on a transparent label added to the same pin as the dissected specimen.

The bump type of mesoventral structure in *Pseudcolenis* is indicated as A or B depending on its width, height and its steepness following the terminology in Švec (2016). The structure A is represented by longitudinal wide bump flatly rounded or narrow longitudinal bump narrowly rounded on its top in oblique view resembling wide roundly angled ridge, flatly or more obliquely falling anteriorly in the lateral view, while the type B is representing by thick or narrow obliquely falling longitudinal carina. With the exception of mesoventrite in *Pseudcolenis*, no structures typical or quite common in the genera *Pseudcolenis*, *Dermatohomoeus* and *Colenisia* were included in the descriptions of the new species presented in this paper. There are not mentioned especially sternal and abdominal ventral structures in *Dermatohomoeus* and *Colenisia*, type of the dorsal puncturation and setosity and setosity of the appendices.

The measurements of the total body length were taken from all specimens examined. Specific measurements of the individual body parts were taken from the holotypes only. The

measurements were measured to the first decimal place of millimetre except the distance between elytral strigosites the length of aedeagus and spermatheca that are approximated on the hundredth of the millimetre.

Abbreviations of body parts and measurements:

AII-AXI: Antennomeres II-XI.

AIII/AII: The ratio of the length or width of the antennomeres III:II, analogously ratios of others antennomeres.

L: Length.

W: Width.

W/L: Ratio between measurements

TI-TV: tarsomeres I-V

Terminology:

Median lobe = tegmen

Endophallic sclerites = sclerotised elements of internal sac of the tegmen

The descriptions are based on the holotypes. Variability is mentioned in the paragraph “Variation” if necessary and includes also the important characters of the sexual dimorphism.

#### TAXONOMY, NEW DISTRIBUTIONAL MORPHOLOGICAL AND BIONOMICAL DATA

#### **Genus *Pseudcolenis* Reitter, 1884**

The best way to determine *Pseudcolenis* species is assessing and comparing of the male and female genitalia. Nevertheless some external characters e.g. absence or presence of the elytral strigosity, its density, the structure of the male antennae, especially the size of the 7<sup>th</sup> male antennomere and also the structure of mesoventrite also seem to be useful making it possible at least to sort the species to the informal species groups and the subgroups. The groups and the subgroups cited in the following table follow Švec (2009).

Table 1. A review of the species of the genus *Pseudcolenis* Reitter, 1884.

	species	known distribution	type of mesoventral structure	absence (A) or presence and density* of elytral strigosites	7 <sup>th</sup> antennomere strikingly enlarged (L) or normal (N) in males	species group and subgroup (I or II) **
1	<i>P. atrobrunnea</i> Švec, 2016	CH (Yunnan)	B	VS	N	<i>sedlaceki</i> I
2	<i>P. sedlaceki</i> Daffner, 1988.	Papua New Guinea	B	D	N	<i>sedlaceki</i> I
3	<i>P. carinata</i> Švec, 2009	CH (Yunnan)	B	D	L	<i>sedlaceki</i> II
4	<i>P. crassicornis</i> Švec, 2009	CH (Yunnan)	B	D	L	<i>sedlaceki</i> II
5	<i>P. bouvieri</i> (Portevin, 1903)	NE, IN (Sikkim)	A	A	N	<i>bouvieri</i> I

6	<i>P. laevipennis</i> Portevin, 1922	Indonesia (Java)	A	A	N	<i>bouvieri</i> I
7	<i>P. laticornis</i> Angelini et Švec, 2000	CH (Hubei, Shaanxi, Yunnan)	A	A	N	<i>bouvieri</i> I
8	<i>P. neglecta</i> Angelini et Švec, 2000	CH (Hubei, Sichuan, Yunnan)	A	A	N	<i>bouvieri</i> I
9	<i>P. schawalleri</i> Švec, 2009	NE	A	A	N	<i>bouvieri</i> I
10	<i>P. simplicornis</i> Švec, 2016	CH (Yunnan)	A	A***	N	<i>bouvieri</i> I
11	<i>P. antennata</i> Švec, 2014	CH (Yunnan)	A	A	L	<i>bouvieri</i> II
12	<i>P. appendiculata</i> Švec, 2014	CH (Yunnan)	A	VS	N	<i>grandis</i> I
13	<i>P. confusa</i> Švec, 2021	CH (Sichuan)	A	VS	N	<i>grandis</i> I
14	<i>P. curvipes</i> Švec, 2014	CH (Yunnan)	A	VS	N	<i>grandis</i> I
15	<i>P. fortepunctata</i> Švec, 2009	CH (Yunnan)	A	VS	N	<i>grandis</i> I
16	<i>P. grandis</i> Portevin, 1905	JA (Shikoku), FE	A	VS	N	<i>grandis</i> I
17	<i>P. indica</i> (Portevin, 1926)	IN (Kashmir)	A	VS	N	<i>grandis</i> I
18	<i>P. michaeli</i> Švec, 2009	CH (Yunnan)	A	VS	N	<i>grandis</i> I
19	<i>P. picea</i> (Hisamatsu, 1964)	Taiwan, JA (Amami Ōshima)	A	VS	N	<i>grandis</i> I
20	<i>P. similis</i> Švec, 2014	CH (Yunnan)	A	VS	N	<i>grandis</i> I
21	<i>P. sinica</i> Angelini & Švec, 1995	CH (Yunnan)	A	VS	N	<i>grandis</i> I
22	<i>P. strigicollis</i> Švec, 2009	CH (Yunnan)	A	VS	N	<i>grandis</i> I
23	<i>P. torta</i> Švec, 2014	CH (Yunnan)	A	VS	N	<i>grandis</i> I
24	<i>P. viktorai</i> Švec & Zhang, 2020	CH (Sichuan)	A	VS	N	<i>grandis</i> I
25	<i>P. yunnanica</i> Švec, 2009	CH (Yunnan)	A	VS	N	<i>grandis</i> I
26	<i>P. lenka</i> Švec, 2002	CH (Hubei)	A	VS	L	<i>grandis</i> II
27	<i>P. shannae</i> Angelini & Švec, 2000	CH (Shaanxi, Hubei)	A	VS	L	<i>grandis</i> II
28	<i>P. flavicollis</i> Daffner, 1988	IN W. Bengal, Darjeeling, Meghalaya)	A	S	N	<i>strigosa</i> I
29	<i>P. parva</i> Švec, 2014	CH (Yunnan)	A	S	N	<i>strigosa</i> I
30	<i>P. strigosa</i> (Portevin, 1905)	Thailand, NE, IN (Sikkim, Darjeeling, Himachal Pradesh), CH (Shaanxi, Sichuan, Yunnan)	A	S	N	<i>strigosa</i> I
31	<i>P. disparilis</i> Champion, 1924	IN (Meghalaya, Kumaon - Uttar Pradesh, Darjeeling), NE, CH (Yunnan)	A	S	L	<i>strigosa</i> II
32	<i>P. jaegeri</i> Švec, 2009	NE	A	S	L	<i>strigosa</i> II

33	<i>P. schuelkei</i> Švec, 2002	CH (Sichuan, Yunnan)	A	S	L	<i>strigosa</i> II
34	<i>P. annulata</i> Švec, 2009	CH (Yunnan)	A	D	N	<i>hilleri</i> I
35	<i>P. hilleri</i> Reitter, 1884	CH (Fujian, Jilin, Shaanxi, Yunnan), JA (Shikoku), KO, FE (Chabarov. Krai, Primor. Krai), NE	A	D	N	<i>hilleri</i> I
36	<i>P. hoshinai</i> Park & Ahn, 2007	KO	A	D	N	<i>hilleri</i> I
37	<i>P. interposita</i> Švec, 2009	CH (Yunnan)	A	D	N	<i>hilleri</i> I
38	<i>P. klapperichi</i> Daffner, 1988	Taiwan	A	D	N	<i>hilleri</i> I
39	<i>P. riedeli</i> Daffner, 1991	IN (Tamil Nadu)	A	D	N	<i>hilleri</i> I
40	<i>P. acuminata</i> Švec, 2009	CH (Yunnan), IN (Uttaranchal), NE	A	D	L	<i>hilleri</i> II
41	<i>P. distincta</i> Švec, 2016.	CH (Yunnan)	A	D	L	<i>hilleri</i> II
42	<i>P. minor</i> Švec, 2009	NE	A	D	L	<i>hilleri</i> II
43	<i>P. malaysica</i> sp. nov.	Malaysia (Pahang)	A	ED	N	<i>rastrata</i> I
44	<i>P. baliense</i> sp. nov.	Indonesia (Bali)	A	ED	N	<i>rastrata</i> I
45	<i>P. boukali</i> Švec, 1996	S IN (Kerala)	A	ED	N	<i>rastrata</i> I
46	<i>P. flaveola</i> Švec, 2009	NE	A	ED	N	<i>rastrata</i> I
47	<i>P. hemisphaerica</i> Champion, 1924	S IN (Madras), Sri Lanka	A	ED	N	<i>rastrata</i> I
48	<i>P. loebli</i> Daffner, 1988	S IN (Madras)	A	ED	N	<i>rastrata</i> I
49	<i>P. major</i> Švec, 2009	CH (Yunnan)	A	ED	N	<i>rastrata</i> I
50	<i>P. mycophila</i> sp. nov.	CH (Yunnan)	A	ED	N	<i>rastrata</i> I
51	<i>P. rastrata</i> Champion, 1923	IN (Himachal Pradesh - Kulu, Uttar Pradesh, Meghalaya, W Bengal - Darjeeling, Uttarakhand - Kumaon), CH (Yunnan), NE	A	ED	N	<i>rastrata</i> I
52	<i>P. rotundata</i> Daffner, 1988	Vietnam, NE	A	ED	N	<i>rastrata</i> I
53	<i>P. variicornis</i> Champion, 1924	S IN (Nilgiri Hills, Madras)	A	ED	N	<i>rastrata</i> I
54	<i>P. aciculata</i> Daffner, 1988	IN (Darjeeling)	A	ED	L	<i>rastrata</i> II
55	<i>P. besucheti</i> Daffner, 1988	IN (Darjeeling)	A	ED	L	<i>rastrata</i> II
56	<i>P. dilatata</i> Angelini & Švec, 2000	CH (Shaanxi, Sichuan, Hubei, Yunnan)	A	ED	L	<i>rastrata</i> II
57	<i>P. forticornis</i> Daffner, 1988	Taiwan	A	ED	L	<i>rastrata</i> II
58	<i>P. schneideri</i> Švec, 2003	NE	A	ED	L	<i>rastrata</i> II

Remarks:

\* VS - very sparse: interval between strigosities (i):  $i \geq 0.03$  mm;

S - sparse:  $0.01 < i \leq 0.02$  mm;

D - dense:  $i = 0.01$  mm;

ED very or extremely dense (elytra sometimes opalescent):  $i < 0.1$  mm

\*\* - explanation of subgroups:

Subgroup I. - Antennomere VII of similar size as rest of antennal club approximately as large as AIX, AX in both sexes (exceptionally AVII a little broader than other segments - in *P. strigicollis* Švec, 2009).

Subgroup II - Antennomere VII strikingly enlarged in male; usually a little larger than AIX, X in female.

\*\*\* - elytra not strigose, only traces of several transverse strigosities on shoulders.

Abbreviations of the distribution: CH - continental China, JA - Japan, IN - India, KO- Korea, NE - Nepal, FE - Far East of Russia, S - southern



Fig. 1. Vicinity of Tongbiguan - site of the occurrence of *Dermatohomoeus minor* sp. nov. Photo J. Hájek



Fig. 2. Vicinity of Tongbiguan - site of the occurrence of *Pseudocolenis rastrata* Champion, 1923, *Colenisia castanea* Švec, 2011, *C. schuelkei* Švec, 2011 and *Dermatohomoeus alesianus* Daffner, 1990. Photo J. Hájek



Fig. 3. Host mushroom (*Marasnius* sp.) of *Pseudocolenis rastrata* Champion, 1923, *Colenisia castanea* Švec, 2011, *C. schuelkei* Švec, 2011 and *Dermatohomoeus alesianus* Daffner, 1990 in Tongbiguan. Photo J. Hájek



Fig. 4. Vicinity of Kongshu - site of the occurrence of *Pseudocolenis mycophila* sp. nov., *P. rastrata* Champion, 1923, *P. schuelkei* Švec, 2011 and *P. acuminata* Švec, 2009. Photo J. Hájek



Fig. 5. Host mushroom (*Gymnopus* sp.) of *Pseudocolenis mycophila* sp. nov., *P. rastrata* Champion, 1923, *P. schuelkei* Švec, 2011 and *P. acuminata* Švec, 2009 in Kongshu. Photo J. Hájek

*Pseudocolenis baliense* sp. nov.

(Figs. 6, 7)

**Type material.** Holotype (♂): "INDONESIA, BALI: Buleleng Distr.; Tamblingan-Danau Tamblingan [lake], montane forest around lake, 19.-21.ii.2015, 08°16.1' S, 15°05.5-9' E, 1250 m, J. Hájek & J. Šumpich leg. // genitalia in Euparal", (NMPC). Paratypes: (2 ♂♂, 9 ♀♀): same data as in holotype, (NMPC, ZSPC).

**Description.** Body broadly oval. Length in holotype 2.4 mm, head 0.3 mm, pronotum 0.7 mm, elytra 1.4 mm, antenna 0.8 mm, aedeagus 0.56 mm. Maximum width of head 0.7 mm, pronotum 1.5 mm, elytra 1.6.

Dorsum chestnut brown, clypeus paler, base of pronotum and lateral sides lighter, legs yellow-reddish with a little paler tarsi, head and pronotum somewhat opalescent; antennomeres I-IV yellow, AV-AVI infuscate, AVII-AXI brown. Entire dorsal surface micro-sculptured by transverse strigosites.

Head. With very fine, small and unobtrusive, irregularly distributed punctures, spaced by about 10 or more times their own diameter. Distinctly, very finely very densely strigose. Antennal club 5-segmented. Relative length of AII-AXI (AII = 1.0): 1.0 - 1.3 - 0.8 - 0.7 - 0.8 - 0.9 - 0.8 - 0.8 - 0.8 - 1.7. Relative width of AII-AXI (AII = 1.0): 1.0 - 0.8 - 0.7 - 0.8 - 1.3 - 1.8 - 1.7 - 1.8 - 1.8 - 1.7. W/L of AII-AXI = 0.5 - 0.3 - 0.4 - 0.6 - 0.9 - 1.0 - 1.1 - 1.1 - 1.1 - 0.5.

Pronotum. With very fine puncturation, similarly to that on head. Punctures separated more than 10 times their own diameter. Very finely and densely strigose, strigosity distinctly denser than those on head. Posterior angles distinctly obtuse abruptly rounded on tip in dorsal view, rectangular with abruptly rounded tip in lateral view. Base slightly emarginate before hind angles.

Elytra. Strigosity extremely dense, separated less than 0.01 mm (about 0.007mm). Very small and fine punctures hardly broader than individual transverse striae tend to form very unobtrusive rows in some places.

Mesoventrite. Type A, mesoventral bump broad, distinct, obliquely falling anteriorly.



Figs. 6, 7. *Pseudocolenis baliense* sp. nov.: 6- aedeagus dorsally; 7- spermatheca.

Legs. Anterior tarsomeres I-IV a little widened, tenent setae of TI-TIV sparse, long.  
Male genitalia. Aedeagus as in Fig. 6.

**Variation and sexual dimorphism.** Length of body in the type series 2.4-2.5 mm. Female tarsi slender. Antennomere VII a little broader than AVIII, and as broad as AIX and AX in female. Spermatheca as in Fig. 7, its length 0.24 mm.

**Differential diagnosis.** The size and dorsal sculpture and also the shape of the aedeagus in *Pseudocolenis baliense* sp. nov is very similar to those in Indian *P. loebli* Daffner, 1988. It differs from *P. loebli* by the shape of the endophallic structures having siphon distinctly swollen basally, while siphon is almost equally wide in *P. loebli*. The spermatheca is also of the shape specific for the new species differing from that in *P. loebli* by the presence of a node on the basal third of the distal part of spermatheca (Fig. 7). The body of *P. baliense* is broadly oval, while *P. loebli* oblong oval.

**Biology.** Unknown.

**Etymology.** The name of the new species is derived from the name of Bali Island, where the type locality of the species is located.

***Pseudocolenis malaysica* sp. nov.**  
(Figs. 8, 9)

**Type material.** Holotype (♂): "MALAYSIA, PAHANG / Cameron Highlands, TANAH RATA vill. env. Gunung Jasar [Mt.]: 1470-1705 m, 04° 28.4-7' N, 101° 21.6-22' E J. Hájek leg., 18.iv.-10.v.2009 // genitalia in water / soluble medium polyvinylpyrrolidin", (NMPC). Paratypes: (2 ♀♀): the same data as in holotype, (NMPC, ZSPC).

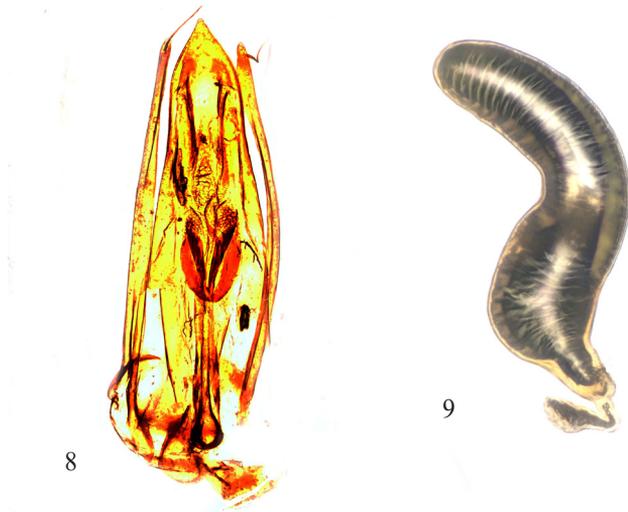
**Description.** Body broadly oval. Length in holotype 2.0 mm, head 0.2 mm, pronotum 0.6 mm, elytra 1.2 mm, antenna 0.9 mm, aedeagus 0.69 mm. Maximum width of head 0.6 mm, pronotum 1.2 mm, elytra 1.3 mm.

Head and pronotum light brown, anterior half of head lighter coloured, pronotum lighter along margins, elytra yellow-brown densely irregularly dark veined. Head and pronotum opalescent. Legs and AI-AVI and AXI yellow, AVII-AX dark brown. Entire dorsal surface micro-sculptured by transverse strigosity.

Head. With very small very fine and sparse irregularly distributed punctures spaced by more than 10 times their own diameter. Finely, extremely densely, strigose. Antennal club 5-segmented. Relative length of AII-AXI (AII = 1.0): 1.0 - 1.2 - 0.6 - 0.7 - 0.6 - 0.7 - 0.6 - 0.8 - 0.9 - 1.7. Relative width of AII-AXI (AII = 1.0): 1.0 - 0.8 - 0.6 - 0.8 - 1.2 - 1.8 - 1.6 - 2.4 - 2.4 - 2.0. W/L of AII-AXI = 0.4 - 0.3 - 0.4 - 0.5 - 0.9 - 1.1 - 1.1 - 1.2 - 1.1 - 0.5.

Pronotum. With very fine puncturation, punctures separated 4-10 or more times their own diameter. Very finely and extremely densely strigose similarly as on head. Posterior angles slightly obtuse abruptly rounded on tip in dorsal view, rectangular with abruptly rounded tip in lateral view.

Elytra. Strigosity extremely dense, separated by less than 0.01 mm (0.004-0.005 mm).



Figs. 8, 9. *Pseudocolenis malaysica* sp. nov.: 8- aedeagus dorsally; 9- spermatheca.

Very small and fine punctures hardly broader than individual striae.

Mesoventrite. Type A, mesoventral bump broad, distinct, obliquely falling anteriorly.

Wings. Developed.

Legs. Anterior tarsomeres I-IV a little widened, tenent setae of TI-TIV sparse, long.

Male genitalia. Aedeagus in Fig. 8.

**Variation and sexual dimorphism.** Length of body in the type series 2.0-2.2 mm. Female tarsi slender. Antennomere VII a little broader than AVIII, as wide as AIX and AX in female. Spermatheca in Fig. 9, its length 0.16 mm.

**Differential diagnosis.** Taking into account the shape of the aedeagus and spermatheca *Pseudocolenis malaysica* sp. nov. stands close to two, each other extremely similar species - the Palearctic *P. hilleri* Reitter, 1884 and the Korean *P. hoshinai* Park & Ahn, 2007. The new species differs from both species by much denser strigosity on elytra. Elytral dense strigosity are separated approximately by 0.01 mm space in the both mentioned similar species, while the strigosity are separated by distinctly less than 0.01 mm in *P. malaysiaca* sp. nov. The new species also differs from both species by the shape of the endophallus, especially by its slim, basally abruptly bulbous, siphon that is basally gradually widened in *P. hilleri* and *P. hoshinai*. The shape of spermatheca also slightly differs in *P. malaysica* sp. nov. by its slim basal part.

**Biology.** Unknown.

**Etymology.** The name of the new species is derived from the country of the origin.

*Pseudcolenis mycophila* sp. nov.

(Figs. 10, 11)

**Type material.** Holotype (♂): "CHINA: YUNNAN PROV. Gaoligong Mts. NNR 1.1 km SE of Kongshu vill. 25° 43.10' N, 98°38.31' E, J. Hájek J. Růžička & CH.-B. Wang leg. // (CH23) 30.vi.2016 2240 m, broad-leaved forest on mature mushrooms (Basidiomycota) on dead wood near brook // Genitalia in polyvinyl-pyrrolidin" (NMPC). Paratypes: (11 ♂♂, 12 ♀♀): the same data as in holotype, (NMPC, ZSPC).

**Description.** Body oblong oval, length in holotype 2.7 mm, head 0.3 mm, pronotum 0.7 mm, elytra 1.7 mm, antenna 1.0 mm, aedeagus 0.85 mm. Maximum width of head 0.7 mm, pronotum 1.5 mm, elytra 1.7 mm.

Dorsum yellow-red, head and pronotum slightly opalescent, vertex, disc of pronotum and some pores on elytra darker, legs yellow-red, antennomeres I-V yellow-red, AVI slightly infusate AVI-AXI brown, AXI with lighter apex. Entire dorsal surface micro-sculptured by transverse strigosity.

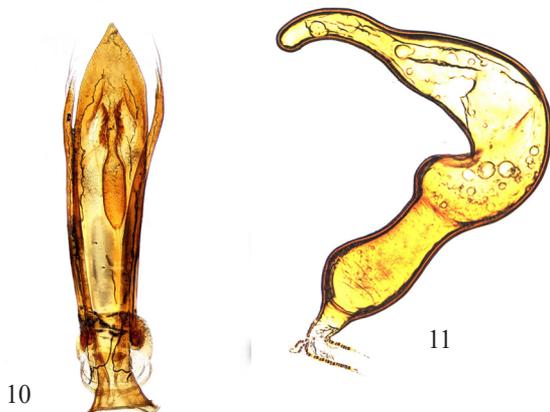
Head. With very small very fine and sparse punctures irregularly distributed, spaced by 6 to more than 10 times their own diameter. Very finely extremely densely strigose. Antennal club 5-segmented. Relative length of AII-AXI (AII = 1.0): 1.0 - 1.1 - 0.5 - 0.6 - 0.6 - 0.8 - 0.9 - 1.0 - 1.0 - 1.6. Relative width of AII-AXI (AII = 1.0): 1.0 - 1.0 - 0.8 - 0.8 - 1.3 - 2.3 - 2.0 - 2.3 - 2.3 - 2.0. W/L of AII-AXI = 0.4 - 0.4 - 0.7 - 0.6 - 1.0 - 1.3 - 1.0 - 1.0 - 1.0 - 0.5.

Pronotum. With very fine puncturation similar to that on head. Very finely and extremely densely strigose, strigosity more finely and densely arranged than on head. Posterior angles slightly acute abruptly rounded on tip in dorsal view, rectangular with abruptly rounded tip in lateral view.

Elytra. Strigosity extremely dense, a little denser than on head, sparser than on pronotum, separated by less than 0.01 mm (approximately 0.007 mm). Two irregular rows of punctures detectable on basal third of elytra; rest of elytra with very small and fine punctures irregularly distributed punctures separated by about 3-10 or more times their own diameter.

Mesoventrite. Type A, mesoventral bump broad, distinct, obliquely falling anteriorly.

Wings. Developed.



Figs. 10, 11. *Pseudcolenis mycophila* sp. nov.: 10- aedeagus dorsally; 11- spermatheca.

Legs. Anterior tarsomeres I-IV a little widened, pro-tarsomere I protracted, 0.7 times as long as TV, tenent setae of TI-TIV dense, long.

Male genitalia. Aedeagus as in Fig. 10.

**Variation and sexual dimorphism.** Body length in the type series 2.7-3.2 mm, Elytra irregularly dark dotted or dark veined or entirely yellowish in the individual paratypes. Female tarsi slender. Antennomere VII a little broader than AVIII, as wide as AIX and AXI in female. Spermatheca as in Fig. 11; length of spermatheca 0.27 mm.

**Differential diagnosis.** Taking into account the shape, colour and the sculpture of the dorsum and also the shape of the aedeagus and spermatheca *Pseudocolenis mycophila* sp. nov. stands very close to *P. major* Švec, 2009 known also from Yunnan. Beside others both species differ in the structure of the male anterior tarsi. Anterior pro-tarsomere of *P. mycophila* is long, 0.7 times as long as the pro-tarsomere V, while the anterior pro-tarsomere I of *P. major* is longer compared to *P. mycophila* being as long as pro-tarsomere V.

The endophallus is similar in the both species but differing in the paired lateral structures adjacent to the terminal part of the siphon. Those structures are of a lyre-shape in *P. mycophila* sp. nov. (Fig. 10) while the same structures resemble triangular or an arrow plumage in *P. major*. Terminal slim part of siphon is approximately as long as cylindrical widened basal part of the siphon in *P. mycophila* sp. nov., while the same is longer than the basal part in *P. major*. The shape of the basal part of spermatheca can a little vary in the individual specimens so with reservation it is to mention that the species also differs by the shape of spermatheca having two spherical amplification on the basal part (Fig. 11) in *P. mycophila* sp. nov. while the amplifications are semi-spherical in *P. major*.

**Biology.** Details unknown. Specimens of the type series were found on mature fruiting bodies of mushrooms (Fig.3) probably *Gymnopus* (Persoon) Roussel 1806.

**Etymology.** As the specimens of the new species were found on mushrooms, the name of the new species is derived from the Greek words *mýkis* (mushroom) and *fili* (friend).

***Pseudocolenis crassicornis* Švec, 2009**  
(Fig. 12)

**Type locality:** China: Yunnan Baoshan Pref., Gaoligong Shan, 33 km SE Tengchong, 2100-2200 m, 24°51'22''N 98°45'36''E.

**Material examined:** (1 ♀), "China, Yunnan prov. Lushui Co., Gaoligong Mts, Lusaihe vill., 2135-2450 m, 25°58.3-7' N, 98°44.5-45.3' E, Hájek, Hružová, Král, Růžička, Sommer lgt. // 30.vi.-2.vii. 2019, river valley, mixed forest on vegetation in dead wood and fungi", (NMPC).

**Distribution.** China (Yunnan).

First record since the date of the description. The spermatheca is figured for the first time (Fig. 12). Length of spermatheca 0.18 mm.



Figs. 12, 13. Spermatheca: 12- *Pseudocolenis crassicornis* Švec, 2009; 13- *Pseudocolenis torta* Švec, 2014.

***Pseudocolenis torta* Švec, 2014**  
(Fig. 13)

**Type locality:** China, Yunnan, Baoshan Pref., Gaoligong Shan, 32 km SE Tengchong 1600 m, 24°51'11''N, 98°44'27''E.

**Material examined:** (1 ♂, 3 spec.), “CHINA: YUNNAN Prov. Gaoligong Mts NNR, N of Baihualin vill., 1535-1630 m, 25°17.7-18.2' N, 98°48.0-1' E J. Hájek & J. Růžička leg. // 6.-9.vii.2016; individually from vegetation; border of ruderal orchard and broadleaved forest”, (NMPC, ZSPC); (1 ♂), “CHINA: YUNNAN Prov. 8 km NW Gudong, Yunfeng Shan Nat. Park, 25°22.79'N, 98°24.64'E, Hájek & J. Růžička leg. // (Ch18) 3.vii. 2016; 2240 m, sift #19, broad-leaved forest with *Rhododendron* and *Pinus*, fungi + wet debris near fallen logs”, (NMPC).

**Distribution.** China (Yunnan).

First record since the date of the description. The spermatheca is figured for the first time (Fig. 13). Length of spermatheca 0.28 mm.

***Pseudocolenis rastrata* Champion, 1923**

**Type locality:** India: West Almora division of Kumaon.

**Material examined:** (32 spec.), “CHINA: YUNNAN Prov. Gaoligong Mts NNR, 2.6 km E of Kongshu vill., 25°43.17'N, 98°39.65'E, J. Hájek & J. Růžička leg. // (Ch29) 1.vii. 2016; 2220 m, on mature mushrooms (Basidiomycota), dead stump of *Juglans*, on steep slope near road” (NMPC, ZSPC); (1 ♂, 1 ♀, 42 unsexed spec.), “CHINA: YUNNAN Prov. 6.5-5.2 km W Tongbiguan 24°36.6-8'N, 97°35.5-36.4'E, 1290-1325 m J. Hájek & J. Růžička leg. // 25.+27.vi.2016; individually from vegetation, from fungi; broadleaved tropical forest”, (NMPC, ZSPC); (3 unsexed spec.), “CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1.6 km NW of Baihualin vill., 25°18.55'N, 98°47.75'E, J. Hájek & J. Růžička leg. // (Ch42) 7.vii. 2016; 1530 m, sift #23, deep wet debris near trunks, broad-leaved forest with bamboo above waterfall”, (NMPC, ZSPC); (9 unsexed spec.), “CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1-2 km NW of Baihualin vill., 25°18.2-3'N, 98°47.0-7'E, J. Hájek & J. Růžička leg. // (Ch43-44) 8.vii. 2016; 1820-2045 m, on mature mushrooms (Basidio-mycota), along road in broad-leaved forest”, (NMPC, ZSPC).

**Distribution.** India (Himachal Pradesh, Uttar Pradesh, Meghalaya, West Bengal, Kumaon), China (Yunnan), Nepal.

The occurrence of the species on Basidiomycota mushrooms (*Marasmius* sp. and *Gymnopus* sp.) is reported for the first time.

### *Pseudocolenis carinata* Švec, 2009

**Type locality:** China: Yunnan, Baoshan Pref., Gaoligong Shan Eastern pass, 36 km Southeast of Tengchong. 2200 m, 24°49'32"N 98°46'06"E.

**Material examined:** (1 ♂), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1-2 km NW of Baihualin vill., 25°18.2-3'N, 98°47.0-7'E, J. Hájek & J. Růžička leg. // (Ch43-44) 8.vii. 2016; 1820-2045 m, on mature mushrooms (Basidio-mycota), along road in broad-leaved forest", (NMPC).

**Distribution.** China (Yunnan).

First finding since description. The occurrence of the species on Basidiomycota mushrooms is reported for the first time.

### *Pseudocolenis schuelkei* Švec, 2002

**Type locality:** China, West Sichuan, Ganzoi Tibet aut.pref., Luding Co., Erlangshan-Pass.

**Material examined:** (2 ♂♂, 2 ♀♀), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1-2 km NW of Baihualin vill., 25°18.2-3'N, 98°47.0-7'E, J. Hájek & J. Růžička leg. // (Ch43-44) 8.vii. 2016, 1820-2045 m, on mature mushrooms (Basidio-mycota), along road in broad-leaved forest", (NMP, ZSPC); (1 ♂, 2 unsexed spec.), "CHINA: YUNNAN PROV. Gaoligong Mts. NNR 1.1 km SE of Kongshu vill. 25 ° 43.10'N, 98°38.31'E J. Hájek J. Růžička & CH.-B. Wang leg. // (CH23) 30.vi.2016, 2240 m, broad-leaved forest on mature mushrooms (Basidiomycota) on dead wood near brook", (NMPC); (2 ♂♂), "CHINA: Yunnan, mts W Dongchuan, Sedan Snow Mountain Scenic Resort, 26°06'08"N, 102°54'46"E, 2620 m, sec. pine for., litter, moss, and roots of herbs sifted, 14.VIII.2014, leg. M. Schülke [CH14-07], (MSBC, ZSPC); (1 ♂, 3 unsexed spec.), "CHINA: Yunnan, Dali Bai Aut. Pref., Wuliang Shan, 11 km SW Weishan, 25°08'46.7"N, 100°14'14.1"E, 2520 m, pine forest, litter & dead wood sifted, 14.IX.2009, leg. M. Schülke [CH09-52]", (MSBC, ZSPC); (1 ♂, 1 unsexed spec.), "CHINA: Yunnan, Dali Bai Aut. Pref. Diancang Shan, E pass, 43 km NW Dali, 25°59'50"N, 100°00'30"E, 2700 m, secondary pine forest, litter, moss and mushrooms sifted, 23.VIII. 2009, leg. M. Schülke [CH09-02]", (MSBC, ZSPC).

**Distribution.** China (Sichuan; Yunnan).

The occurrence of the species on mushrooms (*Gymnopus* sp.) is reported for the first time.

### *Pseudocolenis acuminata* Švec, 2009

**Type locality:** India, Uttaranchal State, near Bageshvar, Dhakiri vill.

**Material examined:** (1 ♂, 1 unsexed spec.), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1-2 km NW of Baihualin vill., 25°18.2-3'N, 98°47.0-7'E, J. Hájek & J. Růžička leg. // (Ch43-44) 8.vii. 2016; 1820-2045 m, on mature mushrooms (Basidio-mycota), along road in broad-leaved forest", (NMPC, ZSPC); (2 ♂♂, 2 ♀♀, 2 unsexed spec.), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1.1 km SE of Kongshu vill., 25°43.10'N, 98°38.31'E, J. Hájek, J. Růžička & Ch.-B. Wang leg. // (Ch23) 30.vi. 2016; 2240 m, broad-leaved forest, on mature mushrooms (Basidiomycota) on dead wood near brook", (NMPC, ZSPC); (1 ♂, 1 ♀, 2 unsexed spec.), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 2.6 km E of Kongshu vill., 25°43.17'N, 98°39.65'E, J. Hájek & J. Růžička leg. //

(Ch29) 1.vii. 2016; 2220 m, on mature mush-rooms (Basidiomycota), dead stump of *Juglans*, on steep slope near road", (NMPC, ZSPC).

**Distribution.** India (Uttaranchal), Nepal, China (Yunnan).

First record since description. The occurrence of the species on mushrooms (*Gymnopus* sp.) is reported for the first time.

### *Pseudocolenis annulata* Švec, 2009

**Type locality:** China, Yunnan, Baoshan Pref., Gaoligong Shan, 33 km Southeast of Tengchong.

**Material examined:** (1 ♂, 1 ♀, 6 unsexed spec.), "CHINA: YUNNAN Prov. 8 km NW Gudong Yunfeng Shan NP, 1845 m, 25°22.6-7'N, 98°24.4-5'E, J. Hájek & J. Růžička leg. // 29.vi.2016; individually from vegetation, from fungi; secondary broadleaved forest around lower cable car station", (NMPC, ZSPC); (1 ♂), "CHINA: YUNNAN Prov. Gaoligong Mts NNR / E of Kongshu vill., 2035-2230 m/ 25°43.2-5'N, 98°38.4-40.0'E / J. Hájek & J. Růžička leg. // 1.vii.2016; individually, border of pastures and mixed forest under bark", (NMPC).

**Distribution.** China (Yunnan).

First record since description. The occurrence of the species on mushrooms is reported for the first time.

### *Pseudocolenis parva* Švec, 2014

**Type locality:** China, Yunnan: Mao Jiao Shan, Eastern pass, 58 km Northeast of Dali.

**Material examined:** (2 ♂♂, 4 unsexed spec.), "CHINA: YUNNAN Prov. Gaoligong Mts NNR N of Baihualin vill., 1535-1630 m, 25°17.7-18.2'N, 98°48.0-1'E J. Hájek & J. Růžička leg. // 6.-9.vii.2016; individually from vegetation; border of ruderal, orchards and broadleaved forest", (NMPC, ZSPC).

**Distribution.** China (Yunnan).

First record from the date of description.

### Genus *Dermatohomoeus* Hlišnikovský, 1963

Table 2. A list of the species of genus *Dermatohomoeus* Hlišnikovský, 1963.

	Name	Known distribution
1	<i>D. alesianus</i> Daffner, 1990	NE, CH (Yunnan)
2	<i>D. angelinii</i> Švec, 2004	Madagascar
3	<i>D. annae</i> Švec, 2004	Madagascar
4	<i>D. apicalis</i> Cooter et Švec, 2002	Indonesia (Sulawesi)
5	<i>D. apicicornis</i> Cooter et Švec, 2002	Indonesia (Sulawesi)
6	<i>D. balkei</i> Švec, 2009	Indonesia (Irian Jaya)
7	<i>D. banari</i> Švec, 2022	Madagascar
8	<i>D. besuchetianus</i> Daffner, 1988	IN (Indian – Madras = Chennai)
9	<i>D. bidentatus</i> Švec et Cooter, 2015	CH (Yunnan)
10	<i>D. biroi</i> Hlišnikovský, 1963	Indonesia (Irian Jaya)

11	<i>D. brevipterus</i> Švec, 2022	Madagascar
12	<i>D. brunneus</i> Daffner, 1988	IN (Tamil Nadu, Meghalaya)
13	<i>D. bulirschi</i> Švec, 2004	Madagascar
14	<i>D. ferrugineus</i> Švec, 2004	Madagascar
15	<i>D. fulvus</i> Daffner, 1986	Papua N. Guinea
16	<i>D. garous</i> Daffner, 1988	IN (Meghalaya)
17	<i>D. guineensis</i> Hlisenkovský, 1963	Papua N. Guinea
18	<i>D. hamatus</i> Švec, 1997	Indonesia (Borneo)
19	<i>D. hirsutus</i> Švec, 2022	Madagascar
20	<i>D. indicus</i> Daffner, 1988	IN (Uttar Pradesh, Uttarakhand -Kumaon)
21	<i>D. insularis</i> (Hlisenkovský, 1972)	Sri Lanka, IN (Uttar Pradesh, Assam)
22	<i>D. kaszabi</i> (Hlisenkovský 1963)	Australia: North Queensland, Bismarck Archipelago, Papua N. Guinea:
23	<i>D. kejvali</i> Švec, 1996	IN (Tamil Nadu)
24	<i>D. khasicus</i> Daffner, 1988	IN (Meghalaya)
25	<i>D. lobatus</i> Švec, 2022	Madagascar
26	<i>D. loeblianus</i> Daffner, 1988	IN (W. Bengal - Darjeeling), Nepal
27	<i>D. longicornis</i> Daffner, 1988	NE, CH (Yunnan)
28	<i>D. madagascarensis</i> Švec, 2004	Madagascar
29	<i>D. maliauensis</i> Schilthuizen, Otani & Seip, 2017	Malaysia (Borneo -Sabah)
30	<i>D. michaeli</i> Švec, 2009	Indonesia (Irian Jaya)
31	<i>D. micropunctatus</i> Švec, 2004	Madagascar
32	<i>D. minor</i> sp.nov.	CH (Yunnan)
33	<i>D. montanus</i> Švec, 2022	Madagascar
34	<i>D. muehlei</i> Daffner, 1988	Burundi
35	<i>D. micropunctatus</i> Švec & Baňar, 2021	Madagascar
36	<i>D. neoguineensis</i> Hlisenkovský, 1963	Papua N. Guinea (Bismarck Arch.), Solomon Islands
37	<i>D. obscuratus</i> Daffner, 1988	IN (Meghalaya), CH (Yunnan, Shaanxi)
38	<i>D. operculatus</i> Švec, 2022	Madagascar
39	<i>D. parameralis</i> Švec, 2022	Madagascar
40	<i>D. pilosus</i> (Hlisenkovský, 1964)	Solomon Isl. (Rennel Isl.)
41	<i>D. portevini</i> (Champion, 1923)	India (Uttarakhand -Kumaon), Indonesia (Borneo - W Sarawak)
42	<i>D. punctatus</i> Daffner, 1988	Thailand, CH (Yunnan, Zhejiang, Sichuan)!
43	<i>D. puncticollis</i> Hlisenkovský, 1963	Papua N. Guinea
44	<i>D. rufus</i> Daffner, 1988	IN (Kerala)
45	<i>D. sarawaki</i> Hlisenkovský, 1965	Malaysia (Borneo)
46	<i>D. schuelkei</i> Švec, 2011	CH (Yunnan)
47	<i>D. sedlaceki</i> Daffner, 1986	Papua N. Guinea

48	<i>D. silvaticus</i> (Hlisenkovský, 1972)	Sri Lanka
49	<i>D. similis</i> Švec, 2004	Madagascar
50	<i>D. striatipennis</i> Daffner, 1988	Vietnam, Thailand
51	<i>D. strigellus</i> Daffner, 1988	NE, IN (Meghalaya)
52	<i>D. subtilis</i> sp. nov.	Malaysia (Pahang)
53	<i>D. terrenus</i> (Hisamatsu, 1985)	JA (10 islands), KO
54	<i>D. wachteli</i> Daffner, 1986	Australia (Queensland)

Abbreviations of the distribution: CH - continental China, JA - Japan, IN - India, KO- South Korea, NE - Nepal, S - south.

### *Dermatohomoeus minor* sp. nov.

(Fig. 14)

**Type material.** Holotype (♂): “CHINA: Yunnan Prov. 1 km NW Tongbiguan 24°36.98’N, 97°38.96’E, J. Hájek & J. Růžička leg. // (CH10) 24.vi.2016, 1435 m sift #06, border of secondary broad leaved forest at foot of trees// Genitalia in water-soluble medium”, (NMPC). Paratypes: (11 ♂♂, 2 ♀♀): the same locality data, (NMPC, ZSPC); (1 ♂): “CHINA: Yunnan Prov. 0.7 SW km NW Tongbiguan 24°36.04’N, 97°39.05’E, J. Hájek & J. Růžička leg. // (CH14) 26.vi.2016, 1380 m, sift #09, border of secondary mixed forest, debris above small/ brook” // Genitalia in polyvinyl-pyrrolidin”, (NMPC).

**Description.** Body length in holotype 1.9 mm, head 0.2 mm, pronotum 0.6 mm, elytra 1.1 mm, antenna 0.7 mm, aedeagus 0.6 mm. Maximum width of head 0.5 mm at eyes, pronotum 1.1 mm at base, elytra 1.1 mm at basal third.

Oblong oval. Dorsum brown, clypeus lighter, antennomeres I-VI and AVIII reddish, AVII, AIX-AXI lightly brown, femora and tibiae chest-nut coloured, tarsi yellow-red. Underside chest-nut, coxal margins and hind margins of femora darker. Entire dorsum punctured. Elytra with fine transversal strigosites.

Head. Without micro-sculpture. Eyes subglobose, well developed. Dorsal surface of head with very indistinct fine sparse puncturation, punctures separated more than 10 times their own diameter. Antennomeres II-XI longer than wide. AXI narrower than AX. W/L of AVII = 0.8.

Pronotum broadest at base. Base straight; very feebly emarginate before the acute abruptly rounded posterior angles dorsally seen. Posterior angles acute abruptly rounded in lateral view. Sides evenly curved from base to anterior angles in both dorsal and lateral view. Pronotal puncturation very fine and sparse separated more than 10 times their own diameter. Punctures stronger and denser toward base.

Elytra broadest approximately at basal third of their length with lateral margins roundly curved to apex. Elytral surface punctured. Punctures separated predominantly by 1-2 times their own diameter, irregularly arranged. Medially, near suture, punctures tend to create two irregular double or even triple rows of punctures in some places. Interval punctures very similar, irregular, a little sparser. Elytral punctures are connected by transverse or oblique strigosity. Sutural stria extends approximately to basal fourth of elytra.

Legs. Anterior tarsomere I distinctly dilated and elongate in male. Ratio of length of TI: TII-V (without claws) of anterior tarsus = 0.3.

Male genitalia. Aedeagus in Fig. 14.

**Variation and sexual dimorphism.** Length of body in the type series 1.5-1.9 mm. Anterior tarsi slender in female. Length of spermatheca 0.13 mm.

**Differential diagnosis.** The species of the genus *Dermatohomoeus* are generally very similar in their appearance especially those that are of similar colour of dorsum and the size of body. The best way to differentiate the individual species is to compare their genitalia, especially the shape of the aedeagus and also the shape of the internal sac. *Dermatohomoeus minor* sp. nov. differs from all Asian known species by the combination of the aedeagal characters possessing the tegmen terminating in long slim and acute process and by plates covering ventro-apical foramen having a long paired terminal processes visible dorsally on each side of apex of tegmen.

**Biology.** Unknown.

**Etymology.** The name of the new species comes from Latin minor (= smaller).

***Dermatohomoeus subtilis* sp. nov.**

(Fig. 15)

**Type material.** Holotype (♂): "MALAYSIA, Pahang prov. Taman Negara, Nusa Camp env., 4°23'71''N 102°26'04''E, 27.v.2006, ca 110 m // Campor leg.", (NMPC). Paratypes (2 ♂♂, 4 ♀♀): the same locality data, (NMPC, ZSPC).

**Description.** Body length in holotype 1.4 mm, head 0.2 mm, pronotum 0.4 mm, elytra 0.8 mm, antenna 0.4 mm, aedeagus 0.44 mm. Maximum width of head 0.4 mm at eyes, pronotum 0.8 mm at base, elytra 0.8 mm at basal third.



Figs. 14, 15. Aedeagus dorsally: 14- *Dermatohomoeus minor* sp. nov.; 15- *D. subtilis* sp. nov.

Oblong oval. Dorsum yellow-brown, antennomeres I-VI and AVIII yellowish, AVII, AIX-AXI yellow-brown, femora and tibiae yellow-brown, tarsi yellow-red. Underside yellow-brown, coxal margins of mid- and hind legs and margins of metaventral process darker. Entire dorsum punctured. Elytra with fine transverse strigosities.

Head. Without micro-sculpture. Eyes subglobose, normally developed. Dorsal surface of head with very distinct coarse puncturation, punctures separated by about 2-3 times their own diameter. Antennomeres II-VII and XI longer than wide. AXI as wide as AX, W/L of AVII = 0.8.

Pronotum broadest at base. Base nearly straight for substantial middle part, obliquely angled toward acute, pointed, hind angles. Posterior angles rectangular, abruptly rounded, in lateral view. Sides evenly curved from base to anterior angles in both dorsal and lateral view. Pronotal puncturation fine and sparse separated by about 3-4 times their diameter anteriorly, denser toward base. Punctures protracted longitudinally separated by 1-2 times their own diameter.

Elytra broadest approximately at basal third of their length with lateral margins roundly curved toward apex. Elytral surface punctured. Punctures form double-striae; strial intervals with smaller punctures separated by about 4 times their own diameter. Strial punctures separated by about 2 times their diameter longitudinally. Elytral punctures are connected by transverse or oblique strigosity. Sutural stria extending approximately to basal third of elytral length.

Legs. Anterior tarsomere I dilated and elongate in male. Ratio of length of TI/TII-V (without claws) of anterior tarsus = 0.3.

Genitalia. Aedeagus in Fig. 15.

**Variation and sexual dimorphism.** All the specimens of the type series seem to be not fully mature. No variation detected except size of body - in type series 1.2-1.5 mm. Anterior tarsi slender in female. Length of spermatheca 0.06 mm.

**Differential diagnosis.** *Dermatohomoeus subtilis* sp. nov. differs from the habitually most similar small Asian species possessing double-striate elytra, i.e. *Dermatohomoeus apicicornis* Cooter & Švec, 2002; *D. apicallis* Cooter & Švec, 2002; *D. hamatus* Švec, 1997; and *D. garous* Daffner, 1988 by the shape of aedeagus and endophallus. The aedeagus in *D. subtilis* is of the specific shape with slim, apically triangularly tapered, tegmen rounded on its top contained crescent-shaped endophallic sclerite. The unpaired crescent-shaped sclerite resembles endophallic structures that are of the shape usual in the most of *Dermatohomoeus* species known from Madagascar.

**Biology.** Unknown.

**Etymology.** The Latin word *subtilis* in name of the new species should remember the subtle shape of both body and aedeagus (Latin *subtilis* is subtle in English).

### *Dermatohomoeus terrenus* (Hisamatsu, 1985)

**Type locality:** Japan, Shikoku, Shiroyama, Matsuyama, Ehime Pref.

**Material examined:** (1 ♀), “Kohzaki-jinjya Kohzaki-machi Chiba Pref. // 11.x.1998 (Berlese) S. Nomura leg. // *Dermatohomoeus terrenus* (Hisamatsu) // Det. H. Hoshina in 2003”, (NMPC); (1 ♀), “Koda Hachiman Shr. (110 m) Mihara-cho Awaji Is., Hyogo Pref. // 16.xi.1988 (Berlese) S. Nomura leg. // *Dermatohomoeus terrenus* (Hisamatsu) // Det. H. Hoshina in 2003”, (NMPC); (1 ♀), “Japonia Nagasaki 13.xi.81 Coll. Hlisnikowski 19 // *Pseudocolenis hilleri* Rtt. Hlisnikovský 1966 // *Dermatohomoeus terrenus* H. Švec det.” (NMPC); (6 ♀♀), “Japan G. Lewis 1910-320// Nagasaki 13.11.-21.IV.81 // *Pseudocolenis hilleri* Rtt. det. Hlisnikovský 1966 // *Dermatohomoeus terrenus* H. Švec det.”, (NMPC); (1 ♀), “Japonia Nagasaki 22.4.05 Coll. Hlisnikowski 19 // *Pseudocolenis hilleri* Rtt. det. Hlisnikovský 1966 // *Dermatohomoeus terrenus* H. Švec det.”, (NMPC).

**Distribution.** Japan (ten islands, see below), S. Korea (Park & Ahn 2007). New record for Awaji Island (Japan).

**Discussion.** The species was known from the Japanese islands Honshu, Shikoku, Kyushu, Izu, Goto and from four Ryukyus islands (Hoshina 1999). Beside the species was known also from southern Korea (Park & Ahn 2007). Altogether dozens specimens attributed to this species were examined up to now (Hisamatsu 1985, Hoshina 1999, Park & Ahn 2007). All of them, including those cited in the present paper, were females. Other dozen *Dermatohomoeus* females perhaps belonging to the same species are deposited in NMPC. I incline to agree with the Hoshina's hypothesis (1999) that *D. terrenus* may have a parthenogenetic reproduction. This type of reproduction can be perhaps more widespread within the *Dermatohomoeus* species or their populations in the eastern Palaearctic or even Oriental regions.

As the morphological characters detectable on females are hardly sufficient for any differentiation of the individual species, the Japanese and Korean data may not necessary be accurate regarding the determination of the species as *D. terrenus*. The same statement can also be applied to my determination and new findings reported in the present data. Perhaps the exact determination should be supported by the molecular methods.

### *Dermatohomoeus brunneus* Daffner, 1988

**Type locality:** India, Madras, Bilgiri Rangan Hills, Dhimbam

**Material examined:** (1 ♂, 1 ♀, 1 unsexed spec.), “INDIA, Meghalaya State E Khasi Hills, 11 km SW Cherrapunjee, Laitkynsew, 25.iv. 2008 25°12'48''N, 91°39'48''E, 735 m, Fikáček, Podskalská, Šípek lgt. // secondary tropical rainforest with young trees + bamboo below the village, thin layer of leaf litter (sifting)”, (NMPC); (1 ♂, 1 ♀), “INDIA, Meghalaya State E Khasi Hills, 11 km SW Cherrapunjee, Laitkynsew, 21.+24..iv. 2008 25°12'N, 91°40'E, 460 m Fikáček, Podskalská, Šípek lgt. // secondary evergreen tropical forest (recovered plantage) sifting of wet leaf litter near living bridge”, (NMPC); (1 ♂, 1 ♀), “S- INDIA, T. Nadu Nilgiri Hills 15 km SE Kotagiri Kunnchapanai 900 m // 17.-20.11.1993, 76°56'E, 11°22' N Boukal D. + Kejval Z. lgt.”, (NMPC).

**Distribution.** India (Karnataka State, Tamil Nadu State, Meghalaya State). New record for Meghalaya State, confirmed record for Tamil Nadu State.

**Discussion.** The location of the type locality seems to be rather uncertain. The name Madras was used for the capital of the Tamil Nadu State till 1966. The current name of the city is Chennai. On the other hand Bilgiri Rangan Hills are located in Karnataka State. The words India and Madras are printed on the original labels accompanying the paratypes (4 ♀♀ in NMPC) while the name Bilgiri Rangan Hills is handwritten. As I did not find any other city or place Madras in India, I incline to trust the handwritten data.

The specimens from Khasi Hills agree morphologically well with the paratypes from Bilgiri Rangan Hills. The aedeagus of those specimens differs from the image of aedeagus published by Daffner (1988) by wider parameres.

### ***Dermatohomoeus alesianus* Daffner, 1990**

**Type locality:** Nepal, Kosi val, Arun ss Num, 1100 m.

**Material examined:** (1 ♂), “China: Yunnan Prov. 5.9 km W Tongbiguan, 24°36.78’N, 114°16.0’E, J. Hájek & J. Růžička lgt. // CH12), 27.vi.2016, 1290 m, sift #10, secondary broad-leaved forest, valley near stream”, (NMPC).

**Distribution.** Nepal, China (Yunnan). New record for China.

### **Genus *Colenisia* Fauvel, 1903**

Key to the identification of the Chinese, Japanese and Malaysian species

- |      |   |   |
|------|---|---|
| 1    | Dorsal surface without transverse strigosity with exception of clypeus (character is variable in <i>C. topali</i> Daffner, 1988, therefore the species is repeated also under link 8(7). .....  | 2   |
| -    | At least elytra partly or entirely transversely strigose. ....  | 6   |
| 2(1) | Lateral margins of elytra widened, visible simultaneously in dorsal view. ....  | 3   |
| -    | Lateral margins with narrow channel, at least near shoulders not visible simultaneously in dorsal view. ....  | 4   |
| 3(2) | Elytra with rows of punctures sparsely arranged but easily detectable also on disc of elytra. Dorsum black. Aedeagus with tegmen ending by small nipple, parameres a little shorter than tegmen. Spermatheca with small spherical basal part and pointed simply bent distal part. Length 1.6-1.7 mm. China (Yunnan). ....   | .....                                       |
| -    | ..... <i>Colenisia seriepunctata</i> Švec, 2013   |   |
| -    | Dorsal puncturation of elytra unobtrusive, traces of punctured elytral rows hardly visible on disc, more visible along suture. Brown-black. Aedeagus with tegmen ending by small nipple, parameres distinctly shorter than tegmen. Spermatheca with very small spherical basal part and with pointed perplexedly twisted very slim and fragile distal part. Length 1.1-1.4 mm. China (Yunnan). .... | ..... <i>Colenisia fragilis</i> Švec, 2013  |
| 4(2) | Median lobe of aedeagus roundly tapered to narrowly rounded tip. Basal part of spermatheca large, globose distinctly separated from rectangular proximal part. Dorsum black. Length 1.1 mm. China (Yunnan). ....  | .....                                       |
| -    | ..... <i>Colenisia insolita</i> Švec, 2013  |   |
| -    | Median lobe of aedeagus angulate before tip. ....   | 5   |
| 5(4) | Parameres approximately as long as median lobe. Basal part of spermatheca small, poorly separated from proximal part. Dorsum brown-back. Length 1.3 mm. Taiwan. ....  | ..... <i>C. glabella</i> Daffner, 1988      |
| -    | Parameres of aedeagus distinctly shorter than median lobe. Basal part of spermatheca oblong oval, distal part narrow hook-shaped. Length 0.9 mm. Taiwan, Vietnam. ....  | ..... <i>Colenisia topali</i> Daffner, 1988 |
| 6(1) | Elytra partly transversely strigose. Dorsum black or brown-black. ....  | 7   |
| -    | Dorsum including elytra entirely transversely strigose. ....  | 10  |

- 7(6) Transverse strigosites distinct only at apex or posterior part of elytra. Basal part of spermatheca globose or oblong oval or female unknown. Parameres as long as median lobe of aedeagus or shorter. ....8
- Transverse strigosites developed on apical two-thirds of elytra. Spermatheca ring-shaped with stout basal part. Parameres longer than median lobe of aedeagus. Length 1.0-1.1 mm. China (Yunnan). ....  
.....*Colenisia yunanica* Švec 2013
- 8(7) Parameres of aedeagus distinctly shorter than median lobe. Basal part of spermatheca oblong oval, distal part narrow hook-shaped. Length 0.9 mm. Taiwan, Vietnam. ....*Colenisia topali* Daffner, 1988
- Parameres approximately as long as median lobe. ....9
- 9(8) Pronotal base obliquely angled toward rectangular posterior angles. Median lobe abruptly rounded on apex. Basal part of spermatheca very small globose, distal part slim U-shaped. Length 0.9-1.0 mm. India (Sikkim, Assam States), Vietnam, Taiwan, Indonesia (Sumatra), China (Zhejiang). .... *C. pygmaea* (Portevin, 1905)
- Pronotal base straight up to obtuse posterior angles. Median lobe terminating in small but distinct nipple (Fig. 16). Length 1.3 mm. Japan (Amami Oshima). ....*Colenisia strigipennis* sp. nov.
- 10(6) Elytra with detectable rows of punctures. .... 11
- Elytral punctures inordinate or at most tending to become seriate only in some places forming feebly expressed, unobtrusive irregular rows. .... 12
- 11(10) Larger, 1.9 mm. Antennal club dark. Elytral punctures large, dense, separated by about 1-2 times their diameter. Elytral strigosites sparse, separated by about 0.03 mm. Spermatheca basally globosely irregularly thickened, distal part simply bent. Male unknown. Length. China (Yunnan). ....  
..... *Colenisia similata* Angelini & Švec, 1994
- Smaller. 1.3-1.6 mm. Antenna entirely lightly coloured. Elytral strigosites denser, separated by about 0.02 mm. Elytral punctures separated by about 2-3 times their diameter longitudinally. Aedeagus stout, straight tapered apically with parameres distinctly shorter than median lobe. Spermatheca with slim ring-shaped distal part. Length 1.5-1.6 mm. Thailand. ....*Colenisia neglecta* Švec, 2013
- 12(10) Elytral punctures tending to become seriate in some places forming feebly expressed, unobtrusive irregular rows. .... 13
- Elytral punctures inordinate. .... 14
- 13(12) Dorsum brown, antenna of one colour yellow. Elytral strigosity separated by about 0.02 mm. Elytral punctures very sparse, microscopic. Aedeagus with parameres reaching apical third of median lobe. Median lobe roundly truncate apically. Spermatheca sickle-shaped. Length 1.6-1.7 mm. Indonesia (Kalimantan, Sulawesi), Malaysia (Pahang). ....*Colenisia truncata* Cooter & Švec, 2002
- Dorsum lightly chestnut. Antennal club slightly darkened. Elytral strigosity separated by about 0.01-0.02 mm. Elytral punctures fine, sparse. Aedeagus (Fig. 17) with parameres slightly exceeding half of median lobe length. Median lobe broadly rounded apically. Spermatheca in Fig. 18 sickle-shaped. Length 1.4-2.0 mm. Malaysia (Pahang). ....*Colenisia marginipennis* sp. nov.
- 14(12) Parameres of aedeagus distinctly shorter than median lobe, basal part of spermatheca globose or J-shaped or sickle-shaped. .... 15
- Parameres of aedeagus long or approximately as long as median lobe. Spermatheca with globose basal part with diameter much smaller than long, slender, simply bent or twisted distal part. ....20
- 15(14) Species from China and Taiwan. Sutural stria developed. Elytral strigosities separated by about 0.01-0.03 mm. Spermatheca with diameter of globose basal part larger than length of short stout rectangular bent distal part of spermatheca or spermatheca J-shaped with vaguely differentiated basal and distal parts. .... 16
- Species from Malaysia. Sutural stria not developed. Elytral strigosities separated by about 0.02 mm. Spermatheca with globose basal part and distal part about twice as long as the diameter of the basal bulb. Dorsum chestnut coloured. Pronotum denser strigose than head, head four times denser strigose than elytra. Elytral punctures separated by about 5-8 times their own diameter. Median lobe of aedeagus elongated, first parallel-sided, then narrowed to the broadly rounded top with feebly concave lateral sides. Parameres thin, short, two-thirds of the length of the median lobe, bisetose. Only male known. 1.25 mm. Malaysia (Borneo). ....*Colenisia chungii* Schilthuisen, Seip & Otani, 2017
- 16(15) Antennal club brown or infusate, rest of antennae yellow. .... 17
- Antennae unicolourous. Apex of median lobe abruptly rounded, parameres slim, bisetose reaching approximately apical third of tegmen length. Spermatheca sickle-shaped. Length 1.7-1.8. Taiwan. ....  
..... *Colenisia rotunda* Daffner, 1988

- 17(16) Dorsum very finely sparsely unobtrusively pubescent. Median lobe evenly narrowed to its top, at most with very feebly concave lateral sides before apex. .... 18  
- Dorsum distinctly haired. Size on average smaller (1.1-1.5 mm). Median lobe of aedeagus angulate before top; spermatheca with obtrusively large globose basal part. Taiwan. .... *Colenisia johanni* Daffner, 1988
- 18(17) Median lobe terminating with acute or abruptly rounded top. .... 19  
- Median lobe with roundly truncate apex. Spermatheca elongate, its basal part poorly differentiated from distal part. Length 1.5-1.9 mm. China (Zhejiang, Yunnan). .... *Colenisia castanea* Švec, 2011
- 19(18) Dorsum broadly oval, chestnut coloured, antennal club infuscate. Parameres very thin short reaching approximately half of aedeagal length. Basal part of spermatheca stouter than feebly bent distal part. Larger, length 1.6-1.9 mm. China (Yunnan). .... *Colenisia schuelkei* Švec, 2011  
- Dorsum oblong oval, dark brown, antennal club yellow brown, darker than in previous species. Parameres of usual width, terminating not far from top of median lobe. Spermatheca sickle-shaped. Median lobe slim apically, very shortly rounded, almost pointed on its tip. Smaller than previous species. Length 1.3-1.5 mm. China (Yunnan). .... *Colenisia gracilis* Švec, 2013
- 20(14) Sutural striae developed on elytra. .... 21  
- Sutural striae not developed. .... 26
- 21(20) Antennae unicoloured, yellow. Size smaller 1.4-1.6 mm. Aedeagus slim, tegmen ending in ling process. Parameres as long as tegmen. Basal part of spermatheca small globose, distal part longer, simply curved. Japan (Shikoku), Taiwan, Vietnam, Thailand, China (Yunnan, Gansu). .... *Colenisia miyatakei* (Hisamatsu, 1957)  
- Antennal club dark or at least a little darkened. Size on average larger, 1.6-2.2 mm. .... 22
- 22(21) Punctuation of elytra tending to become seriate. All tarsi stout, conically tapered distally in male. .... 23  
- Elytra irregularly punctured. Only anterior or at most mid-tarsi thickened in male. .... 25
- 23(22) Elytral punctuation sparse; punctures separated by about 10 or more times of their diameter on head and pronotum. Dorsum yellow-red. Parameres of aedeagus slender much longer than tegmen. Spermatheca with small globose basal part and longer sickle-shaped distal part. Length 1.8-2.1 mm. China (Yunnan). .... *Colenisia fortipes* Švec, 2013  
- Elytral punctuation dense, punctures separated by about 1-3 times their diameter. Dorsum light chest-nut. .... 24
- 24(23) Elytral strigosity sparse, separated by about 0.02-0.03 mm, elytral punctures strong. Parameres dilated apically. Aedeagus with parameres thickened apically, exceeding round top of tegmen. Spermatheca with very small globose base and slim, simply bent distal part. Length 1.6-2.0 mm. China (Yunnan). .... *Colenisia dilatata* Švec, 2013  
- Elytral strigosity denser, separated by about 0.01 mm, elytral punctures finer. Parameres slim all along its length. Aedeagus with short process apically, and parameres shorter than median lobe. Spermatheca with small globose base and slim, simply bent distal part. Length 1.7-2.1 mm. China (Yunnan). .... *Colenisia jelineki* Švec, 2013
- 25(22) Size larger, 1.7-2.2 mm. Eyes smaller, ratio of frontal width : eye width approximately 11.5. Median lobe of aedeagus constricted laterally before abruptly rounded apex. Spermatheca with simply bent distal part. China (Hubei, Beijing distr.). .... *Colenisia cooteri* Švec, 2013  
- Size smaller, 1.6 mm, Eyes larger; ratio of frontal width : eye width approximately 7. Median lobe of aedeagus evenly roundly tapered toward apex. Spermatheca with twisted distal part. Japan. .... *Colenisia pecki* Daffner, 1988
- 26(20) Body broadly oval. Pronotal base straight; posterior angles of pronotum acute in dorsal view. Parameres of aedeagus much longer than median lobe. Spermatheca with globose basal part. Length 1.0-1.2 mm. Taiwan. .... *Colenisia stanislavi* Švec, 2013  
- Body oblong oval. Pronotal base obliquely tapered to rectangular posterior angles. Parameres of aedeagus approximately as long as median lobe. Spermatheca C-shaped without globose basal part. Length 1.3-1.4 mm. Taiwan. .... *Colenisia ovalis* Daffner, 1988.

*Colenisia strigipennis* sp. nov.

(Fig. 16)

**Type material.** Holotype (♂): "JAPAN, KAGOSHIMA-KEN, AMMI-OSHI YAMATO VILL. 18.3.2010, T. LACKNER lgt. // YUWAN-DAKE, primary forest, sifted", (NMPC). Paratype (1 ♂): the same locality data, (ZSPC).

**Description.** Length 1.3 mm, head 0.3 mm, pronotum 0.4 mm, elytra 0.6 mm, antenna 0.4 mm, aedeagus 0.32 mm. Maximum width of head 0.4 mm, pronotum 0.7 mm, elytra 0.8 mm.

Body broadly oval. Dorsum shining, black. Legs reddish, antennomeres I-VI yellow-red, antennomeres VII-AXI brown. Ventral surface dark chestnut. Dorsum partly transversely strigose.

Head. Eyes normally developed. Ratio of head W/W of eye=8:1. Punctuation fine and sparse punctures separated by 3-4 times their diameter. Relative length of AII-AXI (AII = 1.0): 1.0 - 0.8 - 0.3 - 0.3 - 0.3 - 0.4 - 0.3 - 0.5 - 0.6 - 1.0. Relative width of AII-AXI (AII = 1.0): 1.0 - 0.5 - 0.5 - 0.5 - 0.5 - 1.0 - 0.8 - 1.3 - 1.3 - 1.3. W/L of AII-AXI = 0.5 - 0.3 - 1.0 - 1.0 - 1.0 - 1.3 - 1.5 - 1.3 - 1.0 - 0.6.

Pronotum. Broadest at base. Base feebly curved caudally in flat arc medially, straight toward posterior angles laterally. Posterior angles slightly obtuse abruptly rounded in dorsal view; distinctly obtuse pointed in lateral view. Sides evenly curved from base to anterior angles in dorsal view, flatly rounded in lateral view. Punctures scarce, distinct, separated by about 4-6 or more time their diameter. Surface smooth without any strigosity.

Elytra. Punctuation a little finer and sparser than that on pronotum. Punctures irregularly distributed not seriate. Lateral channel narrow visible simultaneously except of humeral part all along the elytral margins in dorsal view. Sutural striae not developed. Elytral strigosity very sparse separated by about 0.03 mm present at posterior two thirds of elytra.

Wings. Developed.

Legs. Anterior tarsomeres I-III widened, TI broadest. Mid- and hind tarsi very slim, long.

Male genitalia. Aedeagus in Fig. 16.

**Variation.** The paratype is dark chest-nut coloured.

**Differential diagnosis.** *Colenisia strigipennis* sp. nov. is most similar to Chinese *C. seriepunctata* Švec, 2013 in the shape of its aedeagus, dark colour of dorsum and by bicoloured antennae. It differs by more developed nipple at the top of median lobe, by different shape of endophallic structures and also by partly strigose elytra lacking transversal strigosity in *C. seriepunctata* at all. *C. strigipennis* is also similar to *C. pygmaea* (Portevin, 1905) from India, Vietnam, Taiwan, Indonesia and China by the small size of body and type of dorsal structures. The new species



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Fig. 16. *Colenisia strigipennis* sp. nov., aedeagus dorsally.

differs from *C. pygmaea* by the presence of terminal nipple on the median lobe while the top of median lobe is simply shortly rounded in *C. pygmaea*.

**Biology.** Unknown.

**Etymology.** The name of the new species is a combination of the Latin words *striata* and *penna* (in English wing).

***Colensia marginipennis* sp. nov.**

(Figs. 17, 18)

**Type material.** Holotype (♂): "MALAYSIA, Pahang prov. Taman Negara, Nusa Camp / env., 4°23'71''N 102°26'04''E, 27.v.2006, ca 110 m // Ćampor leg.", (NMPC). Paratypes (2 ♂♂, 1 ♀): the same locality data, (NMPC, ZSPC).

**Description.** Length 1.5 mm, in holotype, length of body parts in holotype: head 0.2 mm, pronotum 0.4 mm, elytra 0.9 mm, antenna 0.4 mm, aedeagus 0.34 mm. Maximum width of head 0.4 mm, pronotum 0.8 mm, elytra 0.9 mm.

Body oblong oval. Dorsum shiny, lightly chest-nut. Legs reddish-brown, antennomeres I-VI yellowish, antennomeres VII-AXI very slightly darker. Ventral surface dark chestnut with lighter central part of metaventricle and mesoventral process. Dorsum completely transversely strigose.

Head. Eyes well developed; ratio of head W : W of eye=7:1. Puncturation extremely fine and sporadic. Relative length of AII-AXI (AII = 1.0): 1.0 - 1.0 - 0.3 - 0.3 - 0.3 - 0.4 - 0.8 - 0.3 - 1.0 - 1.8. Relative width of AII-AXI (AII = 1.0): 1.0 - 0.8 - 0.8 - 0.8 - 0.8 - 1.3 - 1.0 - 1.5 - 1.8 - 1.8. W/L of AII-AXI = 0.8 - 0.5 - 1.5 - 1.5 - 1.5 - 1.0 - 2.0 - 1.0 - 1.0 - 0.6. Strigosity distinct, very dense.

Pronotum. Broadest at base. Base straight. Posterior angles slightly acute, widely rounded in dorsal view; distinctly obtuse rounded in lateral view. Sides flatly curved from base to anterior angles in dorsal view, flatly rounded in lateral view. Punctures sporadic, very small and fine. Surface with strigosity a little sparser than that on head.

Elytra. Puncturation fine and sparse, punctures predominantly irregularly distributed, tend to produce series in some places. Lateral channel narrow visible simultaneously all along the length of elytral margins in dorsal view. Sutural striae well developed finishing in traces approximately at basal tenth of elytral length. Elytral strigosity sparse, separated by about 0.01-0.02 mm.

Wings. Developed.

Legs. Anterior tarsomeres I-II slightly widened, TI broadest in males. Mid- and hind tarsi moderately stout.

Male genitalia. Aedeagus in Fig. 17.

**Variation and sexual dimorphism.** Length of body 1.4-2.0 mm in the type series. No other morphological variation detected. Tarsi slim in females. Spermatheca as in Fig.18. Length of spermatheca 0.13 mm.



Figs. 17, 18. *Colenisia marginipennis* sp. nov.: Fig. 17- aedeagus dorsally; Fig. 18- spermatheca.

**Differential diagnosis.** *Colenisia marginipennis* sp. nov. belongs to the other up to known 25 Asian *Colenisia* species characterized by the dorsum entirely strigose. Majority of the mentioned species are habitually very similar. The new species is most similar in the shape of its aedeagus, to *C. castanea* Švec, 2011. It differs by parallel-sided median lobe in dorsal view and its very broadly rounded apex while median lobe is evenly narrowed to roundly truncate top of median lobe in *C. castanea*. The spermatheca also differs by its specific sickle-shape. *Colenisia marginipennis* sp. nov. is also very similar to *C. quatuorsignata* sp. nov. It differs by the absence of large punctures or depressions on head and by irregularly punctured elytra, while vertex of *C. quatuorsignata* possesses 2 large punctures and two shallow depressions and distinct punctures on the anterior part head. Beside, strigosity on elytra are more distinct and punctures are seriate on the elytra in *C. quatuorsignata*. Also the shapes of the aedeagus differ in the both species (Figs. 17, 19).

**Biology.** Unknown.

**Etymology.** The name of the new species is a combination of the Latin words marginus (Engl. margin) and penna (English wing).

***Colenisia quatuorsignata* sp.nov.**  
(Figs. 19, 20)

**Type material.** Holotype (♂): “MALAYSIA, Pahang prov. Taman Negara, Nusa Camp env., 4°23′71″N 102°26′04″E, 27.v.2006, ca 110 m // Čampor leg.”, (NMPC). Paratypes (2 ♂♂, 1 ♀): the same locality data, (NMPC, ZSPC).

**Description.** Body length in holotype 1.4 mm, head 0.1 mm, pronotum 0.4 mm, elytra 0.9 mm, antenna 0.4 mm, aedeagus 0.32 mm. Maximum width of head 0.5 mm, pronotum 0.8 mm, elytra 0.9 mm.

Figs. 19, 20. *Colenisia quatuorsignata* sp. nov.:  
19- aedeagus dorsally; 20- spermatheca.



Body short oval. Dorsum shining lightly chest-nut. Legs reddish-brown; antennomeres I-VI a little lighter than rest of of antenna. Ventral surface dark chestnut with lighter central part of metaventricle and mesoventral process. Dorsum completely transversely strigose.

Head. Eyes moderately developed; ratio of head W : W of eye=8:1. Punctuation extremely fine almost indistinct. Pair of large punctures on vertex another pair of shallow depressions anteriorly between front and clypeus. Relative length of AII-AXI (AII = 1.0): 1.0 - 0.7 - 0.3 - 0.3 - 0.3 - 0.5 - 0.3 - 0.6 - 0.6 - 1.3. Relative width of AII-AXI (AII = 1.0): 1.0 - 0.5 - 0.5 - 0.5 - 0.5 - 1.3 - 0.8 - 1.8 - 1.8 - 1.8. W/L of AII-AXI = 0.5 - 0.3 - 1.0 - 1.0 - 1.0 - 1.3 - 1.5 - 1.4 - 1.4 - 0.7. Strigosity distinct; very dense.

Pronotum. Broadest at base. Base straight. Posterior angles slightly acute, rounded in dorsal view; distinctly obtuse, rounded, in lateral view. Sides flatly rounded from base to anterior angles in dorsal view, flatly rounded in lateral view. Punctures distinct very small and fine, scarce, separated by about 10 times their own diameter or more. Surface with strigosity similar to that on head.

Elytra. Punctuation fine but distinct, punctures predominantly seriate, arranged in longitudinal striae. Strial punctures separated by about four times their own diameter from lateral neighbours. Lateral channel narrow visible simultaneously all along the length of elytral margins in dorsal view. Sutural striae weak present on posterior third of elytral length. Elytral strigosity sparse separated by about 0.01-0.02 mm.

Wings. Developed.

Legs. Anterior tarsomeres I-II slightly widened. Mid- and hind tarsi moderately stout.

Male genitalia. Aedeagus in Fig. 19.

**Variation and sexual dimorphism.** Length of body in the type series 1.4-1.7 mm. No other morphological variation detected. Tarsi slim in females. Spermatheca 0.13 mm, as in Fig. 20.

**Differential diagnosis.** *Colenisia quatuorsignata* sp. nov. belongs to the other up to other known 25 Asian *Colenisia* species characterized by the dorsum entirely strigose. Majority

of the species mentioned are habitually very similar. The new species is most similar in the shape of its aedeagus, to Indian *C. championi* (Portevin, 1937). It differs by parallel-sided slim parameres in dorsal view while parameres are apically widened in *C. championi*. The shape of the endophallus differs as well. Also the spermatheca differs by its specific shape. *Colenisia quatuorsignata* is habitually very similar also to *C. marginipennis* sp. nov. It differs by the presence of large punctures and depressions on head and by serially punctured elytra, while the head of *C. marginipennis* lacks large vertex punctures and two shallow anterior depressions as well. The shapes of the aedeagus, length of parameres and the shape of the spermatheca also distinctly differ.

**Biology.** Unknown.

**Etymology.** The name of the new species is a combination of the modified Latin words quatuor (in English four) and signum (English sign) and it should attract the attention to the presence of sculptures located on the head of the new species.

### *Colenisia castanea* Švec, 2011

**Type locality:** China: Zhejiang, Tianmu Shan, pass 25 km North, northwestern of Lin'an, 620-820 m, 30°25'40'' N, 119°35'30'' E.

**Material examined:** (3 ♂♂, 2 ♀♀), "CHINA: YUNNAN PROV. 6.5-5.2 km W Tongbiguan 24°36.6-8'N, 97°35.5-36.4'E, 1290-1325 m, J. Hájek & J. Růžička leg. // 25+27.vi.2016 individually from fungi, broadleaved tropical forest // Genitalia in water-soluble medium", (NMPC, ZSPC).

**Distribution.** China (Zhejiang, Yunnan). New for Yunnan.  
The species is observed and collected from mushrooms (*Marasmius* sp.) for the first time.

### *Colenisia miyatakei* (Hisamatsu, 1957)

**Type locality:** Japan, Shikoku, Omogo valley, Iyo.

**Material examined:** (1 ♂), "CHINA: YUNNAN Prov. Gaoligong Mts NNR, 1-2 km NW of Baihualin vill. 25°18.2-3'N, 98°47.0-7'E, J. Hájek & J. Růžička leg. // (Ch43-44) 8.vii. 2016; 1820-2045 m, on mature mushrooms (Basidio-mycota), along road in broad-leaved forest", (NMPC).

**Distribution.** Vietnam, Japan, Taiwan, Thailand, China (Yunnan, Gansu).  
The species is observed and collected from mushrooms for the first time.

### *Colenisia neglecta* Švec, 2013

**Type locality:** Thailand bor., Chiang Dao.

**Material examined:** (4 ♂♂, 6 ♀♀), "MALAYSIA, Pahang prov. Taman Negara, Nusa Camp env., 4°23'71''N 102°26'04''E, 27.v.2006, ca 110 m // Čampor leg.", (NMPC, ZSPC).

**Distribution.** Thailand, Malaysia. New record for Malaysia.

### *Colenisia pygmaea* (Portevin, 1905)

**Type locality:** India: Sikkim.

**Material examined:** (1 ♀), “CHINA: ZHEJIANG Prov. Lin’an County, West Tianmu Shan Nat. Res., 100 m SE below top of Immortal Peak, J. Hájek & J. Růžička leg. // (WT13), 28.vii.2017, 1470 m, sift #07, dwarf forest under bamboo and other shrubs near water source”, (NMPC).

**Distribution.** India (Sikkim, Assam States), Vietnam, Taiwan, Indonesia (Sumatra), China (Zhejiang). New record for China.

### *Colenisia schuelkei* Švec, 2011

**Type locality:** China: Yunnan, Dali Bai Aut. Pref., Wuliang Shan, 11 km Southwestern of Weishan, 25°08′46.7″N, 100°14′14.1″E, 2520 m.

**Material examined:** (2 ♂♂), “CHINA: YUNNAN PROV. 6.5-5.2 km W Tongbiguan 24°36.6-8′N, 97°35.5-36.4′E, 1290-1325 m. J. Hájek & J. Růžička leg. // 25+27.vi.2016 individually from fungi broadleaved tropical forest // Genitalia in water-soluble medium”, (NMPC, ZSPC).

**Distribution.** China (Yunnan).

First record since the date of description. The species is observed and collected from mushrooms (*Marasmius* sp.) for the first time.

### *Colenisia topali* Daffner, 1988

**Type locality:** Vietnam, Muong son.

**Material examined:** (1 ♂), “Taiwan, Taichung county Hepping distr., Bashianshan Mts. Bashianshan Recreation Area between upper parking and Jinja ruins, 5.i. 2018 24.19058°N,121.01277°E, 1020 m, lgt. Fikáček, Liang & Hsiao 2018-TW02”, (NMPC).

**Distribution.** Vietnam, Taiwan.

**Remark.** The examined specimen lacks transversal strigosity on the elytra at all. According to the original description (Daffner 1988) the elytra of the type bear sparse strigosities apically.

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