

New Asian Pseudoliadini (Coleoptera: Leiodidae: Leiodinae)

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Abstract. *Dermatohomoeus pseudorufus* sp. nov. from Laos, *Pseudcolenis oblonga*, *P. quadriseta* and *P. suturalis* spp. nov., all from China, are described and distinguished from similar species. Presence of the genus *Dermatohomoeus* in Laos is recorded for the first time. *Pseudcolenis laticornis* Angelini & Švec, 2000 from Sichuan (China), *P. torta* Švec, 2014 from Laos and *Zeadolopus insignis* Cooter & Švec, 2002 from The Philippines are recorded newly.

INTRODUCTION

The present paper is focused on the new species belonging to the tribe Pseudoliadini - genera *Pseudcolenis* Reitter, 1884 and *Dermatohomoeus* Hlisnikovský, 1963 discovered in the Palaearctic and Oriental realm.

Altogether 61 species of the genus *Pseudcolenis* Reitter, 1884 have been described up to now. They occur predominantly in the Asian Palaearctic and the Oriental Regions. One single species is known also from the Australian Region. The species of the genus are generally, with some exceptions, small unobtrusive and uniformly shaped, difficult to be distinguished by their morphological characters. Nevertheless some of the external characters e.g. absence or presence of the elytral strigosity, its density, the structure of the male antennae, especially the size of the 7th male antennomere and also the structure of mesoventrite enables to sort the species to the informal species groups and the subgroups. Definitions of the groups and the subgroups mentioned in the descriptions below follow Švec (2009). Three species new to science described in this paper were collected in China (Sichuan and Yunnan). Therefore the number of the *Pseudcolenis* species is 64, among them 35 species are known from the mainland of China at present (Švec private database).

The genus *Dermatohomoeus* Hlisnikovský, 1963 comprises currently 56 species including the new taxa described in the present paper. The representatives of the genus are known to be occurred in Afrotropical region including Madagascar, in the Palaearctic, Oriental and also Australian regions. Presence of the genus *Dermatohomoeus* from Laos is reported for the first time.

MATERIAL AND METHODS

The present work is based on the material collected by Czech entomologists in Laos, Philippines and China.

Abbreviations of the collections:

OKZC Ondřej Konvička, private collection, Zlín, Czech Republic;

NMPC National Museum, Praha, Czech Republic;

ZSPC Zdeněk Švec, private collection, Praha, Czech Republic.

Abbreviations of the body parts:

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.

Collecting data of the type material cited in quotation marks are taken from the locality labels accompanying the examined examples. Individual locality labels are separated by double slash // in the text. Each type is indicated by a red label bearing the status of the specimen (holotype or paratype respectively) name of the species, the name of the author and the year 2024 attached to the same pin as the relevant specimen. The types are preserved in NMPC and in ZSPC.

The specimens had been relaxed in 4% acetic acid first, then rinsed in water and dissected in a drop of water. The genitalia were rinsed in isopropyl alcohol, than 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 isopropyl alcohol again and subsequently to polyvinylpyrrolidin or transferred through xylene to Canada balsam (*Pseudocolenis quadriseta* sp. nov.) on a transparent label added to the same pin as the dissected specimen.

The terminology of the mesoventral structure in *Pseudocolenis* follows Švec (2016). The structure of the type A, detected in the species described in the present paper, is represented by a longitudinal wide bump flatly rounded on its top falling obliquely anteriorly in the lateral view.

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 strigosities and the length of aedeagus and spermatheca that are approximated on the hundredth of millimetre.

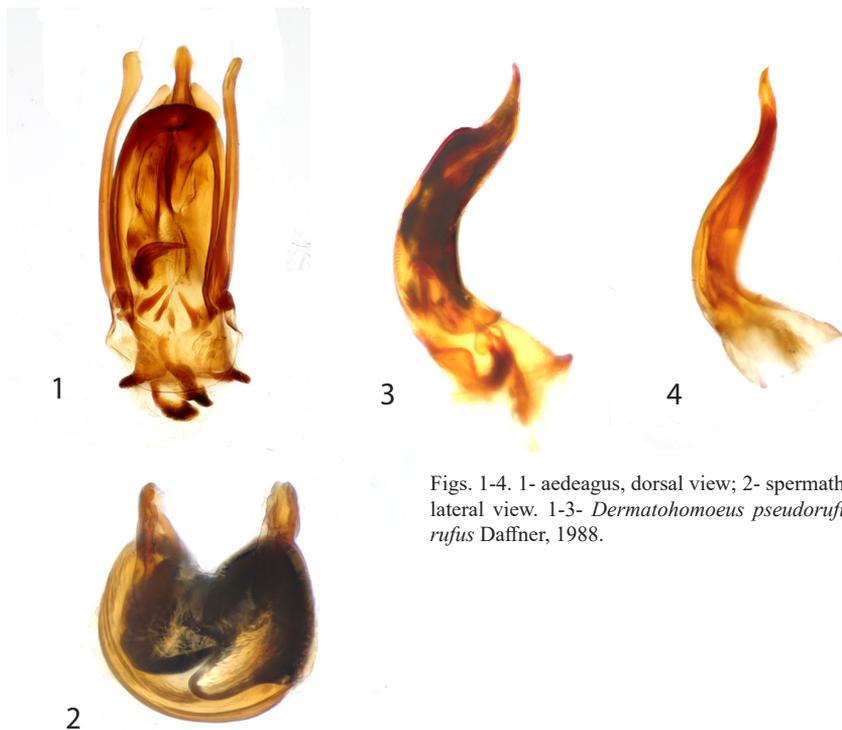
The descriptions are based on the holotypes. Variability is mentioned in the paragraph “Variation” if necessary and includes also the important characters of the sexual dimorphism.

TAXONOMY

Dermatohomoeus pseudorufus sp. nov.

(Figs. 1-3)

Type material. Holotype (♂): “LAOS-NE, Houa Phan prov., 20°13′09-19′N 103°59′54′′-104°00′03′′E, 1480-1510 m, PHOU PANE Mt. , 22.iv.-14.v. 2008, Vít Kubáň leg // Genitalia in water / soluble medium /



Figs. 1-4. 1- aedeagus, dorsal view; 2- spermatheca; 3, 4- tegmen, lateral view. 1-3- *Dermatohomoeus pseudorufus* sp. nov.; 4- *D. rufus* Daffner, 1988.

polyvinylpyrrolidin”, (NMPC). Paratypes: (1 ♂, 1 ♀), same data, (NMPC, ZSPC); (5 ♂♂, 6 ♀♀, 1 spec. sex indet.): “LAOS-NE, Houa Phan prov., 20°12-13.5’N 103°59.5’-104°01’E, Ban Saluei → Phou Pane Mt., 1340-1870 m, 22.iv.-15.v. 2008, Vít Kubáň & Lao coll. leg. // Primary mountain forest, *intercept trap*, Laos 2008 Expedition National Museum, Prague Czech Republic”, (NMPC, ZSPC).

Description. Body oval. Length 1.8-2.0 mm, in holotype 2.0 mm, length of body parts in holotype: head 0.2 mm, pronotum 0.6 mm, elytra 1.2 mm, antenna 0.6 mm, aedeagus 0.54 mm. Maximum width of head 0.5 mm, pronotum 1.2 mm at base, elytra 1.3 mm near base. Dorsum, antenna and legs reddish, tarsi yellow-red. Underside chest-nut, metaventrite and coxal margins darker. Entire dorsum punctured. Head and elytra with strigosites. Metaventrite sparsely finely punctured and haired centrally, punctures very sparser toward anterior process, shagreened laterally.

Head. With fine dense transverse strigosites. Eyes subglobose, well developed. Dorsal surface of head with fine puncturation, punctures separated 2-3 times their own diameter. Antennomeres II-VII, XI longer than wide. AVIII-AX broader than long.

Pronotum. Base straight centrally; distinctly emarginate before obtuse abruptly rounded hind angles in dorsal view. Posterior angles distinctly obtuse with tip abruptly rounded also in lateral view. Sides evenly curved from base to anterior angles in both dorsal and lateral view. Pronotal puncturation distinct, dense, separated by about 1-2 times their own diameter.

Elytra broadest approximately at humeral part; roundly curved to apex. Elytral surface

punctured. Punctures separated predominantly by 1-2 times their own diameter, irregularly arranged, connected by transverse or oblique strigosity. Sutural stria extending approximately to half of elytral length.

Legs. Anterior tarsomere TI distinctly dilated and elongate in male, with dense and short seta beneath. Ratio of length of TI:TV (without claws) of anterior tarsus = 1.5.

Genitalia. Male genitalia as in Figs 1, 3. Paramera with one apical and one very short and unobtrusive preapical seta. Spermatheca as in Fig. 2.

Variation and sexual dimorphism. Anterior tarsi slender in female. Length of spermatheca 0.17 mm.

Biology. Not known.

Differential diagnosis. *Dermatohomoeus pseudorufus* sp. nov. very similar in the body appearance and also in the shape of aedeagus dorsally seen to *D. rufus* Daffner, 1988. The both species can be easily recognized by the shape of tegmen in lateral view. Tegmen is first evenly bent than abruptly declined to the flattened apical part with tip bent upwards in *D. pseudorufus* (Fig. 3), while the median lobe is evenly S-shaped with ventrally declined tip in *D. rufus* (Fig. 4). The both species can be distinguished also by different shape of the operculum lateral parts visible in dorsal view on the aedeagus.

Name derivation. The name of the new species remembers its similarity to *D. rufus* Daffner, 1988.

***Pseudcolenis suturalis* sp. nov.**

(Fig. 5)

Type material. Holotype (♂): "CHINA, Sichuan, Emeishan 3000 m, 17.-19.vi. 1996, 29°32' N, 103°21' E, leg. A. Smetana, J. Farkač, P. Kabátek", (ZSPC).

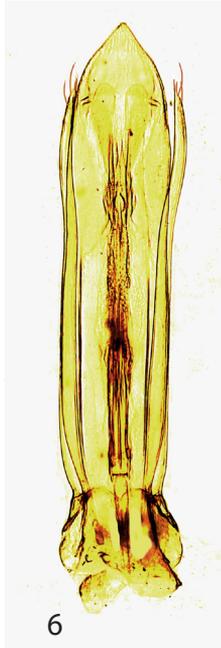
Description. Body oval. Length 2.9 mm, head 0.2 mm, pronotum 0.8 mm, elytra 1.9 mm, antenna 1.2 mm, aedeagus 0.90 mm. Maximum width of head 0.8 mm, pronotum 1.6 mm at base, elytra 1.7 mm at basal quarter. Head and disc of pronotum brown, clypeus and pronotal lateral margins paler, legs yellow-reddish with a little paler tarsi, elytra yellow-brown. Antennomeres AI-AIV yellow, AV-AX gradually darker to light brown, AXI yellow-brown. Dorsal surface partly micro-sculptured by transverse strigosities. Entire dorsum punctured. Underside yellow-brown with darker metaventrite and coxal margins.

Head. With very rare, fine, small and unobtrusive, irregularly distributed punctures, spaced more than 10 times their own diameter. Two pairs of large punctures on vertex at level of posterior margin of eyes. Very finely and very densely strigose. Antennal club 6-segmented. Relative length of AII-AXI (AII = 1.0): 1.0-1.2-0.8-0.8-0.9-0.9-0.8-0.9-0.9-1.3. Relative width of AII-AXI (AII = 1.0): 1.0-1.2-1.0-1.4-2.0-2.4-2.6-2.8-2.8-2.6. W/L of AII-AXI = 0.3-0.3-0.4-0.6-0.8-0.9-1.1-1.0-1.0-0.7.

Pronotum. With very fine puncturation, similar to that on head. Punctures separated more than 10 times their own diameter. With very unobtrusive traces of dense strigosity. Posterior



5



6

Figs. 5-6. Aedeagus, dorsal view: 5- *Pseudocolenis suturalis* sp. nov.; 6- *P. quadriseta* sp. nov.

angles feebly acute abruptly rounded on tip in dorsal and lateral views. Base very slightly emarginate before hind angles.

Elytra. Strigosity sparse to very sparse, strigoses separated 0.01-0.03 mm (predominantly more than 0.01 mm). Larger elytral punctures connecting by transverse strigosity. Punctures separated each other by about 2 times their diameter longitudinally forming five distinct medially located rows. Laterally located rows hardly detectable. Interval punctures smaller sparse and more irregularly arranged than those in rows. Sutural stria very long reaching level of the scutellar tip.

Mesoventrite. Type A.

Legs. Anterior tarsomere TI widened and protracted, with long sparse seta beneath, TI shorter than TV (without claws).

Male genitalia. Aedeagus as in Fig. 5. Paramera with two apical seta.

Biology. Not known.

Etymology. The name of the new species should remembers the presence of the very long sutural stria (Latin sutura is equal to suture in English).

Differential diagnosis. *Pseudocolenis suturalis* sp. nov. is very similar in the shape of the endophallus to Chinese (Yunnan) *Pseudocolenis torta* Švec, 2014. Both species belong to the species group *grandis*, subgroup I. The endophallus of the both species contains an irregularly twisted syphon terminating in a ring-like structure. *P. suturalis* differs from *P. torta* before all by the shape of tegmen. While tegmen is broadly rounded apically in *P. suturalis*, the abruptly rounded top terminates in a trace of an unobtrusive bump in *P. torta*. Elytral strigosity are a little denser in *P. suturalis* (width of intervals 0.01-0.03 mm) than in *P. torta* (0.03-0.04 mm).

***Pseudocolenis quadriseta* sp. nov.**

(Fig. 6)

Type material. Holotype (♂): "CHINA, Sichuan prov., Kangding, 3000 m, 30.vi. 1993, Jindra lgt.", (ZSPC).

Description. Body oval. Length 2.9 mm, head 0.3 mm, pronotum 0.8 mm, elytra 1.8 mm,

antenna 1.0 mm, aedeagus 1.09 mm. Maximum width of head 0.8 mm, pronotum 1.6 mm at base, elytra 1.7 mm at basal third.

Head brown, disc of pronotum light brown, clypeus and pronotal margins paler, elytra and legs red-brown, antennomeres AI-AIV yellow, AV-AX light brown, AXI red-brown. Dorsal surface partly micro-sculptured by transverse strigosites. Entire dorsum punctured. Underside yellow-brown with darker metaventrite and coxal margins.

Head. With fine, small and unobtrusive, irregularly distributed punctures, spaced 4-8 times their own diameter. Punctures become smaller and finer anteriorly. Several large punctures interposed. Two pairs of large punctures on vertex at level of posterior margin of eyes. Finely but distinctly densely strigose. Antennal club 7-segmented. Relative length of AII-AXI (AII = 1.0): 1.0 - 1.0 - 0.7 - 0.6 - 0.7 - 0.8 - 0.5 - 0.8 - 0.8 - 1.4. Relative width of AII-AXI (AII = 1.0): 1.0 - 1.0 - 1.3 - 2.0 - 2.2 - 2.7 - 2.2 - 2.3 - 2.2 - 2.0. W/L of AII-AXI = 0.4 - 0.4 - 0.8 - 1.3 - 1.3 - 1.3 - 1.6 - 1.2 - 1.1 - 0.6.

Pronotum. With irregular puncturation. Punctures of several sizes. Smallest punctures separated by about 4-8 times their own diameter. Some larger punctures sparsely disseminated. With very unobtrusive feeble traces of dense strigosity. Strigosity more distinct near base. Posterior angles feebly acute short rounded on tip in dorsal view, rectangular short rounded laterally viewed. Base straight not emarginate before hind angles.

Elytra. Strigosity very sparse, strigosites separated by 0.03-0.04 mm (predominantly by 0.03 mm). Distinctly developed punctures connected by strigosity; punctures tend to form longitudinal rows. Row punctures separated by about 1-2 times their diameter. Interval punctures separated by about 2-3 times their diameter, a little smaller than those in rows. Sutural stria very long terminating near base.

Mesoventrite. Type A.

Legs. Anterior tarsomere TI a little widened and protracted, with long sparse seta beneath. TI shorter than TV (without claws).

Male genitalia. Aedeagus as in Fig. 6. Paramera with two preapical and two apical seta.

Biology. Not known.

Etymology. The name of the new species remembers four setose paramera (Latin expression quadri seta mean four seta in English).

Differential diagnosis. *Pseudcolenis quadriseta* sp. nov. belongs, due to the type of its elytral strigosity and the antennal structure, to the species group *grandis*, subgroup I. The shape of the tegmen in *P. quadriseta* is similar to those in two another species attributed to the same species group and subgroup - the Russian and Japanese *Pseudcolenis grandis* (Portevin, 1905) and the Chinese species *P. similis* Švec, 2014. *P. quadriseta* differs from both mentioned species by the shape of the endophallus and by the 7-segmented antenna while the same is 5-segmented in the both similar species.

Pseudocolenis oblonga sp. nov.

(Fig. 7)

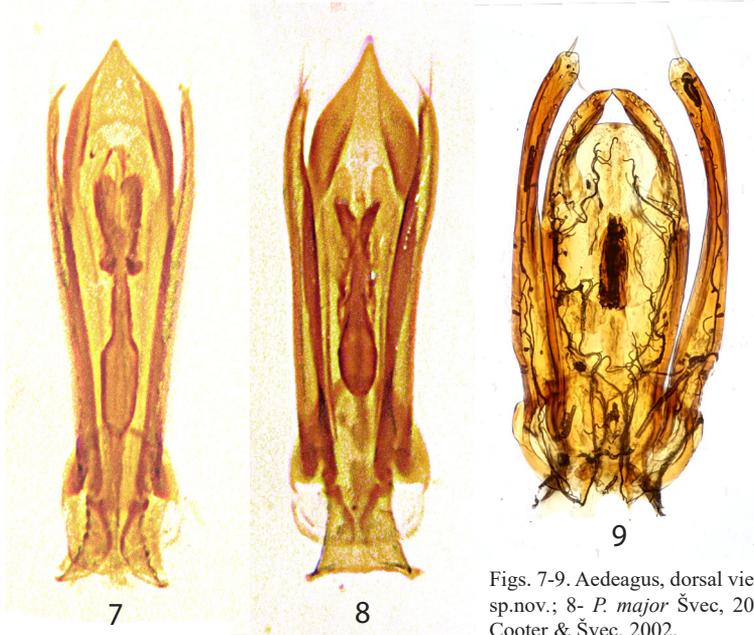
Type material. Holotype (♂): "CHINA, N- Yunnan, Nujiang Lisu, Aut. Pr. Gongshan Co., Gaoligong Shan, valley at 3000-3500 m, 27°47,90' N, 98°30.19' E, 21.vi. 2005, A. Smetana [C159]", (ZSPC).

Description. Oblong oval. Total length 3.0 mm, head 0.4 mm, pronotum 0.7 mm, elytra 1.9 mm, antenna 1.1 mm. Maximum width of head 0.8 mm, pronotum 1.5 mm at base, elytra 1.7 mm at anterior third of elytral length.

Head yellow-brown with lighter clypeus and front, pronotum yellowish, elytra yellow-red, scutellar margins, posterior margin of pronotum, suture and sutural stria darker. Elytra feebly opalescent. Antennal segments AI-AV yellow, AVI-AXI light brown, apical third of AXI yellowish. Dorsal surface entirely micro-sculptured by transverse strigosity. Entire dorsum punctured. Ventral surface light yellow-brown.

Head. Strigosity distinct, strigosities very dense. With sparse irregularly distributed punctures separated by about 3-10 times or more their diameter. Two pairs of large punctures on vertex at posterior level of eyes. Antennal club 6-segmented. Relative length of antennal segments II-XI (segment II = 1.0): 1.0-1.2-0.6-0.7-0.8-1.0-0.9-1.2-1.2-1.8. Relative width of antennal segments II-XI (segment II = 1.0): 1.0-0.8-1.0-1.2-1.6-2.2-2.0-2.2-2.2-2.0. W/L ratios of antennal club segments II-XI = 0.5-0.3-0.8-0.8-1.0-1.0-1.0-0.8-0.8-0.5.

Pronotum. Strigosity much finer than on head. With fine punctures separated by about 5-10 or more time their own diameter. Several large punctures disseminated mainly near pronotal base. Posterior pronotal angles acute abruptly rounded on tip in both dorsal and



Figs. 7-9. Aedeagus, dorsal view: 7- *Pseudocolenis oblonga* sp.nov.; 8- *P. major* Švec, 2009; 9- *Zeadolopus insignis* Cooter & Švec, 2002.

lateral views. Pronotal lateral outline almost conical, sides almost straight in dorsal view.

Elytra. With extremely dense strigosities separated distinctly less than 0.01 mm. With extremely small punctures feebly tending to seriate in some places. Sutural stria extending approximately to elytral basal third.

Mesoventrite. Mesoventral bump of type A.

Legs. Segment TI of anterior tarsi slightly widened, protracted, as long as TV without claws.

Genitalia. Aedeagus as in Fig. 7.

Differential diagnosis. *Pseudcolenis oblonga* sp. nov. is most similar to *Pseudcolenis major* Švec, 2009 in the size of body, colouring of antenna, in extremely dense elytral strigosities, dorsal puncturation and by the shape of the aedeagus. Both species belong to the species group *rastrata* subgroup I. The compared species can be distinguished by the shape of AVII of the male antenna. The seventh antennomere is as wide as long in *P. oblonga* while the same is distinctly broader than long in *P. major*. Both similar species differ distinctly also by the shape of the endophallic structures. The paired endophallic structure adjacent to the distal part of the syphon resembles a wavy woman's wig (Fig. 7) while the same in *P. major* looks like a notching of an arrow (Fig. 8).

Name derivation. The name of the new species reminds the oblong oval shape of body (Latin *oblonga* means oblong or elongated).

NEW DISTRIBUTIONAL DATA

Pseudcolenis laticornis Angelini & Švec, 2000

Examined material: (1 ♂, 2 ♀♀), China, N Sichuan, Jiuzhaigou env., Zhongchacun, 33°17'13" N, 103°50'1" E, 9.-13.7.2017, 2400-3000 m, lgt. Ondřej Konvička, (ZSPC, OKZC).

Distribution. China (Hubei, Shaanxi, Yunnan, Sichuan). New for Sichuan.

Pseudcolenis torta Švec, 2014

Examined material: (2 ♂♂, 3 ♀♀), Laos-NE Houa Phan Prov., 20°11'50" N 103°59'54"-104°01'01" E, 1.870 m, Phou Pane Mt., 14.-24.vi. 2012, Vít Kubáň leg. // Primary mountain forest, light intercept trap, Laos 2012 Expedition, National Museum Prague, Czech Republic, (NMPC, ZSPC).

Distribution. China (Yunnan), Laos. New for Laos.

***Zeadolopus insignis* Cooter & Švec, 2002**

(Fig. 9)

Examined material: (1 ♂, 6 ♀♀), Philippines, Mindanao island, Davao Or. Province, Mt. Hamiguitan, Research Base, alt. 390-440 m, 6°44'07,44" N, 126°08'30,14" E, 16.-23.ii. 2017, Damaška, Hřřman, Šřpek, Vondřřček lgt. // FIT near research base, open area near forest and ferns. Propylenglycole, then transfer to 96% EtOH, (NMPC, ZSPC).

Distribution. Indonesia (Sulawesi), Philippines (Mindanao). New for Philippines.

Remark. The specimens from Philippines agreed with those from Sulawesi in all the main morphological characters. Some small differences were detected in the punctuation. The puncturation of metaventricle is more regular in the specimens from Philippines than that in the type series from Sulawesi. Small difference was detected also in the shape of the endophallus that is simply bar-shaped in the specimen from Philippines (Fig. 9).

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