ACTA ENTOMOLOGICA
MUSEI NATIONALIS PRAGAE
2024
64(2): 293–297
doi: 10.37520/aemnp.2024.020
ISSN 1804-6487 (online) – 0374-1036 (print)
www.aemnp.eu

SHORT NOTE

First record of the genus *Falsorsidis* from China, with description of one new species and transfer of the genus to the tribe Lamiini (Coleoptera: Cerambycidae)

Wen-Xuan BI[1] & Chang-Chin CHEN[2]

[1] Room 401, No. 2, Lane 155, Lianhua South Road, Shanghai, 201100 China; e-mail: insectb@163.com;
ORCID: https://orcid.org/0000-0003-1806-7679
[2] NPS office, Tianjin New Wei San Industrial Company, Ltd., Tianjin, China; e-mail: chen-2c@hotmail.com;
ORCID: https://orcid.org/0000-0001-5771-8337

Accepted:
4th November 2024

Published online:
24th November 2024

Abstract. A little-known genus *Falsorsidis* Breuning, 1959 (Coleoptera: Cerambycidae: Lamiinae), so far known only from Vietnam, is newly recorded from China upon the discoveries of its type and until now the only known species, *F. griseofasciatus* (Pic, 1926), from Guangxi, and *F. lichaoi* sp. nov. from Yunnan. The genus is proposed to be transferred from the tribe Desmiphorini to Lamiini and is considered to be closest to the Oriental genus *Granulorsidis* Breuning, 1980. Description and illustrations of the habitus, endophallic structure and major diagnostic features for the involved taxa are provided.

Key words. Coleoptera, Cerambycidae, *Falsorsidis*, endophallus, new species, new records, taxonomy, China, Oriental Region

Zoobank: http://zoobank.org/urn:lsid:zoobank.org:pub:2916A152-E7AD-41AD-977A-BC33944FF32C

Introduction

The genus *Falsorsidis* was established by Breuning (1959) based on *Orsidis griseofasciatus* Pic, 1926 from Tonkin, Vietnam and compared with *Diboma* Thomson, 1864 (nec *Diboma* Walker, 1863, Lepidoptera) = *Zotalemimon* Pic, 1925, a genus currently placed in Desmiphorini (Tavakilian & Chevillotte 2024) or Apodasyini (Danilevsky 2020). Breuning (1963, 1975) later treated *Falsorsidis* in Rhodopinini, a tribe whose position and validity had been frequently debated and was finally synonymized with Lamiini by Santana Souza et al. (2020) based on molecular phylogenetics, but Tavakilian & Chevillotte (2024) retain *Rhodopina* Gressitt, 1951 as well as *Falsorsidis* in the tribe Desmiphorini.

The genus *Falsorsidis* can be distinguished among Rhodopinini (sensu Breuning 1975) by the head not retractable, eyes deeply emarginate, antennal tubercles moderately prominent, scape without granules and cicatrix at apex, antennomere III noticeably longer, pronotum spinose laterally, elytra without erect or suberect hairs, mesosternal projection without tubercle, mesocoxal cavities open externally to mesepimera, and mesotibiae with a slight dorsal groove.

In this study, the type species of the genus *Falsorsidis* is newly recorded from China and its male endophallus is investigated, one new species of *Falsorsidis* is described from China, and taxonomic placement of *Falsorsidis* is changed based on newly employed characteristics.

Material and methods

The text of the specimen labels is quoted verbatim. Holotype of the new species is deposited in the Insect Collection of Shanghai Normal University, Shanghai, China (SNUC). Other studied material belongs to the following institutional or private collections:

CBWX Collection of Bi Wen-Xuan, Shanghai, China;
CCCC Collection of Chen Chang-Chin, Tianjin, China;
IZAS Institute of Zoology, Chinese Academy of Sciences, Beijing, China;
MNHN Muséum national d'Histoire naturelle, Paris, France.

Material of the following species was studied for comparison: *Granulorsidis* cf. *puncticollis* (Fisher, 1935): 1 ♂, labelled: 'Borneo: Sabah, Keningau / district, Jungle Girl Camp / N5.54430, E116.4512; 1182m / Shi H.L. & Liu Y. lgt. N / 2016.IV.30' (CBWX).

All images were taken using a Canon EOS 60D camera

in conjunction with a Canon MP-E 65mm f/2.8 1-5X Macro Lens. Canon MT-24EX Macro Twin Lite Flash was used as light source. CombineZM was used for image stacking. All images were edited and arranged in Adobe Photoshop CS3.

Abbreviations used for the description of endophallus are as follows (cf. Fig. 5d): APH – apical phallomere; BPH – basal phallomere; CT – central trunk; MPH – median phallomere; MT – medial tube; PB – preapical bulb; ab – apical bulb; bb – apical bubble; cs – crescent-shaped sclerites; gn – gonopore.

Taxonomy

Genus *Falsorsidis* Breuning, 1959

Falsorsidis Breuning, 1959: 82. Type species: *Orsidis griseofasciatus* Pic, 1926, by original designation.
Falsorsidis: Breuning (1963: 503), Breuning (1975: 8, 45).

Complementary description to the original description provided by Breuning (1959). Elongate. Maxillary and labial palpi with terminal palpomeres showing sexual dimorphism (distally broadened in male and fusiform in female). Frons transverse. Eyes coarsely faceted, deeply emarginate; lower eye lobes vertical. Antennal tubercles moderately prominent. Antennae long and slender, longer than body in both sexes; antennomere III much longer than IV or scape. Scape lacking cicatrix. Pronotum transverse; sharply spinose laterally. Elytra long, parallel, rounded at apices. Hindwings developed. Prosternal process narrow, lower than coxae. Mesoventral process without tubercles, obliquely declivous anteriorly. Mesocoxal cavities open externally to mesepimera. Metaventrite not shortened. Legs long; femora clavate; mesotibiae provided with slight dorsal groove; tarsi tetramerous; tarsal claws divaricate. Endophallus with cs developed; apical furrow with internal membrane complete; ejaculatory ducts paired and associated with pair of rod-like sclerites.

Comments to classification. This genus was established by Breuning (1959) based on *Orsidis griseofasciatus* Pic, 1926 from Tonkin, Vietnam. In the original description Breuning (1959) considered it allied with *Diboma* Thomson, 1864 (= *Zotalemimon* Pic, 1925), and later (Breuning 1963, 1975) placed it in the tribe Rhodopinini, mainly based on the scape without an apical cicatrix. However, comprehensive investigation of new material of *F. griseofasciatus* recently discovered in Guangxi, China shows that this species simultaneously possesses tetramerous tarsi (tarsomeres 4 and 5 completely fused) and paired ejaculatory ducts, a combination of characters only known in certain genera of the Lamiini-Dorcadionini but not in Rhodopinini or Desmiphorini (Švácha & Lawrence 2014). Furthermore, *F. griseofasciatus* is extremely morphologically similar to the Oriental lamiine genus *Granulorsidis* Breuning, 1980, especially in the apical maxillary and labial palpomeres showing sexual dimorphism (Figs 1a, 2a; the type species of *Granulorsidis* was examined by F. Vitali, pers. comm. 2024). The similarities of endophallic structures between *F. griseofasciatus* and studied *Granulorsidis* species from Borneo (Figs 5 ,7; i.e., cs developed, apical furrow with internal membrane complete, ejaculatory ducts paired, APH with a pair of rod-like sclerites) also suggest a possible relationship of these genera. Based on those characters, *Falsorsidis* is herein transferred to the tribe Lamiini, but it differs from *Granulorsidis* in the scape without an apical cicatrix.

Falsorsidis griseofasciatus (Pic, 1926)

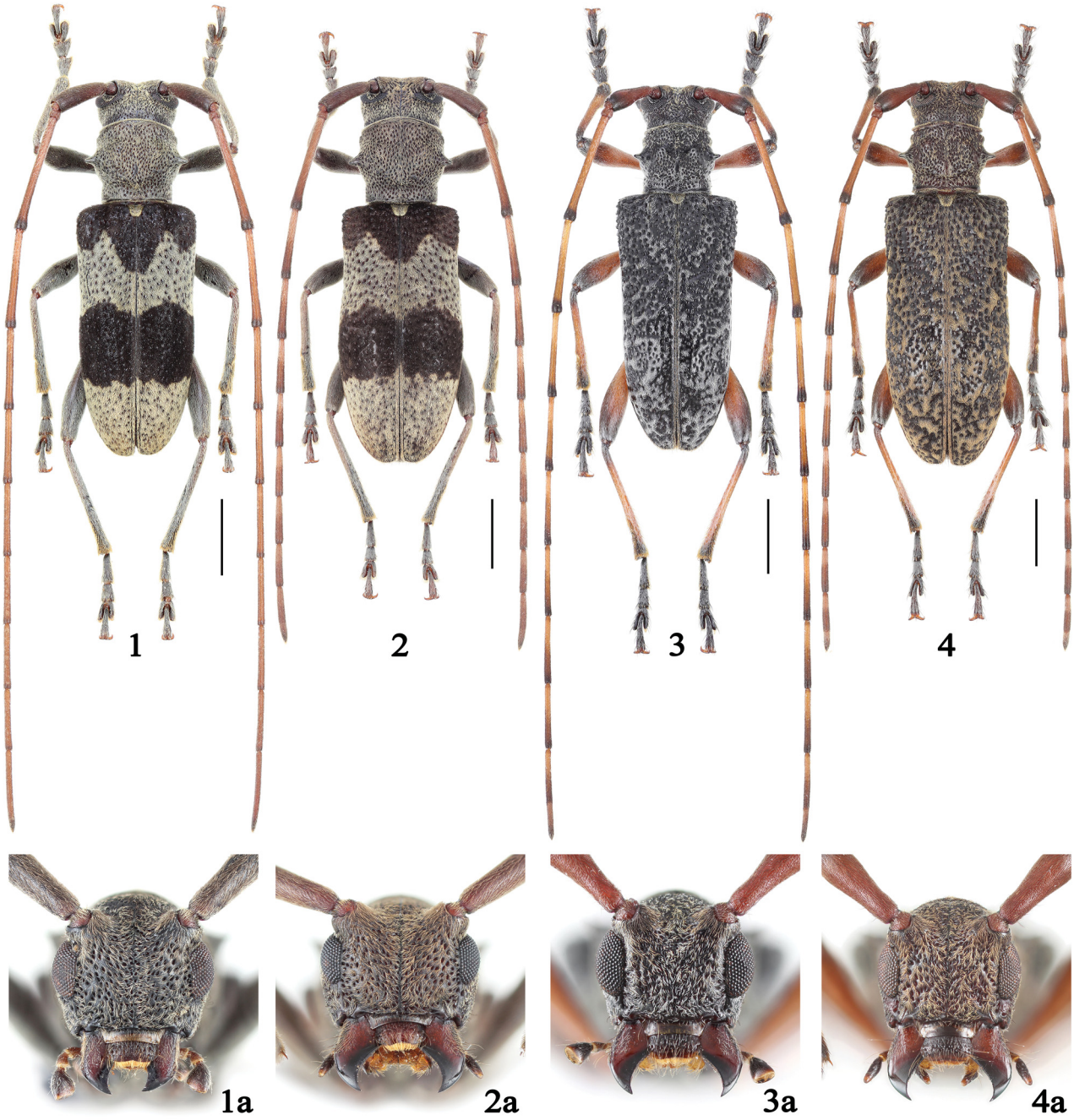
(Figs 1, 2, 5)

Orsidis griseofasciata Pic, 1926: 15.
Falsorsidis griseofasciatus: Breuning (1963: 503); Breuning (1975: 46).

Type material. Holotype: ♂, **VIETNAM: '**Tonkin' (MNHN). One photograph examined, provided by Tomáš Tichý.
Additional material examined. CHINA: Guangxi: 1 ♀, 'China, Guangxi Prov. / Jinxiu County / Yinshan Baohuzhan / 2011.VII.23 / 1,200 m / Peng Zhong leg.' (CBWX); 1 ♀, 'China, Guangxi, Jinxiu, Dayaoshan / Luoyingou, 1,200 m / 2016.V.3 / leg. Jin-Teng Zhao' (CCCC); 1 ♀, ditto except '2016.V.7' (CCCC); 1 ♂ 1 ♀, ditto except '1,150 m / 2017.V.10' (CCCC); 1 ♂, ditto except '2017.VI.4' (CCCC); 1 ♂ 1 ♀, ditto except '1,200 m / 2017.V.21' (CCCC); 2 ♂♂ 1 ♀, ditto except '2017.VI.8' (CCCC); 1 ♂ 1 ♀, ditto except '1,180 m / 2017.V.31' (CCCC); 1 ♀, ditto except 'Jiuershan, 1,250 m / 2016.V.29' (CCCC); 1 ♀, ditto except 'Luomengshan, 1,150 m / 2016.VI.18' (CCCC); 1 ♂, ditto except 'Wugonglilinchang, 1,350 m / 2016.VI.24 // ED-0408' (CCCC); 1 ♀, ditto except 'Shengtangshan, 1,500 m / 2016.VI.25' (CCCC); 1 ♂, ditto except 'Pingbanshan, 1,250 m /2017.V.2' (CCCC); 1 ♀, ditto except 'Fenzhantun, 900 m / 2017.V.18' (CCCC); 1 ♀, 'Guangxi, Nanning, Damingshan / Tianping Baohuzhan (16–24 km) / 2011,V,23, 900–1,260 m // 23.51770°, 108.39295°E / leg. Xin-Lei Huang' (IZAS); 1 ♂, 'Guangxi, Damingshan, 24KM / 2011.VII.1 / leg. Chao Li' (IZAS).

Complementary description. ***Male*** (Fig. 1). Body length 8.2–10.5 mm, humeral width 2.6–3.3 mm. Head and pronotum covered with sparse yellowish pubescence, not obscuring integument; elytra densely clothed with light yellowish and blackish suberect pubescence, with the latter forming one transverse band occupying basal fourth with sinuate posterior margin, and another slightly broader band near apical third. Eyes deeply emarginate. Antennae ca. 1.9–2.1 times as long as body length; scape subcylindrical. Maxillary and labial palpi with terminal palpomeres broadened distally. Head, pronotum and elytra densely and deeply punctate throughout, punctures of elytra becoming shallower distally. Elytra about 2.1 times as long as maximum width across humeri. Hindwings well developed.

Male genitalia. Tergite VIII (Fig. 5a) roughly semicircular with apical margin bearing sparse moderately long setae. Tegmen (Fig. 5b) in lateral view moderately curved, rhombic in shape and widest near middle in ventral view; lateral lobes short, less than one-fourth of total length of tegmen, distinctly thickened at bases, sparsely provided with fine setae on apices. Median lobe (Fig. 5c) slightly shorter than tegmen, moderately curved in lateral view; apex subacute. Endophallus in everted condition (Fig. 5d) S-shaped, long and slender, ca. 3.5 times as long as median lobe; gently curved ventrally near basal third, strongly curved dorsally behind apical third; BPH, MPH and APH well-defined; crescent-shaped sclerites (cs) present; MPH subdivided into MT, CT and PB by weak constrictions; relative lengths of APH : MPH : BPH : PB : CT : MT = 1.0 : 10.4 : 2.0 : 1.7 : 2.8 : 6.0. MT provided with small ventral swelling distally, CT roughly cylindrical, PB not swollen;



Figs 1–4. Habitus of *Falsorsidis* spp. 1–2 –*Falsorsidis griseofasciatus* (Pic, 1926); 3–4 – *F. lichaoi* sp. nov. 1, 3 – male; 2, 4 – female. 3 – holotype; 4 – paratype. a – frontal view. Scale bars = 2 mm (a – not to scale).

APH strongly constricted distally, elongate conical, with reduced bb; apical furrow with internal membrane developed, elongate and sclerotized; spicules mainly distributed on CT where they form two oblique rings, and on most parts of PB and APH; ejaculatory ducts paired, gn situated at apex of APH which is associated with pair of undulate sclerites (Fig. 5e).

Female (Fig. 2). Body length 9.2–11.9 mm, maximum elytral width 3.1–3.9 mm. Almost identical to male in general appearance except for the following: body relatively stouter, antennae ca. 1.5–1.6 times as long as body length, maxillary and labial palpi with terminal palpomeres fusiform, elytra broadest in apical two fifths and legs relatively shorter.

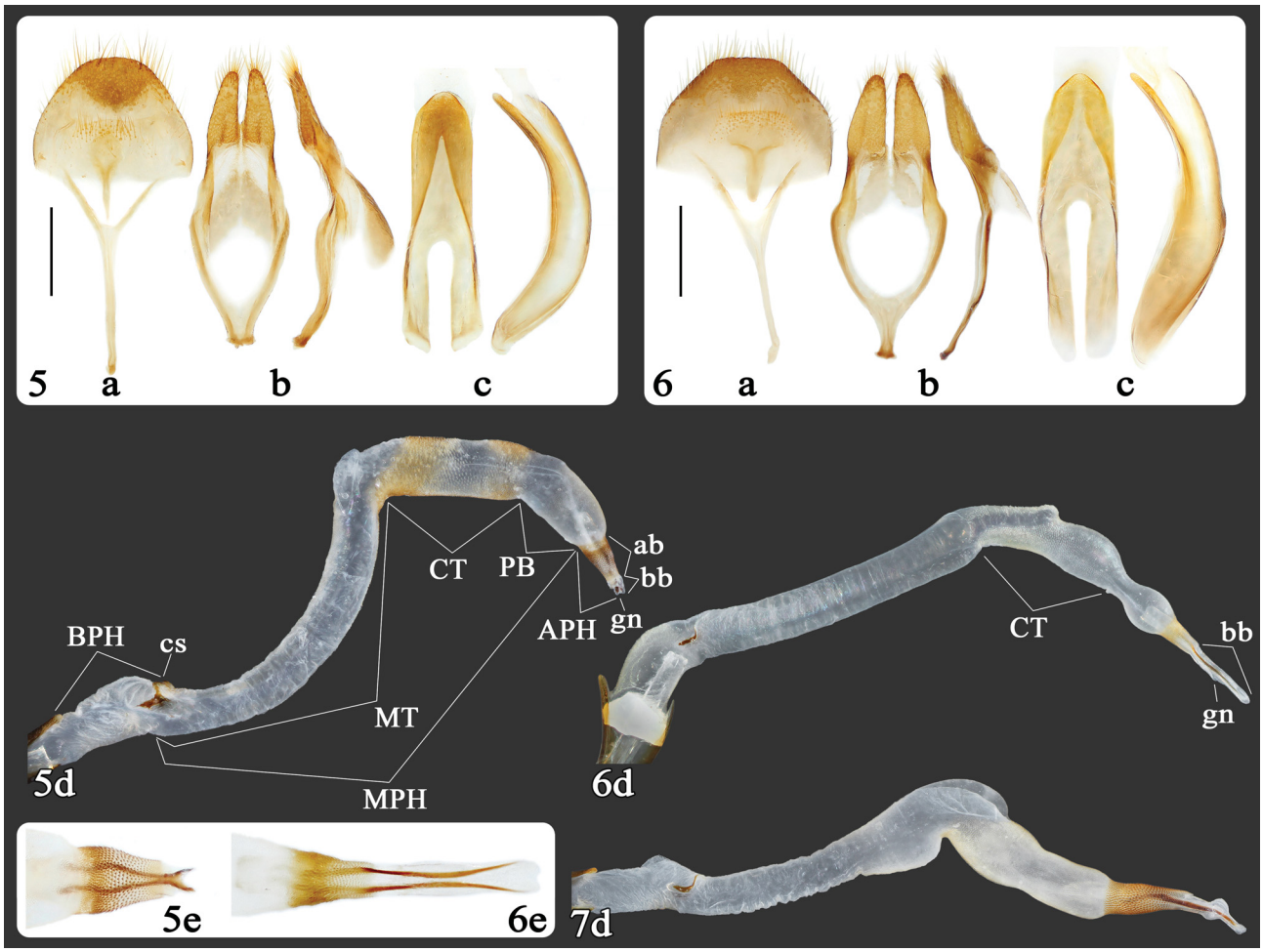
Distribution. Vietnam: Tonkin (Pic 1926); China (new country record): Guangxi.

Falsorsidis lichaoi sp. nov.

(Figs 3, 4, 6)

Type material (8 specimens). Holotype: ♂, **China: Yunnan:** 'China, Yunnan, Pingbian / Daweishan / 2,100 m, 2013.V.12–14 / leg. Chao Li // ED-0426' (SNUC). Paratypes: **China: Yunnan:** 1 ♀, same locality as holotype '2010.V.21 / leg. Wen-Hsin Lin' (CCCC); 1 ♀, same locality as holotype '2,200 m, 2009.V.21 / leg. Wen-Xuan Bi' (CBWX); 1 ♂ 2 ♀♀, ditto except '2,170–2,240 m, 2024.V.31 / leg. Wen-Xuan Bi' (CBWX); 1 ♀, ditto except '2,240 m, 2024.VI.1' (CBWX); 1 ♀, ditto except '2,180 m, 2024.V.31 / leg. Jin-Teng Zhao' (CCCC).

Description. ***Male*** (Fig. 3). Body length 9.9–10.0 mm, humeral width 3.2 mm. Body blackish; antennae with



Figs 5–7. Male terminalia of *Falsorsidis* and *Granulorsidis* spp. 5 – *Falsorsidis griseofasciatus* (Pic, 1926); 6 – *F. lichaoi* sp. nov.; 7 – *Granulorsidis* cf. *puncticollis* (Fisher, 1935). a – tergite VIII with sternites VIII & IX in ventral view; b – tegmen in ventral and lateral view; c – median lobe in ventral and lateral view; d – endophallus in inflated and everted condition in lateral view; e – APH in dorsal view. Scale bars = 0.5 mm (d, e – not to scale).

scape reddish brown, becoming darker apically, antennomeres II to XI mostly light brown except for extreme apices of III to XI which are dark brown, but become less distinct toward apical antennomeres; legs mostly reddish brown, except for extreme apices of femora, extreme bases and apices of tibiae, and tarsi which are dark brown. Head and pronotum sparsely covered with white to yellowish pubescence, relatively dense and dark on antennal tubercles. Antennae with scape clothed with fine brown pubescence; antennomeres III to XI clothed with fine pale pubescence on basal parts. Scutellum densely clothed with yellowish pubescence, obscuring integument. Elytra covered with sparse pale pubescence forming mottled pattern. Legs and ventral surface moderately covered with pale pubescence, relatively dense on extreme apices of femora.

Head slightly wider than pronotal base; frons and vertex deeply and coarsely punctate; eyes weakly emarginate; lower eye lobes vertical, ca. 2.0 times as long as width, 2.2 times as long as genae. Antennae 2.1–2.2 times as long as body length; scape clavate, broadest near apical third, smooth on surface, without apical cicatrix; antennomere III longest, 1.7 times as long as scape, 1.3 times as long as IV, antennomeres IV to X gradually decreasing in length.

Pronotum cylindrical, subequal to basal width; each side provided with short lateral spine slightly before mid-length; disk as deeply and coarsely punctate as head, with exception of smooth bases of lateral spines, with three weakly elevated calli arranged in inverted triangle. Scutellum semicircular.

Elytra elongate, 2.1 times as long as humeral width, 1.7 times wider than pronotal base; subparallel-sided in basal two thirds, then gradually convergent toward conjointly rounded apices; disk provided with a few granules in basal sixth, deeply and coarsely punctate throughout, punctures comparatively sparser than those on head and pronotum and becoming shallower near apical one fourth. Hindwings developed. Legs moderately long, femora strongly clavate.

Male genitalia. Tergite VIII (Fig. 6a) roughly trapezoid with apical margin bearing sparse long setae. Tegmen (Fig. 6b) moderately curved in lateral view, rhombic in shape and widest near middle in ventral view; lateral lobes thickened at bases, provided with fine short setae on apices. Median lobe (Fig. 6c) robust with subacute apex, subequal to length of tegmen, moderately curved in lateral view. Endophallus in everted condition (Fig. 6d) arched, long and slender, about three times as long as median lobe; moderately curved ventrally before midlength; MPH

subdivided into MT, CT and PB by weak constrictions; relative lengths of APH : MPH : BPH : PB : CT : MT = 1.0 : 4.7 : 0.8 : 0.7 : 1.4 : 2.8. MT roughly cylindrical, CT provided with small ventral swelling near midlength, PB moderately swollen; APH elongate, gradually constricted distally, with developed bb; apical furrow with internal membrane developed; spicules mainly distributed on most parts of CT and surround ab; ejaculatory ducts paired, gn situated at dorsal side of bb which is associated with pair of long rod-like sclerites (Fig. 6e).

Female (Fig. 4). Body length 9.9–13.5 mm, elytral maximum width 3.2–4.5 mm. Similar to male in general appearance except for the following: the main pubescence of body light brown, body relatively stouter, antennae ca. 1.5–1.6 times as long as body length, elytra broadest in apical two fifths and legs relatively shorter.

Differential diagnosis. This new species is somewhat unique even among Lamiini by the main pubescence of body showing sexual dimorphism (pale in male and light brown in female). Additionally, it can be readily distinguished from *F. griseofasciatus* by the scape distinctly clavate, eyes only weakly emarginate and elytra without transverse bands of dark pubescence. The clavate scape of this species may be confused with members of the genus *Rhodopina*. However, the tarsi are pentamerous in *Rhodopina*. This species can be distinguished from members of *Granulorsidis* by the scape lacking a cicatrix. However, the resemblance of the endophallic structures of this new species, *F. griseofasciatus* and *Granulorsidis* cf. *puncticollis* (cf. Figs 5–7d) indicates potentially more complex relationships between these two genera which require further study.

Etymology. The new species is dedicated to our friend, Mr. Chao Li, the collector of the holotype of the new species. The specific epithet is a noun in the genitive case.

Distribution. China: Yunnan (Pingbian County).

Acknowledgments

We thank Chao Li (Beijing, China), Jin-Teng Zhao (Guangxi, China) and the late Wen-Hsin Lin (Taiwan, China) for collecting specimens, Tomáš Tichý (Opava, Czech Republic) for providing one picture of the holotype of *Falsorsidis griseofasciatus*, Francesco Vitali (National Museum of Natural History, Luxembourg) for providing further information on the genus *Granulorsidis*, and Mei-Ying Lin (IZAS), Petr Švácha (Institute of Entomology, Academy of Sciences, České Budějovice, Czech Republic) and an anonymous reviewer for revising the first draft of this study.

References

BREUNING S. 1959: Nouveaux genres de Lamiinae (Coleoptera, Cerambycidae). *Bulletin et Annales de la Société Royale d' Entomologie de Belgique* **95**: 70–88.

BREUNING S. 1963: *Catalogue des Lamiaires du Monde (Col. Céramb.). Vol. 7.* Verlag des Museums G. Frey, Tutzing, pp. 463–555.

BREUNING S. 1975: Révision de la tribu des Rhodopinini Gress. de la région asiato-australienne (Coleoptera, Cerambycidae) (première partie). *Sciences Nat* **1975**: 1–70.

DANILEVSKY M. L. (ed.) 2020: *Catalogue of Palaearctic Coleoptera. Volume 6/1. Updated and revised second edition. Chrysomeloidea I (Vesperidae, Disteniidae, Cerambycidae).* Brill, Leiden/Boston, XXVII + 712 pp.

PIC M. 1926: Nouveautés diverses. *Mélanges Exotico-Entomologiques* **47**: 1–32.

SANTANA SOUZA D. DE, MARINONI L., MONNÉ L. M. & GÓMEZ-ZURITA J. 2020: Molecular phylogenetic assessment of the tribal classification of Lamiinae (Coleoptera: Cerambycidae). *Molecular Phylogenetics and Evolution* **145 (106736)**: 1–16.

ŠVÁCHA P. & LAWRENCE J. F. 2014: 2.4 Cerambycidae Latreille, 1802. Pp. 77–177. In: LESCHEN R. A. B. & BEUTEL R. G (eds): *Handbook of Zoology. Arthropoda: Insecta. Coleoptera, Beetles. Volume 3: Morphology and systematics (Phytophaga).* Walter de Gruyter, Berlin/Boston, XI + 675 pp.

TAVAKILIAN G. L. & CHEVILLOTTE H. 2024: *Titan: base de données internationales sur les Cerambycidae ou Longicornes. Version 4.0*. Available from: http://titan.gbif.fr/index.html (accessed April 1, 2024).