

Two new species in the genus *Aglaostigma* Kirby (Hymenoptera: Tenthredinidae) from Mts. Nanling, China

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Abstract: Two new species in the genus *Aglaostigma* Kirby (Hymenoptera: Tenthredinidae) are described and illustrated from Mts. Nanling, China: *A. luoyoulaii* Li, Liu & Wei **sp. nov.** and *A. mengmeng* Li & Wei **sp. nov.**

Key words: Sawflies; Tenthredinoidea; taxonomy

中国南岭山脉钝颊叶蜂属两新种（膜翅目：叶蜂科）

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摘要：记述中国南岭山脉的钝颊叶蜂属 *Aglaostigma* Kirby, 1882（膜翅目：叶蜂科）2 新种：罗氏钝颊叶蜂 *Aglaostigma luoyoulaii* Li, Liu & Wei **sp. nov.** 和萌萌钝颊叶蜂 *A. mengmeng* Li & Wei **sp. nov.**。

关键词：叶蜂；叶蜂总科；分类

Introduction

Aglaostigma Kirby, 1882, is a median sized genus within the family Tenthredinidae (Hymenoptera) comprised of 54 known species and 2 recognized subspecies worldwide (Taeger *et al.* 2010). In China, 44 valid species of *Aglaostigma* have been recorded (Liu *et al.* 2024a, b; 2025a, b). Here, two new species from Mts. Nanling, China are reported and illustrated, *A. luoyoulaii* Li, Liu & Wei **sp. nov.** and *A. mengmeng* Li & Wei **sp. nov.**

Accepted 20 March 2025. Published online 27 May 2025.

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Material and methods

Specimens were collected by using entomological sweep nets in the forests in Hunan, Jiangxi and Zhejiang in China.

The specimens were examined with a Motic-SMZ-171 stereomicroscope. Images of adults were taken with a Nikon D700 digital camera and a Leica Z16APO microscope. The genitalia were examined with a Motic BA410E microscope and photographed with a Motic Motacam Pro 285A. Images were focus-stacked using Helicon Focus (HeliconSoft, Kharkiv, Ukraine) and further processed with Adobe Photoshop CS 11.0. The terminology of genitalia follows Ross (1945) and that of general morphology follows Viitasaari (2002). For a few terms (e.g., middle fovea and lateral fovea), we follow Takeuchi (1952).

All holotypes and paratypes of three new species are deposited in the Asian Sawfly Museum, Nanchang, China (ASMN).

Abbreviations. OOCL — distance between the lateral ocellus and the occipital carina or the hind margin of the head; OOL — shortest distance between the compound eye and the lateral ocellus; POL — distance between the margins of the lateral ocelli.

Taxonomy

Genus *Aglaostigma* Kirby, 1882

Diagnosis. The diagnosis of the genus *Aglaostigma* was given by Liu *et al.* (2024a).

1. *Aglaostigma luoyoulaii* Li, Liu & Wei sp. nov. (Fig. 1)

Description. Body length 10 mm (Figs 1A, 1B).

Color. Body largely magenta; labrum partly, stripes on inner orbit and outer orbit, ventral margin of metepisternum, posterior half of metepimeron, parts of abdominal tergum 1 and abdominal tergum 4, as well as abdominal tergum 10 entirely, yellow; lateral corners of pronotum partly, mesosternum and metasternum, metepisternum largely, anterior half of metepimeron, abdominal terga 2–3 and 5–6 nearly and median parts of abdominal tergum 5, black. Legs reddish brown; fore coxa partly, middle and hind coxae largely and fore and middle trochanters largely, black; hind trochanter largely yellowish brown. Body hairs silver, sheath setae brown. Wings hyaline, near areas of veins with smoky lustre, stigma and vein costal pale brown, other veins largely blackish brown (Figs 1A, 1B).

Punctuation. Dorsal side of head less shiny, with some shallow and large punctures, wrinkles coarse (Fig. 1C). Mesonotum with more minute punctures than head, slightly dense, puncture interspaces with fine microsculptures; mesoscutellum apex with clear punctures, posterior part with denser punctures than anterior part; mesoscutellar appendage without punctures or microsculptures; metascutellum with some shallow and small punctures (Fig. 1E); mesepisternum with dense punctures, puncture interspaces very narrow, without microsculpture; mesepimeron with some punctures and clear microsculpture; metepisternum with clear weak punctures and microsculpture, without smooth interspace; metepimeron largely shiny, without clear punctures, with finer microsculpture (Fig. 1F). Abdominal terga without clear punctures, with clear microsculpture.

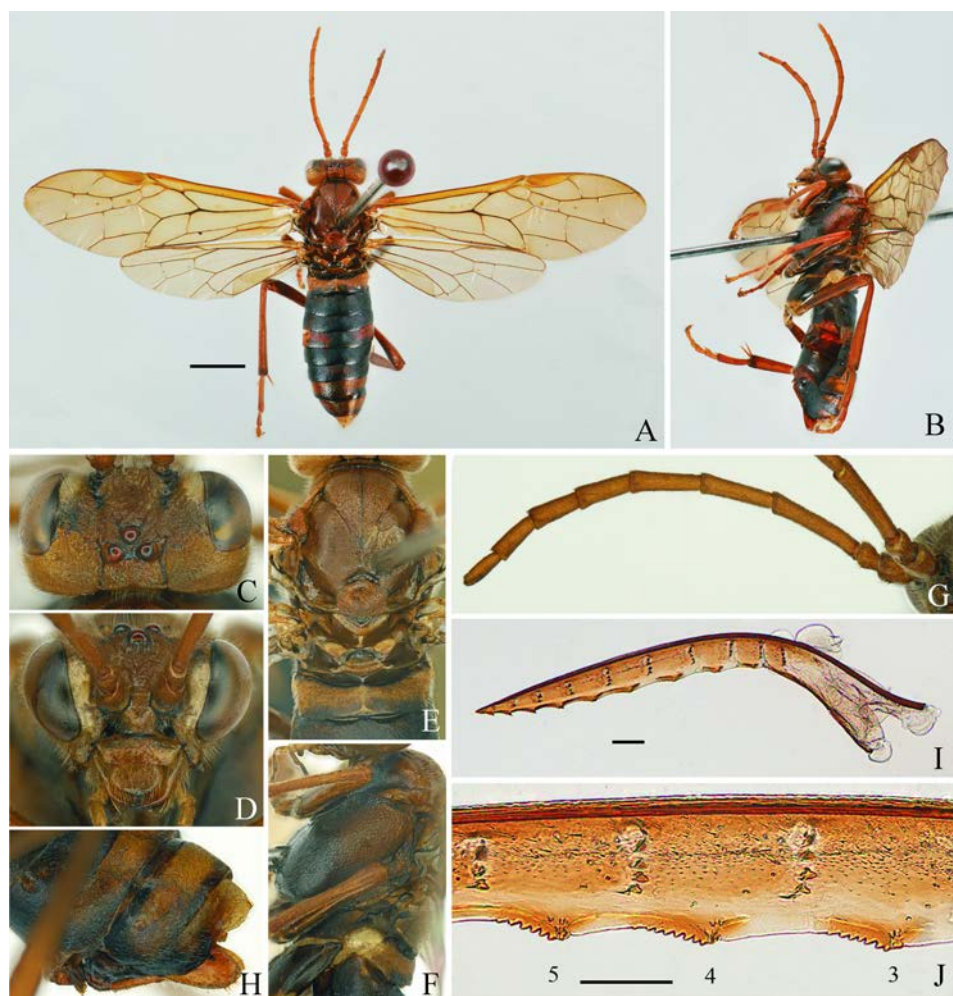


Figure 1. *Aglaostigma luoyoulaii* Li, Liu & Wei **sp. nov.**, ♀, holotype. A, B. Female adult, dorsal and lateral views; C, D. Female head, dorsal and anterior views; E, F. Female mesopleuron and metapleuron, dorsal and lateral views; G. Female antenna, lateral view; H. Ovipositor sheath, lateral view; I. Lancet; J. The 3th–5th serrulae. Scale bars = 2 mm (A); 200 μ m (I); 100 μ m (J).

Body stumpy. Anterior margin of labrum round; apical margin of clypeus truncate, lateral margins slightly convergent forward, narrower than the distance between lower corner of eyes; malar space slightly narrower than the diameter of median ocellus, frontal ridge absent (Fig. 1D); supra-antennal tubercles elevated, small and oblique, posterior part and frontal ridge connected; median fovea deep, with frontal field connected, lateral foveae furrow-shaped; interocellar furrow clear, postocellar furrow weak; postocellar area elevated, without middle longitudinal ditch, posterior part not depressed, with occipital carina, 2 \times broader than long; POL : OOL : OOCL = 22 : 45 : 90, lateral postocellar furrow broad and deep, slightly parallel backward; vertex 0.5 \times broader than diameter of eyes; temple in dorsal view 0.5 \times broader than diameter of eyes, lateral sides almost parallel (Fig. 1C). Antennae

filiform, clearly shorter than abdomen or vein costal, flagellomere 2 broader than long; flagellomere 3 longer than flagellomere 4 (96 : 78), length ratio of apical flagellomeres 5–9 as 73 : 55 : 50 : 50 : 46 (Fig. 1G). Median mesoscutal lobes short, posterior part slightly acute, middle furrow clear, mesoscutellum round and flat, median depressed, without carina or apex; mesocutellar appendage smooth, with weak middle longitudinal carina (Fig. 1E); lower part of mesopleuron not clearly elevated; metepimeronal appendage developed, posterior corner round and obtuse (Fig. 1F). Hind coxa slightly inflated, hind femur not clearly extended to bottom of abdomen; metabasitarsus slightly longer than following 3 tarsomeres together (80 : 70), shorter than following 4 tarsomeres together (80 : 105), inner tibial spur of hind leg clearly shorter than half of metabasitarsus; claw of hind leg with inner tooth broader and larger than outer tooth. Cell 2Rs in fore wing slightly shorter than cell 1R₁ and 1Rs together, outer and lower corner of cell 2Rs strongly extended; vein cu-a joining lower margin of cell 1M at basal 1/5, vein 2r joining upper margin of cell 2Rs at apical 1/3, anal cell with cross vein; anal cell in hind wing with a short petiole, 1/4× longer than vein cu-a; cell M and Rs closed (Fig. 1A). Ovipositor sheath shorter than middle tibia, clearly longer than hind basitarsus, valvula 3 as long as valvifer 2, apical margin truncate, ovipositor sheath in lateral view as shown in Fig. 1H. Lancet with 9 serrulae (Fig. 1I), serrula slightly flat, middle serrulae with 1 proximal and 6–8 distal denticles, denticle small as shown in Fig. 1J, middle annulus with 3–5 clear ctenidial teeth.

Male. Unknown.

Holotype. ♀, **China**, Hunan, Guidong County, Mt. Qiyun, Ximen Forest Protection Station, 25°45.361'N, 113°55.589'E, alt. 1,114 m, 03-IV-2015, leg. Youlai LUO & Ruikun WANG (CSCS15006).

Host plants. Unknown.

Etymology. The specific epithet “luoyoulaii” refers to the first name of Mr. Youlai LUO who collected specimen.

Remarks. This new species is similar to *Aglaostigma ruficorne* (Malaise, 1937) morphologically in having the body slightly thin and long; the clypeus short and broad, approximately 2.8× broader than long; the abdominal tergum 4 not entirely yellow, median part with clear black macula; vein cu-a joining lower margin of cell 1M at basal 1/5, cell anal in hind wing with a short petiole, 1/4× longer than vein cu-a; the apex of sheath slightly acute and round, apical margin arc-like; the middle annulus with 3–5 clear ctenidial teeth.

2. *Aglaostigma mengmeng* Li & Wei sp. nov. (Figs 2, 3)

Description. Body length 10–12 mm (Figs 2A, 2B).

Color. Body largely yellowish brown; labrum, clypeus, supraclypeal area, inner orbit, outer orbit, posterior part of postocellar area and lateral areas, prenotum, V macula and small maculae at inner sides of median mesoscutal lobes, mesoscutellum and mesoscutellar appendage, parapsis partly, parapsidal furrows partly, tegula, mesepisternum, mesepimeron, metepisternum, metepimeron, abdominal tergum 1 entirely, abdominal tergum and sternum 4, abdominal terga 7–9 largely and abdominal tergum 10, yellow. Legs largely yellowish brown; all coxae largely, all trochanters and stripes at inner sides of hind femur, yellow. Body hairs yellow, sheath setae yellowish brown. Wings hyaline, vein costal and stigma yellowish brown,

other veins blackish brown (Figs 2A, 2B).



Figure 2. *Aglaostigma mengmeng* Li & Wei **sp. nov.**, ♀, holotype; ♂, paratype. A, B. Female adult, dorsal and lateral views; C, D. Male adult, dorsal and lateral views. Scale bars = 2 mm (A, C).

Punctuation. Dorsal side of head less shiny, with some shallow and large punctures, wrinkles coarse (Fig. 3A). Mesonotum with more minute punctures than head, slightly dense, puncture interspaces with fine microsculpture; mesoscutellum shiny, apex with some shallow and large punctures, mesoscutellar appendage without punctures or microsculpture; metascutellum with some shallow and small punctures (Fig. 3C); mesepisternum with dense punctures and fine microsculpture; mesepimeron with some punctures and clear microsculpture; metepisternum with some weak punctures and microsculpture; metepimeron largely shiny, without clear punctures or microsculpture (Fig. 3D). Abdominal terga without clear punctures, with clear microsculpture.

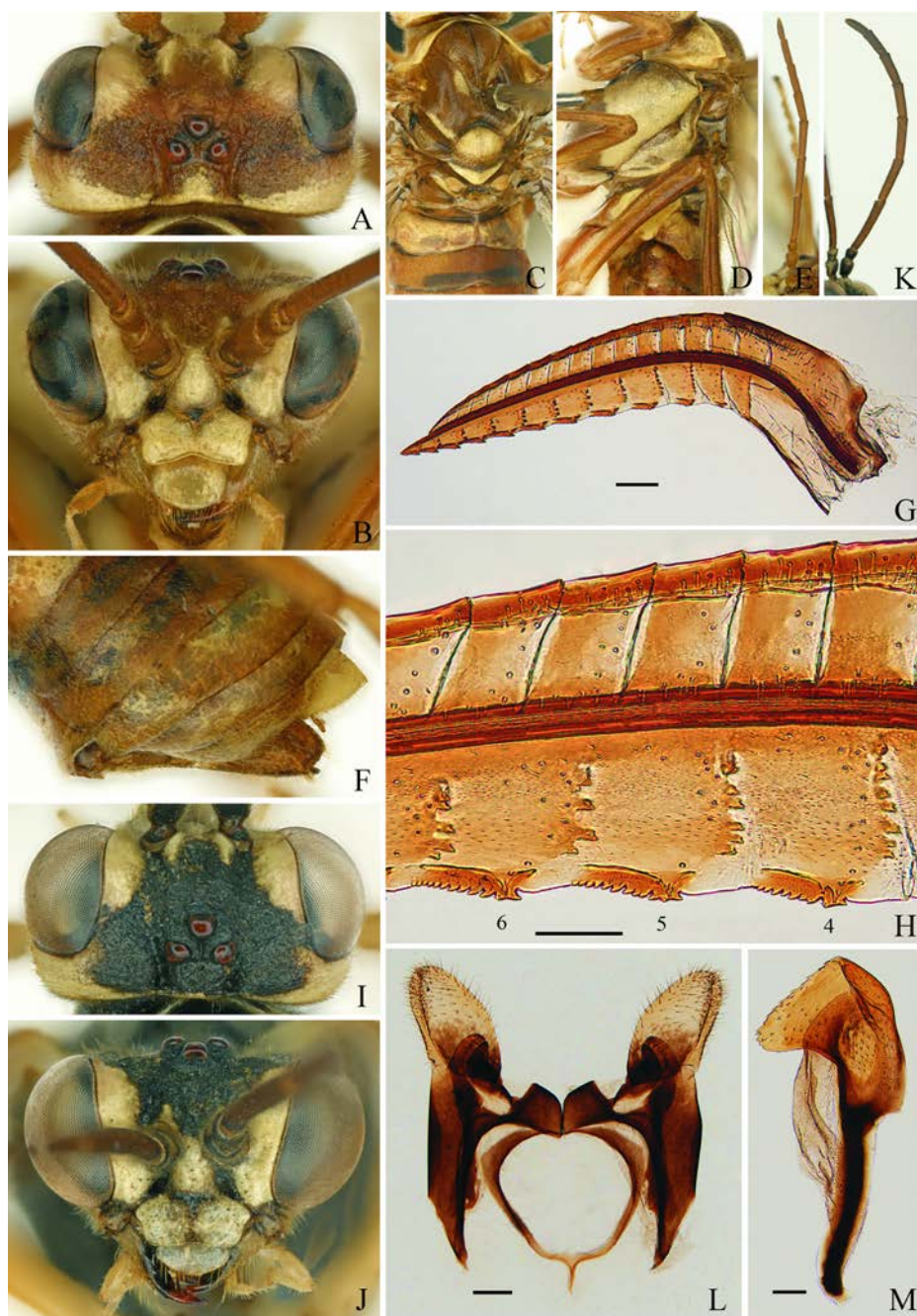


Figure 3. *Aglaostigma mengmeng* Li & Wei **sp. nov.**, ♀, holotype; ♂, paratype. A, B. Female head, dorsal and anterior views; C, D. Female mesopleuron and metapleuron, dorsal and lateral views; E. Female antenna, lateral view; F. Ovipositor sheath, lateral view; G. Lancet; H. The 4th–6th serrulae; I, J. Male head, dorsal and anterior views; K. Male antenna, lateral view; L. Gonoforceps; M. Penis valve. Scale bars = 200 µm (G, L); 100 µm (H, M).

Body stumpy. Anterior margin of labrum round; apical margin of clypeus truncate,

lateral margins slightly convergent forward, narrower than the distance between lower corner of eyes; malar space as broad as the diameter of median ocellus, frontal ridge absent (Fig. 3B); supra-antennal tubercles elevated, posterior part and frontal ridge connected; median fovea deep, with frontal field connected, lateral foveae furrow-shaped; interocellar furrow clear, postocellar furrow weak; postocellar area elevated, with weak middle longitudinal ditch, posterior part not depressed, with occipital carina, $2\times$ broader than long; POL : OOL : OOCL = 23 : 46 : 90, lateral postocellar furrow broad and deep, slightly parallel backward; vertex $0.5\times$ broader than diameter of eyes; temple in dorsal view $0.5\times$ broader than diameter of eyes, lateral sides almost parallel (Fig. 3A). Antennae filiform, longer than abdomen, clearly shorter than vein costal, flagellomere 2 broader than long; flagellomere 3 longer than flagellomere 4 (85 : 68), length ratio of apical flagellomeres 5–9 as 67 : 55 : 53 : 48 : 40 (Fig. 3E). Median mesoscutal lobes short, posterior part slightly acute, middle furrow clear, mesoscutellum round and flat, median not depressed, without carina or apex; mesoscutellar appendage smooth, with weak middle longitudinal carina (Fig. 3C); lower part of mesopleuron not clearly elevated; metepimeronal appendage developed, posterior corner round and obtuse (Fig. 3D). Hind coxa slightly inflated, hind femur not clearly extended to bottom of abdomen; metabasitarsus slightly longer than following 3 tarsomeres together (70 : 65), shorter than following 4 tarsomeres together (70 : 95), inner tibial spur of hind leg as long as half of metabasitarsus; claw of hind leg with broad and large inner tooth than outer tooth. Cell 2Rs in fore wing as long as cell $1R_1$ and $1Rs$ together, outer and lower corner of cell 2Rs strongly extended; vein cu-a joining lower margin of cell 1M at basal $1/4$, vein 2r joining upper margin of cell 2Rs at apical $1/3$, anal cell with cross vein; anal cell in hind wing with a short petiole, $1/4\times$ longer than vein cu-a; cell M and Rs closed (Fig. 2A). Ovipositor sheath slightly shorter than middle tibia, clearly longer than hind basitarsus, valvula 3 as long as valvifer 2, apical margin truncate, ovipositor sheath in lateral view as shown in Fig. 3F. Lancet with 12 serrulae (Fig. 3G), serrula slightly flat, middle serrulae with 1 proximal and 7–11 distal denticles, denticle small as shown in Fig. 3H, middle annulus with 5–8 clear ctenidial teeth.

Male. Body length 9.5 mm, body color not different from the female, structure similar to the female. The body largely black (Figs 2C, 2D); antennae not entirely blackish brown, scape and pedicel largely black, outer sides with yellow maculae (Fig. 3K); labrum, clypeus largely, supraclypeal area, inner orbit, outer orbit (Figs 3I, 3J), posterior margin of postocellar area, prenotum largely, tegula (except for inner margin with black macula), small maculae on inner sides of prescutum, mesoscutellar appendage partly, parapsis partly, parapsidal furrows partly, mesepisternum largely, posterior half of metepimeron, abdominal tergum 1, abdominal terga and sterna 3–4 and abdominal tergum and sternum 5, yellow. Legs largely reddish brown; all coxae largely, all trochanters largely and stripes at inner side of hind femur, yellowish white. Apical margin of harpe round, $1.5\times$ longer than broad, gonoforceps as shown in Fig. 3L, penis valve as shown in Fig. 3M.

Holotype. ♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 06-IV-2017, leg. Mengmeng LIU & Zejian LI (LSAF17024). **Paratypes.** 2♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 16-IV-2017, leg. Mengmeng LIU, Kaiwen GAO & Tingting JI (LSAF17037); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan

Temple, 30.323°N, 119.442°E, alt. 405 m, 15-IV-2017, leg. Mengmeng LIU, Kaiwen GAO & Tingting JI (LSAF17035); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 03-IV-2018, leg. Zejian LI, Mengmeng LIU, Kaiwen GAO & Tingting JI (LSAF18012); 1♀, **China**, Hunan, Liuyang, Mt. Dawei, Limuqiao, 30.323°N, 119.442°E, alt. 980 m, 27–28-IV-2013, leg. Zejian LI & Liwei QI (CSCS13021); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 20-IV-2018, leg. Zejian LI, Mengmeng LIU & Tingting JI (LSAF18031); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 17–18-IV-2018, leg. Zejian LI, Mengmeng LIU & Tingting JI (LSAF18028); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30°19.30'N, 119°26.58'E, alt. 362 m, 10-IV-2015, leg. Wei XIAO & Tao LI (CSCS15036); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.322°N, 119.443°E, alt. 362 m, 04-IV-2019, leg. Zejian LI, Xiufang LI & Tingting JI (LSAF19021); 1♀, **China**, Jiangxi, Mt. Guanshan, Donghe Station, IV-2016, leg. Pingfu FANG, Malaise trap; 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.322°N, 119.443°E, alt. 362 m, 10-IV-2015, leg. Zejian LI (LSAF15028); 2♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.322°N, 119.443°E, alt. 362 m, 12-IV-2015, leg. Zejian LI (LSAF15029); 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.322°N, 119.443°E, alt. 362 m, 17-IV-2016, leg. Zejian LI, Mengmeng LIU & Zhiwei CHEN (LSAF16146); 2♀, **China**, Jiangxi, Mt. Jiulian, Malaise trap 2, 27-IV-2011, leg. Maoling SHENG; 1♀, **China**, Jiangxi, Mt. Jiulian, Malaise trap 5, 20-IV-2011, leg. Maoling SHENG; 1♀, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 19-IV-2021, leg. Zejian LI & Mengmeng LIU (LSAF21019); 1♂, **China**, Zhejiang, Hangzhou, Lin'an, Mt. Tianmu, Chanyuan Temple, 30.323°N, 119.442°E, alt. 405 m, 18-IV-2021, leg. Zejian LI & Mengmeng LIU (LSAF21018).

Host plants. Unknown.

Variation. Tegula in female not entirely yellow, parts yellowish brown; supra-antennal tubercles yellowish brown, without yellow macula; vein 2r joining upper margin of cell 2Rs at apical 1/3–2/5, anal cell in hind wing with a short petiole, 1/4–1/3× longer than vein cu-a.

Etymology. The specific epithet “mengmeng” refers to the given name of Dr. Mengmeng LIU who collected the specimens.

Remarks. This new species is a unique species with the body being yellowish brown largely and in having the antennae entirely yellowish brown, apical 4 segments without black macula; thorax without black macula; vein cu-a joining lower margin of cell 1M at basal 1/4, vein 2r joining upper margin of cell 2Rs at apical 1/3; cell anal in hind wing with a short petiole, 1/4× longer than vein cu-a; middle serrulae with 1 proximal and 7–11 distal denticles, middle annulus with 5–8 clear ctenidial teeth.

Acknowledgements

The authors are deeply grateful to the anonymous referees for their valuable comments and suggestions. This research was supported by the scientific research project of Baishanzu

National Park (2023JBGS07), the National Natural Science Foundation of China (31970447; 32370500) and the Special Funds for Scientific Research of Postdoctoral Work Station Assessment in Zhejiang Province, China (2023).

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