

Two new species of the *Macrophya ligustri* group in *Macrophya* Dahlbom (Hymenoptera: Tenthredinidae), China

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Abstract: Two new species of the *Macrophya ligustri* group in the genus *Macrophya* Dahlbom, 1835 (Hymenoptera: Tenthredinidae) from Jiangxi and Zhejiang in China are described: *M. jiangxiensis* Li, Zhang & Wei **sp. nov.** and *M. qingyuanica* Li, Zhu & Wei **sp. nov.** A revised key to the Chinese species of the *M. ligustri* group is provided.

Key words: Tenthredinoidea; sawfly; taxonomy

中国钩瓣叶蜂属女贞钩瓣叶蜂种团 *Macrophya ligustri* group 两新种 (膜翅目: 叶蜂科)

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摘要: 记述中国江西和浙江境内的钩瓣叶蜂属 *Macrophya* Dahlbom, 1835 女贞钩瓣叶蜂种团 *Macrophya ligustri* group 2 新种: 江西钩瓣叶蜂 *M. jiangxiensis* Li, Zhang & Wei **sp. nov.** 和庆元钩瓣叶蜂 *M. qingyuanica* Li, Zhu & Wei **sp. nov.**。还修订了女贞钩瓣叶蜂种团中国种类检索表。

关键词: 叶蜂总科; 叶蜂; 分类

Introduction

Macrophya Dahlbom, 1835 is the third largest genus in the subfamily Tenthredininae (Hymenoptera: Tenthredinidae). It contains 324 species worldwide, of which 184 had been recorded in China up to 10 November, 2023 (Liu *et al.* 2023).

The *Macrophya ligustri* group was initially proposed by Liu *et al.* (2017) and included a total of seven valid species. Of these, six species have been recorded in China, namely *M.*

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guanshanicus Li, Liu & Wei, 2018 (Liu *et al.* 2018), *M. ligustri* Wei & Huang, 1997 (Wei *et al.* 1997), *M. megapunctata* Li, Liu & Wei, 2017 (Liu *et al.* 2017), *M. micromaculata* Wei & Nie, 2002 (Wei & Nie, 2002), *M. nigroscapula* Li, Liu & Wei, 2018 (Liu *et al.* 2018) and *M. southa* Li, Ji & Wei, 2017 (Liu *et al.* 2017). Additionally, one species, *M. satoi* Shinohara & Li, 2015 (Shinohara & Li 2015) is distributed in Japan. In this study, two new species from this group, *Macrophya jiangxiensis* Li, Zhang & Wei **sp. nov.** from Jiangxi and *M. qingyuanica* Li, Zhu & Wei **sp. nov.** from Zhejiang are described and illustrated. A revised key to Chinese species in this species group is also provided.

Material and methods

Specimens were examined with a Motic-SMZ-171 dissection microscope. High-quality adult images were taken with a Nikon D700 digital camera, with subsequent creation of image montages accomplished through Helicon Focus (HeliconSoft, Kharkiv, Ukraine). All images were further processed with Adobe Photoshop CS 13.0.

The morphological description of the new species is primarily based on the holotype. 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).

The holotype, along with several paratypes are deposited in the Asian Sawfly Collection, Nanchang, China (ASMN). Additional paratypes are deposited in the Scientific Research and Management Center of East China Medicinal Botanical Garden, Lishui, Zhejiang, China (formerly LSAF).

Abbreviations. OOCL — the distance between a lateral ocellus and the occipital carina, or the hind margin of the head where this carina would be if it were developed (Benson 1954); OOL — the shortest distance between an eye and a lateral ocellus; POL — the shortest distance between the mesal margins of the two lateral ocelli.

Taxonomy

Macrophya ligustri species group

Diagnosis was provided by Li *et al.* (2018).

A revised key to the Chinese species of the *Macrophya ligustri* group

1. Median in lateral margins of lateral mesoscutal lobes with 1 double yellowish-white maculae; mesoscutellum largely black, lateral sides with small yellowish-white maculae; mesoscutellar appendage largely yellowish-white, posterior margin with black macula; median of metascutellum black, lateral sides with small yellowish-white macula; median of mesepisternum with 1 double yellowish-white maculae, metapleuron entirely black; basal half of hind femur yellowish-white, hind tibia and tarsomeres entirely black. China (Guizhou) *M. micromaculata* Wei & Nie ♀
- Dorsal side of hind tibia with a long yellowish-white macula clearly, other characters not different from the former 2
2. Dorsum of head very shiny, without punctures and smooth; mesonotum with sparse and minute punctures, less shiny; posterior corners of median mesoscutal lobes with 1 double small yellowish-white maculae; antennae entirely black; lower area of mesepisternum with a yellowish-white macula weakly, posterior

- corner of metepisternum with a small yellowish-white macula; hind coxa largely black, apex yellowish-white; basal 2/3 of hind femur yellowish-white, apical 1/3 black; dorsal side of hind tibia at middle with 1/2 long yellowish-white macula clearly; apex of hind basitarsus dorsally and 2–5 tarsomeres yellowish-white, others black; posterior margin and a small macula in lateral margin of abdominal tergum 1, lateral corners with broad maculae of abdominal terga 3–7, median of abdominal tergum 8 and abdominal tergum 10 entirely yellowish-white; lancet slightly flat, middle serrulae with 1/8–11 denticles, denticle small. China (Anhui, Zhejiang) *M. nigroscapila* Li, Liu & Wei ♀
- . Hind tarsomeres entirely black; other characters not different from the former 3
3. Head and thorax with very large punctures, interspaces between punctures clear broad, less shiny; median in inner margins of lateral mesoscutal lobes with 1 double small yellowish-white maculae; antennae not entirely black, but scape and inner side of pedicel yellowish-white; mesopleuron and metapleuron entirely black; ventral side of hind coxa yellowish-white; basal half of hind femur yellowish-white, apical half black; middle 2/7 in dorsal side of hind tibia with long yellowish-white macula; hind tarsomeres entirely black; broad band in posterior margin of abdominal tergum 1, broad maculae in lateral posterior margins of abdominal terga 2–5, a narrow macula in lateral posterior margin of abdominal tergum 6, a small macula in lateral corner of abdominal tergum 7, median of abdominal tergum 8 and abdominal tergum 10 entirely yellowish-white; lancet slightly oblique and protruding, middle serrulae with 1/2–3 denticles, denticle large (Male: plate, thoracic sterna and apexes of abdominal sterna yellowish-white). China (Guizhou, Hubei, Sichuan) *M. megapunctata* Li, Liu & Wei ♀♂
- . Head and thorax with slightly coarse and dense punctures, interspaces between punctures narrow, or without interspace; other characters not different from the former 4
4. Antennae not entirely black, but scape yellow; temple with narrow yellowish-white maculae; metascutellum entirely yellowish-white; broad band in posterior margin of abdominal tergum 1, broad bands in lateral posterior margins of abdominal terga 2–4, broad bands in posterior margins of abdominal terga 5–8 and abdominal tergum 10 entirely, yellowish-white; basal 1/3 of hind femur yellowish-white, apical 2/3 black; dorsum of head with coarse and dense punctures, without interspace between punctures. China (Guangdong, Guangxi, Hunan, Jiangxi) *M. southa* Li, Ji & Wei ♀
- . Antennae entirely black; temple entirely black; other characters not different from the former 5
5. Middle serrulae of lancet flat and straight 6
- . Middle serrulae of lancet protruding 7
6. Posterior margin of postocellar area yellowish-white; lateral mesoscutal lobes entirely black; metascutellum entirely black; posterior margin at median of abdominal tergum 1 with narrow yellowish-white band, lateral sides entirely black; abdominal terga 2–7 with clearly yellowish-white maculae, but lateral margins of abdominal tergum 2 and tergum 7 with small yellowish-white maculae; basal half of hind femur yellowish-white, apical half black. China (Guizhou, Jiangxi, Hunan)
..... *M. ligustri* Wei & Huang ♀♂
- . Postocellar area with small triangular yellow maculae in lateral sides; middle parts at inner sides of lateral mesoscutal lobes with 1 double long triangular yellow maculae; metascutellum not entirely black, lateral sides with small yellow maculae; posterior margin at median of abdominal tergum 1 with narrow yellowish-white band, lateral sides with large yellow maculae; abdominal terga 2–6 with clearly yellowish-white maculae, but lateral margins of abdominal tergum 2 and tergum 6 with small yellowish-white maculae; basal 1/4 of hind femur yellowish-white, apical 3/4 black. China (Jiangxi)
..... *M. guanshanicus* Li, Liu & Wei ♀
7. Labrum largely and base of clypeus with black maculae; mesoscutellum not entirely black, median with a small yellowish-white macula; fore and middle trochanters largely yellowish-white, ventral sides with black maculae; hind femur not entirely black, basal margin yellowish-white; lateral corners of abdominal

terga 2–5 with slightly short yellowish-white maculae; fore wing with vein 2r joining cell 2Rs at apical 1/3, anal cell with a very short petiole, long punctiform; petiole of anal cell in hind wing 0.25 times length of vein cu-a; middle serrulae of lancet with 1/4–6 denticles. China (Zhejiang).....

..... *M. qingyuanica* Li, Zhu & Wei **sp. nov.** ♀

-. Labrum and clypeus entirely yellowish-white; mesoscutellum not entirely black, median with a large yellowish-white macula; fore and middle trochanters entirely yellowish-white; basal 2/5 of hind femur yellowish-white, apical 3/5 black; lateral corners of abdominal terga 2–5 with slightly long yellowish-white maculae; fore wing with vein 2r joining cell 2Rs at apical 1/4, anal cell with a short petiole and 0.5 times length of vein 1r-m; petiole of anal cell in hind wing 0.5 times length of vein cu-a; middle serrulae of lancet with 1/5–9 denticles. China (Jiangxi).....

..... *M. jiangxiensis* Li, Zhang & Wei **sp. nov.** ♀

1. *Macrophya jiangxiensis* Li, Zhang & Wei **sp. nov.** (Fig. 1)

Female. Holotype. Body length 10.5 mm. Body largely black; following parts yellowish-white: palp largely, basal half of mandibles, labrum, clypeus, posterior margin of postocellar area and two lateral sides with narrow maculae, posterior margin and lateral corners of pronotum, a large macula in propleuron, tegula largely, mesoscutellum, metascutellum, posterior margin and a large macula in lateral corner of abdominal tergum 1, broad maculae in lateral margins of abdominal terga 2–5, a narrow macula in lateral margin of abdominal tergum 6, narrow maculae in lateral corners and median largely of abdominal terga 7–8, abdominal tergum 10, apical parts and outer side with a small macula of fore and middle coxae, apex and outer side with an oval macula basally of hind coxa, all trochanters, anterior stripes of fore femur, base and apex of middle femur, basal 1/3 of hind femur, fore and middle tibiae largely, sub-apical 2/5 maculae in dorsal side of hind tibia, fore and middle tarsomeres largely. Body hairs short and dense, silver; setae on sheath long and curved, pale blackish brown. Wings hyaline, without smoky macula, pterostigma and most veins blackish brown (Figs 1A, 1B).

Dorsum of head less shiny, frontal field and surrounding areas densely and coarsely punctate, between punctures without interspace (Fig. 1C); labrum and clypeus less shiny, with some large and shallow punctures, microsculptures weak (Fig. 1D); postocellar area and lateral sides with slightly dense punctures, interspaces between punctures broader than diameter of a puncture, without clear microsculpture (Fig. 1C). Mesonotum less shiny, with dense and minute punctures, punctures on mesonotum smaller than punctures on head, interspaces between punctures as broad as diameter of a puncture, microsculptures weak (Fig. 1E); mesoscutellum less shiny, with some large and shallow punctures, interspaces between punctures without clear microsculptures; mesoscutellar appendage dull, with slightly dense punctures, microsculptures clear; metascutellum less shiny, without clear punctures, microsculptures weak. Mesepisternum less shiny, densely punctured, upper 1/2 with large punctures, interspaces narrower than diameter of a puncture, lower 1/2 with small punctures, interspaces broader than diameter of a puncture; anepimeron dull, densely wrinkled; anterior 1/4 of katepimeron smooth, without puncture and microsculpture, strongly shiny; posterior 3/4 of katepimeron shiny, sparsely and largely punctate, microsculptures distinct; metepisternum dull, densely and minutely punctate, microsculpture fine; metepimeron less shiny, middle parts with slightly dense punctures, other areas with some punctures (Fig. 1F). Dorsal sides of abdominal terga less shiny, center of abdominal tergum 1 smooth, lateral sides with some punctures and weak microsculptures; dorsal side of other abdominal terga with

minute and sparse punctures, microsculptures fine. Hind coxa with some minute punctures, interspaces between punctures broader than diameter of a puncture; lateral side of ovipositor sheath with minute and fine punctures, microsculpture fine.

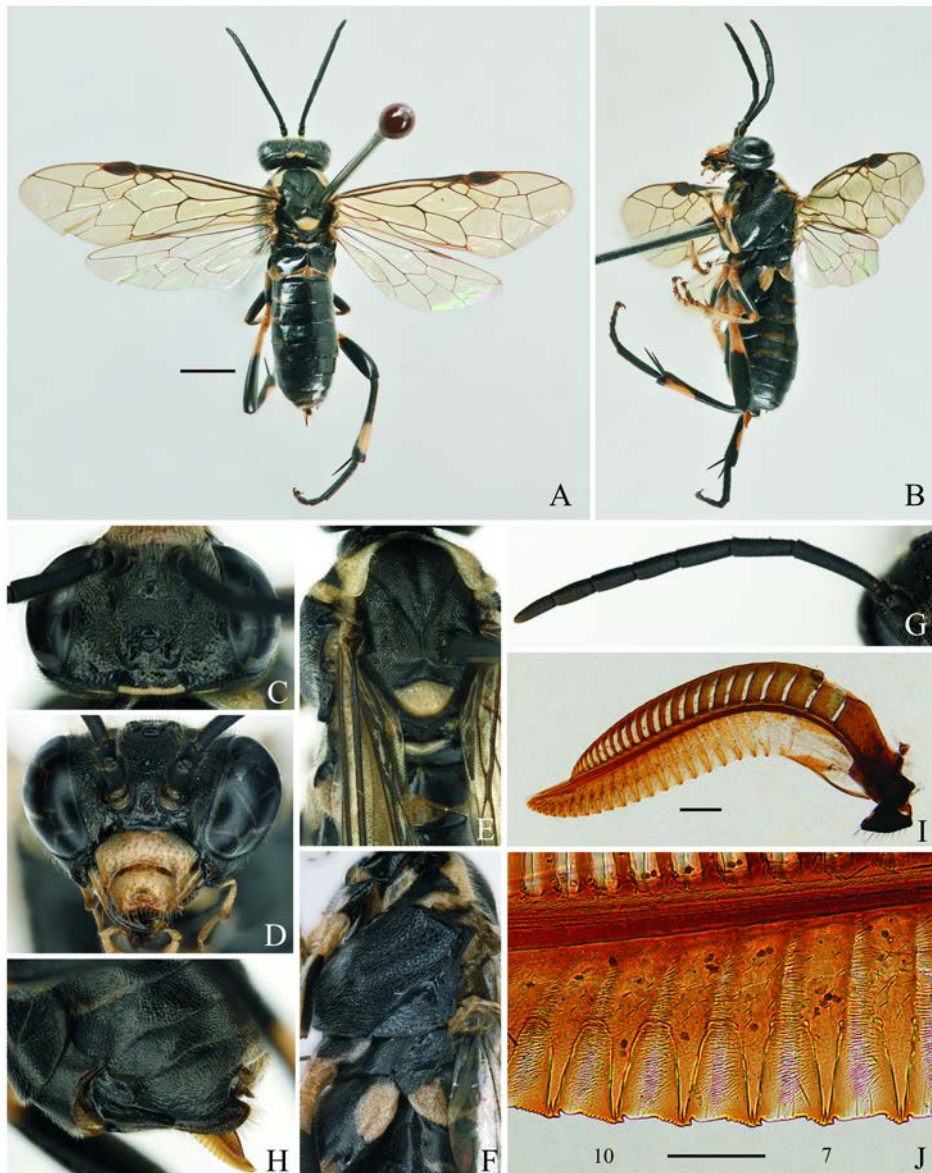


Figure 1. *Macrophya jiangxiensis* sp. nov., ♀, holotype. A. Female adult, dorsal view; B. Female adult, lateral view; C. Head of female, dorsal view; D. Head of female, anterior view; E. Thorax, dorsal view; F. Thorax, lateral view; G. Antennae, lateral view; H. Ovipositor sheath, lateral view; I. Lancet; J. The middle 7–10 serrulae of lancet. Scale bars = 2 mm (A); 200 µm (I); 50 µm (J).

Middle part of labrum elevated, apical margin of labrum truncate, anterior margin with a small gap; clypeus slightly flat, base slightly broader than distance between lower corner of eyes; lateral sides convergent forwards, anterior margin deeply incised to about 1/4 length of

clypeus, lateral corners slightly long and acute, anterior margins rounded and obtuse (Fig. 1D); malar space 0.5 times as long as diameter of median ocellus; frons flat, as high as top of eyes in lateral view; middle fovea shallow and fine; lateral foveae slightly deep, furrow-like; interocellar furrow weak, postocellar furrow indistinct; POL : OOL : OOCL = 4 : 8 : 3; postocellar area slightly elevated, approximately 2.7 times broader than long, anterior 2/3 of lateral furrows broad and deep, posterior 1/3 shallow, slightly divergent backwards; head narrowed behind eyes in dorsal view, occipital carina complete (Fig. 1C). Antenna slender, slightly longer than combined head and thorax (6 : 5), shorter than abdomen (6 : 7); antennomere 2 broader than long; antennomere 3 approximately 1.5 times longer than antennomere 4 (9 : 6), approximately 0.8 times longer than antennomeres 4 and 5 together (9 : 11), subapical antennomeres not dilated, apical antennomeres 6–9 not reduced, the ratio as 4.3 : 4 : 4 : 4.2 (Fig. 1G). Mesoscutellum roundly elevated, without peak, but with weak lateral carina, mesoscutellum slightly higher than top of mesonotum in lateral view; mesoscutellar appendage with clear median carina; metascutellar appendage with a lower and short middle carina; dorsal-posterior platform of mesepimeron as broad as diameter of median ocellus; posterior corner of metepimeral appendage square and obtuse; mesopleuron and metapleuron as in Fig. 1F; distance between cenchri approximately 3 times as long as breadth of a cenchrus (Fig. 1E). Inner tibial spur of hind leg 0.6 times length of metabasitarsus (3 : 5); metabasitarsus not slender, longer than following 4 tarsomeres together (5 : 3.5); claw with inner tooth as long as and broader than outer tooth. Fore wing with vein cu-a joining cell 1M at basal 1/4, vein 2r joining cell 2Rs at apical 1/4, vein 1r-m slightly curved, vein 2r-m slightly oblique, cell 2Rs slightly longer than cell 1Rs, anal cell with a middle petiole 0.5 times length of vein 1r-m; petiole of anal cell in hind wing 0.5 times length of vein cu-a. Ovipositor sheath slightly shorter than metabasitarsus (4 : 5), apical sheath as long as basal sheath, apical margin roundish and narrowed in lateral view (Fig. 1H), setae on sheath curved. Lancet with 21 serrulae (Fig. 1I), serrulae slightly oblique and protruding, each middle serrulae with 1 proximal denticle and 5–9 distal denticles, denticle clear small and clear, annular spine bands slightly broad, spine slightly sparse, the 7th–10th serrulae at base as in Fig. 1J.

Male. Unknown.

Variations. One female specimen (posterior margin of abdominal tergum 6 without yellowish-white macula).

Holotype. ♀, **China**, Jiangxi, Mt. Wugong, Hongyangu, alt. 580 m, 03-IV-2016, Maoling SHENG & Tao LI leg., Malaise trap 1[#] (LSAF17014). **Paratypes.** 2♀, the same data as the holotype; 1♀, **China**, Jiangxi, Xiushui County, Huangshagang Forest Farm, Mt. Wumei, VII-2016, alt. 500 m, Xianping LENG leg., Malaise trap (LSAF17015).

Etymology. The specific epithet “*jiangxiensis*” refers to the locality of this new species being in Jiangxi, China.

Host plant. Unknown.

Remarks. This new species is similar to *M. ligustri* in general appearance, but can be distinguished from the latter by the following combination of characters. The dorsum of head is less shiny, with the frontal field and adjacent regions bearing dense and coarse punctures, devoid of any interspaces in between. The postocellar area 2.7 times broader than its length, flanked by distinctly yellowish-white maculae on both lateral sides. The median of

mesoscutellum is yellowish-white, while the margins are black. The metascutellum is entirely yellowish-white. The fore and middle coxae are largely black, short parts yellowish-white. Approximately the basal 2/5 of hind femur displays yellowish-white, with the apical 3/5 being black. The macula on the lateral corner of abdominal tergum 1 is clear yellowish-white, and its median posterior margin bears a narrow yellowish-white band. The lancet features 21 serrulae, with protruding serrulae, while the middle serrulae exhibit 1/5–8 small denticles.

2. *Macrophya qingyuánica* Li, Zhu & Wei sp. nov. (Fig. 2)

Female. Holotype. Body length 10.5 mm. Body largely black; palp largely dark brown; following parts yellowish-white: basal half of mandibles, anterior part of labrum with a triangular macula. Clypeus except for base with black macula, posterior margin of postocellar area and two lateral sides with narrow maculae, posterior margin of pronotum with broad band, a large macula in propleuron, apical 1/2 of tegula, median of mesoscutellum with a small macula, metascutellum, posterior margin and a large macula in lateral corner of abdominal tergum 1, broad maculae in lateral margins of abdominal terga 2–6, median largely of abdominal terga 6–8, abdominal tergum 10, apical margin and outer side with an oval macula of hind coxa, fore and middle trochanters largely, hind trochanter, anterior sides of fore and middle femora with small maculae apically, base of hind femur, anterior side of fore tibia, anterior side of middle tibia with a small macula apically, sub-apical 2/5 macula in dorsal side of hind tibia, fore and middle tarsomeres. Body hairs short and dense, silver; setae on sheath long and curved, pale blackish brown. Wings hyaline, without smoky macula, pterostigma and most veins blackish brown (Figs 2A, 2B).

Dorsum of head less shiny, frontal field and surrounding areas densely and coarsely punctate, between punctures without interspace (Fig. 2C); labrum and clypeus less shiny, with some large and shallow punctures, microsculptures weak (Fig. 2D); postocellar area and lateral sides with slightly dense punctures, interspaces between punctures broader than diameter of a puncture, without clear microsculpture (Fig. 2C). Mesonotum less shiny, with dense and minute punctures, punctures on mesonotum smaller than punctures on head, interspaces between punctures as broad as diameter of a puncture, microsculptures weak (Fig. 2E); mesoscutellum less shiny, with some large and shallow punctures, interspaces between punctures without clear microsculptures; mesoscutellar appendage dull, with slightly dense punctures, microsculptures clear; metascutellum less shiny, without clear punctures, microsculptures weak. Mesepisternum less shiny, densely punctured, upper 1/2 with large punctures, lower 1/2 with small punctures, interspaces between punctures narrow; anepimeron dull, densely wrinkled; anterior 1/4 of katepimeron smooth, without punctures or microsculpture, strongly shiny; posterior 3/4 of katepimeron shiny, sparsely and largely punctate, microsculptures distinct; metepisternum dull, densely and minutely punctate, microsculpture clear; metepimeron less shiny, upper 1/3 with some slightly large punctures, lower 2/3 with minute punctures, microsculpture clear (Fig. 2F). Dorsal sides of abdominal terga less shiny, center of abdominal tergum 1 smooth, lateral sides with some punctures and weak microsculptures; dorsal side of other abdominal terga with minute and sparse punctures, microsculptures fine. Hind coxa with some minute punctures, interspaces between punctures broader than diameter of a puncture; lateral side of ovipositor sheath with minute and fine punctures, microsculpture fine.

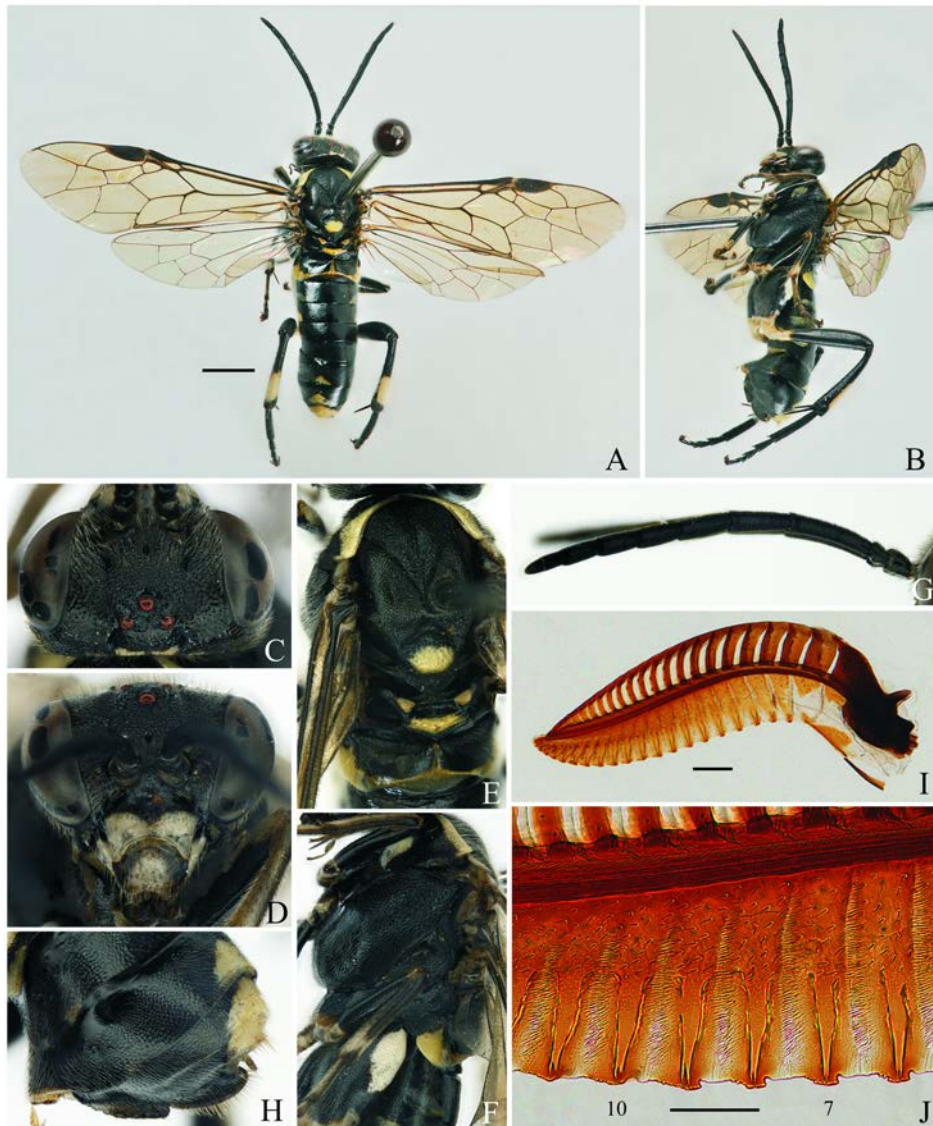


Figure 2. *Macrophyta qingyuanica* **sp. nov.**, ♀, holotype. A. Female adult, dorsal view; B. Female adult, lateral view; C. Head of female, dorsal view; D. Head of female, anterior view; E. Thorax, dorsal view; F. Thorax, lateral view; G. Antennae, lateral view; H. Ovipositor sheath, lateral view; I. Lancet; J. The middle 7–10 serrulae of lancet. Scale bars = 2 mm (A); 200 μm (I); 50 μm (J).

Middle part of labrum elevated, apical margin of labrum truncate, anterior margin with a small gap; clypeus slightly flat, base slightly as broad as distance between lower corner of eyes; lateral sides convergent forwards, anterior margin deeply incised to about 1/4 length of clypeus, lateral corners slightly broad and short, anterior margins rounded and obtuse (Fig. 2D); malar space 0.5 times as long as diameter of median ocellus; frons flat, as high as top of eyes in lateral view; middle fovea shallow and fine; lateral foveae slightly deep, furrow-like; intercellular furrow weak, postocellar furrow indistinct; POL : OOL : OOCL = 3.3 : 8 : 3;

postocellar area slightly elevated, approximately 2.8 times broader than long, anterior 2/3 of lateral furrows broad and deep, posterior 1/3 shallow, slightly divergent backwards; head narrowed behind eyes in dorsal view, occipital carina complete (Fig. 2C). Antenna slender, slightly longer than combined head and thorax (6 : 5), shorter than abdomen (6 : 7); antennomere 2 broader than long; antennomere 3 approximately 1.45 times longer than antennomere 4 (8 : 5.5), approximately 0.8 times longer than antennomeres 4 and 5 together (8 : 11), subapical antennomeres not dilated, apical antennomeres 6–9 not reduced, the ratio as 4.3: 4: 3.7: 3.8 (Fig. 2G). Mesoscutellum roundly elevated, without peak, mesoscutellum slightly higher than top of mesonotum in lateral view; mesoscutellar appendage with clear median carina; metascutellar appendage with a lower and short middle carina; dorsal-posterior platform of mesepimeron as broad as diameter of median ocellus; posterior corner of metepimeral appendage square and obtuse; mesopleuron and metapleuron as in Fig. 2F; distance between cenchri approximately 2.2 times as long as breadth of a cenchrus (Fig. 2E). Inner tibial spur of hind leg 0.6 times length of metabasitarsus (3 : 5); metabasitarsus not slender, longer than following 4 tarsomeres together (5 : 3.5); claw with inner tooth slightly longer and broader than outer tooth. Fore wing with vein cu-a joining cell 1M at basal 1/4, vein 2r joining cell 2Rs at apical 1/3, vein 1r-m slightly curved, vein 2r-m slightly oblique, cell 2Rs slightly as long as cell 1Rs, anal cell with a very short petiole, long punctiform; petiole of anal cell in hind wing 0.25 times length of vein cu-a. Ovipositor sheath slightly shorter than metabasitarsus (4 : 5), apical sheath slightly shorter than basal sheath (9 : 10.5), apical margin roundish and narrowed in lateral view (Fig. 2H), setae on sheath curved. Lancet with 20 serrulae (Fig. 2I), serrulae slightly oblique and protruding, each middle serrulae with 1 proximal denticle and 4–6 distal denticles, denticle slightly clear to not clear, annular spine bands narrow, spine sparse, the 7th–10th serrulae at base as in Fig. 2J.

Male. Unknown.

Holotype. ♀, **China**, Zhejiang, Qingyuan County, Baishanzu Town, Huangpi Village, N. 27.708°, E. 119.177°, alt. 1074 m, 03-V-2023, Zejian LI & Zhicheng ZHU leg. (LSAF23039).

Etymology. This specific epithet “*qingyuanica*” refers to the locality of this new species being in Qingyuan County, Zhejiang.

Remarks. This new species is very similar to *M. jiangxiensis* in general appearance, but can be distinguished from the latter by the following combination of characters. The labrum largely and base of clypeus have black maculae. The mesoscutellum is no longer completely black, its median being a small yellowish-white macula. The fore and middle trochanters are largely yellowish-white, ventral sides being black maculae. The hind femur is no longer completely black, basal margin being yellowish-white. The lateral corners of abdominal terga 2–5 have slightly shorter yellowish-white maculae. The fore wing has vein 2r joining cell 2Rs at apical 1/3, anal cell being a very short petiole, long punctiform. The petiole of anal cell in hind wing 0.25 times length of vein cu-a. The middle serrulae of lancet exhibit 1/4–6 small denticles.

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