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ORIGINAL ARTICLE

Review of some *Siobla* (Hymenoptera: Tenthredinidae) species

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Abstract Six *Siobla* species are revised, including the following new synonymies: *S. rufoscapa* Wei, 2002, **syn. nov.**, synonymized by *S. villosa* Malaise, 1931; *S. tuberculatana* Wei, 2002, **syn. nov.**, synonymized by *S. malaisei* Mallach, 1933 and *Encarsioneura similis* Mocsáry, 1909, **syn. nov.**, synonymized by *S. ruficornis* (Gimmerthal, 1834). *S. frigida* Mocsáry, 1909, as the synonym of *S. sturmii* (Klug, 1817) was recovered; *Siobla plesia* **stat. nov.** is regarded to be a valid species, rather than a subspecies of *S. sturmii*. *Siobla iridipennis* Malaise, 1934 is redescribed based on the holotype, and a new species group, *Siobla iridipennis* group, is proposed. The characters of the group are briefly discussed. All illustrations of type specimens mentioned in this paper are provided. In addition, the lectotypes of *Encarsioneura similis* Mocsáry, 1909, *Encarsioneura frigida* Mocsáry, 1909, and *Siobla sturmii plesia* Malaise, 1945 are designated here.

Key words Hymenoptera, Tenthredinidae, *Siobla*, new synonyms, redescription.

1 Introduction

Siobla Cameron, 1877, is an Old World genus of sawflies known only from the Palaearctic and the north of Oriental Regions. In 2010, Taeger *et al*. listed 73 valid species under the genus. Wei *et al*. (2006) recorded 44 species of *Siobla* from China. Niu & Wei (2010a) separate the known species of *Siobla* into nine groups and provide the key to groups for identifying the adults. After then, *metallica* group (Niu *et al*., 2012a), *formosana* group (Niu & Wei, 2013a) were revised. *Siobla* from Taiwan (Niu & Wei, 2011) and Japan (Shinohara *et al*., 2013) were also revised. Some new species were described from Shaanxi (Niu *et al*., 2012b), Sichuan (Niu & Wei, 2013b), Tibet (Niu *et al*., 2015), and other areas (Niu & Wei, 2010b). Until now, *Siobla* is represented by 111 valid species in 10 species groups. Based on extensive surveys of recent years in China, numerous additional specimens have been collected. Thus some misidentification in literature could be reviewed and corrected. In this paper, six species are discussed, including four new synonyms, a new status. Besides, *Siobla iridipennis* Malaise, 1934, a special species of the genus, is redescribed here based on its holotype.

2 Materials and methods

The specimens were examined with a Leica S8APO dissection microscope. Adult images in Figures 7 and 10 were taken with a Nikon D700 digital camera, and the series of images were montaged using Helicon Focus (©HeliconSoft).

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Adult images in Figures 1 and 4 were taken with a dissection microscope. Detailed images were taken with Leica Z16 APO/DFC550. All images were further processed with Adobe Photoshop CS 6.0®. Morphological descriptions are based on the holotype. The terminology follows Niu & Wei (2010a).

All materials are from the following collections:

CSCS—the Insect Collection of Central South University of Forestry and Technology, Changsha, China;
IZCAS—Institute of Zoology, the Chinese Academy of Sciences, Beijing, China;
HNHM—Hungarian Natural History Museum, Budapest, Hungary;
NHRS—Natural History Museum, Stockholm, Sweden;
USNM—National Museum of Natural History, Smithsonian Institution, Washington, D.C, USA;
BMNH—the Natural History Museum, London, UK;
KUK—Kobe University, Kobe, Japan.

3 Taxonomy

***Siobla ruficornis* (Gimmerthal, 1834)** (Figs 1–3)

Allantus ruficornis Gimmerthal, 1834: 125.
Eriocampa ruficornis Cameron, 1876: 462.
Siobla ruficornis var. *albicornis* Malaise, 1931: 121.
Siobla sibirica var. *bergmani* Malaise, 1931: 122.
Encarsioneura similis Mocsáry, 1909: 14–15. Type locality: Sibiria orientalis: Ussuri. **syn. nov.**

Diagnosis. Only two species of *Siobla* are distributed in Europe, *S. ruficornis* and *S. sturmii*. The current species differs from the latter by the following: broad margin of clypeus and of pronotum reddish brown, microsculpures on the 2nd and 3rd abdominal tergites clear, hairs on dorsum of head pale brown, and slightly longer than the diameter of lateral ocellus. Within the genus, this species is similar to *S. centralia*, but differs from the latter by the following: the 2nd hind trochanter of both sexes black, the 7th to 9th abdominal tergites almost entirely black in female, at least the apical two tergites black in male; microsculptures clear in both sexes; sheath drastically narrow towards the apex.

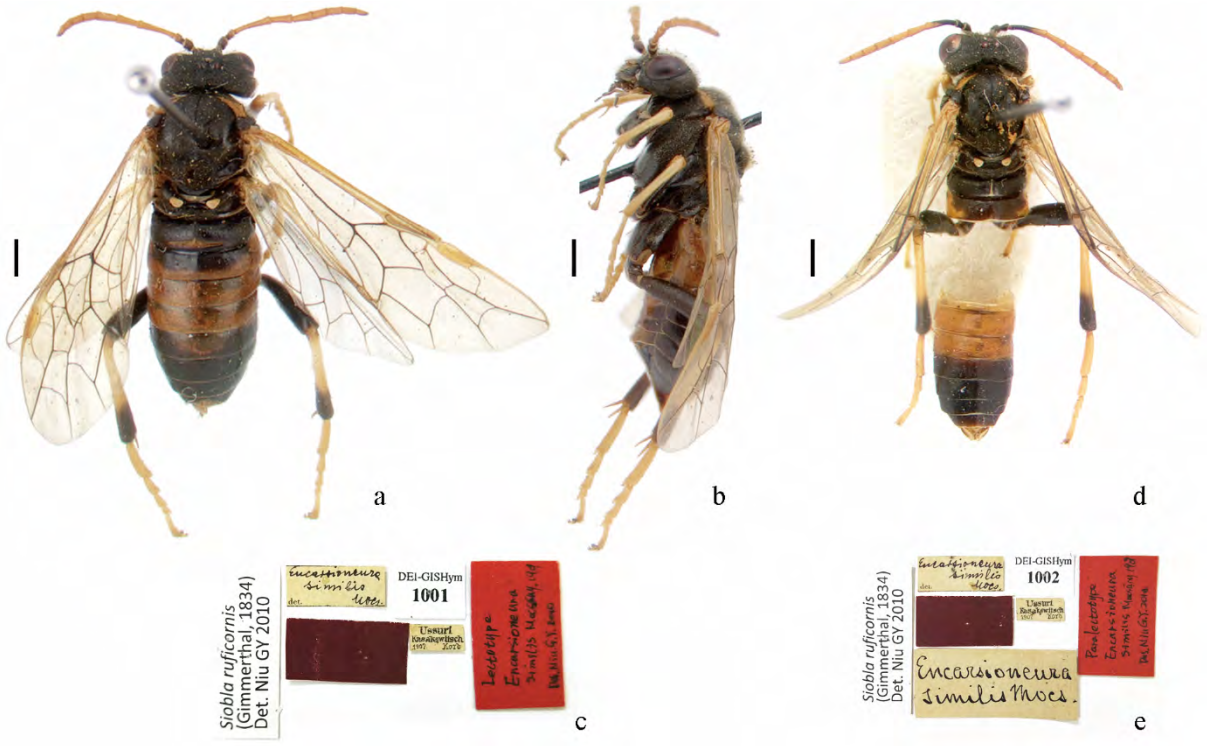

Figure 1. *Siobla ruficornis* (Gimmerthal, 1834). a–c. Lectotype of *Encarsioneura similis* Mocsáry, 1909, ♀. a. Dorsal view; b. Lateral view; c. Labels. d–e. Paralectotype of *E. similis* Mocsáry, 1909, ♂. d. Dorsal view. e. Labels. Scale bars = 1 mm.

Figure 2. *Siobla ruficornis* (Gimmerthal, 1834), head, same specimens as Figure 1. a–b. Dorsal view. c–d. Frontal view. e–f. Antenna. a, c, e. Lectotype of *Encarsioneura similis* Mocsáry, 1909, ♀. b, d, f. Paralectotype of *E. similis* Mocsáry, 1909, ♂. Scale bars = 1 mm.

Distribution. China (Heilongjiang (Yichun), Jilin (Mt. Changbai), Qinghai (Huzhu), Hebei), Russia, Finland, Latvia.

Primary type examined. 1♀, lectotype (HNHM, here designated): "Ussuri, Kasakewiisch, 1907, Koro"; "*Encarsioneura similis*, det. Mocsáry" [red label]; "Lectotype, *Encarsioneura similis* Mocsáry, 1909, Des. Niu G, 2010"; "DEI-GISHym 1001"; "*Siobla ruficornis* (Gimmerthal, 1834), Det. Niu G, 2010". 1♀, paralectotype (HNHM, here designated): "Ussuri, Kasakewiisch, 1907, Koro"; "*Encarsioneura similis*, det. Mocsáry" [red label]; "Paralectotype, *Encarsioneura similis* Mocsáry, 1909, Des. Niu G, 2010"; "DEI-GISHym 1002"; "*Siobla ruficornis* (Gimmerthal, 1834), Det. Niu G, 2010".

Remarks. The types of *Encarsioneura similis* Mocsáry were carefully compared with specimens of *Siobla ruficornis* Gimmerthal (type missing). No distinct difference was found between *Encarsioneura similis* and *S. ruficornis*. The former is treated as a junior synonym of the latter here. The record of *S. ruficornis* from South Korea (Lee *et al.*, 2000) is a misidentification of *S. jucunda* (Mocsáry, 1909) and *Siobla sturmii* (Klug, 1817).

***Siobla sturmii* (Klug, 1817)** (Figs 4–6)

Tenthredo (*Allantus*) *sturmii* Klug, 1817: 116.
Macrophya pacifica F. Smith, 1874: 378.
Macrophya castanea Jakowlew, 1888: 373.
Encarsioneura frigida Mocsáry, 1909: 15–16.

Diagnosis. This species is similar to *S. jucunda* Mocsáry, but differs from the latter by the following: the microsculptures on the 2nd and 3rd abdominal tergites fine, matt; hairs on dorsum of head and of thorax black; malar space of male as long as the radius of a lateral ocellus, the 4th and 5th abdominal tergites blackish brown, the lobe of pennis narrow; malar space of female as long as the diameter of the middle ocellus, the 9th abdominal tergite yellowish brown, vein C almost entirely blackish brown.

Figure 3. *Siobla ruficornis* (Gimmerthal, 1834), thorax (same specimens as in Fig. 1). a–b. Lateral view. c–d. Dorsal view. a, c. Lectotype of *Encarsioneura similis* Mocsáry, 1909, ♀. b, d. Paralectotype of *E. similis* Mocsáry, 1909, ♂. Scale bars = 1 mm.

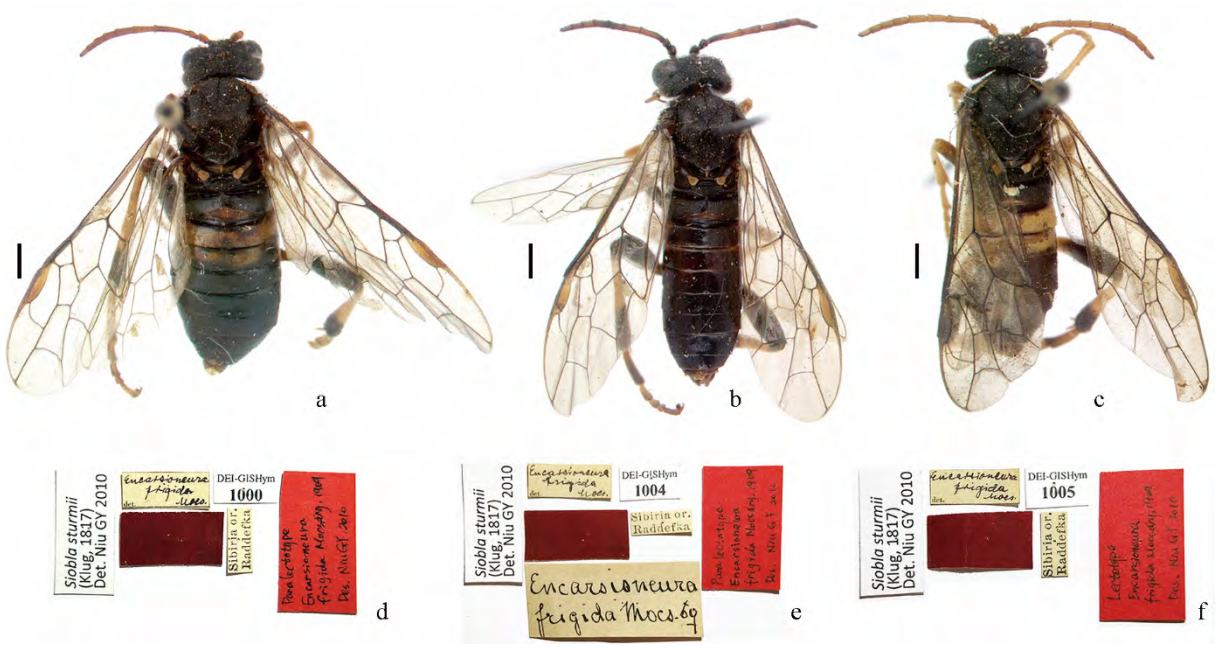

Figure 4. *Siobla sturmii* (Klug, 1817). a–b, d–e. Paralectotype of *Encarsioneura frigida* Mocsáry, 1909. a. ♀, Dorsal view; b. ♂, Dorsal view; d–e. Labels. c, f. Lectotype of *E. frigida* Mocsáry, 1909, ♀. c. ♀, Dorsal view; f. Labels. Scale bars = 1 mm.

Distribution. China (Heilongjiang (Wuying), Jilin (Mt. Changbai), Liaoning (Xinbin), Shanxi (Mt. Wutai), Hebei (Mt. Xiaowutai)), Japan (Hokkaido, southern Kuriles, Honshu, Kyushu), South Korea, Russian Far East (Primorskiy Kray; Sakhalin), Siberia, Europe.

Primary type examined. 1♀, lectotype (HNHM, here designated): "Sibirica or., Raddefka"; "*Encarsioneura frigida*, det. Mocsáry" [red label]; "Lectotype, *Encarsioneura frigida* Mocsáry, 1909, Des. Niu G, 2010"; "DEI-GISHym 1005"; "*Siobla sturmii* (Klug, 1817), Det. Niu G, 2010". 1♀, paralectotype (HNHM, here designated): "Sibirica or., Raddefka"; "*Encarsioneura frigida*, det. Mocsáry" [red label]; "Paralectotype, *Encarsioneura frigida* Mocsáry, 1909, Des. Niu G, 2010"; "DEI-GISHym 1000"; "*Siobla sturmii* (Klug, 1817), Det. Niu G, 2010". 1♂, paralectotype (HNHM, here designated): "Sibirica or., Raddefka"; "*Encarsioneura frigida*, det. Mocsáry" [red label]; "Paralectotype, *Encarsioneura frigida* Mocsáry, 1909, Des. Niu G, 2010"; "DEI-GISHym 1004"; "*Siobla sturmii* (Klug, 1817), Det. Niu G, 2010".

Remarks. No distinct difference was found between the types of *Siobla frigida* and *S. sturmii*. The former is treated as a junior synonym of the latter following Malaise (1931).

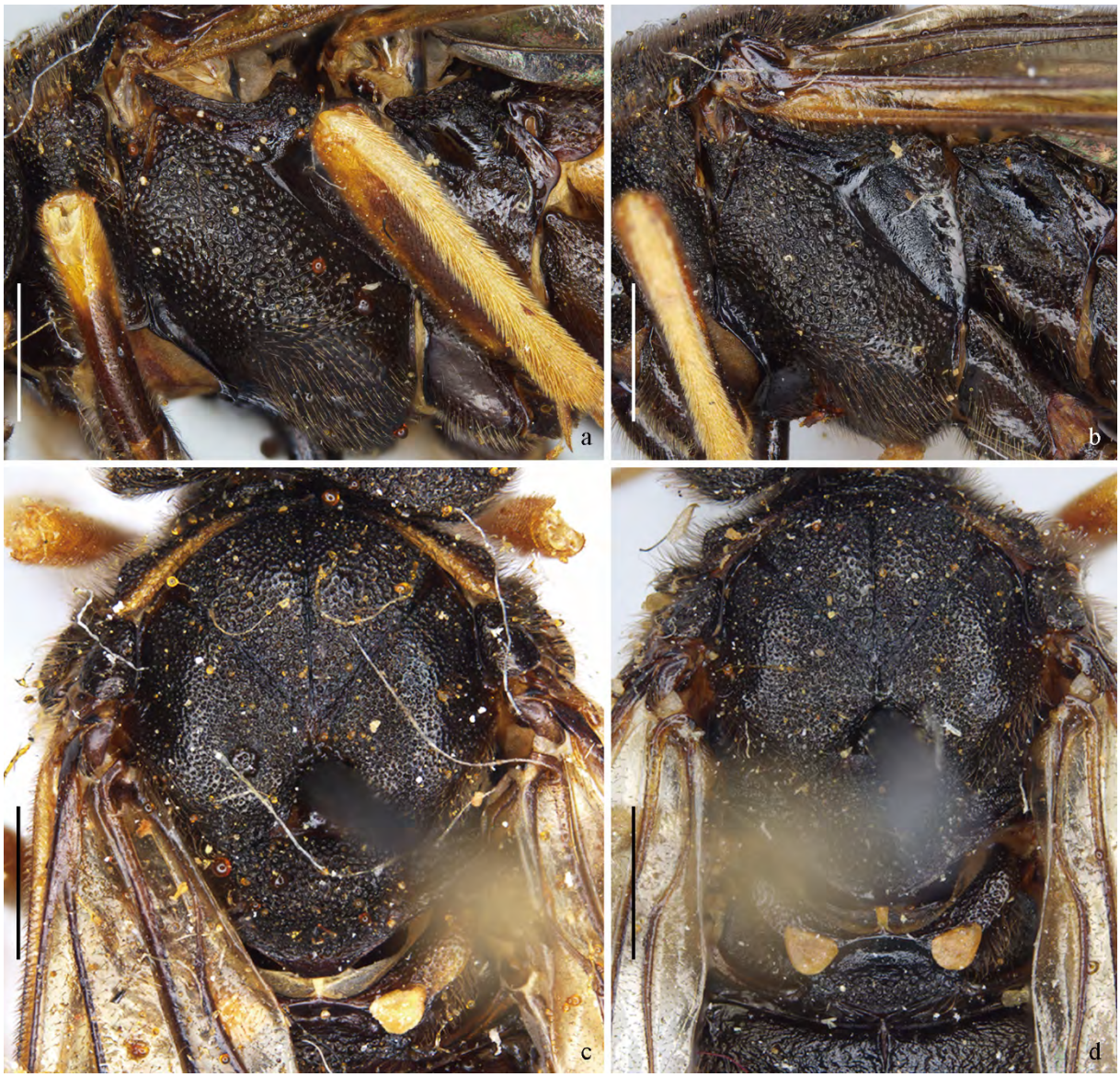

Figure 5. *Siobla sturmii* (Klug, 1817), thorax, same specimens as Figure 4. a–b. Lateral view. c–d. Dorsal view. a, c. Lectotype of *Encarsioneura frigida* Mocsáry, 1909, ♀. b, d. Paralectotype of *E. frigida* Mocsáry, 1909, ♂. Scale bars = 1 mm.

***Siobla villosa* Malaise, 1931** (Figs 7–9)

Siobla villosa Malaise, 1931: 122.

Siobla rufoscapa Wei, 2002: 119–120. Type locality: Henan, China. **syn. nov.**

Diagnosis. Body robust; malar space of female as long as the diameter of middle ocellus; punctures on temple without interspaces; marginal carina of postocellar area slightly higher than lateral occipital carina; interspace between punctures on the middle of venter of mesepimeron polished, without microsculptures; apical serrulae blunt and annular sutures strongly oblique; sheath as long as middle tibia, lateral breadth of sheath narrower than apical breadth of hind tibia; apical sheath 1.5 times as long as basal sheath; male malar space 0.2 times diameter of ocellus and pterostigma brown.

Distribution. China (Gansu (Baishuijiang), Shaanxi (Foping, Meixian), Henan (Songxian), Hubei (Xingshan)).

Primary type examined. 1♂, holotype of *Siobla villosa* (NRHS): "Pei-Lung-Kiang, 750–850 m, 14/6, 30. Hummel"; "Kina, S. Kansu"; "Sven Hedins, Exp. Ctr. Asien, Dr Hummel"; "Typus"; "*Siobla villosa* n. sp. Malaise det. 1936". 1♀, holotype of *Siobla rufoscapa* (CSCS): "Mt. Baiyun, Henan, 2001-V-2, 1800 m, Zhong Yihai"; "Holotype"; "MorphBank 836764"; "*Siobla rufoscapa* Wei, 2002, Det. Wei M. 2002"; "*Siobla villosa* Malaisei, 1931, Det. Niu G, 2016".

Figure 6. *Siobla sturmii* (Klug, 1817), same specimens as Figure 4. a–b. Head in dorsal view. c–d. Head in frontal view. e–f. Abdominal tergites in dorsal view. a, c, f. ♀, Lectotype of *Encarsioneura frigida* Mocsáry, 1909, ♀. b, d, e. ♂, Paralectotype of *E. frigida* Mocsáry, 1909, ♂. Scale bars = 1 mm.

Figure 7. *Siobla villosa* Malaise, 1931. a–d. Holotype of *S. villosa* Malaise, 1931, ♂. a. Dorsal view; b–c. Lateral view; d. Labels. e–g. Holotype of *S. rufoscapa* Wei, 2002, ♀. e. Dorsal view; f. Lateral view; g. Labels. Scale bars = 1 mm.

Other material examined. Henan: 1♂, Mt. Baiyun, Songxian, Henan, 2001-VI-2, 1800 m, Zhong Yihai. Hubei: 1♂, Longmenhe, Mt. Xing, Hubei, 1300 m, 1994-V-8, Yao Jian; 37267 Inst Zool Acad. Sin. Shaanxi: 1♀, Kaitianguan, Mt. Taibai, Meixian, Shaanxi, E.107º51.477′, N.34º0.572′, 1852 m, 2014.VI.7, Wei Meicai; 1♂, Qinvfeng, Mt. Taibai, Meixian, Shaanxi, E.107º49.617′, N.34º0.783′, 2297 m, 2014.VI.8, Qi Liwei, Kang Weinan; 1♀, Kaitianguan, Mt. Taibai, Meixian, Shaanxi, E.107º51.477′, N.34º0.572′, 1852 m, 2014.VI.9, Wei Meicai; 1♀, Tingchechan, Qingfengxia, Taibaixian, Shaanxi, E.107º26.167′, N.34º0.713′, 1792 m, 2014.VI.10, Liu Mengmeng, Liu Ting; 1♀, Tingchechan, Qingfengxia, Taibaixian, Shaanxi, E.107º26.167′, N.34º0.713′, 1792 m, 2014.VI.10, Wei Meicai; 1♀1♂, Liangfengya, Foping, Shaanxi, E.107º51.250′, N.34º41.117′, 2128 m, 2014.VI.17, Wei Meicai; 2♀, Liangfengya, Foping, Shaanxi, E.107º51.250′, N.34º41.117′, 2128 m, 2014.VI.17, Qi Liwei, Kang Weinan; 1♀, Liangfengya, Foping, Shaanxi, E.107º51.250′, N.34º41.117′, 2128 m, 2014.VI.18, Liu Mengmeng, Liu Ting; 1♀, Liangfengya, Foping, Shaanxi, E.107º51.250′, N.34º41.117′, 2128 m, 2014.VI.18,Wei Meicai;

2♀, Liangfengya, Foping, Shaanxi, E.107º51.250′, N.34º41.117′, 2128 m, 2014.VI.18, Qi Liwei, Kang Weinan. 1♀, [China: Shaanxi], Kaitianguan 2000 m, 34.00N, 107.51E, Mt. Taibaishan, Qinling Mts. 31.V.–2.VI.2004, A. Shinohara; Exchange NSMT; 1♂, [China: Shaanxi], Kaitianguan 2000 m, 34.00N, 107.51E, Mt. Taibaishan, Qinling Mts. 27.V.2005, A. Shinohara; Exchange NSMT; 1♂, [China: Shaanxi], Kaitianguan 2000 m, 34.00N, 107.51E, Mt. Taibaishan, Qinling Mts. 5.VI.2007, A. Shinohara; Exchange NSMT.

Remarks. Malaise (1931) described "*S. villosa* n. sp." in a key and mentioned that the male type was collected from Sze Tschuan (Sichuan). Malaise (1934) redescribed *S. villosa* and pointed out that the male type was collected from Pei-lung-kiang, a location between Szechuan (Sichuan) and Kansu (Gansu). Malaise (1945) keyed out *S. villosa* Malaise, 1931 again, and pointed out that the holotype was a male collected from a valley of Peishuio (Baishui River, Wen County, Gansu Province). However, the authors only found one male specimen in the NRHS labeled "Typus" under the name *Siobla villosa*. Therefore, we believe that this specimen is the name-bearing type, and that Malaise referred the type locality to Sze Tschuan in 1931 should be a *lapsus calami*. In conclusion, this male specimen is the holotype fixed by the original designation.

The trapezoidal postocellar area, long hairs on head and thorax, microsculptures on mesepimeron, punctures on scutum and mesoscutellum in types of *S. rufoscapa* Wei, 2002 (only female known) and *S. villosa* Malaise, 1931 (only male known) show that they are two sexes of a single species. Moreover, more specimens, which collected together in both sexes among 2001 to 2014, confirmed the conclusion. So *S. rufoscapa* Wei, 2002 is treated as a new synonym of *S. villosa* Malaise, 1931 here.

Figure 8. *Siobla villosa* Malaise, 1931. a–b. Head in dorsal view. c–d. Head in lateral view. e–f. Hind tarsi. a, c, e. Holotype of *S. rufoscapa* Wei, 2002, ♀. b, d, f. Nontype, ♂. Scale bars = 1 mm.

Figure 9. *Siobla villosa* Malaise, 1931. a–b. Thorax in lateral view. c–d. Thorax in dorsal view. a, c. Holotype of *S. rufoscapa* Wei, 2002, ♀. b, d. Nontype, ♂. Scale bars = 1 mm.

***Siobla malaisei* Mallach, 1933** (Fig. 10)

Siobla malaisei Mallach, 1933: 269.

Siobla tuberculatana Wei, 2002: 122–123. Type locality: Henan, China. **syn. nov.**

Diagnosis. *Siobla malaisei* Mallach is distinct to other species of *Siobla* by the unique character of the narrowly and strongly elevated supraantennal tubercles.

Distribution. China (Gansu (Tianshui), Hebei (Dongling), Shaanxi (Baoji), Beijing (Mentougou), Henan (Songxian, Lushi, Luanchuan), Hubei (Shennongjia), Sichuan (Tianquan)).

Primary type examined. 1♀, holotype of *Siobla malaisei* Mallach (IZCAS): "Dongling, Hebei, 1930-VII-18"; "2889". 1♀, holotype (CSCS): "Dakuaidi, Lushi, Henan, 1700 m, 2001-VII-20, Zhong Yihai"; "Holotype"; "*Siobla tuberculatana* Wei, 2002 Det. Wei M. 2002"; "*Siobla malaisei* Mallach, 1933, Det. Niu G. 2016". 6♀12♂, paratypes of *Siobla tuberculatana* (CSCS): same data as the holotype. 1♀, paratype of *Siobla tuberculatana* (CSCS): "Shennongjia, Hubei, 1981-VII". 1♂, paratype of *Siobla tuberculatana* (CSCS): "Mt. Baiyun, Songxian, Henan, 1650 m, 2002-VII-25, Jiang Jigang".

Other material examined. Henan: 2♀1♂, Mt. Baiyun, Songxian, Henan, 1650 m, 2002-VII-25, Jang Jigang; 2♂, Mt. Baiyun, Songxian, Henan, 1500 m, 2003-VII-19, He Yingke; 3♂, Longyuwan, Luanchuan, Henan, 1600 m, 2003-VII-29, Liang Minwen; 2♀1♂, Mt. Tianchi, Songxian, Henan, 1300–1400 m, 2004-VII-13, Liu Weixing; 2♂, Longyuwan, Luanchuan, Henan, 1600–1800 m, 2004-VII-21, Liu Weixing; 1♂, Mt. Baiyun, Songxian, Henan, 1500–1600 m, 2004-VII-18, Liu Weixing; 3♀3♂, Baotianman, Neixiang, Henan, 1300–1400 m, 2004-VII-22, Liu Weixing. Sichuan: 17♂, Labahe,

Figure 10. *Siobla malaisei* Mallach, 1933. a–c, f, h, j, m–l. Holotype of *S. tuberculatana* Wei, 2002, ♀. d–e, g, i, k, n–o. Paratype of *S. tuberculatana* Wei, 2002, ♂. a. Dorsal view. b. Lateral view. c. Labels. d. Dorsal view. e. Lateral view. f–g. Head in dorsal view. h–i. Head in lateral view. j–k. Thorax in dorsal view. l. Lancet. m. Middle serrulae. n. Gonoforcep. o. Penis valve. Scale bars = 1 mm.

Tianquan, Sichuan, 1900–2200 m, 2003-VII-13, Xiao Wei. Hubei: 1♀1♂, Shennongjia, Hubei, 1900 m, 2003-VII-25, Zhou Hu; 1♂, Honghuaduo, Shennongjia, Hubei, 31º15′N, 109º56′E, 1200 m, 2007-VII-3, Xiao Wei; 4♂, Yazikou, Shennongjia, Hubei, E110º20.275′, N31º31.633′, 1241 m, 2008-VII-19, Zhao Fu; 8♂, Yinyuhe, Shennongjia, Hubei, E110º18.799′, N31º29.821′, 2046 m, 2008-VII-29, Zhao Fu; 10♀104♂, Hongpingzhen, Shennongjia, Hubei, E110º25.223′, N31º40.056′, 1867 m, 2009-VII-16-17, Zhao Fu, Jiao Zhao; 2♀8♂, Caiqi, Shennongjia, Hubei, E110º26.048′, N31º30.254′, 1981 m, 2009-VII-20, Zhao Fu, Jiao Zhao. Shaanxi: 2♂, Yuantou, Jialingjiang, Shaanxi, E106º59.026′, N34º13.177′, 1570 m, 2007-V-26, Zhu Xun. Gansu: 1♀, Yulingou, Dangchuan Linchang, Gansu, E106º07.423′, N34º22.298′, 1580–1680 m, 2009-VIII-4. Tang Minjun; 1♂, Linchang, Linxiao, Gansu, E106º00.591′, N34º20.286′, 1600 m, 2009-VII-9, Fan Hui; 2♂, Jinhegongqu, Jiyuan Linchang, Gansu, E105°17.5′, N34°32.223′, 1.85 km, 2009-VII-23, Fan Hui, Xin Heng. 1♀, Beijing: Mentougou, Beijing, 2009-VII-28, Wang Tao.

Remarks. No distinct difference was found between the types of *Siobla tuberculatana* and *S. malsisei.* The former is treated as a junior synonym of the latter here.

***Siobla plesia* Malaise, 1945 stat. nov.** (Figs 11–13)

Siobla sturmii plesia Malaise, 1945: 127. Type locality: Sichuan, China.

Diagnosis. This species is similar to *S. yunanensis*, but differs from the latter by the following: mesoscutellum flat. Female: basal three antennomeres with black spots, abdominal sternites yellowish brown; Male: dorsum of flagellum without black stripe, posterior margin of pronotum reddish brown, outer of basal fumer of the hind leg with reddish spot, abdominal sternites reddish brown.

Distribution. China (Sichuan (Ganzi)).

Primary type examined. 1♀, Lectotype (USNM, here designated): “9 mi. SW of Tatsienlu, Jun 25–7.23, 8500–13000ft”; “Szechuen CHINA DCGraham”; “Type No. 27440, USNM”; “*S. sturmii* (Kl), var. *plesia* n.var. Malaise det. 1936”; “*Siobla plesia*, TYPE. Roh.”. 1♂, paralectotype (USNM, here designated): “9 mi. SW of Tatsienlu, Jun 25–7.23, 8500–13000ft”; “Szechuan CHINA DC Graham”; “Type No. 27440, USNM”; “*S. sturmii* (Kl), var. *plesia* n. var. Malaise det. 1936”; “*Siobla plesia*, allotype. Roh.”.

Other material examined. 1♀1♂, Maiba, Kangding, Sichuan, E101º34.856′, N30º03.631′, 3525 m, 2009-VII-01, Wei Meicai; 1♀1♂, China, Kangding, 2800 m, Sichuan Prov. 18.VI.1990, F. S. Naito leg., F.S.Huang leg.; Exchange KUK; 1♀1♂, China, Mt. Zheduoshan 3100 m, Sichuan Prov. 21.VI.1990. M. T. Naito leg. M. Takeda leg.; Exchange KUK.

Remarks. Malaise (1945) reported *plesia* as a subspecies of *S. sturmii* (Klug, 1817). Here we treat *plesia* as an independent species as it is distinct from *S. sturmii.*

In *S. sturmii*, the female has following characters: abdominal tergites 2–4 and tergite 9 yellowish brown; pale margin of pronutum narrow; hairs on head and thorax brown; hind tarsi somewhat dark; the male abdominal tergites 2–3 yellowish brown; sternites 5–7 and basal plate black; the female lancet more slender with sharper serrulae, the area below pore line (*aso* of Ross, 1945) quite narrow and bent, dorsal margin round (Figs 13f, h); the inner margin of male harpe weakly incised (Fig. 13j); the dorsal margin of the valviceps convex above middle (Fig. 13l).

In *S. plesia*, the female has follwing characters different from *S. Sturmii*: abdominal tergites 2–5, and tergites 7–9 yellow (Figs 11a–c); pale margin of pronutum broad (Fig. 13c); hairs on head (Figs 12a, c, e) and thorax (Figs 13a, c) yellowish brown; hind tarsi yellow (Figs 11a–c); the male abdominal tergites 2–4 yellowish brown; sternites 5–7 and basal plate yellow with dark macula (Figs 11e–g); the female lancet less slender with obtuse serrulae, the area below pore line broad and not bent, dorsal margin almost truncate (Figs 13e, g); the inner margin of male harpe weakly convex (Fig. 13i); the dorsal margin of the valviceps convex below middle (Fig. 13k).

***Siobla iridipennis* Malaise, 1934** (Fig. 14)

Siobla iridipennis Malaise, 1934: 23; Malaise, 1945: 117–118.

Description. Holotype ♀. Body length 9.0 mm (Figs 14a–c). Yellow brown, following parts black: head and antenna entirely, narrow lateral margin of pronotum, bottom of parapsis, metapostnotum, propleuron, ventral half of mesepisternum, middle of mesepimeron, metapleuron except for dorsal margin and small posterior corner, narrow anterior margin of tergite 2, narrow base of basal ovipositor sheath and most of apical ovipositor sheath; legs black, apical half of fore femur on anterior side, ventral side of fore tibia and of tarsus, ventral side of middle tarsus pale brown; most of middle femur and hind femur except for extreme apex yellow brown. Wing evenly infuscate, with feeble purple reflection, paler toward apex, pterostigma and veins black brown. Hairs on head black brown, hairs on dorsal of thorax pale brown and on mesopleuron brown, setae on sheath pale brown.

Punctures on clypeus large and sparse, interspaces broad and smooth (Fig. 14f); punctures on dorsum and lateral of head denser, with narrow but distinct smooth interspaces (Figs 14e, g); frons, lateral fovea and middle fovea densely punctured, with very narrow interspaces; interspaces between punctures on middle of inner orbit about as broad as diameter of a puncture, smooth and shiny; punctures dense on anterior of mesoscutal middle lobe, large and sparse on middle and posterior area, interspaces smooth and broader than diameter of a puncture; punctures on mesoscutal lateral lobe smaller and denser (Fig. 14h), interspaces smaller than diameter of a puncture, top area with feeble microsculptures; punctures on anterior slope of mesoscutellum shallow and sparse, interspaces smooth and as broad as a puncture, strongly shiny; posterior third of mesoscutellum coarsely punctured, mesoscutellar appendage smooth on middle and microsculptured laterally; punctures on metascutellum large and sparse, shiny; metapostnotum densely microsculptured, feebly shiny; punctures on propleuron minute and sparse (Fig. 14i); upper half of mesepisternum coarsely and densely punctured, anterior margin sparsely

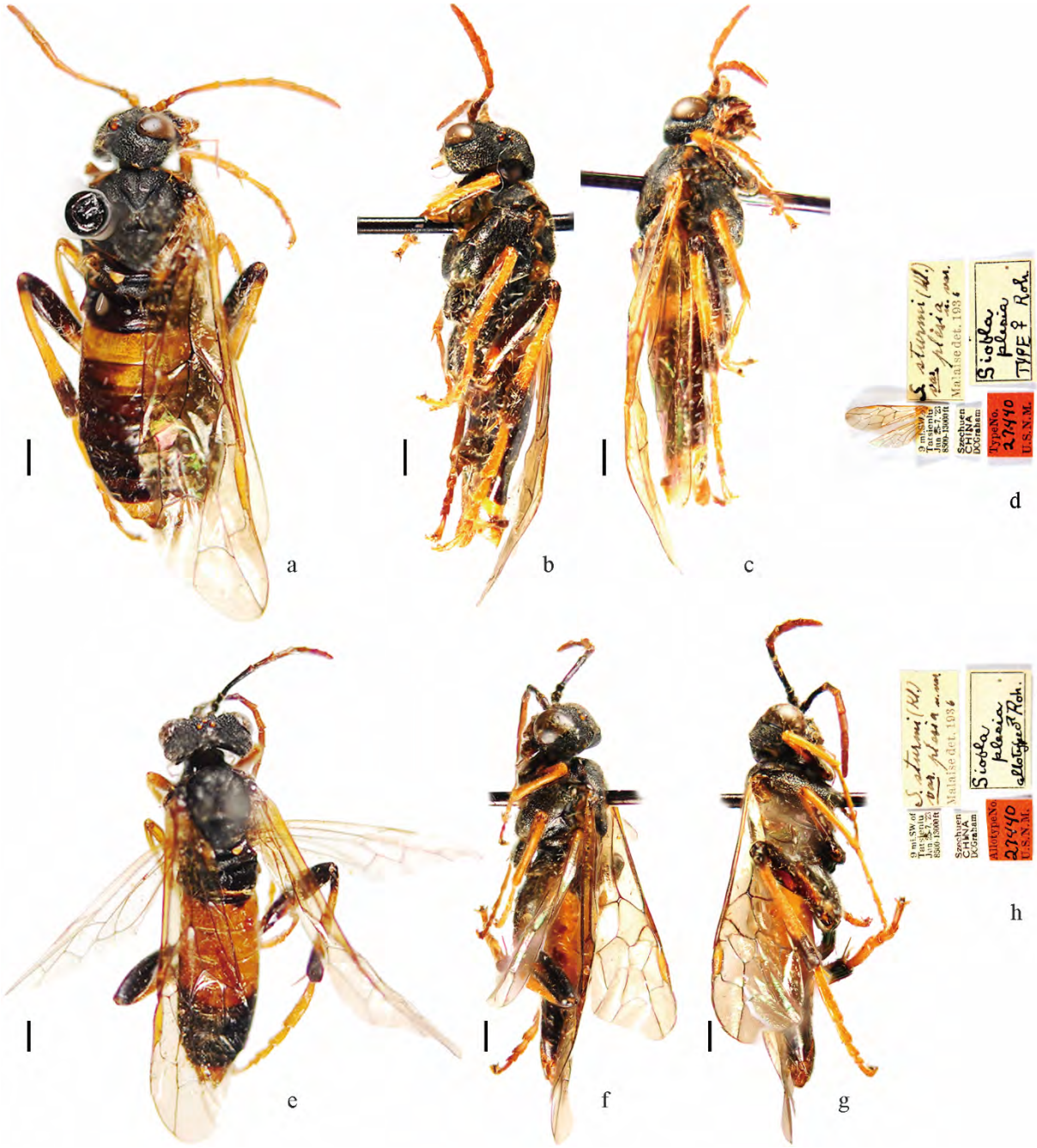

Figure 11. *Siobla plesia* Malaise, 1945. a–d. Lectotype of *S. sturmii plesia* Malaise, 1945, ♀. e–h. Paralectotype of *S. sturmii plesia* Malaise, 1945, ♂. a. Dorsal view. b–c. Lateral view. d. Labels. e. Dorsal view. f–g. Lateral view. h. Labels. Scale bars = 1 mm.

punctured, punctures on ventral half of mesepisternum minute and very sparse, interspaces broad and shiny, a large ventral anterior corner of mesepisternum smooth and shiny; middle of mesepimeron with large and dense punctures, bottom of anepimeron and most of katepimeron densely microsculptured, posterior margin of katepimeron smooth; dorsum of metepisternum evenly punctured, without microsculpture, ventral of metepisternum smooth and shiny; depressed part of metepimeron with shallow punctures and fine microsculptures, dorsal margin with dense punctures, posterior corner smooth; abdominal tergites 1 and 2 quite smooth (Fig. 14j), small middle area with several punctures; other tergites with dense and large punctures, interspaces smaller than punctures, surface smooth, strongly shiny.

Hairs on dorsum of head 2 times as long as diameter of lateral ocellus, hairs on mesopleuron about 2.2 times diameter of lateral ocellus. Clypeus about 2 times as broad as long, middle length distinctly longer than lateral length, apical margin roundly protruding (Fig. 14f); distance between eyes at level of toruli 1.2 times longest axis of eye; malar space 0.6 times

Figure 12. *Siobla plesia* Malaise, 1945, head, same specimens as Figure 11. a–b. Dorsal view. c–d. Frontal view. e–f. Lateral view. a, c, e. Lectotype of *S. sturmii plesia* Malaise, 1945, ♀. b, d, f. Paralectotype of *S. sturmii plesia* Malaise, 1945, ♂. Scale bars = 1 mm.

Figure 13. *Siobla* spp. a–b. Thorax in lateral view. c–d. Thorax in dorsal view. e–f. Lancet. g–h. Middle serrulae. i–j. Gonoforcep. k–l. Penis valve. a, c, e, g. Lectotype of *S. sturmii plesia* Malaise, 1945, ♀. b, d, f, h. Nontype of *S. sturmii* (Klug, 1817), ♀. i, k. Nontype of *S. sturmii plesia* Malaise, 1945, ♂. j, l. Nontype of *S. sturmii* (Klug, 1817), ♂. Scale bars = 1 mm.

diameter of lateral ocellus; middle fovea broad and deep, lateral fovea small and narrow, much deeper than middle fovea; supraantennal tubercle distinctly elevated, broader than high and about as high as frontal wall; frontal wall low and obtuse; interocellar furrow deep and narrow, postocellar furrow shallow, lateral furrows fine, weakly curved and slightly divergent backwards; postocellar area flat, clearly lower than top of ocelli, without middle ridge, broader than long (1.5 : 1); in dorsal view temple almost as long as eye (0.95: 1), lateral sides weakly bent and slightly convergent backwards (Fig. 14e); occipital

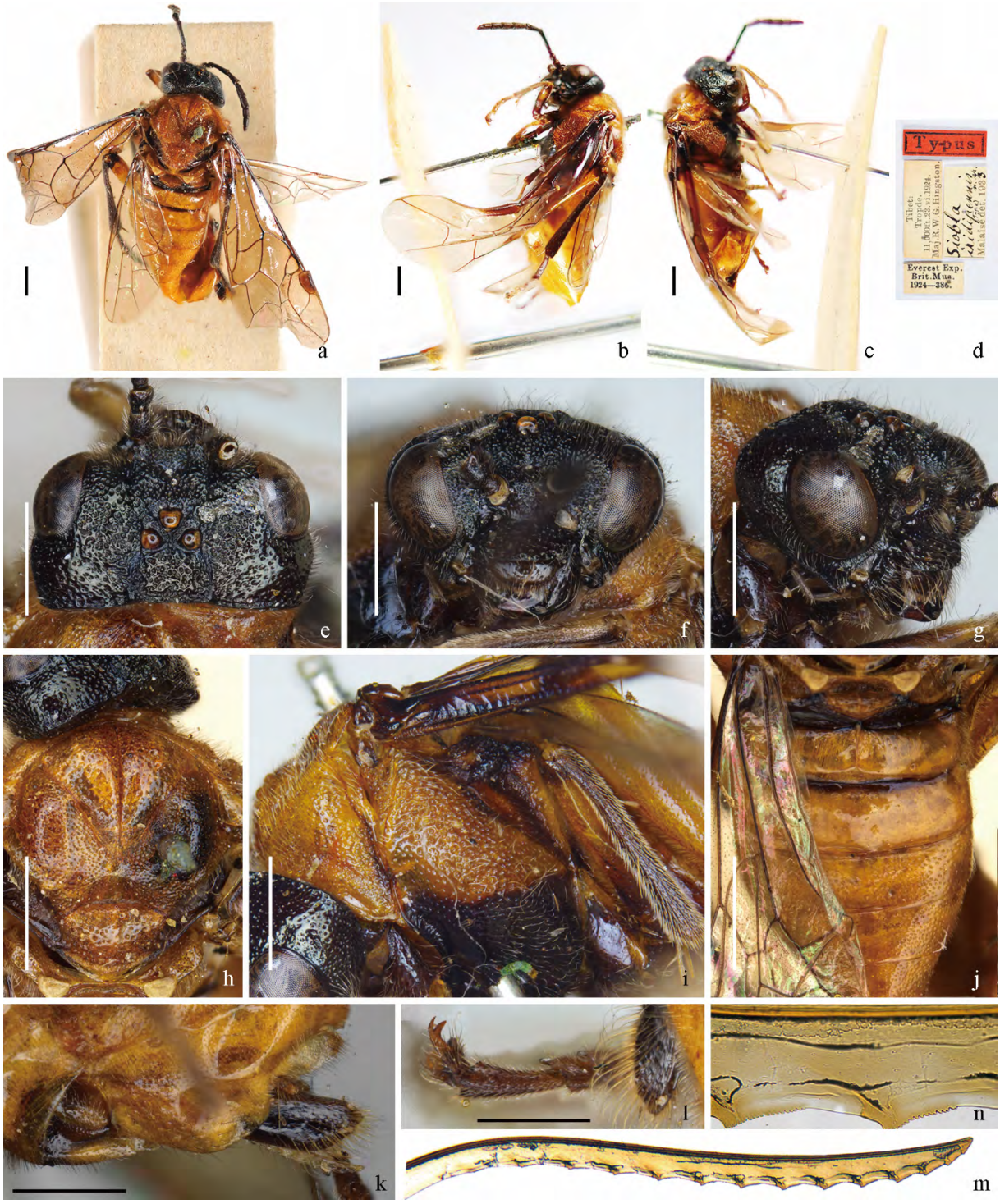

Figure 14. *Siobla iridipennis* Malaise, 1934, ♀, holotype. a. Dorsal view. b–c. Lateral view. d. Labels. e. Head in dorsal view. f. Head in frontal view. g. Head in lateral view. h. Thorax in dorsal view. i. Thorax in lateral view. j. Abdominal tergites in dorsal view. k. Sheath. l. Claw. m. Lancet. n. Middle serrulae. Scale bars = 1 mm.

carina low and weak, complete. Antenna 0.9 times as long as head and thorax together, clearly shorter than abdomen or vein C, pedicellum 1.2 times as long as broad, antennomere 3 about 1.9 times as long as antennomere 4, outer side of antennomeres 5–8 with distinct longitudinal furrow, subapical antennomeres clearly enlarged, antennomere 7 about 1.3 times as long as broad. Middle furrow of mesoscutal middle lobe deep; mesoscutellum weakly elevated, much broader than long (1.8 : 1), without peak and carina, posterior slope almost flat; mesoscutellar appendage flat, without middle carina. Metapostnotum with a sharp middle ridge and merged with middle process of first tergite, about as high as metascutellum; middle of mesepisternum distinctly elevated, ventral spur absent. Legs slender, hind tibia 1.2 times longer than tarsus, apex as broad as breadth of apical sheath in lateral view, inner apical spur 0.5 times as long as metabasitarsus; metabasitarsus slender, 5 times as long as broad, as long as following 3 tarsomeres together; tarsal pulvilli developed, about half as long as apical breadth of each tarsomeres, distance between basal 2 pulvilli 1.8 times as long as second pulvillus (Fig. 14l). Forewing with vein R clearly shorter than free part of Sc and about 0.33 times length of vein R+M, vein R+M 2 times as long as first absccisa of vein Rs, vein 2r strongly curved, vein cu-a meeting cell 1M at basal 0.2, pterostigma 1.2 times as long as cell 1Rs; stalk of hind anal cell about 0.33 times length of vein cu-a. Sheath 1.25 times as long as middle tibia, apical sheath 1.5 times as long as basal sheath (Fig. 14k), setae on sheath long and dense, distinctly curved in dorsal view. Lancet (Figs 14m–n) with 14 serrulae, spiculella distinct, middle serrulae distinctly convex and with 18–22 small distal teeth, proximal basal tooth absent, cypsela clearly shorter than serrula.

Male. Unknown.

Primary type examined. 1♀, holotype (BMNH): “Tibet, Tropde, 11000ft., 23.VI.1924, Maj. R. W. G. Hingston”; “Everest Exp. Brit. Mus., 1924. 386”; “*Siobla iridipennis* n. sp. (Type), Malaise det., 1933”; “Typus (coll. BMNH)”.

Distribution. China (Tibet (Tropde)).

Remarks. The species is rare found. Malaise (1934) simply described the species based on a female specimen in a key to *Siobla* species. After then there is no additional collecting record about the species. Malaise (1945) keyed the species again but the description was still simple and most characters were not mentioned.

Siobla iridipennis is undoubtedly a species of *Siobla* as shown by the metabasitarsus distinctly compressed, the anterior margin of clypeus roundly protruding, anal cross vein of forewing oblique and at middle of the broad anal cell, and female lancet quite long and slender. However, *Siobla iridipennis* is remote from its congeners by the following characters: head subquadrate, temple distinctly elongated; sheath with dense setae, lancet with distinct spiculella; mesoscutellum quite flat and sparsely punctured; antenna stout and short; body yellow brown including head and antenna entirely, the ventrum of thorax black.

Siobla iridipennis was placed in *Siobla ferox* group in the paper of Niu & Wei (2010a), based on the simple original description of Malaise (1934, 1945). However, it is unique in body color and structure as discussed above. It seems that *S. iridipennis* is possibly a basal lineage of the genus. So it is necessary to propose a new species group, *Siobla iridipennis* group, for the species.

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