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The genus *Philoctetes* Abeille de Perrin, 1879 from China, with description of two new species (Hymenoptera, Chrysididae)

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Abstract

The Chinese species of the genus *Philoctetes* Abeille de Perrin, 1879 are revised and keyed for the first time. Six species are recorded, of which two are new for science: *Philoctetes longiflagellis* Rosa, Wei & Xu, **sp. nov.** (Inner Mongolia and Shanxi) and *P. simulator* Rosa, Notton & Xu, **sp. nov.** (Tianjin). The new synonym, *Philoctetes cupratus* (Mócsary, 1914), **syn. nov.** of *Philoctetes mongolicus* (du Buysson, 1901), is proposed. *Philoctetes mongolicus* (du Buysson, 1901) is newly recorded from Pakistan.

Key words: Elampini, new records, new synonym

Introduction

The genus *Philoctetes* Abeille de Perrin, 1879 was traditionally considered as a homogeneous genus including only few species characterised by the following characteristics: body length 2–4 mm; metanotum usually with conical to mucronate projection; hind tibia enlarged, especially in male; apex of T3 with transverse swelling; and tarsal claw with three teeth.

Kimsey & Bohart (1991) provided a new interpretation of the genus *Philoctetes*, and synonymised *Diplorrhinos* Aaron, 1885, *Chrysellampus* Semenov, 1932, *Dictenulus* Semenov, 1932, and *Parellampus* Semenov, 1932 with *Philoctetes*. They considered new valid diagnostic characteristics to identify the species in *Philoctetes* as malar space not bisected by genal carina and punctures on mesosoma mostly clumped along notauli. We already followed Kimsey & Bohart's (1991) interpretation (Rosa 2006; Rosa & Soon 2012; Rosa *et al.* 2014). Nevertheless, species previously included in *Chrysellampus* (= *Parellampus*) are truly different and do not match Kimsey & Bohart's (1991) diagnosis of *Philoctetes*. For this reason, *Chrysellampus* has been revalidated as a valid genus (Rosa *et al.* 2015b).

Also the check-list of the species included in *Philoctetes* by Kimsey & Bohart (1991) has been modified and implemented in the last years, and now includes species previously considered by Kimsey & Bohart (1991) as *Elampus* Spinola, 1806, *Holophris* Mocsáry, 1890, *Omalus* Panzer, 1801, and *Pseudomalus* Ashmead, 1902 (Tussac & Tussac 1993; Mingo 1994; Niehuis 2001; Rosa 2003, 2005, 2006; Rosa *et al.* 2014, 2015a).

In our check-list of the Chinese species (Rosa *et al.* 2014), we included more species in *Philoctetes* and later moved to the genus *Chrysellampus* (Rosa *et al.* 2015b). At present, six species are known only from Palaeartic part of China, whereas no data are known from Oriental part of China, as well as from other Oriental countries.

Material and methods

The specimens at SCAU were examined and described under stereomicroscope (Leica MZ125). Photographs were taken with a digital camera (CoolSNAP) attached to a Zeiss Stemi 2000-CS stereomicroscope. Images were

processed using Image-Pro Plus software. Photographs at BMNH were taken with Nikon D-80 connected to the stereomicroscope Togonal SCZ and stacked with the software Combine ZP. Photographs at BMNH were taken with Canon EOS 550D connected to a Leica M125 stereomicroscope; images were processed with Helicon Focus software.

Morphological terminology follows that of Kimsey & Bohart (1991). Abbreviations used in the descriptions as follows: **F1, F2, F3, etc.** = flagellomere 1, 2, 3, etc.; **l/w** = length/ width; **MOD** = mid ocellar diameter; **MS** = malar space, the shortest distance between base of mandible and lower margin of compound eye; **OOL** = the shortest distance between posterior ocellus and compound eye; **P** = pedicel; **POL** = the shortest distance between posterior ocelli; **T1, T2, T3** = metasomal terga 1, 2, 3.

Types and other specimens have been examined from the following institutions:

BMNH	Natural History Museum, London, UK.
HNHM	Hungarian Natural History Museum, Budapest, Hungary.
NHMW	Natural History Museum, Vienna, Austria.
PRC	Paolo Rosa collection, Bernareggio, Italy.
SCAU	Hymenopteran Collection, South China Agricultural University, Guangzhou, China.
ZIN	Zoological Institute, St. Petersburg, Russia.

Genus *Philoctetes* Abeille de Perrin, 1879

Philoctetes Abeille de Perrin, 1879: 26. Type species: *Holopyga cicatrix* Abeille, 1879 (= *Philoctetes micans* (Klug, 1835)), by subsequent designation of Ashmead 1902.

Ellampus (*Philoctetes*): Mocsáry 1889: 107 (part.); Semenov-Tian-Shanskij 1932: 7 (part.).

Philoctetes: du Buysson 1892: 153 (part.); Bischoff 1913: 10 (part.); Trautmann 1927: 44 (part.); Mingo 1994: 85 (part.); Kimsey & Bohart 1991: 251; Rosa 2006: 119.

Omalus (*Philoctetes*): Linsenmaier 1959: 20 (part.), 1994: 151 (part.), 1999: 20 (part.); Arens 2014: 569 (part.).

Diagnosis. The most relevant characteristics of *Philoctetes sensu* Kimsey & Bohart (1991) are combined short malar space not bisected by genal carina and punctures on mesosoma mostly clumped along notauli. These two characteristics well separate *Philoctetes* from the similar genera *Holophris*, *Omalus* and *Pseudomalus*.

Description. Representative of the genus *Philoctetes* can be identified for the following characteristics: malar space usually short (≤ 1 MOD) and not bisected by curved genal carina; genal carina usually faint or not sharply elevated; pronotum more or less concave laterally, and punctate medially; mesoscutum with punctures clumped along notauli, or more evenly distributed, but anyway gathering together toward notauli; Mesopleuron extending at an oblique angle toward venter, ecarinate and not strongly projecting on juncture between omaulus and scrobal carina; metanotum usually conical, project backward in few species, or distinctly mucronate, spine-like; fore wing with medial cell asetose, medial vein strongly arched, stigma short; fore femur often carinate ventrally; tarsal claw with 1–3 subsidiary teeth.

Biology. The species of *Philoctetes* are known as nest parasites of Crabronidae (Pemphredoninae) (Trautmann 1927; Krombein 1963; Kimsey & Bohart 1991; Rosa 2006).

Distribution. The genus *Philoctetes* is distributed in the Holarctic Region, with an unusual species in the Afrotropical Region. It is not yet collected from the Oriental Region.

Key to Chinese species of the genus *Philoctetes*

1. Head blue to black; pronotum, mesonotum and metanotum golden-red, rest of mesosoma blue; metasoma golden-red, T1 and T2 medially black (Fig. 1A); apex of T3 without median notch. *P. simulator* Rosa, Notton & Xu, **sp. nov.**
- Differently coloured; apex of T3 with median notch 2
2. Body green or bluish-green, with golden reflections on mesoscutellum, metanotum and T3 (Figs 3D, 3F) 3
- Body red or golden red, with or without dark or black areas on head and mesosoma (Figs 2C, 2D) 4
3. Female mesoscutum with large punctures (Fig. 4D) and erected setae; male flagellomeres elongated (Fig. 3B)
 *P. longiflagellis* Rosa, Wei & Xu, **sp. nov.**

- Female mesoscutum with smaller punctures and inclined setae; male unknown *P. mordvilko* (Semenov)
- 4. Metanotum with large flat medial projection with apex U-shaped (Fig. 2C); head and mesosoma with large dark or black areas (Figs 2C, 2D); T3 with median notch deeply incised (Fig. 2F) *P. mongolicus* (du Buysson)
- Metanotum conical to slightly projected backward; head and mesosoma with uniform colouration, without black areas (Fig. 1A); T3 with median notch shallowly incised (Fig. 1C) 5
- 5 Metanotum conical, not projected backward (Fig. 1A), shorter than mesoscutellum dorso-medially (Fig. 1B); tegula with metallic reflection; T2 with sparse punctuation dorsally (Fig. 1B) *P. deauratus* (Mocsáry)
- Metanotum conical and with apex slightly projected backward, as long as mesoscutellum dorso-medially; tegula brown without metallic reflection; T2 with dense punctuation all over the tergum *P. horvathi* (Mocsáry)

***Philoctetes deauratus* (Mocsáry, 1914)**

(Figs 1A–1F)

Ellampus deauratus Mocsáry, 1914: 2. Lectotype (designated by Kimsey & Bohart, 1991: 267), ♀, China: Tientsin [=Tianjin] (BMNH) (examined).

Ellampus deauratus: Tsuneki 1947: 45; Tsuneki 1948: 119.

Omalus (Omalus) deauratus: Linsenmaier 1959: 20.

Pseudomalus deauratus: Kimsey & Bohart 1991: 267.

Philoctetes deauratus: Rosa *et al.* 2014: 31.

Material examined. CHINA: 1♀, Tientsin [=Tianjin], 15.VI.1906, F.M. Thomson, 1907-200, 8 <handwritten by Mocsáry>, *Ellampus deauratus* Mocs. typ. det. Mocsáry <handwritten by Pável>, B.M. Type Hym 13.9, Holotype, BMNH(E) #970948, Lectotypus *Ellampus deauratus* Mocsáry ♀, Kimsey & Bohart design. 1991. Paralectotype: 1♀, Tientsin [=Tianjin], 15.VI.1906, F.M. Thomson, 1907-200.

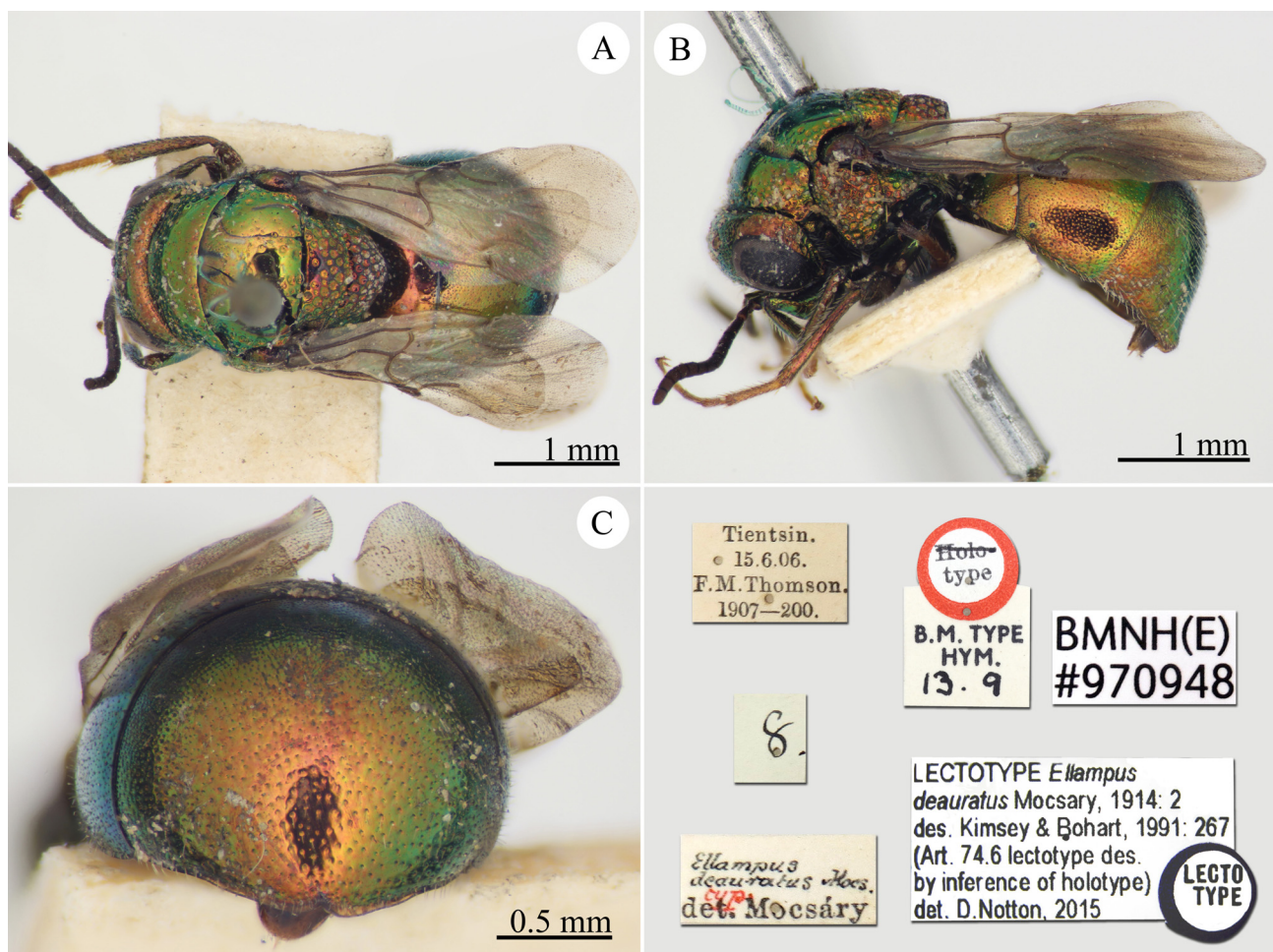


FIGURE 1. *Philoctetes deauratus* (Mocsáry), ♀, lectotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Apex of T3, posterior view.

Diagnosis. Female of *Philoctetes deauratus* (Mocsáry, 1914) is close to that of *P. horvathi* (Mocsáry, 1889) for habitus. It can be separated by metanotum conical not projected backward (Figs 1A, 1B), shorter than mesoscutellum dorso-medially (Fig. 1B) (slightly but always well distinct projected and almost as long as mesoscutellum in *P. horvathi*); tegula with metallic red reflection (brown without metallic reflection in *P. horvathi*); T2 with sparse punctuation dorsally (Fig. 1B) (finely but densely punctuate in *P. horvathi*); colouration shining golden-red with greenish reflections on pronotum and mesonotum (usually metallic red-purple in *P. horvathi*).

Distribution. China (Tianjin).

Remarks. Mocsáry (1914) described *Ellampus deauratus* based on an unknown number of female specimens collected in China at Tientsin [=Tianjin] on the 15.VI.1906 (by F.M. Thomson) and housed at the British Museum. At the BMNH two identical specimens bearing the same locality labels and collecting event are housed. According to the Code (ICZN 1999: recommendation 73F) they are considered here as syntypes. One specimen was erroneously labelled as holotype by a former curator and later considered as holotype by Kimsey & Bohart (1991). Kimsey and Bohart's inference that this specimen was a holotype is in effect a lectotype designation by inference of holotype (ICZN 1999: article 74.6). A third specimen, collected during the same collecting event at Tientsin (=Tianjin) by F.M. Thomson on 15 June 1906, was labelled by G. Meade-Waldo as "compared with the type" and it is currently housed at HNHM. This specimen cannot be considered as syntype because it does not match the original description given by Mocsáry (1914), and shows a completely different colouration.

***Philoctetes horvathi* (Mocsáry, 1889)**

Ellampus wesmaeli Mocsáry, 1882: 27. Lectotype ♀ (designated by Móczár 1964: 434), Hungary (HNHM) (examined), *nom. praeocc.*, *nec* Chevrier, 1862.

Ellampus horváthi (!) Mocsáry, 1889: 82. Replacement name for *Ellampus wesmaeli* Mocsáry, 1882.

Ellampus horvathii (!): Dalla Torre 1892: 13.

Omalus (Omalus) horvathi: Linsenmaier 1959: 15, 19; Linsenmaier 1997: 249.

Omalus horváthi (!): Móczár 1964: 434 (lectotype designation).

Philoctetes horvathi: Kimsey & Bohart 1991: 256; Ha *et al.* 2008: 77; Rosa *et al.* 2013: 13; Rosa *et al.* 2014: 32.

Material examined. HUNGARY: ♀: Deliblat 5.VII. / ♀ / Lectotypus ♀ *Ellampus horvathi* Mocsáry / id nr. 134866 HNHM Hym. coll. CHINA: 1♀, Nan-Chan le Kan Tchegu à Lan Tcheou [=Lanzhou], 2000 m to 4000 m, VII.1908, Dr. Vaillant 1909 (NMLS).

Diagnosis. *Philoctetes horvathi* (Mocsáry, 1889) is similar to *P. mongolicus* (du Buysson, 1901) and *P. deauratus* (Mocsáry, 1914) for general habitus (Fig. 1A). However, it can be easily separated from *P. mongolicus* by the following characteristics: metanotum conical to slightly projected backward (with large and flat medial projection with apex U-shaped in *P. mongolicus*); males with metanotum conical not projected backward (Fig. 1D); apex of T3 with shallow median notch (Fig. 1F) (deep in *P. mongolicus*); and body with uniform colouration, without black areas (Figs 1A, 1C) (with large black areas on mesosoma and metasoma in *P. mongolicus*). It can be separated from *P. deauratus* by metanotum slightly projected backward and almost as long as the mesoscutellum dorso-medially (not projected and shorter in *P. deauratus*); tegula brown without metallic reflection (with red metallic reflection in *P. deauratus*); T2 densely punctuate dorsally (with sparse punctuation in *P. deauratus*); body colouration metallic red-purple (shining golden-red with greenish reflections on pronotum and mesonotum in *P. horvathi*).

Distribution. China (Gansu). Transpalearctic, from Europe and North Africa to Korea (Kimsey & Bohart 1991; Linsenmaier 1997).

Remarks. Pictures of the type are published in Rosa *et al.* (2014: Plate 23).

***Philoctetes mongolicus* (du Buysson, 1901)**

(Figs 2A–2F)

Ellampus horvathi var. *mongolicus* du Buysson, 1901: 98. Lectotype, ♂, designated by Móczár 1967: 186; Mongolia: North Mongolia (NHMW) (examined).

Ellampus horwathi (!) var. *mongolicus*: du Buysson 1911: 219; Bischoff 1913: 8.

Ellampus (Notozus) cupratus Mocsáry, 1911: 443. Holotype ♀; Kyrgyzstan: Naryn (HNHM) (examined), *nom. praeocc.*, *nec* Mocsáry, 1889. **Syn. nov.**

Notozus mongolicus: Tsuneki 1948: 116, 128.

Omalus (Notozus) mongolicus: Trautmann, 1927: 29; Linsenmaier 1959: 16, 23.

Philoctetes mongolicus: Rosa *et al.* 2014: 33.

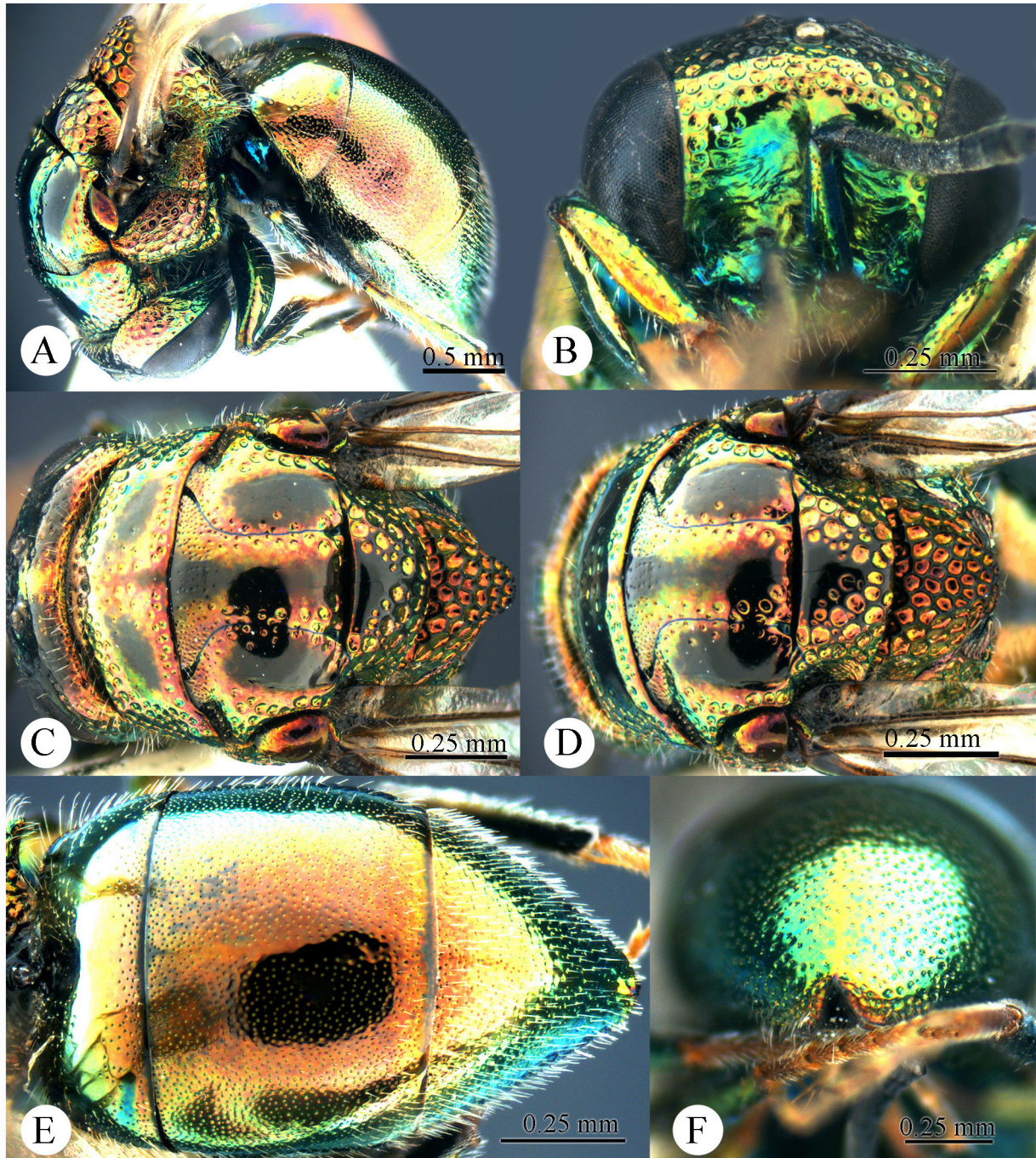


FIGURE 2. *Philoctetes mongolicus* (du Buysson), ♀, Inner Mongolia. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Head, pronotum and mesonotum, dorsal view; **D.** Mesoscutum, mesoscutellum and metanotum, dorsal view; **E.** Metasoma, dorsal view; **F.** Apex of T3, posterior view.

Material examined. KYRGYZSTAN: 1♀, Turkestan Almásy 1906 // Naryn // *cupratus* Mocs. typ. det. Mocsáry // Typus *cupratus* Mocs. // Holotypus ♀ *cupratus* Mocsáry (L.D. French) // 134901 HNHM Hym.coll. MONGOLIA: 1♀: N. Mongolei Leder 92, *Ellampus Horvathi* Mocs. var. *mongolicus* Buyss. var. nov. R. du Buysson det. 1901, ♂, Lectotype v. *mongolicus* Buysson det. L. Móczár (NHMW); 2♀♀: N. Mongolei Leder 92, *Ellampus Horvathi*

Mocs. var. *mongolicus* Buys. var. nov. R. du Buysson det. 1901 ♂, Paralectotype v. *mongolicus* Buysson det. L. Móczár (NHMW). MONGOLIA: 1♀, SE Mongolia, 200 km SSE Baruun-Urt Moltsoy Els, 1250m, 27.VII.2007, M. Kadlecová (PRC), 1♂, Mongolia, 50 km N Ulaanbaatar riv. E of Mandal, 1180 m, 8–13.VIII.2007, M. Kadlecová (PRC). CHINA: 2♀♀, Inner Mongolia, Helanshan (38°53'39"N 105°59'32"E), 30.VII.2010, J. Zeng (SCAU); 1♀, same place, 31.VII.2010, C-j. Yan (SCAU); 1♀, same place, 31.VII.2010, H-f. Chai (SCAU); 1♀, same place, 3.VIII.2010, J. Zeng (SCAU); 1♀, same place, 10.VIII.2010, C-j. Yan (SCAU); 1♀, Hebei, Xiaowutaishan Nature Reserve (40°0'47"N 115°3'32"E), 20–23.VIII.2005, J-x. Liu & L-q. Weng (SCAU). PAKISTAN: 2♀♀, South Pakistan, [Gilgit-Baltistan] Mush Bar (Dalti), 9.IX.1954, Klapperich (NMLS).

Diagnosis. *Philoctetes mongolicus* (du Buysson, 1901) is similar to *P. horvathi* (Mocsáry, 1889) for general habitus and red colouration. However, it can be easily separated from the latter by: metanotum distinctly projected backward with apex U-shaped (Fig. 2C) (conical to slightly projected in *P. horvathi*); apex of T3 with deep median notch (Fig. 2F) (shallow in *P. horvathi*); colouration on head and mesosoma with large black areas (Figs 2A–2C) (uniform in *P. horvathi*); tegula metallic red (Figs 2A, 2C, 2D) (without metallic reflection in *P. horvathi*).

Distribution. China (Inner Mongolia, Hebei, Shanxi), Kyrgyzstan, Russia and Mongolia (Rosa et al. 2014), Pakistan (**new record**).

Remarks. *P. mongolicus* was erroneously included into the genus *Elampus* (=Notozus) due to its distinct metanotal projection (Fig. 2C). However, the metanotal projection is also present in other *Philoctetes* species (e. g. *P. putoni* (du Buysson)). Kimsey & Bohart (1991: 256) placed *P. mongolicus* under *P. horvathi*, even if Tsuneki (1948) and Linsenmaier (1959) already considered it as a valid species. Type examination has also confirmed that *Elampus* (*Notozus*) *cupratus* Mocsáry, 1911 is a junior synonym of *P. mongolicus* (du Buysson). *E. cupratus* was listed in the check-list of the genus *Elampus* by Kimsey & Bohart (1991: 167), but also considered as *Philoctetes* in the general discussion (Kimsey & Bohart 1991: 254). *E. cupratus* was described based on a specimen from Naryn (Kyrgyzstan), therefore *P. mongolicus* appears widely distributed from China and Mongolia to Russia (Trautmann 1927).

***Philoctetes mordvilkoii* (Semenov, 1932)**

Elampus mordvilkoii Semenov-Tian-Shanskij, 1932: 36. Holotype ♀, China: Xinjiang: Chotan, Sajbag (ZIN) (examined).

Pseudomalus mordilkoi (!): Kimsey & Bohart 1991: 268.

Philoctetes mordvilkoii: Rosa et al. 2014: 33.

Material examined. CHINA: holotype, ♀, Xinjiang: Chotan, Sajbag, 2115 m, 6–7.VI.1890, B. Grombczewskij (ZIN).

Diagnosis. Female of *Philoctetes mordvilkoii* (Semenov, 1932) is close to female of *P. longiflagellis* sp. nov., but it can be separated from the latter by: small punctures clumped along notauli (large punctures in *P. longiflagellis*); mesosoma with inclined setae (erected in *P. longiflagellis*); and median notch on apex of T3 with wide open angle, >120° (narrower, ≤90°, in *P. longiflagellis*). Male unknown.

Distribution. China (Xinjiang).

Remarks. Pictures of the type are published in Rosa et al. (2014: Plate 24).

***Philoctetes longiflagellis* Rosa, Wei & Xu, sp. nov.**

(Figs 3A–3F, 4A–4F)

Material examined. Holotype: ♂, CHINA: Inner Mongolia, Bayan Nur (40°44'23"N 107°23'09"E), 15.VII.2008, B. Qiu & H-y. Chen (SCAU). Paratypes: 3 ♂♂ 6 ♀♀: same locality, date and collectors as holotype (SCAU); 1 ♂ 1 ♀: same locality and collectors as holotype, 15–26.VII.2008 (SCAU); 1 ♀: Shanxi, Xiaoyi City (37°08'41"N 111°46'44"E), VIII.2004, J-h. He (SCAU).

Diagnosis. Male of *Philoctetes longiflagellis* sp. nov. is similar to that of *P. conifer* (Semenov, 1932) from Russia, and *P. elongatus* (Semenov & Nikol'skaja, 1954) from Tajikistan, but it can be easily separated from *P. conifer* by metanotum slightly convex (strongly projected with raised lamella in *P. conifer*), whereas it can be easily separated from *P. elongatus* by body with white and short setae (black and long setae in *P. elongatus*), apex

of T3 with deep median notch (shallow in *P. elongatus*). Female of *P. longiflagellis* **sp. nov.** is close to female of *P. mordvilkoii* (Semenov, 1932), but it can be separated from the latter by large punctures clumped along notauli (smaller punctures in *P. mordvilkoii*), body with erected setae (inclined in *P. mordvilkoii*), and median notch narrowly open, $\leq 90^\circ$ (widely open, $> 120^\circ$ in *P. mordvilkoii*).

Description. *Male.* Holotype. Body length 3.6 mm. Fore wing length 3.3 mm. OOL = 2.0 MOD; POL = 2.7 MOD; MS = 1 MOD; relative length of P:F1:F2:F3 = 1:2:1.6:1.5.

Head. Frons, vertex, face between eye and scapal basin with large (up to 0.75 MOD) and shallow punctures (Figs 3B, 3C). Punctures on occipital area smaller, with two impunctate areas close to ocelli (Fig. 3C). Scapal basin asetose, deep and smooth (Fig. 3B). Gena with large punctures, without wrinkles. Genal carina relatively sharp, not bisecting MS. Ocellar triangle isosceles, with large POL (2.7 MOD). Postocellar line indistinct.

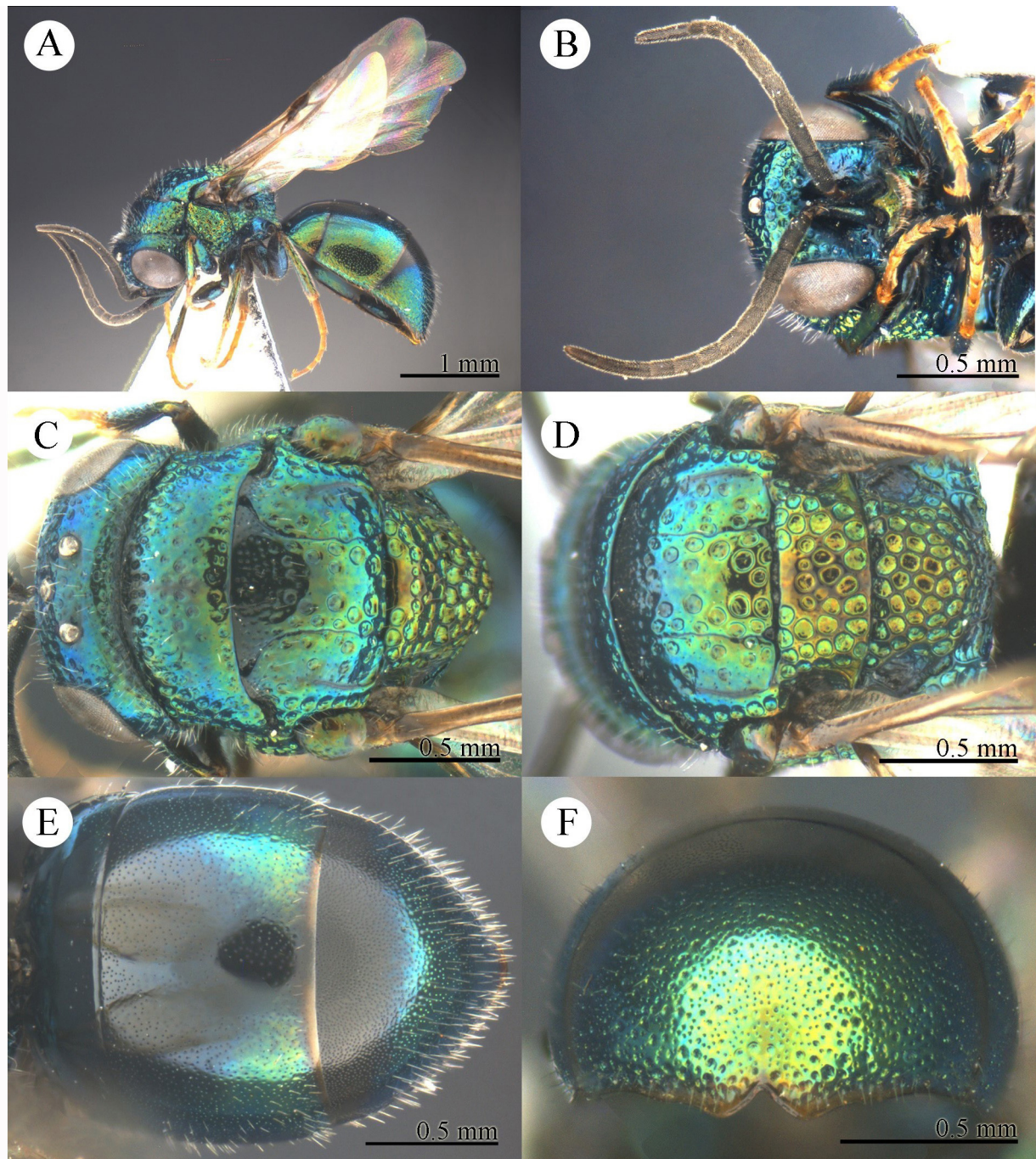


FIGURE 3. *Philoctetes longiflagellis* **sp. nov.**, ♂, holotype, Inner Mongolia. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Head, pronotum and mesonotum, dorsal view; **D.** Mesoscutum, mesoscutellum and metanotum, dorsal view; **E.** Metasoma, dorsal view; **F.** Apex of T3, posterior view.

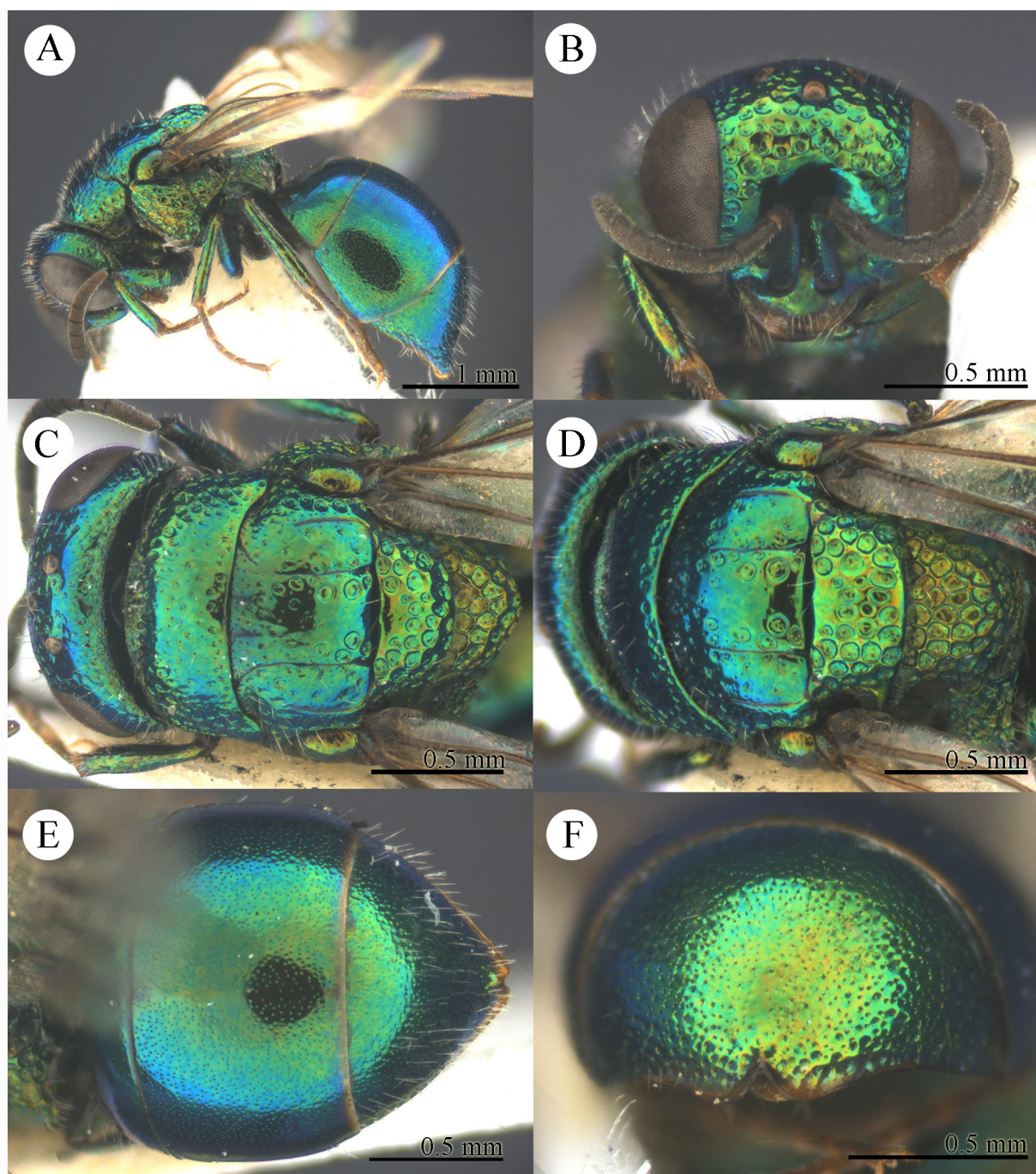


FIGURE 4. *Philoctetes longiflagellis* sp. nov., ♀, paratype, Inner Mongolia. A. Habitus, lateral view; B. Head, frontal view; C. Head, pronotum and mesonotum, dorsal view; D. Mesoscutum, mesoscutellum and metanotum, dorsal view; E. Metasoma, dorsal view; F. Apex of T3, posterior view.

Mesosoma. Pronotum with two rows of deep pits on anterior margin, and one row of shallow pits on posterior margin (Fig. 3C); medially with shallow punctures surrounded by polished area, at most micro-punctate, laterally with large and deep punctures. Mesoscutum with large and shallow punctures clumped along notauli; punctures between notauli are larger, generally more than 1 MOD (Fig. 3D). Notauli and parapsidal furrows complete. Mesoscutellum with irregular punctures, as large as those on mesoscutum. Metanotum slightly convex, with irregular punctures. Mesopleuron with omaulus and sharp scrobal carina; punctures with increasing diameter from alar fovea to ventral margin. Tarsal claw with four teeth.

Metasoma. T1 and T2 almost impunctate medially, with fine and spare dots on lateral margins (Fig. 3E). T3 with lateral margins gently curved; with punctuation distinctly double. Apex of T3 with deep median notch; median notch with narrow brown rim (Fig. 3F).

Colouration. Body metallic green to blue (Fig. 3A); metasomal terga with large dark to black areas; mesoscutum posteriorly, mesoscutellum and metanotum entirely with golden reflections. Legs metallic green, with tarsi yellowish to light brown. Antenna entirely black, sometimes scape with feeble metallic reflection.

Female. Similar to male for general habitus, punctuation and colouration (Figs 4A–4F). However, flagellomeres from F3 to F10 subsquare ($l/w = 1$), whereas F11 elongated ($l/w = 2$); metanotum sharply conical (Fig. 4D).

Distribution. China (Inner Mongolia, Shanxi).

Etymology. The name *longiflagellis* is derived from the Latin adjective *longus* (=long) and the noun *flagellum*, both following the same declension, plurals, in the ablative case, and the gender is masculine; *longis* is shorten in the root *longi-*, the species epithet is indeclinable. It refers to the long male antennae of this species (Fig. 3A).

Remarks. It is the first time that sexual dimorphism in antennal length is observed and described. A revision of the Asian *Philoctetes* is needed to evaluate further synonyms between males with elongated flagellomeres (*P. conifer* (Semenov, 1932), and *P. stackelbergi* Semenov, 1932) and females with shortened or subsquare flagellomeres (*P. diakonovi* (Semenov, 1932), *P. mordvilkoii* (Semenov, 1932), and *P. pylnovi* (Semenov, 1932)).

***Philoctetes simulator* Rosa, Notton & Xu, sp. nov.**

(Figs 5A–5H)

Material examined. Holotype: ♀, CHINA: Tientsin [=Tianjin], 15.VI.1906, F.M. Thomson, 1907–200, *Ellampus deauratus* Mocs. compared with type G.M-W., *Omalus deauratus* Mocs., red label, id nr. 134853 HNHM Hym. coll. (HNHM).

Diagnosis. *Philoctetes simulator* sp. nov. is easily recognisable from other Chinese species by apex of T3 without median notch and different colouration with head blue to black; pronotum, mesonotum, metanotum and propodeum antero-medially red to golden-red contrasting with rest of mesosoma blue; metasomal terga red to golden-red with T1 and T2 black medially.

Description. *Female.* Holotype. Body length 3.6 mm. OOL = 2.0 MOD; POL = 2.4 MOD; MS = 1 MOD; relative length of P:F1:F2:F3 not available, the holotype is missing of both antennae, excluding scapes.

Head. Frons, vertex, face between eye and scapal basin with small (0.5 MOD) and shallow punctures. Punctures on occipital area smaller. Scapal basin asetose, deep and smooth. Gena with punctures, without wrinkles. Genal carina relatively sharp, not bisecting MS. Ocellar triangle isosceles, with large POL (2.4 MOD). Postocellar line indistinct.

Mesosoma. Pronotum almost smooth with sparse punctures medially, with large and deep punctures laterally. Mesoscutum with large and shallow punctures clumped along notauli; punctures between notauli are larger. Notauli and parapsidal furrows complete; notauli pit short and deep. Mesoscutellum with rounded punctures, evenly distributed with subequal interspaces. Metanotum slightly convex, with large punctures, larger than punctures on mesoscutellum, and without intervals between punctures. Mesopleuron with omaulus and sharp scrobal carina; with evenly round punctures. Tarsal claw with four teeth.

Metasoma. T1 and T2 almost with fine and spare dots. T3 with deeper and denser dots. Apex of T3 with narrow brown rim, not distinctly notched.

Colouration. Head blue, black on frons, vertex and occiput; mesosoma with pronotum, mesonotum, scutellum, metanotum and propodeum antero-medially red to golden-red, the rest metallic blue; metasomal terga red to golden-red with large dark to black areas on T1 and T2. Legs metallic blue, with tarsi light brown.

Male. Unknown.

Distribution. China (Tianjin).

Etymology. The name *simulator* is derived from the Latin adjective *simulator* (=swindler); it refers to the general habitus, similar to that of *P. micans* (Klug, 1835) and *P. friesei* (Mocsáry, 1889).

Remarks. The type of *Philoctetes simulator* was collected on the 15th of June 1906 at Tianjin by F.M. Thomson, together with other two specimens described by Mocsáry as *Ellampus deauratus*. This specimen does not belong to the type series of *E. deauratus* because it is clearly different from the original description and was sent by G. Meade-Waldo to Mocsáry after the description of *E. deauratus*. In fact, it does not bear any identification label handwritten by Mocsáry or by Pável, the technician of HNHM, whereas it was identified as *E. deauratus* by G. Meade-Waldo.

P. simulator **sp. nov.** shares its particular colour with some other species known for West Palearctic: *P. micans* (Klug, 1835), *P. friesei* (Mocsáry, 1889), and partially with *P. caudatus* (Abeille de Perrin, 1878), *P. obtusus* (du Buysson, 1893), *P. tiberiadis* (du Buysson, 1887). It is separated from the first two species by different punctuation on pronotum, with dense and close punctures medially (pronotum polished with sparse punctures in *P. simulator*) and from last three species by mesopleuron and metapleuron green to golden-red (blue in *P. simulator*).

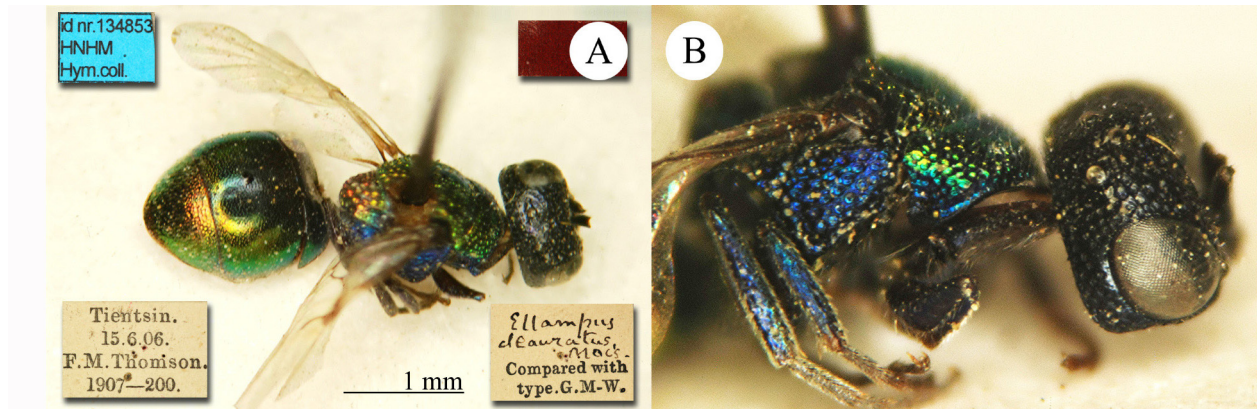


FIGURE 5. *Philoctetes simulator* **sp. nov.**, ♀, holotype, Tianjin. **A.** Habitus, dorso-lateral view; **B.** Head and mesosoma, lateral view.

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