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Revalidation of genus *Chrysellampus* Semenov, 1932, with description of two new species from China (Hymenoptera, Chrysididae)

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Abstract

The genus *Chrysellampus* Semenov, 1932 is revalidated. Chinese species are revised and keyed for the first time. Five species are recorded, two of them are new for science: *Chrysellampus obtusidentibus* Rosa, Wei & Xu, **sp. nov.** (Yunnan), and *C. proximocellis* Rosa, Wei & Xu, **sp. nov.** (Gansu and Yunnan). New synonymy for *Chrysellampus* Semenov, 1932 (=*Parellampus* Semenov, 1932, **syn. nov.)** and new combination for *C. praeteritorum* (Semenov, 1932), **comb. nov.** are proposed.

Key words: *Omalus*, *Philoctetes*, new combination, new synonym

Introduction

Kimsey & Bohart (1991) proposed a new systematic classification of genera closely related to *Omalus* Panzer, 1801. This classification is not universally accepted, and many authors prefer to fully or partially adopt the conservative systematic classification proposed by Linsenmaier (1959) (Kunz 1994; Mingo 1994; Linsenmaier 1997, 1999; Arens 2014; Martynova & Fateryga 2014; Rosa *et al*. 2015). Linsenmaier (1959, 1997, 1999) considered only one valid genus, *Omalus*, and five subgenera, *Chrysellampus* Semenov, 1932, *Elampus* Spinola, 1806, *Holophris* Mocsáry, 1890, *Omalus s. str.*, and *Philoctetes* Abeille de Perrin, 1879. This interpretation was recently followed by other authors (Kunz 1994 (part.); Mingo 1994 (part.); Arens 2014 (part.); Martynova & Fateryga 2014). We agree that the classification of genera within the tribe Elampini *sensu* Kimsey & Bohart (1991) is still far from being settled (Linsenmaier 1997; Carpenter 1999). Nevertheless, we have already adopted it for practical reasons (Rosa 2005, 2006; Rosa & Soon 2012; Rosa *et al*. 2014; Wei *et al*. 2014), waiting for a more modern definition of the genera confirmed by means of molecular systematic analysis. In the present study we follow Kimsey & Bohart's (1991) classification.

The genus *Chrysellampus* Semenov, 1932 was traditionally considered as a valid genus (Tsuneki 1948, 1950, 1953a, 1953b; Semenov 1967; Nikol'skaya 1978) or valid subgenus (Linsenmaier 1959, 1997; Martynova & Fateryga 2014). Kimsey & Bohart (1991: 251) synonymised *Chrysellampus* Semenov, 1932 with *Philoctetes* Abeille de Perrin, 1879 and later Linsenmaier (1997) revalidated it as subgenus. However, most of the authors who cited the species usually included in *Chrysellampus* followed Kimsey & Bohart (1991) without any generic analysis (Rosa 2005; Strumia & Yildirim 2009; Rosa & Soon 2012; Paukkunen *et al*. 2014).

During the study of type specimens deposited in different museums, we found that species traditionally included in *Chrysellampus* (excluding *Philoctetes truncatus* (Dahlbom, 1831)) cannot be identified to generic level of *Philoctetes* with the key to Elampini genera proposed by Kimsey & Bohart (1991). In fact, malar space is bisected by genal carina; scrobal sulcus and omaulus are not subequal in length. Moreover, the Asiatic species show fully punctuated mesoscutum, whereas only two Palaearctic species have punctuation clumped along notauli. These diagnostic characteristics clearly place these species of *Chrysellampus* outside the generic key by Kimsey & Bohart (1991). At the same time, additional diagnostic characteristics allow us to consider them as a distinct genus,

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such as colliculate sculpture, different shape of mesosoma and metasoma, elongated pronotum, metanotum, propodeum and T1 compared to *Philoctetes* species. The name *Chrysellampus* derives from the general habitus resembling the genus *Chrysis* Linnaeus more than any other genus in the tribe Elampini.

The interpretation of the genus *Chrysellampus* given by Linsenmaier (1959, 1997, 1999) is partially correct, because he included *Omalus truncatus* (Dahlbom, 1831) into the genus *Chrysellampus* based on similar shape of T3 with lateral margins semitransparent and strongly convex adjacent to median notch, and median notch shallowly triangular and bordered by rims. However, these characteristics resemble those of *Philoctetes bidentulus* (Lepeletier, 1806) (Rosa & Xu 2015), rather than *Chrysellampus* species. As a consequence, most of the authors considered the widespread Euro-Asiatic species *O. truncatus* as *Chrysellampus* confusing the original interpretation of the genus, based on *Ellampus heros* Semenov. Nevertheless, *O. truncatus* does not belong to *Chrysellampus*, but truly belongs to *Philoctetes* for MS not bisected, mesosoma without colliculate sculpture, and general habitus with shortened mesosoma and metasoma.

Material and methods

All specimens 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.

Morphological terminology follows that of Kimsey & Bohart (1991). Abbreviations used in the descriptions as follows: **F1**, **F2**, **F3**, etc. = flagellomeres 1, 2, 3, etc.; **MOD** = midocellus 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:

GLAC	Gian Luca Agnoli private collection, Bologna, Italy.
HNHM	Hungarian Natural History Museum, Budapest, Hungary.
KUM	The Kyushu University Museum, Fukuoka, Japan.
SCAU	Hymenopteran Collection, South China Agricultural University, Guangzhou, China.
ZIN	Zoological Institute, St. Petersburg, Russia.

Genus *Chrysellampus* Semenov, 1932

(Figs 1A–1C, 2A–2C, 3, 4A–4F, 5, 6A–6F, 7A–7F, 8, 9A–9F)

Chrysellampus Semenov-Tian-Shanskij, 1932: 5. Type species: *Ellampus heros* Semenov, 1892, by original designation.

Parellampus Semenov-Tian-Shanskij, 1932: 7. Type species: *Parellampus praeteritorum* Semenov, 1932, by original designation. **Syn. nov.**

Chrysellampus Semenov: Semenov-Tian-Shanskij 1967: 119; Nikol'skaya 1978: 63 (part.).

Omalus (*Chrysellampus*) Panzer, 1801: Linsenmaier 1959: 22, 1997: 249 (part.), 1999: 22, 23 (part.); Martynova & Fateryga 2014: 14.

Omalus (*Philoctetes*) Panzer: Arens 2014: 570 (part.).

Diagnosis. *Chrysellampus* Semenov, 1932 was synonymised with *Philoctetes* Abeille de Perrin, 1879 by Kimsey & Bohart (1991), but it can be easily separated by the following characteristics: habitus subcylindrical and elongate (stocky and roundish in *Philoctetes*) (Martynova & Fateryga 2014: Fig. 14); F2–F11 flattened and dilated (Fig. 3) (cylindrical and not dilated in *Philoctetes*); MS bisected or nearly so by curved genal carina (Figs 2A, 3, 5, 8) (MS not bisected and genal carina not curved in *Philoctetes*); genal carina well developed and sharp from lower margin of temple to MS (Figs 3, 5, 8) (faint or not well developed in *Philoctetes*); pronotum with large and dense punctures (Figs 4A–4F, 6A–6F, 8) (smooth to sparsely punctate in *Philoctetes*); mesoscutum with large punctures clumped along notauli (*C. sculpticollis* and *C. medanae*) or covering entire surface (punctures only clumped along notauli or

more evenly distributed, but anyway gathered together toward notauli in *Philoctetes*); if punctures on mesoscutum are clumped along notauli, then punctuation on pronotum is dense with large punctures (smooth to sparsely punctate in *Philoctetes*); metanotum round, with exception of *C. praeteritorum* (Semenov, 1932) (usually conical to mucronate in *Philoctetes*); medial vein weakly curved (strongly arched in *Philoctetes*); the distance between posterior margin of anterior declivity of T1 and posterior margin of T1 as long as or longer than mesoscutellum (Fig. 2C) (very short, 0.2–0.5 × as long as in *Philoctetes* (Fig. 2B)); apex of T3 with median notch, with tooth at each side (with or without median notch in *Philoctetes*); head and mesosoma characterised by colliculate sculpture (Harris 1979), a reticulate microsculpture continuously set with granulations on the intervals among punctures (Figs 1A, 1B) (polished in *Philoctetes*); tarsal claw with five teeth (two to four in *Philoctetes*).

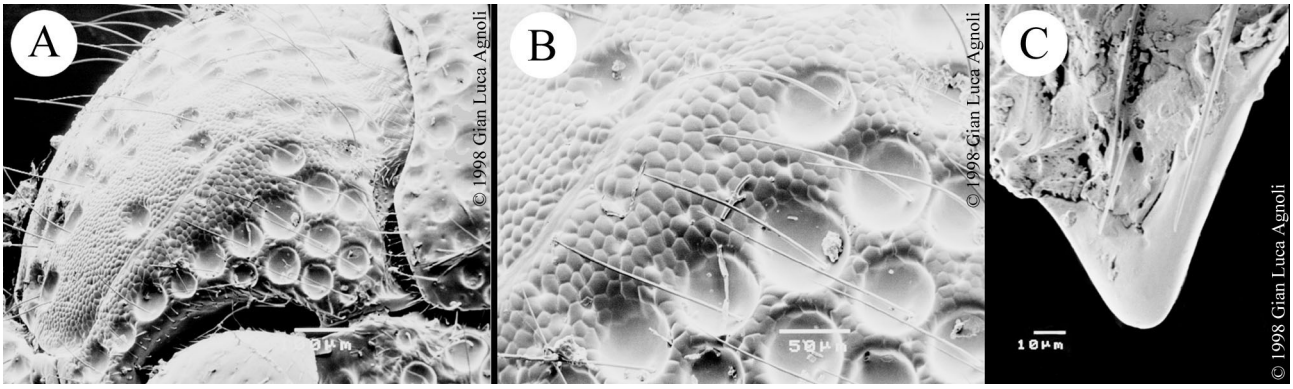

FIGURE 1. *Chrysellampus sculpticollis* (Abeille de Perrin), ♀. **A.** Punctuation and colliculate sculpture of mesoscutum over tegula margin, 150x; **B.** Punctuation and colliculate sculpture of mesoscutum over tegula margin, close up, 300x; **C.** Left apical tooth with rim, 500x. (Agnoli & Rosa 2011).

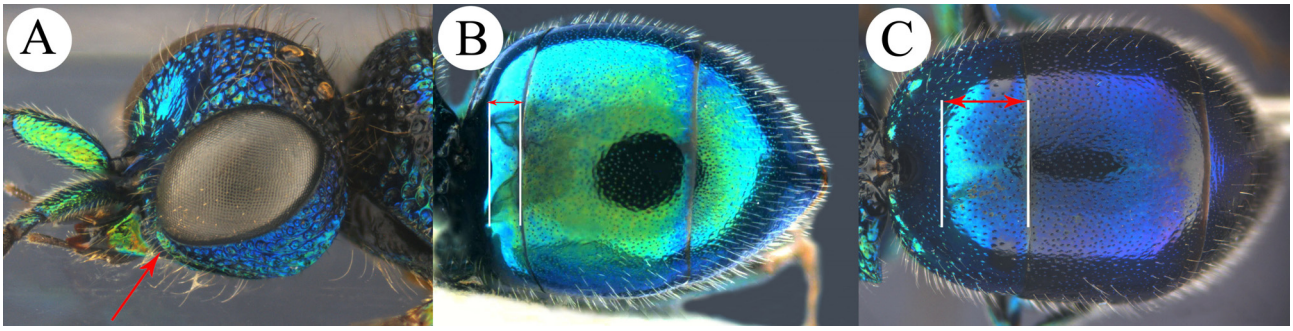

FIGURE 2. A. *Chrysellampus sculpticollis* (Abeille de Perrin), ♂. Head, lateral view. Arrow pointing curved genal carina bisecting MS; **B.** *Philoctetes* sp., metasoma, dorsal view. Arrow delimiting the distance between posterior margin of anterior declivity and posterior margin of T1; **C.** *Chrysellampus* sp., metasoma, dorsal view. Arrow delimiting the distance between posterior margin of anterior declivity and posterior margin of T1.

Redescription. F2–F11 flattened and dilated (Fig. 3); mandible tridentate; scapal basin asetose, polished to rugose or striate; MS short, usually around 0.5 MOD; genal carina well developed from lower margin of temple to MS and curved beneath lower margin of eye, usually bisecting MS; subgenal area narrow, but well visible. Head (on vertex, occipital area and genae) and mesosoma with colliculate sculpture, giving matt colour effect to body surface (Figs 1A, 1B); pronotum concave laterally, and evenly covered by large punctures; mesoscutum with large punctures evenly distributed on entire surface (Figs 4D, 6D, 9C) (*C. duplipunctatus* Tsuneki; *C. obtusidentibus* Rosa, Wei & Xu, **sp. nov.**; *C. proximiocellis* Rosa, Wei & Xu, **sp. nov.**), only two species (*C. sculpticollis* (Abeille de Perrin) and *C. medanae* (du Buysson)) with punctures clumped along notauli; metanotum round (with exception of *C. praeteritorum* (Semenov, 1932), **comb. nov.**); propodeal angle subparallel, elongated and broad; mesopleuron with ventral margin extending at an oblique angle (Figs 4B, 6B, 9B), with omaulus elongate and scrobal carina shortened. T1 to T3 subcylindrical and elongated; distance between posterior margin of anterior declivity and posterior margin of T1 as long as or longer than mesoscutellum (Figs 2C, 3, 8); apex of T3 with deep notch and sharp to blunted tooth usually surrounded by thin rim (Figs 1C, 4F, 6F, 9F). Fore wing with medial vein

curved. Fore femur carinate; tarsal claw with five teeth. Habitus subcylindrical and elongated compared to other Elampini (*Holophris*, *Omalus*, *Pseudomalus* and *Philoctetes*) close to *Chrysellampus*.

Species included. At present, the genus *Chrysellampus* Semenov includes ten rare and homogeneous species: *C. sculpticollis* (Abeille de Perrin, 1878), *C. medanae* (du Buysson in Magretti, 1890), *C. heros* (Semenov, 1892), *C. pici* (du Buysson, 1900) (=*C. nigromaculatus* Linsenmaier, 1997), *C. harmandi* (Buysson, 1903), *C. praeteritorum* (Semenov, 1932), **comb. nov.**, *C. duplipunctatus* Tsuneki, 1948, *C. tatianae* Semenov, 1967, *C. obtusidentibus* Rosa, Wei & Xu, **sp. nov.**, and *C. proximocellis* Rosa, Wei & Xu, **sp. nov.**

Biology. *Chrysellampus* are known as nest parasite of Crabronidae (Martynova & Fateryga 2014). Martynova & Fateryga (2014) gave description of larva and cocoon of *C. sculpticollis*, and its feeding habits and interactions with host, *Psenulus fuscipennis* (Dahlbom).

Distribution. *Chrysellampus* Semenov is known from Palaearctic and Oriental Regions (China: Yunnan).

Remarks. The genus *Parellampus* Semenov, 1932 is a junior subjective synonym of *Chrysellampus* Semenov, 1932 and not a synonym of *Philoctetes* Abeille de Perrin, 1879.

Key to Chinese species of the genus *Chrysellampus*

1. Metanotum elevated and conical (Fig. 7A); lower mesopleuron triangle shaped, formed by sharp omaulus and scrobal carina, strongly projecting outward on their juncture at apex of ventral margin (Fig. 7A) . . . . . *C. praeteritorum* (Semenov)
- Metanotum rounded or gibbous (Fig. 4D); mesopleuron with ventral margin extending at an oblique angle, with sharp omaulus and scrobal carina not projecting outward (Fig. 4B). 2
2. Shortest distance between posterior ocelli (POL) = 1 MOD (Fig. 9C) . . . . . *C. proximocellis* **sp. nov.**
- Shortest distance between posterior ocelli (POL) about 2 MOD (Figs 4C, 6C) 3
3. Median notch of T3 with blunted teeth without rim (Fig. 6F) . . . . . *C. obtusidentibus* **sp. nov.**
- Median notch of T3 with pointed teeth surrounded by rim (Fig. 4F) 4
4. Lower margin of mesopleuron with large and irregular foveae above omaulus (Fig. 3) . . . . . *C. duplipunctatus* Tsuneki
- Lower margin of mesopleuron with round foveae . . . . . *C. heros* (Semenov)

Chrysellampus duplipunctatus Tsuneki, 1948

(Figs 3, 4A–4F)

Chrysellampus near *harmandi* Tsuneki, 1946: 33 (China: Shanxi).
Chrysellampus duplipunctatus Tsuneki, 1948: 120. Holotype ♀, China: Shanxi, Wutai Shan (KUM).
Chrysellampus duplipunctatus f. *suzukii* Tsuneki, 1948: 122. Holotype ♀, China: Shanxi, Yangchêng (KUM).
Chrysellampus duplipunctatus f. *variegatus* Tsuneki, 1950: 63. Syntypes ♂♀, Korea, Manchuria: Kay-juan (NIAS).
Chrysellampus duplipunctatus Tsuneki: Tsuneki 1953a: 55; Tsuneki 1953b: 23.
Chrysellampus duplipunctatus f. *variegatus* Tsuneki: Tsuneki 1953a: 55; Tsuneki 1953b: 23.
Omalus (*Chrysellampus*) *duplipunctatus* (Tsuneki): Linsenmaier 1959: 22.
Philoctetes duplipunctatus (Tsuneki): Kimsey & Bohart 1991: 255; Kurzenko & Lelej 2007: 1004; Ha *et al*. 2008: 77; Rosa *et al*. 2014: 31.

Material examined. CHINA: 1♀ Ningxia, Liupanshan Forest Park (35°22'N 106°18'E), 3–4.VII.2009, leg. H-y. Chen (SCAU); 1♀, Ningxia, Liupanshan Longtan Forest Farm (35°23'22"N 106°20'38"E), 6.VII.2008, J-m. Yao (SCAU); 1♀, Yunnan, Xian Yenteng Village (24°7'27"N 104°7'46"E), 25.VII.2005, leg. K. Wu.

Diagnosis. *Chrysellampus duplipunctatus* Tsuneki, 1948 is similar to *C. obtusidentibus* Rosa, Wei & Xu, **sp. nov.** and *C. heros* (Semenov) for habitus and colouration. However, it can be separated by fine and shallow punctures on metasoma (large and deep in *C. obtusidentibus*), and apex of T3 with median notch deep and with sharp teeth surrounded by thin rim (Fig. 4F) (blunted teeth without rim in *C. obtusidentibus*); it can be separated from *C. heros* by shape of mesopleuron with large areolae and irregular punctures on lower margin (with small and round punctures in *C. heros*).

Redescription. *Female*. Body length 7.1–7.3 mm. Fore wing length 4.5–4.7 mm. OOL = 2.2 MOD; POL = 2 MOD; MS = 0.5 MOD; relative length of P:F1:F2:F3 = 1:1.5:1:0.7.

Head. Head with large and deep punctures (Fig. 4A) on frons and lateral sides of scapal basin; punctures on vertex and occipital area smaller and subequal, with two impunctate areas close to ocelli; frons, occipital area and

gena colliculate, with reticulate microsculpture on intervals between the punctures. Gena micropunctate and obliquely wrinkled. Scapal basin deep and transversely striated. Ocellar triangle isosceles; postocellar line indistinct. Occipital carina and genal carina sharp; the latter curved close to lower margin of eye, partially bisecting the MS.

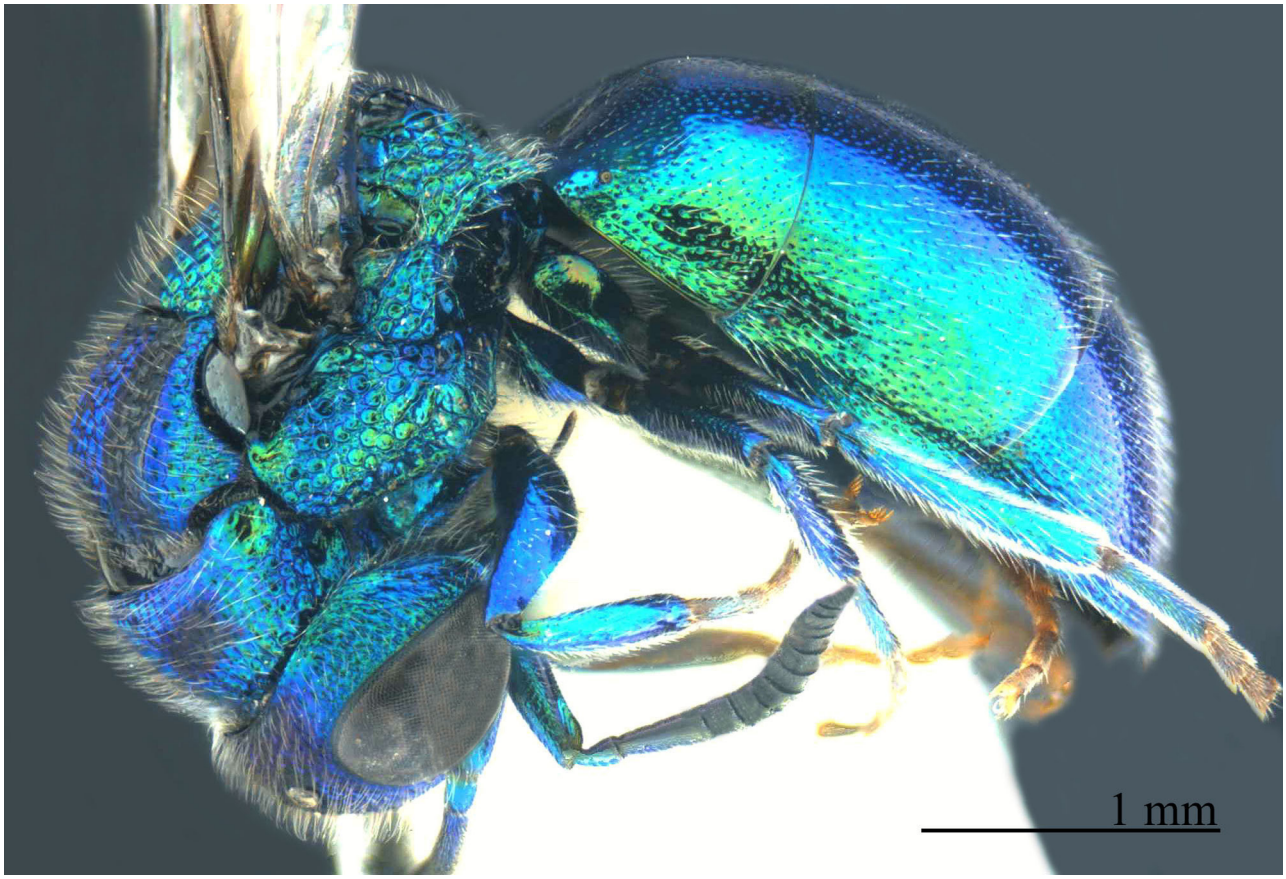

FIGURE 3. *Chrysellampus duplipunctatus* Tsuneki, ♀, Ningxia, habitus, lateral view.

Mesosoma. Pronotum impunctate antero-medially; with large and irregular punctures medially; with smaller and round subequal punctures laterally. Mesoscutum mostly with large and deep punctures, but impunctate anteriorly (Figs 4C, 4D). Notauli and parapsidal furrows complete. Mesoscutellum impunctate antero-medially, the rest punctate as mesoscutum. Pronotum, mesonotum, mesoscutellum and mesopleuron colliculate. Metanotum elongated and gibbous, with larger aerolate punctures. Propodeal angles large and straight, slightly divergent. Mesopleuron with omaulus sharply carinate and scrobal carina well developed (Fig. 4B).

Metasoma. T1, T2 and T3 with shallow punctures, denser to lateral margins and on T3. T3 without semitransparent rim. Apex of T3 with median notch bidentate, teeth with rim (Fig. 4F).

Colouration. Body metallic blue, with green spots on face, vertex, pronotum, mesoscutellum and mesopleuron. Scape, pedicel and F1 metallic green to blue, rest of flagellum black. Tegula dark brown, without metallic reflection. Legs metallic green; tarsi brown with metallic green reflections at least on the first tarsomere. Sternites metallic green.

Male. Unknown.

Remarks. The type of *C. duplipunctatus* Tsuneki, 1948 was not available for this study. It is strictly related to *C. heros* (Semenov, 1932). Description and drawings of the two species are matching. According to Tsuneki's description, he did not know any specimen of *C. heros* (Semenov). In fact, the diagnosis of *C. duplipunctatus* was given in comparison with the European species *C. sculpticollis* (Abeille de Perrin, 1878). The main difference between the two species is shape of mesopleuron, which is without irregular foveate punctures in *C. heros*, but only with sharp and thick juncture between omaulus and scrobal carina. Moreover, based on Tsuneki's drawing, shape of metanotum in *C. duplipunctatus* is triangularly pointed downward, whereas in our Chinese specimens metanotum is regularly rounded.

Distribution. China (Liaoning, Jilin, Shanxi, Yunnan). Korea and Russian Far East (Tsuneki 1953a, b; Kurzenko & Lelej 2007; Ha *et al*. 2008; Lelej & Kurzenko 2012).

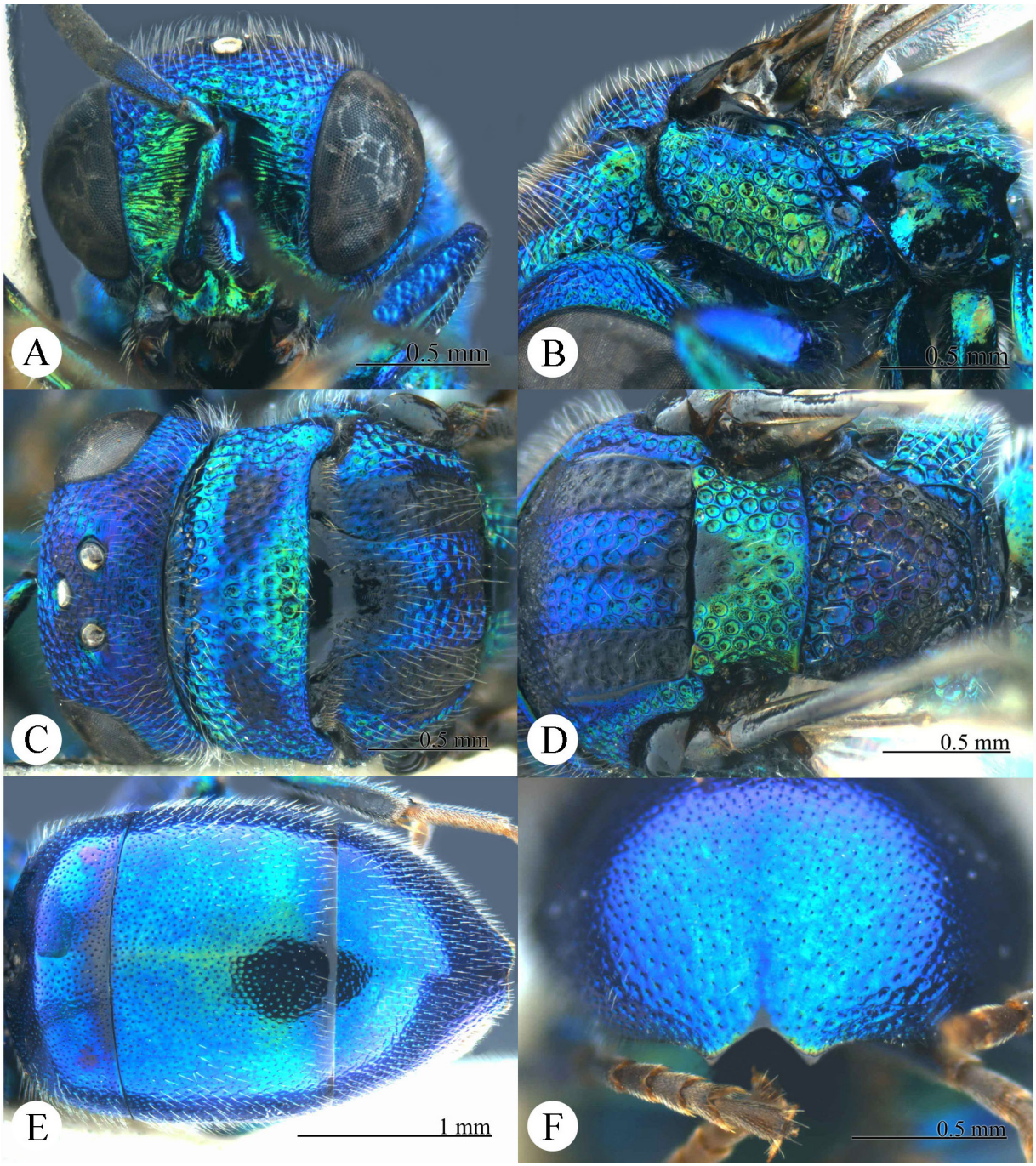

FIGURE 4. *Chrysellampus duplipunctatus* Tsuneki, ♀, Ningxia. **A.** Head, frontal view; **B.** Mesopleuron, lateral view; **C.** Head, pronotum and mesonotum, dorsal view; **D.** Mesoscutum, mesoscutellum and metanotum, dorsal view; **E.** Metasoma, dorsal view; **F.** Apex of T3, posterior view.

Chrysellampus heros (Semenow, 1892)

Ellampus heros Semenow, 1892: 71. Holotype ♀, China: Alaschan (ZIN) (examined).
Ellampus heros Semenov: Bischoff 1913: 8.
Chrysellampus heros (Semenov): Semenov-Tian-Shanskij 1932: 5.
Omalus (Chrysellampus) heros (Semenov): Linsenmaier 1959: 22.
Philoctetes heros (Semenov): Kimsey & Bohart 1991: 255; Rosa *et al*. 2014: 32.

Material examined. CHINA: ♀, Alaschanicae mts., at beginning of VII.1871, Przewalski [in Cyrillic], 77337, Holotypus, *Ellampus heros*, ♀ un. typ. A.S. X 91.

Diagnosis. *Chrysellampus heros* (Semenov, 1892) is similar to *C. duplipunctatus* Tsuneki, 1948 for habitus and colouration. It can be separated only by punctuation without irregular foveae on ventral margin of mesopleuron (with large irregular foveae in *C. duplipunctatus*).

Distribution. China (Inner Mongolia).

Remarks. Picture of the type are published in Rosa *et al*. (2014: Plate 22).

***Chrysellampus obtusidentibus* Rosa, Wei & Xu, sp. nov.**
(Figs 5, 6A–6F)

Material examined. Holotype, ♀, CHINA: Yunnan, Jingdong, Jinping town (24°27'14"N 100°50'4"E), 28.IV.2005, leg. H-s. Wang (SCAU). Paratypes: 4 ♀♀, with the same label as holotype (SCAU); 1 ♀, Yunnan, Jingdong, Wenjing town (24°18'9"N 100°55'53"E), 28.IV.2005, leg. K. Wu (SCAU).

Diagnosis. *Chrysellampus obtusidentibus* **sp. nov.** is similar to *C. duplipunctatus* Tsuneki, 1948 and *C. heros* (Semenov, 1892) for general habitus and colour. However, it can be separated by the following characteristics: mesoscutellum evenly punctate (impunctate antero-medially in *C. duplipunctatus* and *C. heros*), metasoma with large and deep punctures (fine and shallow in *C. duplipunctatus*), apex of T3 with median notch bidentate, blunted teeth without rim (pointed teeth with rim in *C. duplipunctatus* and *C. heros*), and sparse whitish vestiture on head (dense in *C. duplipunctatus* and *C. heros*).

Description. *Female*. Holotype (Fig. 5). Body length 7.1 mm. Fore wing length 4.7 mm. OOL = 1.9 MOD; POL = 1.9 MOD; MS = 0.5 MOD; relative length of P:F1:F2:F3 = 1:1.6:1:0.7.

Head. Head with large and deep punctures (Fig. 6A) on frons and lateral sides of scapal basin; punctures on vertex and occipital area smaller and subequal, with two impunctate areas close to ocelli; frons, occipital area and gena colliculate, with reticulate microsculpture on intervals between the punctures. Scapal basin deep and transversely striated. Gena micropunctate and obliquely wrinkle. Ocellar triangle isosceles; postocellar line indistinct. Occipital carina and genal carina sharp; the latter curved close to lower margin of eye, partially bisecting MS.

FIGURE 5. *Chrysellampus obtusidentibus* **sp. nov.**, ♀, holotype, habitus, lateral view.

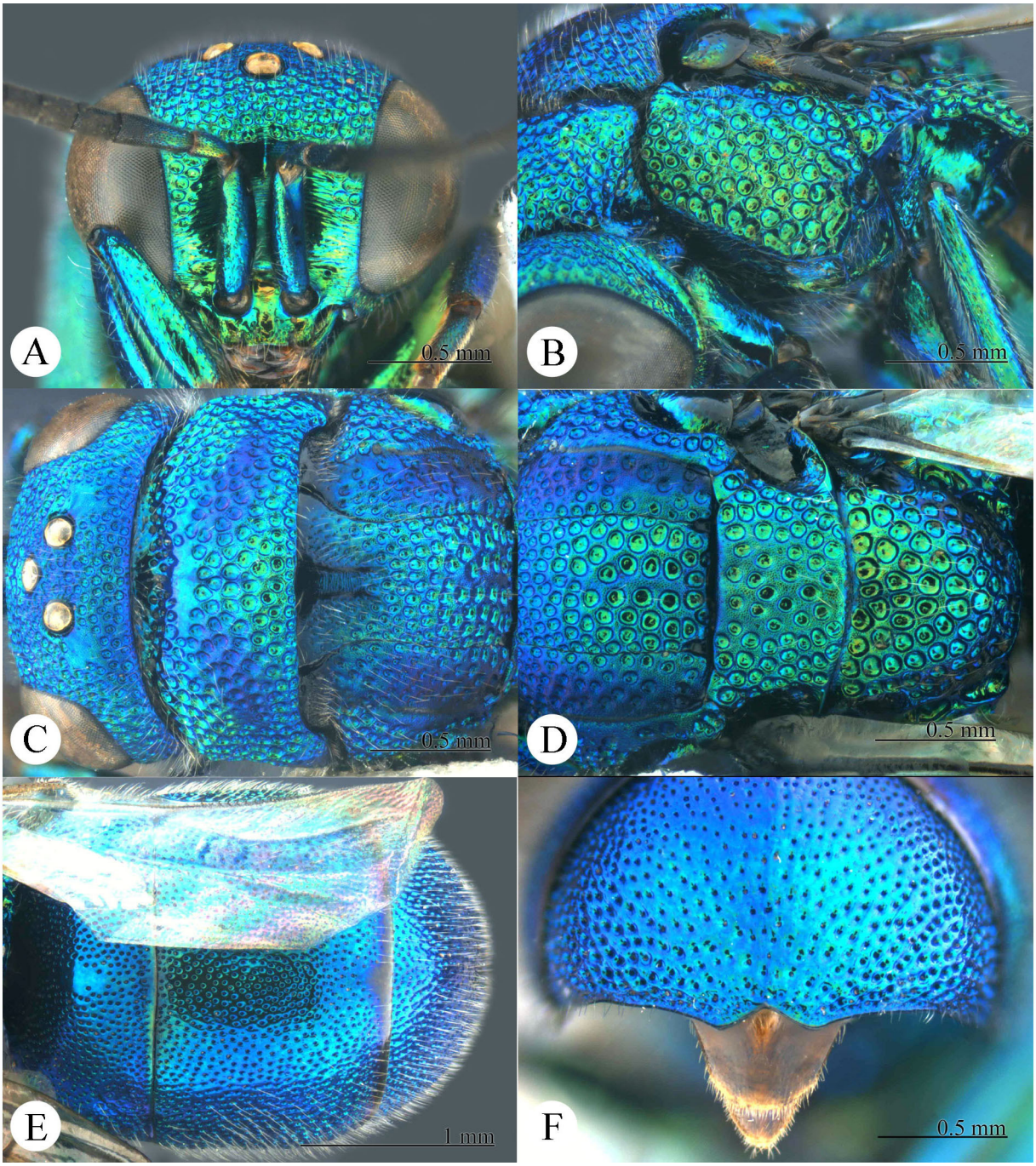

FIGURE 6. *Chrysellampus obtusidentibus* **sp. nov.**, ♀, holotype. **A.** Head, frontal view; **B.** Mesopleuron, lateral view; **C.** Head, pronotum and mesonotum, dorsal view; **D.** Mesoscutum, mesoscutellum and metanotum, dorsal view; **E.** Metasoma, dorsal view; **F.** Apex of T3, posterior view.

Mesosoma. Pronotum with large and round punctures antero-medially; with smaller and round subequal punctures laterally. Mesoscutum mostly with large and deep punctures, but with smaller punctures anteriorly (Figs 6C, 6D). Notauli and parapsidal furrows complete. Mesoscutellum evenly with large and round punctures. Metanotum elongated and gibbous, with larger and round punctures. Propodeal angles large and straight, slightly divergent. Mesopleuron with omaulus sharply carinate and scrobal carina well developed; lower margin of mesopleuron with large and round punctures (Figs 5, 6B).

Metasoma. T1 and T2 with round and deep punctures dorsally, denser to lateral margins and on T3 (Figs 5, 6E). Apex of T3 with median notch bidentate; teeth blunted without rim (Fig. 6F). Some specimens show coarser punctuation on metasoma, even with double punctuation and corrugated intervals between punctures.

Colouration. Body metallic green, with blue spots on vertex, occipital area, pronotum and mesoscutum; metasoma from blue to green. Scape, pedicel and F1 metallic green, rest of flagellum black. Tegula metallic green. Leg metallic green; tarsi brown with metallic green reflections at least on the first tarsomere. Sternites metallic green.

Male: unknown.

Distribution. China (Yunnan).

Etymology. The species name is derived from the Latin adjective *obtusus* (=smoothed) and the noun *dens* (=tooth), plurals, in the ablative case, third declension, and the gender is masculine; obtusis is shorten in the root *obtusi-*. It refers to the apical blunted teeth on T3.

***Chrysellampus praeteritorum* (Semenov, 1932), comb. nov.**

(Figs 7A–7F)

Parellampus praeteritorum Semenov-Tian-Shanskij, 1932: 7. Holotype ♀, China: Sichuan, Tadzinlu (ZIN) (examined).
Philoctetes praeteritorum (Semenov): Kimsey & Bohart 1991: 257; Rosa *et al*. 2014: 34.

Material examined. CHINA: ♀, Tadzinlu, Potanin 22.VI.1893 [in Cyrillic], Holotypus, *Parellampus praeteritorum* m. typ. un. ♀ A. Semenov-Tian-Shansky det. V.19 (ZIN).

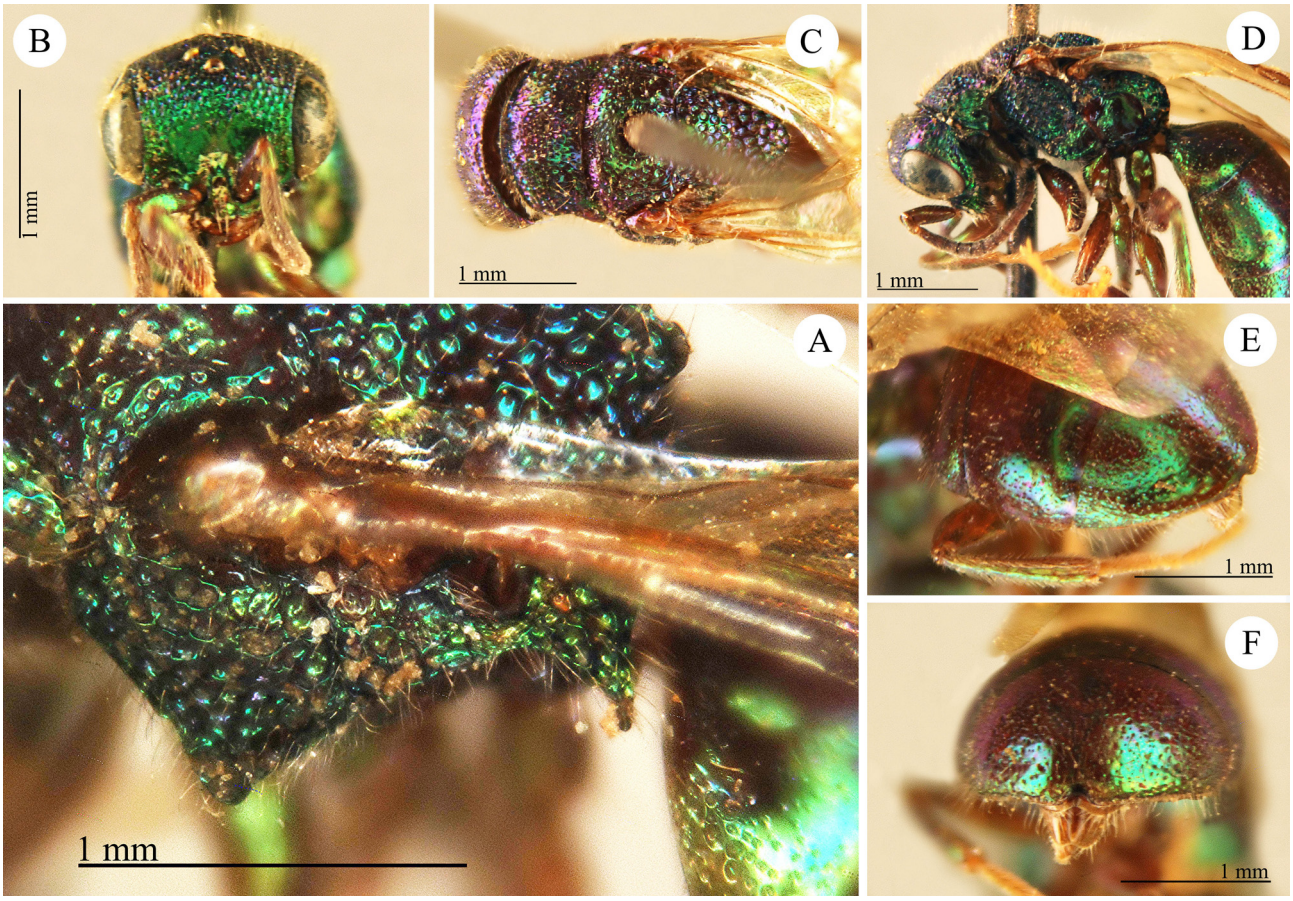

FIGURE 7. *Chrysellampus praeteritorum* (Semenov), ♀, holotype. **A.** Mesopleuron and metanotum, dorso-lateral view; **B.** Head, frontal view; **C.** Head and mesosoma, dorsal view; **D.** Head, mesosoma, and T1, lateral view; **E.** Metasoma, postero-lateral view; **F.** Apex of T3, posterior view.

Diagnosis. *Chrysellampus praeteritorum* (Semenov, 1932) shows unique metanotum elevated and conical; mesopleuron triangular shaped, formed by omaulus and scrobal carina strongly projecting in the juncture on ventral margin. Other diagnostic chacateristics are sharp collar edge on anterior margin of pronotum; pronotum longer than mesoscutum, with concave margins; mesoscutum with smaller punctures evenly distributed, but apparently

gathered towards notauli (holotype damaged by entomological pin). Colliculate sculpture less incised and flagellomeres less flattened than other *Chrysellampus*. Apical margin of T3 distinctly notched without teeth at its sides.

Distribution. China (Sichuan).

Remarks. Semenov-Tian-Shanskij (1932) described the genus *Parellampus* based on the sole *P. praeteritorum*. This species is clearly separated by all the other species in the genus. The main diagnostic characteristics given are conical to submucronate metanotum, projecting juncture of omaulus and scrobal carina on ventral margin of mesopleuron, and apical margin of T3 with simple notch. Nevertheless, these characteristics are valid for species identification, and variable within the genus. The same morphological variations are observed in the genus *Philoctetes* where some species bears mucronate metanotum or notch apical margin of T3 without rim. However, the main diagnostic features of the genus *Chrysellampus* can be found in *P. praeteritorum*, as general habitus subcylindrical and elongated; elongated pronotum, metanotum and T1; pronotum fully punctuated with large punctures; MS bisected by genal carina; mesopleuron with ventral margin extending at an oblique angle; with elongated omaulus and shortened scrobal carena; etc. Semenov (1932) described tarsal claw with three teeth, but they are subsidiary teeth and a smaller one at base can be considered as the fourth subsidiary tooth, therefore claws have in total five teeth. For this morphological characteristics we include *P. praeteritorum* in the genus *Chrysellampus* and propose the new synonym *Chrysellampus* Semenov, 1932 =*Parellampus* Semenov, 1932, **syn. nov.**

***Chrysellampus proximocellis* Rosa, Wei & Xu, sp. nov.**
(Figs 8, 9A–9F)

Material examined. CHINA: Holotype: 1♀, Gansu, Tianshui, Xiao Longshan (106°08.201'E 34°16.275'N), 1490 m, 7.VII.2007, leg. N. Mei. Paratype: 1♀, Yunnan, Weibaoshan Mts., W-slope (25°11'N 100°24'E), 2000–2800 m, 17.VI.2002, S Becvár & R. & H. Fouquè (GLAC).

Diagnosis. *Chrysellampus proximocellis* **sp. nov.** can be easily separated from other species by: POL = 1 MOD (about 2 MOD in other species), F3–F11 elongate (l/w = 1.3) (l/w = 1 in other species); scapal basin deep and smooth, weakly subrugose only laterally, not transversely striated or wrinkled, only *C. praeteritorum* (Semenov) shares this characteristic, but the two species are easily recognisable for the different shape of head, metanotum and mesopleuron.

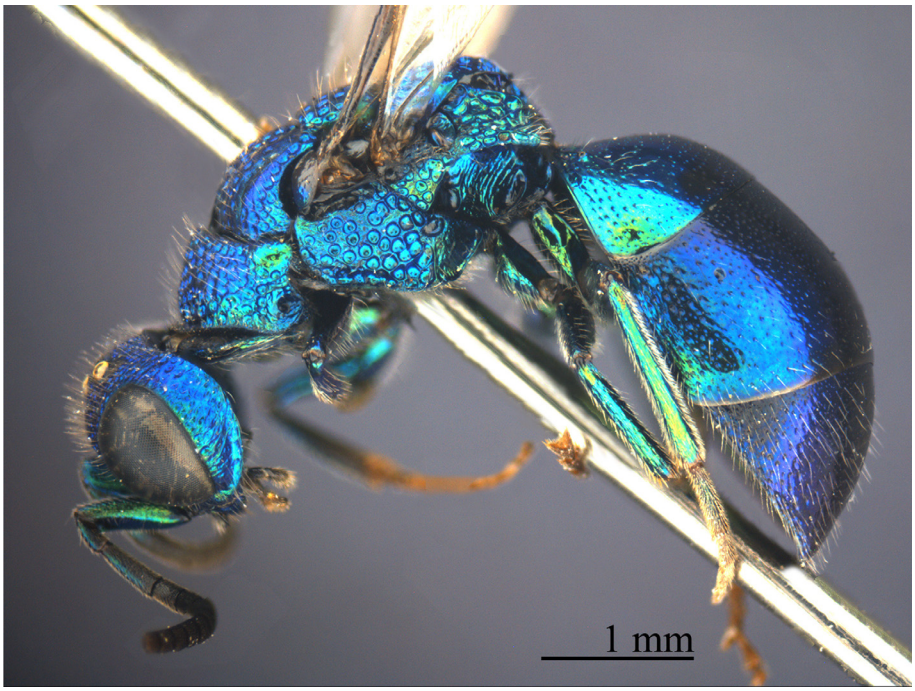

FIGURE 8. *Chrysellampus proximocellis* **sp. nov.**, ♀, holotype, habitus, lateral view.

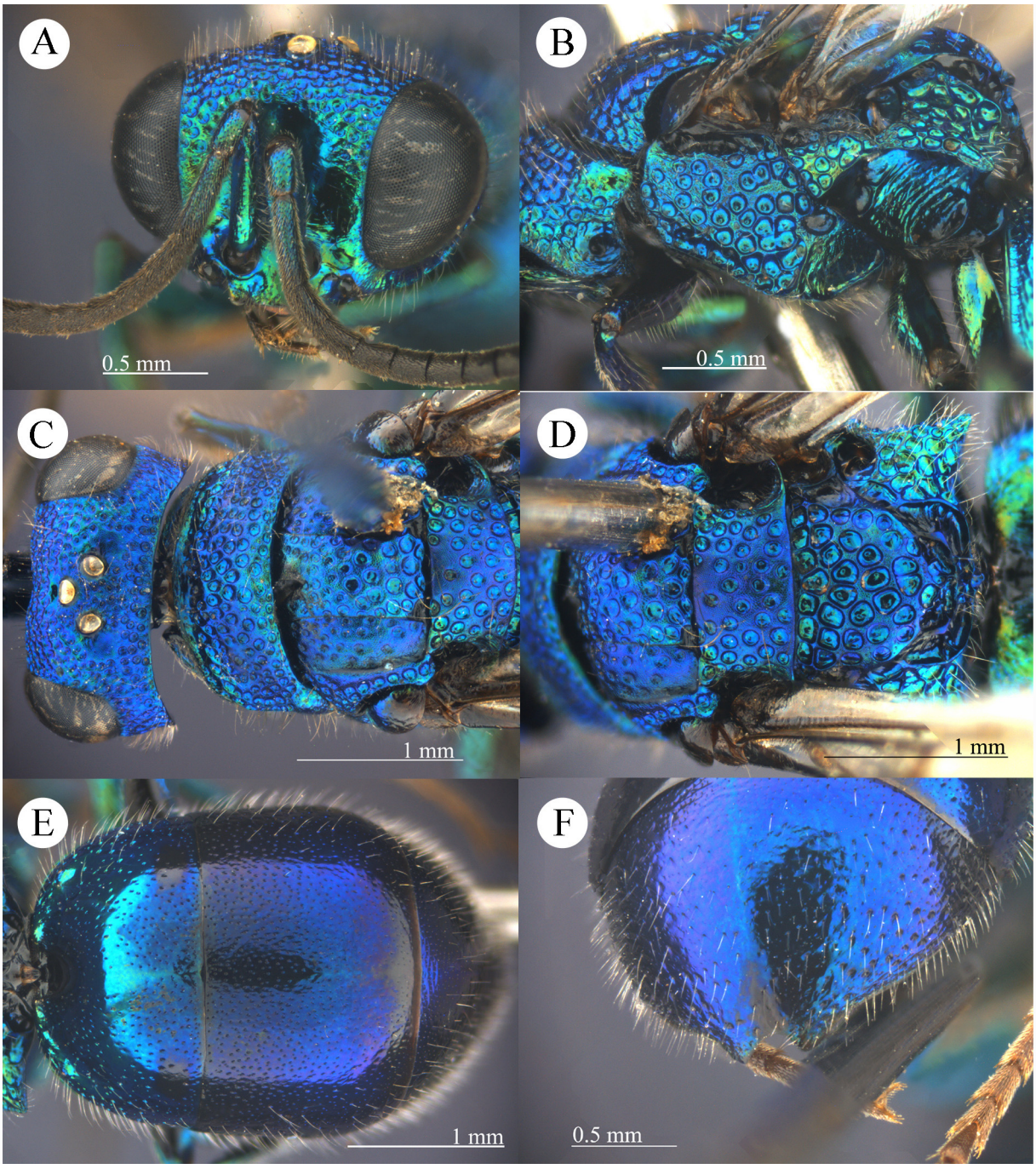

FIGURE 9. *Chrysellampus proximocellis* **sp. nov.**, ♀, holotype. **A.** Head, frontal view; **B.** Mesopleuron, lateral view; **C.** Head, pronotum, mesoscutum and mesoscutellum, dorsal view; **D.** Mesoscutum, mesoscutellum and metanotum, dorsal view; **E.** Metasoma, dorsal view; **F.** Apex of T3, posterior view.

Description. *Female*. Holotype. Body length 7.1 mm (Fig. 8). Fore wing length 5 mm. OOL = 2.0 MOD; POL = 1 MOD; MS = 0.8 MOD; relative length of P:F1:F2:F3 = 1:1.5:0.8:0.7.

Head. Frons and vertex with deep punctures (Fig. 9A); punctures on occipital area with subequal diameter and with two impunctate areas close to ocelli. Scapal basin deep and smooth, weakly subrugose only laterally. Vertex, occipital area and genae with colliculate, reticulate microsculpture in intervals between the punctures. Gena micropunctate and obliquely wrinkled. Ocellar triangle isosceles, with very short POL (1 MOD); postocellar line indistinct. Occipital and genal carina sharp, the latter curved close to the lower margin of eye, partially bisecting the MS.

Mesosoma. Pronotum with sharp and polished carina on anterior margin, with irregular punctures of different diameter evenly distributed, with a marked median depression on lateral sides (Fig. 9B). Mesoscutum basally with

large and deep punctures, anteriorly with smaller punctures, evenly distributed; lateral field of mesoscutum with shallow and small round punctures evenly distributed (Fig. 9D). Notauli and parapsidal furrows complete. Mesoscutellum with round punctures smaller than those on mesoscutum and subequally interspaced. Metanotum elongate and gibbous, with large and deep aereolate punctures. Propodeal angles large and straight, slightly divergent. Mesopleuron with omaulus sharply carinate and scrobal carina strongly developed; lower margin of mesopleuron with large and irregular punctures (Fig. 9C).

Metasoma. T1, T2 and T3 with fine and spare dots (Fig. 9E); apex of T3 with a deep notch, bidentate at its margins and projected by a pointed rim (Fig. 9F); the notch has a triangular form, with the vertical angle of about 120°.

Colouration. Body metallic blue to green; vertex and occipital area, two lateral pronotal spots, lateral fields of mesoscutum, mesoscutellum anteriorly and metanotum dark metallic blue. Tegula dark brown, with blue metallic reflection. T1 anteriorly and laterally metallic green, dorsally, T2 and T3 metallic blue with violet reflections. Legs metallic green; tarsi brown with metallic green reflections at least on the first tarsomere. Scape, pedicel and F1 metallic green, rest of flagellum black. Sternites metallic green.

Male. Unknown.

Distribution. China (Gansu).

Etymology. The name *proximocellis* is derived from the Latin adjective *proximus* (= very close) and the noun *ocellus*, both following the second declension, plurals, in the ablative case, and the gender is masculine*; proximis* is shorten in the root *proxim-*, the species epithet is indeclinable. It refers to the short distance between posterior ocelli (POL).

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