

# An annotated checklist of the chrysidid wasps (Hymenoptera, Chrysidae) from China

Paolo Rosa<sup>1</sup>, Na-sen Wei<sup>2</sup>, Zai-fu Xu<sup>2</sup>

**1** Via Belvedere 8/d, I-20881 Bernareggio (MB), Italy **2** Department of Entomology, College of Natural Resources and Environment, South China Agricultural University, Guangzhou 510640, China

Corresponding author: Zai-fu Xu ([xuzaifu@scau.edu.cn](mailto:xuzaifu@scau.edu.cn))

---

Academic editor: Michael Engel | Received 28 August 2014 | Accepted 24 October 2014 | Published 19 November 2014

---

<http://zoobank.org/7346B2B9-40BF-4358-AFE4-B3F30023F9F2>

---

**Citation:** Rosa P, Wei N-s, Xu Z-f (2014) An annotated checklist of the chrysidid wasps (Hymenoptera, Chrysidae) from China. ZooKeys 455: 1–128. doi: 10.3897/zookeys.455.6557

---

## Abstract

An annotated checklist of the Chinese Chrysidae is provided. The list includes 188 species and subspecies in twenty three genera of five subfamilies. Four species are proposed as new combinations: *Hedychrnidium cupreum asianum* (Linsenmaier, 1997), *Philocetes deauratus* (Mocsáry, 1914), *Ph. mordvilkoi* (Semenov-Tian-Shanskij, 1932), and *Pseudomalus hypocritus* (du Buysson, 1893). Two species are revalidated: *Chrysis consobrina* Mocsáry, 1889, and *Philocetes mongolicus* (du Buysson, 1901). Historical data with comments on the current taxonomic position, and the pictures of sixty five types are also given.

## Keywords

Chrysidae, catalogue, new combination, status revived, pictures, China

## Table of contents

Introduction.....	3
Material and methods.....	3
Results.....	5
I. Taxa from China.....	5
Subfamily Cleptinae.....	5
1. Genus <i>Cleptes</i> Latreille, 1802 .....	5
Subfamily Amiseginae .....	10
2. Genus <i>Magdalium</i> Kimsey, 1986.....	10
3. Genus <i>Nipponosega</i> Kurzenko & Lelej, 1994 .....	10
Subfamily Loboscelidiinae.....	11
4. Genus <i>Loboscelidia</i> Westwood, 1874 .....	11
5. Genus <i>Rhadinoscelidia</i> Kimsey, 1988.....	13
Subfamily Chrysidiinae .....	13
Tribe Elampini .....	13
6. Genus <i>Elampus</i> Spinola, 1806 .....	13
7. Genus <i>Hedychridium</i> Abeille de Perrin, 1878 .....	17
8. Genus <i>Hedychrum</i> Latreille, 1802.....	20
9. Genus <i>Holophris</i> Mocsáry, 1890 .....	26
10. Genus <i>Holopyga</i> Dahlbom, 1845.....	26
11. Genus <i>Omalus</i> Panzer, 1806.....	28
12. Genus <i>Philoctetes</i> Abeille de Perrin, 1878 .....	31
13. Genus <i>Pseudomalus</i> Ashmead, 1902 .....	34
Tribe Chrysidiini .....	38
14. Genus <i>Chrysidea</i> Bischoff, 1913 .....	38
15. Genus <i>Chrysis</i> Linnaeus, 1761.....	38
16. Genus <i>Chrysura</i> Dahlbom, 1845 .....	67
17. Genus <i>Euchroeus</i> Latreille, 1809 .....	68
18. Genus <i>Praestochrysis</i> Linsenmaier, 1959 .....	70
19. Genus <i>Primeuchroeus</i> Linsenmaier, 1968 .....	71
20. Genus <i>Pseudospinolia</i> Linsenmaier, 1951 .....	73
21. Genus <i>Stilbum</i> Spinola, 1806 .....	74
22. Genus <i>Trichrysis</i> Lichtenstein, 1876 .....	75
Subfamily Parnopinae .....	79
23. Genus <i>Parnopes</i> Latreille, 1797 .....	79
Plates.....	80
II. Taxa to be excluded from China .....	115
III. Doubtful taxa mentioned in China .....	116
Conclusion.....	117
Acknowledgements.....	117
References .....	118

## Introduction

The Chrysidae, commonly known as cuckoo wasps or goldwasps, are a cosmopolitan family and have the greatest diversity in the Palaearctic Region (Morgan 1984). Based on the most recent investigation, 87 genera and 2509 species have been described worldwide in this family (Aguiar et al. 2013). Cuckoo wasps are parasitoids or cleptoparasites of stick insects, moths, and other wasps, bees and sawflies (Kimsey and Bohart 1991). Kimsey and Bohart (1991) divided this family into four subfamilies (Amiseginae, Chrysinae, Cleptinae, and Loboscelidinae), while Mocsáry (1889), Lisenmaier (1959), Mingo (1994), and Rosa et al. (2013) considered also Parnopinae as a valid subfamily and we follow the latter taxonomic interpretation.

In 1864 Smith included *Stilbum cyanurum* (sub *splendidum*) from China in a table of his paper. This is the first report of the Chrysidae from China. From then on, many articles with occasional descriptions of new species of Chinese chrysid can be found in the literature (Smith 1874a, 1874b; du Buysson 1887, 1893, 1898a, 1898b, 1898c, 1899, 1900, 1901a, 1904, 1908; Mocsáry 1887, 1889, 1890, 1911, 1912a, 1912b, 1913a, 1913b, 1914; Radoszkowski 1887, 1889, 1891; Semenow 1892; Semenov-Tian-Shansky 1909; Bischoff 1910; Uchida 1927; Semenov-Tian-Shanskij 1932, 1954, 1967; Hammer 1936, 1950; Tsuneki 1947, 1948a, 1950, 1953a, 1970b, 1982; Lisenmaier 1959, 1968, 1997a; Lin 1964; Móczár 1968; Kimsey 1987a, 1987b, 1988, 1995; Rosa 2003; Xu et al. 2003, 2006; Liu et al. 2010, 2011; Yao et al. 2010; Wei et al. 2013; Wei et al. 2014a, 2014b). But these descriptions are scattered and a composite review of the Chinese Chrysidae is necessary.

The aim of the present checklist is to summarize the taxa previously recorded for China as a base for further research.

## Material and methods

The list follows the genera subdivision proposed by Kimsey and Bohart (1991), with few exceptions. The species are listed alphabetically. Type depositories are given mainly according to Kimsey and Bohart (1991). Types examined are asterisked (\*) after the type depositories.

The following abbreviations are used in the text: aberr. (aberratio), biol. (biology), cat. (catalogue), cit. (citation), comp. notes (comparative notes), ecol. (ecology), design. (designation), distr. (distribution), ex. (examplar), fig. (figs) (figure (figures)), misid. (misidentification), pl. (pls) (plate (plates)), syn. (synonym), tab. (table), tax. (taxonomy), typ. gen. (typus generis).

Pictures of the types were taken with Nikon D-80 connected to the stereomicroscope Togal SCZ and stacked with the software Combine ZP.

Types and other specimens were deposited in the following institutions:

<b>AEI</b>	The American Entomological Institute, Gainesville, Florida, USA.
<b>BMNH</b>	The Natural History Museum, London, England.
<b>CNC</b>	Hymenoptera Section, Biosystematics Institute, Ottawa, Canada.
<b>EIHU</b>	Entomology Institute, Hokkaido University, Hokkaido, Japan.
<b>HNHM</b>	Hungarian Naturwissenschaftlichen Museum, Budapest, Hungary.
<b>HEC</b>	Hope Entomological Collections, Oxford University Museum, England.
<b>HUSK</b>	Department of Biological Sciences, Faculty of Science, Hanseo University, Seosan, Korea Republic.
<b>ISEA-PAS</b>	Invertebrate collections of the Institute of Systematics and Evolution of Animals, Polish Academy of Sciences in Krakow, Poland.
<b>KUM</b>	The Kyushu University Museum, Faculty of Bioresource and Bioenvironmental Sciences and Faculty of Social and Cultural Studies, Fukuoka, Japan.
<b>LSL</b>	Linnean Society of London, England.
<b>LZM</b>	Lund Zoological Museum, University of Lund, Sweden.
<b>MHNG</b>	Muséum d'Histoire Naturelle, Genève, Switzerland.
<b>MMU</b>	Zoological Museum, Lomonosov State University Moscow, Russia.
<b>MNHN</b>	Muséum National d'Histoire Naturelle, Paris, France.
<b>MNHU</b>	Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.
<b>MRSN</b>	Museo Regionale di Scienze Naturali, Turin, Italy.
<b>MSNG</b>	Museo Civico di Storia Naturale "G. Doria", Genoa, Italy.
<b>MSNM</b>	Museo Civico di Storia Naturale di Milano, Italy.
<b>NHMW</b>	Naturhistorisches Museum Wien, Vienna, Austria.
<b>NHRS</b>	Swedish Museum of Natural History, Stockholm, Sweden.
<b>NIAS</b>	Laboratory of Insect Systematics, National Institute of Agro-Environmental Sciences, Kannondai, Tsukuba, Ibaraki, Japan.
<b>NMLS</b>	Natur Museum Luzern, Switzerland.
<b>OMNH</b>	Osaka Museum of Natural History, Osaka, Japan.
<b>RMNH</b>	Nationaal Natuurhistorisch Museum, Leiden, The Netherlands.
<b>SCAU</b>	Department of Entomology, College of Natural Resources and Environment, South China Agricultural University, Guangzhou, China.
<b>SMFD</b>	Forschungsinstitut und Museum Senckenberg, Frankfurt am Main, Germany.
<b>TARI</b>	Entomology Collection, Taiwan Agricultural Research Institutue, Taichung, Taiwan, China.
<b>USNM</b>	United States National Museum of Natural History, United States National Entomological Collection, Washington DC, USA.
<b>ZIN</b>	Zoological Institute, St. Petersburg, Russia.
<b>ZJUH</b>	Institute of Insect Sciences, University of Zhejiang, Hangzhou, China.
<b>ZMU</b>	Zoological Museum, University of Copenhagen, Denmark.

## Results

### I. Taxa from China

#### Subfamily Cleptinae

##### 1. Genus *Cleptes* Latreille, 1802

###### 1. *Cleptes albonotatus* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_albonotatus](http://species-id.net/wiki/Cleptes_albonotatus)

*Cleptes albonotatus* Wei, Rosa & Xu, 2013: 61. Holotype ♀, China: Guangdong: Nanning National Nature Reserve (59 (key), 61 (descr.), 62 (pl. 1), 63 (*satoi* group), 65 (comp. notes), 74 (comp. notes), 75 (comp. notes), depository: SCAU)\*.

**Distribution.** China (Guangdong).

###### 2. *Cleptes asianus* Kimsey, 1987

[http://species-id.net/wiki/Cleptes\\_asianus](http://species-id.net/wiki/Cleptes_asianus)

*Cleptes asianus* Kimsey, 1987b: 56. Holotype ♀, Taiwan: Wushe (56 (descr.), 57 (figs 3, 4, 7), depository: AEI).

*Cleptes asianus*: Kimsey and Bohart 1991: 59 (cat., *orientalis* group); Wei et al. 2013: 56 (tab.), 58 (key), 60 (tax., *asianus* group).

*Cleptes (Cleptes) asianus*: Móczár 2000: 320 (diagnosis of the *asianus* group; cat.); 322 (key; figs 3–5); 325 (tax., descr.).

**Distribution.** China (Taiwan).

**Remarks.** Móczár (2000) added some morphological characteristics to the original description.

###### 3. *Cleptes eburnecoxis* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_eburnecoxis](http://species-id.net/wiki/Cleptes_eburnecoxis)

*Cleptes eburnecoxis* Wei, Rosa & Xu, 2013: 63. Holotype ♂, China: Zhejiang: Mt. Tianmu, Xianrending (60 (key), 63 (type series: China: Zhejiang: Mt. Tianmu, Xianrending; Guangxi: Longsheng, Huaping National Nature Reserve, descr.), 64 (pl. 2), 65 (*townesi* group), depository: SCAU)\*.

**Distribution.** China (Zhejiang, Guangxi).

**4. *Cleptes flavolineatus* Wei, Rosa & Xu, 2013**

[http://species-id.net/wiki/Cleptes\\_flavolineatus](http://species-id.net/wiki/Cleptes_flavolineatus)

*Cleptes flavolineatus* Wei, Rosa & Xu, 2013: 65. Holotype ♀, China: Zhejiang: Mt. Tianmu, Xianrending (59 (key), 61 (comp. notes), 65 (descr.), 66 (pl. 3), 67 (*satoi* group), 74 (comp. notes), depository: ZJUH)\*.

**Distribution.** China (Zhejiang).

**5. *Cleptes helanshanus* Wei, Rosa & Xu, 2013**

[http://species-id.net/wiki/Cleptes\\_helanshanus](http://species-id.net/wiki/Cleptes_helanshanus)

*Cleptes helanshanus* Wei, Rosa & Xu, 2013: 67. Holotype ♀, China: Inner Mongolia: Mt. Helan (59 (key), 67 (descr.), 68 (pl. 4), 69 (*nitidulus* group), depository: SCAU)\*.

**Distribution.** China (Inner Mongolia).

**6. *Cleptes mandsuricus* Móczár, 1968**

[http://species-id.net/wiki/Cleptes\\_mandsuricus](http://species-id.net/wiki/Cleptes_mandsuricus)

Plate 1

*Cleptes (Holcocleptes) mandsuricus* Móczár, 1968: 171. Holotype ♂, China: Manchuria: Erzendjanzsy (171 (descr.), 172 (figs 5–7), depository: NHMW)\*.

*Cleptes (Holcocleptes) mandsuricus*: Móczár 1998: 325 (cat., aerosus group), 329 (key), 332 (figs 12–13), 337 (China: Manchuria: Erzendjanzsy, tax., descr.).

*Cleptes mandsuricus*: Kimsey and Bohart 1991: 61 (China: Manchuria: Erzendjanzsy, cat., aerosus group); Kurzenko and Lelej 2007: 1002 (Northeast China, cat.); Wei et al. 2013: 56 (tab.), 60 (key), 69 (Northeast China, tax.).

**Distribution.** China.

**Remarks.** Móczár (1998) added some morphological characteristics to the original description.

**7. *Cleptes mareki* Rosa, 2003**

[http://species-id.net/wiki/Cleptes\\_mareki](http://species-id.net/wiki/Cleptes_mareki)

*Cleptes (Leiocleptes) mareki* Rosa, 2003: 408. Holotype ♀, China: Shanxi: Zhongtiao Shan c. [= Mt. Zhongtiao], 45 km W of Sanmenxia (408 (descr.), 410 (comp. tab.), 411 (figs 1, 2), 412 (figs 3, 4), 413 (figs 5–6), depository: MSNM)\*.

*Cleptes (Leiocleptes) mareki*: Rosa 2005: 5 (cit.), 6 (cit), 7 (China: Shanxi: Zhongtiao Shan c. [= Mt. Zhongtiao], 45 Km W of Sanmenxia, cat.).

*Cleptes mareki*: Wei et al. 2013: 56 (tab.), 59 (key), 60 (key), 68 (comp. notes), 70 (China: Shanxi; Gansu: Jiuquan, Huangnibao, tax., *nitidulus* group), 71 (pl. 5, ♂), 72 (pl. 6, ♀), 82 (comp. notes).

**Distribution.** China (Gansu, Shanxi).

**Remarks.** Wei et al. (2013) added some morphological characteristics to the original description.

## 8. *Cleptes metallicorpus* Ha, Lee & Kim, 2011

[http://species-id.net/wiki/Cleptes\\_metallicorpus](http://species-id.net/wiki/Cleptes_metallicorpus)

*Cleptes metallicorpus* Ha, Lee & Kim, 2011: 493. Holotype ♀, Korea: Gangwon-do, Wonju-si, Maeji-ri (489 (cit.), 490 (key; figs 1B, 1H, 1O, 1S), 491 (figs 2D, 2H), 493 (descr.), depository: HUSK).

*Cleptes metallicorpus*: Wei et al. 2013: 59 (key), 70 (China: Guangdong: Nanling National Nature Reserve; Zhejiang: Mt. Tianmu, Xianrending, Mt. Tianmu, Qililing; Shaanxi: Quing Ling Shan mts, tax., descr.), 73 (pl. 7 ♀), 74 (*asianus* group), 87 (comp. notes), 91 (comp. notes).

**Distribution.** China (Shaanxi, Zhejiang, Guangdong). Korea (Ha et al. 2011).

## 9. *Cleptes niger* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_niger](http://species-id.net/wiki/Cleptes_niger)

*Cleptes niger* Wei, Rosa & Xu, 2013: 74. Holotype ♀, China: Shaanxi: Mt. Taibai, 1100 m (59 (key), 61 (comp. notes), 65 (comp. notes), 74 (descr.), 75 (pl. 8), 76 (*satoi* group), depository: SCAU)\*.

**Distribution.** China (Shaanxi).

## 10. *Cleptes seoulensis* Tsuneki, 1959

[http://species-id.net/wiki/Cleptes\\_seoulensis](http://species-id.net/wiki/Cleptes_seoulensis)

*Cleptes seoulensis* Tsuneki, 1959: 13. Holotype ♀, Korea: Keijo (4 (comp. tab.), 6 (key), 13 (descr.), 14 (comp. notes), 17 (figs 8–12), depository: OMNH, not NIAS (Móczár 1998: 340)).

*Cleptes seoulensis*: Kim 1970: 506 (tax.); Kimsey and Bohart 1991: 64 (cat., *orientalis* group); Ha et al. 2011: 489 (cit.), 490 (key; figs 1C, 1F, 1M, 1T), 491 (figs 2B,

2F), 492 (descr.); Wei et al. 2013: 58 (key), 59 (key), 76 (tax., *fudzi* group), 77 (descr., pl. 9, ♂), 78 (*fudzi* group).

*Cleptes (Holcobleptes) seoulensis*: Móczár 1998: 325 (*fudzi* group, cat.), 330 (fig. 9), 331 (key), 332 (figs 14–16), 340 (descr., tax.).

**Distribution.** China (Anhui). Korea (Tsuneki 1959; Kim 1970).

**Remarks.** Móczár (1998) added some morphological characteristics to the original description. Wei et al. (2013) gave the first description of the male.

### 11. *Cleptes shengi* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_shengi](http://species-id.net/wiki/Cleptes_shengi)

*Cleptes semiauratus* (Linnaeus, 1758): Sheng et al. 1998: 7 (misid.).

*Cleptes shengi* Wei, Rosa & Xu, 2013: 78. Holotype ♀, China: Jilin: Maoershan National Forest Park (59 (key), 78 (descr.), 79 (pl. 10), 80 (*semiauratus* group), 93 (comp. notes), depository: SCAU)\*.

**Distribution.** China (Jilin).

### 12. *Cleptes sinensis* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_sinensis](http://species-id.net/wiki/Cleptes_sinensis)

*Cleptes sinensis* Wei, Rosa & Xu, 2013: 81. Holotype ♂, China: Shaanxi: Liping National Forest Park (60 (key), 80 (Type series: China: Shaanxi: Liping National Forest Park; Shaanxi, Mt. Taibai; Shaanxi: Liping National; Shaanxi, Liuba, Mt. Zibo; Hainan: Jianfengling National Nature Reserve; Sichuan: Wolong National Nature Reserve; Hubei: Wufeng, Houhe National Nature Reserve, descr.), 81 (pl. 11, ♂), 83 (*nitidulus* group), depository: SCAU)\*.

**Distribution.** China (Shaanxi, Zhejiang, Hubei, Hainan, Sichuan).

### 13. *Cleptes sjostedti* Hammer, 1950

[http://species-id.net/wiki/Cleptes\\_sjostedti](http://species-id.net/wiki/Cleptes_sjostedti)

Plate 2

*Cleptes Sjöstedti* Hammer, 1950: 2. Holotype ♀, China: Kiangsu [= Jiangsu], (2 (descr.), depository: NHRS)\*.

*Cleptes pinicola* Lin, 1959: 205. Holotype ♀, Taiwan: Lien-hwa-chich (205 (descr.), depository: TARI) (synonymised by Móczár 1998).

*Cleptes sjostedti*: Kimsey and Bohart 1991: 64 (China: Jiangsu [= Jiangsu], cat., *orientalis* group); Kurzenko and Lelej 2007: 1002 (Jiangsu, cat.); Wei et al. 2013: 56 (tab.), 58 (key), 60 (key), 83 (China: Hunan, Liuyang City; Yunnan: Xiangyun; Zhejiang, Anji; Guangdong: Xinhui; Yunnan, Kunming; Anhui: Ningguo; Zhejiang, Gaozhou, Bamen, tax., descr.), 84 (pl. 12, ♀), 85 (pl. 13, ♂), 86 (*fudzi* group).

*Cleptes (Holcocleptes) sjostedti* (!): Móczár 1998: 325 (cat., *fudzi* group), 332 (key, fig. 19), 340 (tax.), 341 (descr.).

**Distribution.** China (Jiangsu, Zhejiang, Anhui, Taiwan, Hunan, Guangdong, Yunnan). Korea (Móczár 1998).

**Host.** *Nesodiprion japonica* Marlatt (Hymenoptera, Diprionidae) (Lin 1959; Móczár 1998).

**Remarks.** Móczár (1998) designated the neotype based on the paratype of *sjostedti* deposited in NHMW. A closer examination of the type material (by Paolo Rosa) has revealed the original holotype in NHRS, thus Móczár's neotype has consequently been set aside. *Cleptes pinicola* Lin was not listed in Kimsey and Bohart (1991). Móczár (1998) and Wei et al. (2013) have provided detailed descriptions.

#### 14. *Cleptes taiwanus* Tsuneki, 1982

[http://species-id.net/wiki/Cleptes\\_taiwanus](http://species-id.net/wiki/Cleptes_taiwanus)

*Cleptes taiwanus* Tsuneki, 1982: 2. Holotype ♀, Taiwan: Pempuchi (2 (descr.), depository: OMNH).

*Cleptes taiwanus*: Móczár 2000: 320 (cat., *asianus* group), 321 (fig. 2), 322 (key, fig. 6), 328 (comp. notes), 329 (Taiwan: Nantou Prov., Pempuchi, tax.); Wei et al. 2013: 56 (tab.), 59 (key), 86 (tax., *asianus* group), 91 (comp. notes).

**Distribution.** China (Taiwan).

**Remarks.** *Cleptes taiwanus* Tsuneki is not listed in Kimsey and Bohart (1991). Móczár (2000) has provided some additions and corrections to the original description.

#### 15. *Cleptes tibetensis* Wei, Rosa & Xu, 2013

[http://species-id.net/wiki/Cleptes\\_tibetensis](http://species-id.net/wiki/Cleptes_tibetensis)

*Cleptes tibetensis* Wei, Rosa & Xu, 2013: 87. Holotype ♂, Tibet: Pailongxiang, Daxiagu (60 (key), 87 (descr.), 88 (pl. 14), 89 (*asianus* group), 91 (comp. notes), depository: SCAU)\*.

**Distribution.** China (Tibet).

**16. *Cleptes townesi* Kimsey, 1987**

[http://species-id.net/wiki/Cleptes\\_townesi](http://species-id.net/wiki/Cleptes_townesi)

*Cleptes townesi* Kimsey, 1987b: 58. Holotype ♂, Taiwan: Wushe (58 (descr., figs 2–6), depository: AEI).

*Cleptes townesi*: Kimsey and Bohart 1991: 58 (tax.), 64 (Taiwan: Wushe, cat., *townesi* group); Móczár 2000: 330 (Taiwan: Wu-feng, tax., descr., *townesi* group); Wei et al. 2013: 56 (tab.), 60 (key), 63 (comp. notes), 89 (China: Zhejiang: Hangzhou; Fujian: Chong'an, Mt. Wuyi, Jiuqu, descr., *townesi* group), 90 (pl. 15, ♂).

**Distribution.** China (Zhejiang, Fujian, Taiwan).

**17. *Cleptes villosus* Wei, Rosa & Xu, 2013**

[http://species-id.net/wiki/Cleptes\\_villosus](http://species-id.net/wiki/Cleptes_villosus)

*Cleptes villosus* Wei, Rosa & Xu, 2013: 91. Holotype ♂, China: Guizhou, Suiyang, Kuankuoshui National Nature Reserve (60 (key), 87 (comp. notes), 91 (type series: China: Guizhou: Suiyang, Kuankuoshui National Nature Reserve; Daozhen, Dashuhe, Xiannvdong, descr.), 92 (pl. 16), 93 (*asianus* group), depository: SCAU)\*.

**Distribution.** China (Guizhou).

**Subfamily Amiseginae****2. Genus *Magdalium* Kimsey, 1986****18. *Magdalium orchidense* Kimsey, 1995**

[http://species-id.net/wiki/Magdalium\\_orchidense](http://species-id.net/wiki/Magdalium_orchidense)

*Magdalium orchidense* Kimsey, 1995: 594. Holotype ♂, Taiwan: Orchid Isl., Batel Toba (591 (fig. 6), 594 (comp. notes, descr.), depository: CNC).

**Distribution.** China (Taiwan).

**3. Genus *Nipponosega* Kurzenko & Lelej, 1994****19. *Nipponosega kurzenkoi* Xu, He & Terayama, 2003**

[http://species-id.net/wiki/Nipponosega\\_kurzenkoi](http://species-id.net/wiki/Nipponosega_kurzenkoi)

*Nipponosega kurzenkoi* Xu, He & Terayama, 2003: 195. Holotype ♀, China: Zhejiang: Suichang, Mt. Jiulongshan (195 (key, descr.), 196 (figs 1, 2), depository: SCAU)\*.

*Nipponosega kurzenkoi*: Kurzenko and Lelej 2007: 1002 (China: Zhejiang, cat.).

**Distribution.** China (Zhejiang).

## Subfamily Loboscelidiinae

### 4. Genus *Loboscelidia* Westwood, 1874

#### 20. *Loboscelidia guangxiensis* Xu, Weng & He, 2006

[http://species-id.net/wiki/Loboscelidia\\_guangxiensis](http://species-id.net/wiki/Loboscelidia_guangxiensis)

*Loboscelidia guangxiensis* Xu, Weng & He, 2006: 208. Holotype ♂, China: Guangxi: Jiuwandashan (208 (descr.), 209 (key, figs 1–6), depository: SCAU)\*.

*Loboscelidia guangxiensis*: Liu et al. 2010: 641 (key in Chinese), 645 (key in English); Yao et al. 2010: 526 (China: Guangxi: Jiuwandashan; Guangdong: Nanling National Nature Reserve; Chebaling National Nature Reserve, distr., tax.), 527 (figs 1A–1H), 528 (comp. notes), 533 (key); Kimsey 2012: 6 (key), 16 (comp. notes), 18 (China: Guangxi, Jiuwandashan, tax.), 19 (comp. notes).

**Distribution.** China (Guangdong, Guangxi).

#### 21. *Loboscelidia hei* Liu, Yao & Xu, 2010

[http://species-id.net/wiki/Loboscelidia\\_hei](http://species-id.net/wiki/Loboscelidia_hei)

*Loboscelidia hei* Liu, Yao & Xu, 2010: 642. Holotype ♀, China: Fujian, Mt. Meihua (641 (key in Chinese), 642 (descr. in Chinese, figs 1–6), 645 (key and descr. in English), depository: SCAU)\*.

**Distribution.** China (Fujian).

#### 22. *Loboscelidia levigata* Yao, Liu & Xu, 2010

[http://species-id.net/wiki/Loboscelidia\\_levigata](http://species-id.net/wiki/Loboscelidia_levigata)

*Loboscelidia levigata* Yao, Liu & Xu, 2010: 528. Holotype ♂, China: Guangdong: Chebaling National Nature Reserve (526 (cit.), 528 (type series: China: Guangdong; Chebaling National Nature Reserve, Nanling National Nature Reserve; Fujian: Minqing County, Huangchulin Provincial Nature Reserve, descr.), 529 (figs 2A–2H), 533 (key), depository: SCAU)\*.

*Loboscelidia levigata*: Kimsey 2012: 8 (key), 24 (China: Guandong, tax.), 30 (comp. notes), 35 (comp. notes).

**Distribution.** China (Fujian, Guangdong).

**23. *Loboscelidia maai* (Lin, 1964)**

[http://species-id.net/wiki/Loboscelidia\\_maai](http://species-id.net/wiki/Loboscelidia_maai)

*Scelidoloba maai* Lin, 1964: 238. Holotype ♀ (not ♂); Taiwan: Paomingszu, 2 km S Keelung (238 (descr.), depository: TARI).

*Loboscelidia latigena* Lin, 1964: 241. Holotype ♂, Taiwan: Tsaoshan, 20 km NW Taipei city (241 (descr.), depository: TARI) (synonymised by Kimsey 2012).

*Loboscelidia artigena* Lin, 1964: 243. Holotype ♂, Taiwan: Paomingzu, 2 Km S Kee-lung (243 (descry.), depository: TARI) (synonymised by Kimsey and Bohart 1991).

*Loboscelidia maai* (Lin, 1964): Kimsey and Bohart 1991: 147 (Taiwan, cat.); Xu et al. 2006: 209 (key); Liu et al. 2010: 641 (key in Chinese), 643 (comp. notes in Chinese.), 645 (key and comp. notes in English); Yao et al. 2010: 526 (cit.), 533 (key); Kimsey 2012: 11 (comp. notes), 24 (Taiwan, tax.).

**Distribution.** China (Taiwan).

**Remarks.** In Kimsey (2012) *L. latigena* is considered a synonym of *L. maai*, but in the keys *L. latigena*, rather than *L. maai*, is mentioned.

**24. *Loboscelidia sinensis* Kimsey, 1988**

[http://species-id.net/wiki/Loboscelidia\\_sinensis](http://species-id.net/wiki/Loboscelidia_sinensis)

*Loboscelidia sinensis* Kimsey, 1988: 76. Holotype ♂, China: Hainan (76 (descr.), depository: BMNH).

*Loboscelidia sinensis*: Kimsey and Bohart 1991: 148 (China: Hainan, cat.); Xu et al. 2006: 209 (key); Liu et al. 2010: 641 (key in Chinese), 645 (key in English); Yao et al. 2010: 526 (cit.), 530 (China: China: Zhejiang: Kaihua County, Gutianshan Provincial Nature Reserve; Taishun County, Wuyanling Provincial Nature Reserve; Fujian, Minqing, Huangchulin Provincial Nature Reserve; Guangdong, Nanling National Nature Reserve; Shixing, Chebaling National Nature Reserve; Hainan, Jianfengling National Nature Reserve; Bawangling National Nature Reserve, descr., tax.), 531 (figs 3A–3H), 533 (key, comp. notes); Kimsey 2012: 8 (key), 24 (comp. notes), 37 (China: Hainan, descr., tax.), 39 (cit.).

**Distribution.** China (Zhejiang, Fujian, Guangdong, Hainan).

**25. *Loboscelidia striolata* Yao, Liu & Xu, 2010**

[http://species-id.net/wiki/Loboscelidia\\_striolata](http://species-id.net/wiki/Loboscelidia_striolata)

*Loboscelidia striolata* Yao, Liu & Xu, 2010: 530. Holotype ♂, China: Guangdong: Nanling National Nature Reserve (526 (cit.), 530 (descr.), 532 (figs 4A–4H), 533 (key), depository: SCAU)\*.

*Loboscelidia striolata*: Kimsey 2012: 24 (comp. notes), 38 (China: Guangdong, tax.), 39 (comp. notes).

**Distribution.** China (Guandong).

**26. *Loboscelidia zengae* Liu, Yao & Xu, 2010**

[http://species-id.net/wiki/Loboscelidia\\_zengae](http://species-id.net/wiki/Loboscelidia_zengae)

*Loboscelidia zengae* Liu, Yao & Xu, 2010: 643. Holotype ♀, China: Hainan: Wuzhishan (641 (key in Chinese), 643 (descr. in Chinese), 644 (figs 7–12), 645 (key, descr. in English), depository: SCAU)\*.

**Distribution.** China (Hainan).

**5. Genus *Rhadinoscelidia* Kimsey, 1988**

**27. *Rhadinoscelidia delta* Liu, Yao & Xu, 2011**

[http://species-id.net/wiki/Rhadinoscelidia\\_delta](http://species-id.net/wiki/Rhadinoscelidia_delta)

*Rhadinoscelidia delta* Liu, Yao & Xu, 2011: 13. Holotype ♀, China: Hainan: Wuzhishan (13 (descr.), 14 (figs 1–6), 15 (figs 7–12), 16 (key), depository: SCAU)\*.

**Distribution.** China (Hainan).

**Subfamily Chrysinae**

**Tribe Elampini**

**6. Genus *Elampus* Spinola, 1806**

**28. *Elampus albipennis* (Mocsáry, 1889)**

[http://species-id.net/wiki/Ellampus\\_albipennis](http://species-id.net/wiki/Ellampus_albipennis)

Plate 3

*Ellampus (Notozus) albipennis* Mocsáry, 1889: 80 [nec *Elampus*]. Lectotype ♂ design. by Móczár (1964b: 447), Russia: Sarepta (depository: HNHM)\*.

*Notozus violascens* (Mocsáry, 1889): du Buysson 1911: 218 (China: “Nan Chan, versant Nord; route de Cha Tchéou à Kan Tchéou; Linchouei, par 1, 500 mètres d’altitude, 25 juin 1908. Nan Chan: route de Kan Tchéou à Lan Tchéou par Si Ning; col de King Yang Ling, par 3,800 mètres d’altitude”, tax.) [misid.].

*Notozus albipennis*: Tsuneki 1953a: 54 (Manchuria: Kaiyüan, Kupeikau, tax.).

*Omalus (Notozus) albipennis*: Lisenmaier 1959: 16 (key), 24 (tax., cat., distr.).  
*Elampus albipennis*: Kimsey and Bohart 1991: 166 (cat.).

**Distribution.** China (Liaoning, Beijing). Widely distributed in the Palaearctic Region (Tsuneki 1953a; Lisenmaier 1959). The Chinese specimen is not listed in the distribution by Kimsey and Bohart (1991).

**Remarks.** The record of *Notozus violascens* Mocsáry by du Buysson (1911) is a misidentification: the reduced dimension and the green colour reported by the author match other species: *E. albipennis* Mocsáry, *E. mocsaryi* (Radoszkowski) and *E. turcmenicus* (Lisenmaier). Without examining the specimens it is not possible to correctly identify them.

Lisenmaier (1959) placed *E. tournieri* Dalla Torre, 1892 (repl. name for *E. viridis* Tournier, 1890) as synonym of *E. albipennis* (Mocsáry).

## 29. *Elampus bischoffi* Kimsey, 1991

[http://species-id.net/wiki/Elampus\\_bischoffi](http://species-id.net/wiki/Elampus_bischoffi)

*Notuzus spinosus* Bischoff, 1910: 436. Syntypes ♂♀, China: Chinese Turkestan [= Xinjiang], Tschakar and Saiback near Pulu (MNHU)\*, nec Provancher, 1881.

*Notuzus spinosus* Bischoff, 1913: 7 (Chinese Turkestan [= Xinjiang], cat.).

*Elampus (Notozus) spinosus*: Lisenmaier 1959: 16 (key), 24 (Chinese Turkestan [= Xinjiang], tax., descr.).

*Elampus bischoffi* Kimsey (in Kimsey & Bohart), 1991: 167. Replacement name for *spinosus* Bischoff, 1910 nec Provancher, 1881, China: Sinkiang [= Xinjiang], cat.).

*Elampus bischoffi*: Kurzenko and Lelej 2007: 1003 (China: Inner Mongolia, Xinjiang, cat.).

**Distribution.** China (Xinjiang, Inner Mongolia).

## 30. *Elampus coeruleus* Dahlbom, 1854

[http://species-id.net/wiki/Elampus\\_coeruleus](http://species-id.net/wiki/Elampus_coeruleus)

Plate 4

*Elampus coeruleus* Dahlbom, 1854: 46. Syntypes, ♂♀, Austria, Germany, Ukraine (46 descr.), depository: MNHU)\*.

*Omalus viridiventris* Abeille, 1878: 2. Unnecessary replacement name for *Elampus coeruleus* Dahlbom, 1854.

*Notozus coeruleus* f. *coeruleus*: Tsuneki 1953a: 53 (Manchuria: Tierin, cat.).

*Omalus (Notozus) panzeri* ssp. *coeruleus*: Lisenmaier 1968: 12 (Manchuria [Heilongjiang], distr.).

*Notozus panzeri coeruleus*: Banaszak 1980: 8 (Manchuria [Heilongjiang], tax.).

*Elampus caeruleus* (!): Kimsey and Bohart 1991: 167 (cat.).

**Material examined.** Heilongjiang: 1♂, Harbin, without data; 1♂, Harbin, 10.VII.1949 leg. Alin (NMLS).

**Distribution.** China (Heilongjiang, Liaoning). Widely distributed in the Palaearctic Region (Tsuneki 1953a; Linsenmaier 1959, 1968).

**Remarks.** The taxonomic status of *E. coeruleus* is unclear. Various authors have alternately considered it as a valid species, a subspecies of *E. panzeri*, or a synonym of either *E. panzeri* or *E. constrictus*.

### 31. *Elampus constrictus* (Förster, 1853)

[http://species-id.net/wiki/Notozus\\_constrictus](http://species-id.net/wiki/Notozus_constrictus)

*Notozus constrictus* Förster, 1853: 336. Holotype ♂, Germany: Aachen (336 (descr.), depository: MNHU)\*.

*Ellampus (Notozus) soror* Mocsáry, 1889: 68. Neotype ♀ design. by Móczár (1964b: 422), Hungary: Budapest (depository: HNHM) (synonymised by Móczár, 1967).

*Elampus panzeri* sensu Trautmann, 1927, sensu Linsenmaier, 1959.

*Notozus yasumatsui*: Tsuneki 1948a: 116 (China: Kaiyuan).

*Notozus panzeri*: Tsuneki 1948a: 118 (China: Shanxi: Tungyehchen, distr., tax.), 128 (China: Shanxi, cat.).

*Notozus coeruleus* f. *soror*: Tsuneki 1953a: 54 (China: Kaiyuan, tax.).

**Distribution.** China (Liaoning, Shanxi). Widely distributed in the Palaearctic Region (Linsenmaier 1959; Móczár 1967).

**Remarks.** Tsuneki (1953a) wrote that the paratype of *E. yasumatsui* from Shanxi is to be referred to *Elampus (=Notozus) coeruleus* f. *soror*. The taxonomic position of *E. soror* is unclear: according to Linsenmaier (1959) it is a synonym of *E. coeruleus* Dahlbom. It has been considered a variety of *E. coeruleus* (Bischoff 1913), *E. panzeri* (Trautmann 1927) and *E. constrictus* (Móczár 1964b). Only Kimsey and Bohart (1991) listed *E. soror* as a valid species. We here consider *E. soror* as a synonym of *E. constrictus* following Móczár (1967) and Rosa and Soon (2012). Kimsey and Bohart (1991) considered *E. panzeri* and *E. constrictus* synonyms of Chrysis *E. scutellaris* Panzer, but without any type examination.

### 32. *Elampus mocsaryi* Radoszkowski, 1887

[http://species-id.net/wiki/Elampus\\_mocsaryi](http://species-id.net/wiki/Elampus_mocsaryi)

*Elampus mocsari* (!) Radoszkowski, 1887: 45. Holotype ♀, China [not Mongolia]: Qinghai: Zaïdam (45 (descr.), depository: ISEA-PAS)\*.

*Ellampus (Notozus) mocsaryi*: Mocsáry 1889: 80. Justified emendation of *Elampus mocsari* Radoszkowski, 1887.

*Ellampus mocsaryi*: Dalla Torre 1892: 14 (Mongolia [= China], cat.); Kimsey and Bohart 1991: 168 (Mongolia [= China], cat.).

*Notozus mocsaryi*: Bischoff 1913: 6 (Mongolia [= China], cat.).

*Omalus (Notozus) mocsaryi*: Lisenmaier 1959: 16 (key), 24 (Mongolia [= China], tax., descr.).

**Distribution.** China (Qinghai).

### 33. *Elampus panzeri* (Fabricius, 1804)

[http://species-id.net/wiki/Chrysis\\_panzeri](http://species-id.net/wiki/Chrysis_panzeri)

*Chrysis scutellaris* Panzer, 1798: fig. 51, tav. 11. Holotype (sex unknown), Germany: Nurnberg (MNHU?).

*Chrysis panzeri* Fabricius, 1804: 172. Replacement name for *Chrysis scutellaris* Panzer, 1798, nec Fabricius, 1794.

*Notozus constrictus* Förster, 1853 sensu Lisenmaier 1959.

*Notozus constrictus*: Balthasar 1954: 73 (key), 77 (tax., descr.), 78 (China, distr.); Banaszak 1980: 8 (Manchuria, tax., biol.).

*Omalus (Notozus) constrictus*: Lisenmaier 1959: 16 (key), 24 (Manchuria, tax., descr.), 216 (fig. 667).

**Material examined.** Heilongjiang: 1♂, Harbin, 19.VII.1953; 1♂, Harbin, 10.VII.1949 leg. Alin (NMLS).

**Distribution.** China (Heilongjiang). Widely distributed in the Palaearctic Region (Lisenmaier 1959).

### 34. *Elampus schmidtianus* (Semenov-Tian-Shanskij, 1967)

[http://species-id.net/wiki/Notozus\\_schmidtianus](http://species-id.net/wiki/Notozus_schmidtianus)

Plate 5

*Notozus schmidtianus* Semenov-Tian-Shanskij, 1967: 124. Holotype ♀, China: Xinjiang; Gashun Gobi, Sandzou oasis (124 (descr.), depository: ZIN)\*.

*Elampus schmidtianus*: Kimsey and Bohart 1991: 170 (China: Gashun Gobi, cat.).

**Distribution.** China (Xinjiang). Former southern USSR (Kimsey and Bohart 1991).

**Remarks.** This species is closely related to *E. albipennis* (Mocsáry, 1889).

**35. *Elampus spinipes* (Mocsáry, 1890)**

[http://species-id.net/wiki/Ellampus\\_spinipes](http://species-id.net/wiki/Ellampus_spinipes)

*Ellampus (Notozus) spinipes* Mocsáry, 1890b: 49. Holotype ♀, China: "Mongolia meridionalis (Ta-wan), [China: Inner Mongolia] (49 (descr.), depository: ISEA-PAS)\*.

*Ellampus spinipes*: Dalla Torre 1892: 18 (Mongolia [= Inner Mongolia], cat.).

*Elampus spinipes*: Kimsey and Bohart 1991: 171 (Mongolia [= Inner Mongolia], cat.).

*Notozus spinipes*: Bischoff 1913: 7 (Mongolia [= Inner Mongolia], cat.).

*Omalus (Notozus) spinipes*: Linsenmaier 1959: 16 (key), 24 (Mongolia [= Inner Mongolia], descr.).

**Distribution.** China (Inner Mongolia).

**Remarks.** The type locality in literature was always considered in Mongolia.

**36. *Elampus yasumatsui* (Tsuneki, 1948)**

[http://species-id.net/wiki/Notozus\\_yasumatsui](http://species-id.net/wiki/Notozus_yasumatsui)

*Notozus yasumatsui* Tsuneki, 1948a: 116. Holotype ♀, China: Shanxi: Yüankii (116 (descr.) 117 (comp. notes), 128 (Shanxi, cat.), pl. 6 (figs. A–F), depository: KUM).

*Omalus (Notozus) yasumatsui*: Linsenmaier 1959: 16 (key), 24 (China, descr.).

*Elampus yasumatsui*: Kimsey and Bohart 1991: 173 (China: Shanxi, cat.); Kurzenko and Lelej 2007: 1003 (China: Shanxi, cat.).

**Distribution.** China (Shanxi).

**7. Genus *Hedychridium* Abeille de Perrin, 1878**

**37. *Hedychridium ardens mongolicum* Tsuneki, 1947**

[http://species-id.net/wiki/Hedychridium\\_ardens\\_mongolicum](http://species-id.net/wiki/Hedychridium_ardens_mongolicum)

*Hedychridium ardens* ssp. *mongolicum* Tsuneki, 1947: 47. Holotype ♀, China: Inner Mongolia: Apaka (47 (descr.), depository: NIAS).

*Hedychridium ardens* ssp. *mongolicum*: Linsenmaier 1959: 48 (possible synonym of *incensum* Mocsáry, 1914).

*Hedychridium ardens*: Kurzenko and Lelej 2007: 1003 (China: Gansu: Xiahe, cat.).

**Distribution.** China (Inner Mongolia, Gansu).

**Remarks.** Linsenmaier (1959) considered *Hedychridium ardens* ssp. *mongolicum* a possible junior synonym of *Hedychridium incensum* (Mocsáry, 1914). The type examination of *H. ardens* ssp. *mongolicum* is needed, because *H. ardens* ssp. *mongolicum*

could be also related to *Hedychridium ardens* ssp. *asianum* Linsenmaier, 1997 described from Mongolia [= *integrum* ssp. *asianum*]. However, Linsenmaier did not check any types in this complicated species group.

### 38. *Hedychridium coriaceum* (Dahlbom, 1854)

[http://species-id.net/wiki/Hedychrum\\_coriaceum](http://species-id.net/wiki/Hedychrum_coriaceum)

Plate 6

*Hedychrum coriaceum* Dahlbom, 1854: 88. Lectotype ♀ design. by Morgan (1984: 10), Finland (depository: LZM)\*.

*Hedychridium coriaceum*: Tsuneki 1947: 46 (China: Beijing, cat.); Linsenmaier 1959: 44 (key), 53 (tax., descr.), 200 (figs 189, 190); Kimsey and Bohart 1991: 184 (tax.), 191 (cat.).

**Distribution.** China (Beijing). Europe (Linsenmaier 1959; Kimsey and Bohart 1991).

### 39. *Hedychridium cupreum asianum* (Linsenmaier, 1997), n. comb.

[http://species-id.net/wiki/Hedychridium\\_integrum\\_asianum](http://species-id.net/wiki/Hedychridium_integrum_asianum)

*Hedychridium integrum* ssp. *asianum* Linsenmaier, 1997a: 254. Holotype ♂, Mongolia: Central Aimag, Ulan Bator, 1900 m (254 (descr.), type series: China: Gansu, Xiahe, 3000–3500 m, depository: coll. Koschwitz, Germany).

**Distribution.** China (Gansu). Mongolia (Linsenmaier 1997a).

**Remarks.** Linsenmaier (1959) and Kimsey and Bohart (1991) listed *Hedychridium integrum* (Dahlbom, 1829) and *H. cupreum* (Dahlbom, 1845) as valid species, but *H. integrum* is a greenish form of *H. ardens* (Coquebert, 1801) (Paukkunen et al. 2014). Therefore we transfer the subspecies *H. asianum* Linsenmaier to *H. cupreum* (Dahlbom).

### 40. *Hedychridium cupreum* (Dahlbom, 1845)

[http://species-id.net/wiki/Hedychrum\\_cupreum](http://species-id.net/wiki/Hedychrum_cupreum)

Plate 7

*Hedychrum cupreum* Dahlbom, 1845: 3. Lectotype ♀ design. by Paukkunen et al. (2014), Sweden [nec Switzerland] (3 (descr.), depository: NHMW)\*.

*Hedychridium integrum* f. *cupratum*: Tsuneki 1948a: 123 (China: Shanxi: Chenhaissu, cat.), 128 (Shanxi, cat.).

**Distribution.** China (Shanxi). Widely distributed from central and northern Europe to West Asia (Linsenmaier 1959, 1997a).

**Remarks.** The species was listed as *cupratum* Dahlbom by Tsuneki (1948a), a species endemic to the European Alps and is to be excluded from the Chinese fauna. It is likely that Tsuneki was referring to *cupreum* (Dahlbom, 1854), which is widely distributed from central and northern Europe all the way to West Asia.

#### 41. *Hedychridium flos* (Semenov-Tian-Shanskij, 1954)

[http://species-id.net/wiki/Cyrteuchrum\\_flos](http://species-id.net/wiki/Cyrteuchrum_flos)

Plate 8

*Cyrteuchrum flos* Semenov-Tian-Shanskij, 1954: 105. Holotype ♀, Kazakhstan: Imam-Baba (depository: ZIN)\*.

*Cyrteuchrum nivifrons* Semenov-Tian-Shanskij, 1967: 134. Holotype ♂, China [Xinjiang]: Bugas near Hami [Kumul] (depository: ZIN)\* (synonymised by Kimsey and Bohart 1991: 194).

*Hedychridium flos*: Kimsey and Bohart 1991: 194 (cat.); Rosa et al. 2013: 5 (China: Xinjiang [= Heilongjiang], cat.).

**Distribution.** China (Xinjiang). Iran, Kazakhstan (Semenov-Tian-Shanskij 1967; Rosa et al. 2013).

#### 42. *Hedychridium roborovskii* Semenov-Tian-Shanskij, 1967

[http://species-id.net/wiki/Hedychridium\\_roborovskii](http://species-id.net/wiki/Hedychridium_roborovskii)

Plate 9

*Hedychridium roborovskii* Semenov-Tian-Shanskij, 1967: 129. Holotype ♀, China: Xinjiang: Gashun Gobi, Sachzou oasis (129 (descr.), depository: ZIN)\*.

*Hedychridium roborovskii*: Kimsey and Bohart 1991: 203 (China: Gashun Gobi, cat.).

**Distribution.** China (Xinjiang).

#### 43. *Hedychridium roseum* (Rossi, 1790)

[http://species-id.net/wiki/Chrysis\\_carnea\\_rosea](http://species-id.net/wiki/Chrysis_carnea_rosea)

*Chrysis carnea* var. *rosea* Rossi, 1790: 75. Syntypes, Italy: Tuscany (75 (descr.), depository: MNHU?).

*Hedychridium roseum*: Tsuneki 1953a: 55 (Manchuria: Fen-Tien [= Liaoning], cat., distr.); Tsuneki 1953b: 23 (Manchuria, cat.); Linsenmaier 1959: 57 (*roseum* group), 58 (Manchuria, key, tax., distr.), 198 (figs 105, 106, 115), 199 (fig. 137); Banaszak 1980: 14 (Manchuria, tax., biol.); Kimsey and Bohart 1991: 180 (fig. 62m), 185 (tax.), 203 (cat.).

*Hedychridium roseum roseum*: Arens 2010: 406 (Manchuria, cat.), 410 (tax., descr.), 442 (figs 9e, 9f).

**Material examined.** 1 ex., Heilongjiang: Harbin, 20.VII.1953 leg. Alin (NMLS).

**Distribution.** China (Heilongjiang, Liaoning). Widely distributed in the Palaearctic Region (Tsuneki 1953a, 1953b; Linsenmaier 1959, 1999; Kurzenko and Lelej 2007).

## 8. Genus *Hedychrum* Latreille, 1802

### 44. *Hedychrum chalybaeum* Dahlbom, 1854

[http://species-id.net/wiki/Hedychrum\\_chalybaeum](http://species-id.net/wiki/Hedychrum_chalybaeum)

*Hedychrum chalybaeum* Dahlbom, 1854: 64. Syntypes ♂♂, Europe: ‘*Europa media et meridionali*’, Russia, Prussia, Silesia (64 (descr.), depositories: MNHU, LZM)\*.

*Hedychrum coerulescens* Shuckard, 1837: Tsuneki 1947: 51 (China: Inner Mongolia: Apaka, cat.) [misid.].

*Hedychrum szaboi* Mocsáry, 1889: 167. Lectotype ♀ (design. by Móczár (1964a: 440), Germany: Thuringia (167 (descr.), depository: HNHM)\* (synonymised by Trautmann 1927).

*Hedychrum chalybaeum*: Tsuneki 1953a: 55 (China: Heilongjiang: Harbin, cat., distr.); Linsenmaier 1959: 36 (key), 39 (Manchuria, tax., descr.), 197 (figs 65–69); Móczár 1967: 39 (China, key, tax., descr.); Banaszak 1980: 16 (tax., distr.), 17 (China, biol.); Kimsey and Bohart 1991: 210 (tax.), 212 (cat.).

*Hedychrum komarovii* Semenov-Tian-Shanskij, 1967: 138. Holotype ♂, China: Gansu (138 (descr.), depository: ZIN)\* (synonymised by Kimsey and Bohart 1991).

*Hedychrum martynovi* Semenov-Tian-Shanskij, 1967: 138. Holotype ♂, Manchuria: Langashi (138 (descr.), depository: ZIN)\* (synonymised by Kimsey and Bohart 1991).

**Distribution.** China (Heilongjiang, Inner Mongolia, Gansu). Widely distributed in the Palaearctic Region (Linsenmaier 1959; Kurzenko and Lelej 2007).

**Remarks.** *Hedychrum szaboi* Mocsáry, 1889 is the female of *H. chalybaeum* Dahlbom (Trautmann 1927).

### 45. *Hedychrum davidi* du Buysson, 1900

[http://species-id.net/wiki/Hedychrum\\_davidi](http://species-id.net/wiki/Hedychrum_davidi)

*Hedychrum davidi* du Buysson, 1900: 131. Holotype ♀, China: Beijing (131 (descr.), depository: MNHN).

*Hedychrum davidi*: Bischoff 1913: 18 (China, cat.); Kimsey and Bohart 1991: 213 (China: Beijing, cat.); Kurzenko and Lelej 2007: 1003 (China: Beijing, cat.).

**Distribution.** China (Beijing).

#### 46. *Hedychrum formosanum* Mocsáry, 1911

[http://species-id.net/wiki/Hedychrum\\_formosanum](http://species-id.net/wiki/Hedychrum_formosanum)

Plate 10

*Hedychrum formosanum* Mocsáry, 1911: 458. Holotype ♂, Taiwan: Takao [= Kaohsiung] (458 (descr.), depository: HNHM)\*.

*Hedychrum formosanum*: Mocsáry 1913b: 613 (Taiwan: Takao [= Kaohsiung], cat.), 619 (cat.); Bischoff 1913: 19 (Taiwan, cat.); Uchida 1927: 150 (Taiwan, cat.); Uchida 1933: 2 (Taiwan, cat.); Tsuneki 1970b: 4 (Taiwan: Shihtsulu, Kuonfu, tax., descr.), 5 (comp. notes); Tsuneki 1970c: 48 (Formosa, tax.).

**Distribution.** China (Taiwan).

**Remarks.** Tsuneki (1970b) gave a detailed comparison with the similar Japanese species *H. okai* Tsuneki.

#### 47. *Hedychrum gerstaeckeri* Chevrier, 1869

[http://species-id.net/wiki/Hedychrum\\_gerstaeckeri](http://species-id.net/wiki/Hedychrum_gerstaeckeri)

Plate 11

*Hedychrum gerstaeckeri* Chevrier, 1869: 47. Syntypes ♀♀, Switzerland: Nyon, Beau-lac (47 (descr.), depository: MHNG)\*.

*Hedychrum Marianum* Mocsáry, 1911: 450. Lectotype ♀ design. by French (in Bohart and French 1986: 341), China (depository: HNHM)\*.

*Hedychrum Marianum*: Bischoff 1913: 19 (China, cat.); Wu 1941: 118 (China, cat.); Linsenmaier 1959: 41 (syn. of *japonicum* Mocsáry); Bohart and French 1986: 341 (China, lectotype design.); Kimsey and Bohart 1991: 214 (China, syn.).

*Hedychrum gerstaeckeri* f. *marianum*: Tsuneki 1947: 50 (tax., possible syn. of *japonicum* Cameron, 1887).

*Hedychrum gerstaeckeri*: Tsuneki 1947: 50 (comp. notes); Linsenmaier 1959: 36 (key), 37 (key), 40 (tax., descr.), 198 (figs 81–83); Kimsey and Bohart 1991: 214 (Taiwan, cat.); Linsenmaier 1997b: 33 (key), 62 (Taiwan, tax., descr., fig. 33), 63 (colour picture).

?*Hedychrum gerstaeckeri* ssp. *formosaiense* Linsenmaier, 1959: 41. Holotype ♂, Taiwan (41 (descr.), depository: RMNH).

**Distribution.** China (Taiwan and mainland) (Linsenmaier 1959). Widely distributed in the Palaearctic Region (Mocsáry 1911; Trautmann 1927; Linsenmaier 1959; Kurzenko and Lelej 2007).

**Remarks.** The placement of *H. gerstaeckeri formosaiense* Linsenmaier is uncertain. According to Tsuneki (1970b), it could be synonym or a form of *Hedychrum japonicum* Cameron, 1887.

**48. *Hedychrum gracile* Semenov-Tian-Shanskij, 1967**

[http://species-id.net/wiki/Hedychrum\\_gracile](http://species-id.net/wiki/Hedychrum_gracile)

Plate 12

*Hedychrum gracile* Semenov-Tian-Shanskij, 1967: 139. Holotype ♀, China: Gansu (139 (descr.), depository: ZIN)\*.

*Hedychrum gracile*: Kimsey and Bohart 1991: 214 (China: Han Shui, cat.).

**Distribution.** China (Sichuan).

**Remarks.** The label of the holotype is handwritten by Semenov: Sichuan, Maozhou-Matajgi, leg. Potanin, 27.VIII.1893. Actually, the date (27.VIII.1893) and the collector (Potanin) given in the description are the same as those on the type label. Semenov-Tian-Shanskij mistakenly placed the type locality in Gansu Province instead of the adjacent Sichuan Province.

**49. *Hedychrum japonicum* Cameron, 1887**

[http://species-id.net/wiki/Hedychrum\\_japonicum](http://species-id.net/wiki/Hedychrum_japonicum)

*Hedychrum japonicum* Cameron, 1887: 123. Holotype ♂, Japan: Fukui (123 (descr.), depository: BMNH).

*Hedychrum japonicum*: Tsuneki 1946: 35 (North China, tax.), 39 (descr.); Tsuneki 1947: 50 (comp. notes); Tsuneki 1953b: 23 (North China, tax., aberr.); Kimsey and Bohart 1991: 214 (cat.).

*Hedychrum gerstaeckeri* ssp. *japonicum*: Linsenmaier 1959: 41 (North China, descr.); Tsuneki 1970b: 33 (North China, Taiwan, tax.); Tsuneki 1970b: 3 (tax.), 4 (Taiwan: Wushue, notes); Tsuneki 1970c: 47 (Taiwan, North China, key, tax.).

**Distribution.** North China and Taiwan. Korea, Japan (Tsuneki 1953b; Linsenmaier 1959).

**Host.** *H. gerstaeckeri japonicum* was observed flying around the nests of *Cerceris* spp., in particular those of *C. hortivaga* Kohl (Hymenoptera, Crabronidae). For other host relationships observed in Europe see Rosa (2006).

**Remarks.** Tsuneki (1946) considered *H. Marianum* as the junior synonym of *H. japonicum*.

**50. *Hedychrum latitudum* Linsenmaier, 1959**

[http://species-id.net/wiki/Hedychrum\\_latitudum](http://species-id.net/wiki/Hedychrum_latitudum)

*Hedychrum latitudum* Linsenmaier, 1959: 39. Holotype ♂, China: Heilongjiang: Harbin (36 (key), 39 (descr.), 197 (figs 75, 76), depository: NMLS)\*.

*Hedychrum latitudum*: Kimsey and Bohart 1991: 215 (China: Manchuria, cat.); Kurzenko and Lelej 2007: 1003 (China: Heilongjiang, cat.).

**Material examined.** Heilongjiang: 1♂, Harbin, 20.VII.1953, leg. Alin / Type (NMLS).

**Distribution.** China (Heilongjiang).

**51. *Hedychrum longicolle* Abeille, 1877**

[http://species-id.net/wiki/Hedychrum\\_longicolle](http://species-id.net/wiki/Hedychrum_longicolle)

Plate 13

*Hedychrum longicolle* Abeille, 1877: 65. Lectotype ♀ design. by Kimsey (1986: 108), France: Marseille, Toulon (65 (descr.), depositaries: MNHN, MHNG)\*.

*Hedychrum longicolle*: du Buysson 1904: 257 (China, cat.); Trautmann 1927: 71 (China, tax., descr., distr.); Berland and Bernard 1938: 53 (key), 55 (China, tax., descr., distr.), 56 (figs 68–69); Balthasar 1954: 120 (tax.), 122 (China, key, tax., descr., distr.); Linsenmaier 1959: 36 (key), 37 (key), 41 (China, tax., descr., distr.), 198 (figs 84–86); Móczár 1967: 41 (China, key, tax., descr., distr.); Banaszak 1980: 19 (China, tax., distr.); Kimsey 1986: 108 (lectotype des.); Kimsey and Bohart 1991: 209 (figs 64d, 64h, 64l), 210 (tax.), 215 (cat.); Kurzenko and Lelej 2007: 1003 (China, cat.).

**Distribution.** China. Widely distributed in the Palaearctic Region (Linsenmaier 1959, 1999; Kurzenko and Lelej 2007).

**52. *Hedychrum manchurianum* Tsuneki, 1950**

[http://species-id.net/wiki/Hedychrum\\_manchurianum](http://species-id.net/wiki/Hedychrum_manchurianum)

*Hedychrum manchurianum* Tsuneki, 1950: 64. Holotype ♀, Manchuria (64 (Kaiyuan, descr.), depository: EIHU).

*Hedychrum manchurianum*: Tsuneki 1953a: 57 (Manchuria, tax., fig. 1); Kimsey and Bohart 1991: 216 (Manchuria, cat.); Kurzenko and Lelej 2007: 1003 (Northeast China, cat.).

**Distribution.** China (Liaoning).

**53. *Hedychrum niemelai* Linsenmaier, 1959**

[http://species-id.net/wiki/Hedychrum\\_aureicolle\\_niemelai](http://species-id.net/wiki/Hedychrum_aureicolle_niemelai)

Plate 14

*Hedychrum aureicolle* ssp. *niemelai* Linsenmaier, 1959: 38. Holotype ♀, Switzerland: Wallis (63 (type series: Manchuria, descr.), 197 (figs 62–64), depository: NMLS)\*.

*Hedychrum aureicolle* ssp. *niemelai*: Banaszak 1980: 19 (Manchuria, tax., distr., biol.); Linsenmaier 1997b: 33 (key), 62 (Manchuria, tax., descr., distr., fig. 32).

*Hedychrum niemelai*: Kimsey and Bohart 1991: 217 (cat.).

**Material examined.** Heilongjiang: Paratype, 1♀, Harbin, 20 July (NMLS).

**Distribution.** China (Heilongjiang). Switzerland (Linsenmaier 1959).

#### 54. *Hedychrum nobile* (Scopoli, 1763)

[http://species-id.net/wiki/Sphex\\_nobile](http://species-id.net/wiki/Sphex_nobile)

*Sphex nobile* Scopoli, 1763: 297. Holotype ♀; Italy (297 (descr.), type lost).

*Hedychrum nobile*: Hammer 1936: 3 (China: Kansu [= Gansu], cat.); Tsuneki 1947: 47 (China: Inner Mongolia: Apaka, cat., distr.); Tsuneki 1953a: 56 (Manchuria: Furaruki, North of Tsitsihar [= Qiqihar], cat., distr.); Tsuneki 1953b: 23 (North China, Manchuria, cat.); Kimsey and Bohart 1991: 209 (fig. 209e), 210 (tax.), 217 (cat.).

**Distribution.** China (Heilongjiang, Inner Mongolia, Gansu, Tianjin). Widely distributed in the Palaearctic Region from Europe and North Africa to Turkmenistan, Siberia, Korea, Japan (Tsuneki 1953b; Linsenmaier 1959; Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

#### 55. *Hedychrum simile* Mocsáry, 1889

[http://species-id.net/wiki/Hedychrum\\_simile](http://species-id.net/wiki/Hedychrum_simile)

Plate 15

*Hedychrum cyaneum* Mocsáry (in Radoszkowski), 1889: 10 nec Brullé, 1846. Lectotype ♀ design. by French (in Bohart and French 1986: 341), China “Ta-schian-sy” (HNHM)\*.

*Hedychrum simile* Mocsáry, 1889: 157. Replacement name for *Hedychrum cyaneum* Radoszkowski, 1889 nec Brullé, 1846.

*Hedychrum simile*: Dalla Torre, 1892: 35 (China, cat.); Mocsáry 1890a: 61 (China borealis, cat.); Tsuneki 1946: 37 (Manchuria, tax.); Tsuneki 1947: 51 (China: Inner Mongolia: Apaka; North China: Tientsing [= Tianjin], tax., distr.); Tsuneki 1953b: 23 (North China, Manchuria, tax.); Linsenmaier 1959: 36 (key), 37 (key), 39 (Manchuria, tax., descr.), 198 (figs 79, 80); Bohart and French 1986: 341 (lectotype designation by French, China (“borealis”): Ta-schian-sy); Kimsey and Bohart 1991: 220 (China, Manchuria, cat.); Kurzenko and Lelej 2007: 1003 (Northeast China, tax.); Terayama et al. 2010: 6 (figs.), 10 (China, cat.), 12 (tab., biol.).

*Hedychrum simili* (!): Uchida 1927: 151 (North China, cat.).

*Hedychrum simile* f. *pullatum* Tsuneki, 1953b: 23. Syntype ♂♀, Korea, Shôyôzan (23 (descr.), depository: NIAS).

*Hedychrum simile* ssp. *aereum* Tsuneki, 1970a: 34. Holotype ♀, Japan, Chiba (34 (descr.), depository: NIAS).

**Distribution.** Northeast China, Inner Mongolia, Tianjin. Widely distributed in the Palaearctic Region from Europe and North Africa to Central Asia, Mongolia, Korea, Japan and Russian Far East (Tsuneki 1953b; Lisenmaier 1959; Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

**Host.** *Cerceris arenaria* (Linnaeus, 1758) (Hymenoptera, Crabronidae) (Tsuneki 1979).

**Remarks.** Mocsáry examined at least two specimens of both sexes (see the symbols male and female in the first couplet). However, in the original description Mocsáry (in Radoszkowski) gave the description of *H. simile* (sub *cyaneum* Mocsáry nec Brullé) based only on the male housed in the Radoszkowski collection and dissected by the Russian entomologist, who drew the genitalia. The type locality given by Radoszkowski is "Siberia orientalis", and it has to be referred only to the male housed in the Radoszkowski collection. In the MNHM, we examined the rest of the type series listed by Mocsáry (1889): a female specimen collected in China (Ta-schian-sy). French (1986) designated this female as lectotype. However, this female belongs to a different species compared with the male collected in Siberia. The female lectotype is characterised by the very long pronotum (similar to *H. longicolle*) and sharp and pointing out propodeal angles, while the male has a short pronotum and wide and triangular propodeal angles. A revision of the blue Asian species of *Hedychrum* is missing and urgently needed.

### 56. *Hedychrum sinicum* Semenov-Tian-Shanskij, 1967

[http://species-id.net/wiki/Hedychrum\\_sinicum](http://species-id.net/wiki/Hedychrum_sinicum)

Plate 16

*Hedychrum sinicum* Semenov-Tian-Shanskij, 1967: 140. Holotype ♂, China: Sichuan (depository: ZIN)\*.

*Hedychrum sinicum*: Kimsey and Bohart 1991: 220 (China: Sechuan [= Sichuan], cat.).

**Distribution.** China (Sichuan).

### 57. *Hedychrum taiwanense* Tsuneki, 1970

[http://species-id.net/wiki/Hedychrum\\_taiwanense](http://species-id.net/wiki/Hedychrum_taiwanense)

*Hedychrum taiwanense* Tsuneki, 1970b: 5. Holotype ♂, Taiwan: Liyuchih [= Li-yu Ch'ih]: Hualien (5 (tax. descr.), depository: NIAS).

*Hedychrum taiwanense*: Kimsey and Bohart 1991: 221 (Taiwan: Liyuchih Prov., Hualien, cat.).

**Distribution.** China (Taiwan).

**58. *Hedychrum takasago* Tsuneki, 1970**

[http://species-id.net/wiki/Hedychrum\\_takasago](http://species-id.net/wiki/Hedychrum_takasago)

*Hedychrum takasago* Tsuneki, 1970b: 4. Holotype ♀, Taiwan: Chuchi: Chiai (4 (tax., descr.), 5 (type series: Taiwan: Chiai Prov: Chuchi; Hualien Prov: Kuanfu, Ping-tung Prov.: Henchung, tax., descr. comp. notes), depository: OMNH, not NIAS).

*Hedychrum takasago*: Kimsey and Bohart 1991: 221 (Taiwan: Chuchi, cat.).

**Distribution.** China (Taiwan).

**9. Genus *Holophris* Mocsáry, 1890****59. *Holophris taiwanus* (Tsuneki, 1970)**

[http://species-id.net/wiki/Omalus\\_taiwanus](http://species-id.net/wiki/Omalus_taiwanus)

*Omalus taiwanus* Tsuneki, 1970b: 2. Holotype ♂, Taiwan: Nantou: Chienching (2 (tax., descr., figs 1–4), 3 (type series: Taiwan: Nantou Province: Chienching, Puli), depository: OMNH, not NIAS).

*Holophris taiwanus*: Kimsey and Bohart 1991: 225 (Taiwan, cat.).

**Distribution.** China (Taiwan).

**10. Genus *Holopyga* Dahlbom, 1845****60. *Holopyga amoenula virideaurata* Lisenmaier, 1951**

[http://species-id.net/wiki/Holopyga\\_amoenula\\_virideaurata](http://species-id.net/wiki/Holopyga_amoenula_virideaurata)

*Holopyga amoenula* var. *virideaurata* Lisenmaier, 1951: 16. Holotype ♀, Greece: Rhodes (16 (descr.), depository: NMLS)\*.

*Holopyga amoenula* ssp. *virideaurata*: Lisenmaier 1959: 31 (? China, tax.).

*Holopyga amoenula*: Kimsey and Bohart 1991: 228 (cat.).

**Material examined.** Heilongjiang: 1♂, Harbin, 6.VII.1947; 1♀, id., 10.VII.1949; 1♂, id., 20.VII.1953, all specimens leg. Alin; 1♀, China; 1♂, Kouy-Théou Cavalarie 1921 (NMLS).

**Distribution.** China (Heilongjiang, Guizhou). Widely distributed in the Palaearctic Region (Kimsey and Bohart 1991).

**Remarks.** Lisenmaier (1959) dubiously considered the specimens from Harbin to be *H. amoenula* ssp. *virideaurata*. These specimens were still identified as *virideaurata* in his collection and seem to fit the current interpretation of the taxon. At present,

*H. amoenula amoenula* is an endemism of the Mediterranean island of Rhodes, but some specimens may also be found in southern Greece. A re-evaluation of all the subspecies and taxa related to *H. amoenula* s. str. is urgently needed.

### 61. *Holopyga chrysonota* (Förster, 1853)

[http://species-id.net/wiki/Ellampus\\_chrysonotus](http://species-id.net/wiki/Ellampus_chrysonotus)

*Ellampus chrysonotus* Förster, 1853: 347. Holotype ♀, Hungary: Budapest (347 (descr.), depository: MNHU)\*.

*Holopyga gloriosa* f. *chrysonota*: Tsuneki 1947: 45 (cat.), 46 (China: Beijing, Inner Mongolia, tax., distr.).

*Holopyga chrysonota*: Lisenmaier 1959: 30 (key), 32 (tax., descr.), 197 (fig. 34); Kimsey and Bohart 1991: 227 (fig. 68a), 230 (cat.); Kurzenko and Lelej 2007: 1004 (China, cat.).

**Distribution.** China (Beijing, Inner Mongolia). Widely distributed in the Palaearctic Region (Kurzenko and Lelej 2007).

**Remarks.** The identification of this taxon is dubious because Tsuneki (1947) did not separate *ignicollis* Dahlbom, 1854 from *chrysonota* (Förster, 1853). The two were later recognized as valid species by Lisenmaier (1959), who provided both a key and characteristics to distinguish them from one another. The specific name *Chrysis gloriosa* Fabricius (=*Holopyga gloriosa*) was suppressed by ICZN (1998).

### 62. *Holopyga generosa* (Förster, 1853)

[http://species-id.net/wiki/Ellampus\\_generosus](http://species-id.net/wiki/Ellampus_generosus)

*Ellampus generosus* Förster, 1853: 349. Syntypes ♂♂, Germany: Aachen (349 (descr.), depository: MNHU)\*.

*Holopyga ovata* Dahlbom, 1854: 51. Syntypes, Italy, Austria, Prussia, Sweden (51 (descr.), depositories: MRSN, MNHU, LZM)\*. Lisenmaier 1959: 29 (key), 31 (China, tax., descr.) (synonymised by Lisenmaier 1997a).

*Holopyga fastuosa generosa*: Lisenmaier 1997a: 250 (China, tax.); Lisenmaier 1997b: 32 (figs 10, b4, c5), 33 (key), 57 (China, tax., descr., distr.).

*Holopyga generosa*: Rosa 2006: 39 (ecol.), 41 (ecol.), 42 (ecol.), 52 (ecol.), 55 (distr.), 78 (cat.), 137 (key), 146 (tax., descr., distr.).

**Distribution.** China. Widely distributed in the Palaearctic Region (Lisenmaier 1959).

**Remarks.** Kimsey and Bohart (1991) considered *Holopyga generosa* a junior synonym of *Holopyga chrysonota*, while *fastuosa* and *ovata* synonyms of *amoenula*. Lisenmaier (1997a) considered *generosa* (Förster) as a subspecies of *Holopyga fastuosa* (Lucas).

### **63. *Holopyga ignicollis* Dahlbom, 1854**

[http://species-id.net/wiki/Holopyga\\_ovata\\_ignicollis](http://species-id.net/wiki/Holopyga_ovata_ignicollis)

*Holopyga ovata* var. *ignicollis* Dahlbom, 1854: 53 (given as var. *b*). Syntypes ♂♀, Greece, Rhodes, Austria (53 (descr.), depositaries: NHMW, MNHU)\*.

*Holopyga gloriosa* var. *aureomaculata* Abeille de Perrin, 1879: 32. Syntypes ♂♂, France: Marseille (32 (descr.), depository: MNHN)\*.

*Holopyga gloriosa* var. *aureomaculata*: du Buysson 1900: 128 (China: Beijing, cat.).

**Distribution.** China (Beijing). Central and southern Europe, North Africa, Turkey (Linsenmaier 1959).

**Remarks.** *Holopyga aureomaculata* Abeille is recognized to be the male of *H. ignicollis* Dahlbom. This is a dubious identification, which can perhaps be referenced to *H. chrysonota*. In Kimsey and Bohart (1991: 230) *H. ignicollis* is synonym of *H. chrysonota*, but the two species are clearly distinct.

## **11. Genus *Omalus* Panzer, 1806**

### **64. *Omalus aeneus* (Fabricius, 1787)**

[http://species-id.net/wiki/Chrysis\\_aenea](http://species-id.net/wiki/Chrysis_aenea)

Plates 17, 18

*Chrysis aenea* Fabricius, 1787: 284. Holotype ♀, Germany: Halle “*Halae Saxonum*” (284 (descr.), depository: ZMU)\*.

*Omalus aeneus* var. *pygialis* du Buysson, 1887: 170. Syntypes ♂, ♀; China, Caucasus (170 (descr.), depository: MNHN).

*Ellampus aeneus* var. *pygialis*: Mocsáry 1889: 98 (China, descr.); Dalla Torre 1892: 8 (China, cat.); Bischoff 1913: 8 (China, cat.).

*Ellampus sauteri* Mocsáry, 1913b: 613. Holotype ♀, Taiwan, Taihorinsho (613 (descr.), 619 (Taiwan, cat.), depository: HNHM)\*.

*Ellampus sauteri*: Uchida 1927: 150 (Taiwan, cat.); Uchida 1933: 1 (Taiwan, cat.).

*Philoctetes sauteri*: Tsuneki 1946: 35 (Manchuria, Taiwan).

*Omalus* (*Omalus*) *sauteri*: Linsenmaier 1959: 15 (key), 19 (Taiwan, tax., descr., *punctulatus* group).

*Omalus aeneus sauteri*: Tsuneki 1970b: 1 (Taiwan: Nantou Prov.: Chienching Wushe (1800m), tax., descr.).

*Omalus aeneus*: Kimsey and Bohart 1991: 245 (Taiwan, cat., fig. 76g); Wei et al. 2014b: 31 (key), 32 (China: Inner Mongolia, Helanshan: Gulaben, Dayanggou, Halawuchagou, Shuimogou, Qianggangling, Halawuchagou; Taiwan, descr., tax.), 33 (pl. 1), 34 (pl. 2A–2F), 35 (pl. 3), 36 (pl. 4A–4F).

**Distribution.** China (Inner Mongolia, Taiwan). In literature the records for mainland China are listed under the name *pygialis* du Buysson and the Taiwanese citations are

listed under the name *sauteri*. It is widely distributed in the Palearctic from Europe to the Russian Far East and in the Nearctic, where it is very likely to have been introduced via commerce (Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

**Remarks.** Du Buysson described *pygialis* based on two syntypes collected in China and Caucasus: “Deux exemplaires ♂♀: Chine, Caucase” [not Chinese Caucasus as listed in Kimsey and Bohart, 1991]. Tsuneki (1946) considered *Ellampus potanini* as synonym of *sauteri*.

### 65. *Omalus berezovskii* (Semenov-Tian-Shanskij, 1932)

[http://species-id.net/wiki/Ellampus\\_berezovskii](http://species-id.net/wiki/Ellampus_berezovskii)

Plate 19

*Ellampus (Dictenulus) berezovskii* Semenov-Tian-Shanskij, 1932: 12. Holotype ♀, China: Szechuan [= Sichuan]: Cho-dzi-gou, Lun-ngan-fu (12 (descr.), depository: ZIN)\*.

*Omalus berezovskii*: Kimsey and Bohart 1991: 247 (China: Szechuan [= Sichuan], cat.); Wei et al. 2014b: 31 (key), 35 (China: Ningxia, Liupanshan Forest Park, tax.), 36 (pl. 4, descr.), 37 (pl. 5), 38 (pl. 6A–6F).

**Distribution.** China (Ningxia, Sichuan).

### 66. *Omalus helanshanus* Wei, Rosa, Liu & Xu, 2014

[http://species-id.net/wiki/Omalus\\_helanshanus](http://species-id.net/wiki/Omalus_helanshanus)

*Omalus helanshanus* Wei, Rosa, Liu & Xu, 2014: 39. Holotype ♀, China: Inner Mongolia, Helanshan, Gulaben (32 (key), 39 (type series: Inner Mongolia, Helanshan, Gulaben, Dayanggou; Shuimogou; Habeigou, Huangliangzi; Halawuchagou; Halawubeigou; Halawu, descr.), 40 (pl. 7), 41 (pl. 8A–8F), depository: SCAU)\*.

**Distribution.** China (Inner Mongolia).

### 67. *Omalus imbecillus* (Mocsáry, 1889)

[http://species-id.net/wiki/Ellampus\\_imbecillus](http://species-id.net/wiki/Ellampus_imbecillus)

Plate 20

*Ellampus imbecillus* Mocsáry, 1889: 98. Lectotype ♀ design. by French (in Bohart and French 1986: 341), Turkmenistan: Pendikent (depository: HNHM)\*.

*Holophris imbecillus*: Kimsey and Bohart 1991: 225.

*Omalus imbecillus*: Rosa 2005: 12; Wei et al. 2014b: 31 (key), 41 (tax.), 42 (China: Yunnan, Kaiyuannan River; Gaoligonshan National Nature Reserve, descr., pl. 9), 43 (pl. 10A–10F).

**Distribution.** China (Yunnan). Laos, Russia, Turkey, Iran (Kimsey and Bohart 1991; Rosa et al. 2013).

**68. *Omalus potanini* (Semenov-Tian-Shanskij, 1932)**

[http://species-id.net/wiki/Ellampus\\_potanini](http://species-id.net/wiki/Ellampus_potanini)

Plate 21

*Ellampus (Dictenulus) potanini* Semenov-Tian-Shanskij, 1932: 11. Lectotype ♂ design.

by Kimsey (1986: 107), China: Sichuan: river Sjao-tzhin-cho (11 (type series: China: Sichuan: river Sjao-tzhin-cho; river Fu-bjan cho, Chun-shujgu, Li-fan, descr.), depository: ZIN)\*.

*Philoctetes (Holophris) potanini*: Tsuneki 1953a: 55 (West China: Setshuan and Manchuria, tax., distr.).

*Ellampus potanini*: Kimsey 1986: 107 (China: Setchuan [= Sichuan]: Sjao-tzhin-cho, lectotype design.).

*Omalus potanini*: Kimsey and Bohart 1991: 249 (China: Setshuan [= Sichuan], cat.); Wei et al. 2014b: 32 (key), 44 (China: Liaoning, Sichuan, tax., descr.).

**Distribution.** China (Liaoning, Sichuan).

**Remarks.** Only two specimens erroneously labelled as paratypes and collected in the same place (Sichuan: river Sjao-tzhin-cho, leg. Potanin) are present in the Semenov collection. We don't know whether the lectotype label or the lectotype is lost.

**69. *Omalus probiaccinctus* Wei, Rosa, Liu & Xu, 2014**

[http://species-id.net/wiki/Omalus\\_probiaccinctus](http://species-id.net/wiki/Omalus_probiaccinctus)

*Omalus probiaccinctus* Wei, Rosa, Liu & Xu, 2014: 44. Holotype ♀, China: Guizhou, Suiyang, Kuankuoshui National Reserve (31 (key), 44 (tax.), 45 (descr., pl. 11), 46 (pl. 12A–12F), depository: SCAU)\*.

**Distribution.** China (Guizhou).

**70. *Omalus pseudoimbecillus* Wei, Rosa, Liu & Xu, 2014**

[http://species-id.net/wiki/Omalus\\_pseudoimbecillus](http://species-id.net/wiki/Omalus_pseudoimbecillus)

*Omalus pseudoimbecillus* Wei, Rosa, Liu & Xu, 2014: 44. Holotype ♀, China: Yunnan, Yimen, Longquan Park (31 (key), 47 (type series: Yunnan, Yimen, Longquan Park; Yunlong, Tianchi National Nature Reserve; Jingdong, Jingping, tax., pl. 13), 48 (pl. 14A–14F), 49 (descr.), depository: SCAU)\*.

**Distribution.** China (Yunnan).

**71. *Omalus tibetanus* Wei, Rosa, Liu & Xu, 2014**

[http://species-id.net/wiki/Omalus\\_tibetanus](http://species-id.net/wiki/Omalus_tibetanus)

*Omalus tibetanus* Wei, Rosa, Liu & Xu, 2014: 49. Holotype ♀, China: Tibet, Chayu, Cibagou (31 (key), 49 (tax.), 50 (descr., pl. 15), 51 (pl. 16A–16F), 49 (descr.), depository: SCAU)\*.

**Distribution.** China (Tibet).

**12. Genus *Philoctetes* Abeille de Perrin, 1878**

**72. *Philoctetes deauratus* (Mocsáry, 1914), n. comb.**

[http://species-id.net/wiki/Ellampus\\_deauratus](http://species-id.net/wiki/Ellampus_deauratus)

*Ellampus deauratus* Mocsáry, 1914: 2. Holotype ♀, China: Tientsin [= Tianjin] (2 (descr.), depository: BMNH).

*Ellampus deauratus*: Tsuneki, 1947: 45 (North China: Tieng-tsing [= Tianjin], comp. notes); Tsuneki, 1948a: 119 (comp. notes).

*Omalus (Omalus) deauratus*: Linsenmaier 1959: 20 (China, tax., *pusillus* group).

*Pseudomalus deauratus*: Kimsey and Bohart 1991: 267 (China: Tientsin, cat.).

**Distribution.** China (Tianjin) (Mocsáry 1914).

**Remarks.** After the examination of other specimens labeled as types of *E. deauratus* by Mocsáry in the HNHM, we have included this taxon in the genus *Philoctetes* Abeille, based on the characteristics given by Kimsey and Bohart (1991).

**73. *Philoctetes duplipunctatus* (Tsuneki, 1948)**

[http://species-id.net/wiki/Chrysellampus\\_duplipunctatus](http://species-id.net/wiki/Chrysellampus_duplipunctatus)

*Chrysellampus* near *harmandi*: Tsuneki 1946: 33 (China: Shanxi, tax.).

*Chrysellampus duplipunctatus* Tsuneki, 1948a: 120. Holotype ♀, China: Shanxi, Wutai Shan (120 (descr.), 122 (Wutaishan, comp. notes), 128 (Shanxi, cat.), pl. 7 (figs A, B), pl. 8 (figs A–E), depository: KUM).

*Chrysellampus duplipunctatus* f. *suzukii* Tsuneki, 1948a: 122. Holotype ♀, China: Shanxi, Yangchêng (122 (descr.), 128 (cat.), depository: KUM).

*Chrysellampus duplipunctatus* f. *variegatus* Tsuneki, 1950: 63. Syntypes ♂♀, Korea, Manchuria: Kay-juan (63 (descr.), depository: NIAS).

*Chrysellampus duplipunctatus*: Tsuneki 1953a: 55 (Manchuria: Kaiyüan, tax.); Tsuneki 1953b: 23 (North China, Manchuria, tax.).

*Chrysellampus duplipunctatus* f. *variegatus*: Tsuneki 1953a: 55 (Manchuria: Kaiyüan, distr., cat.); Tsuneki 1953b: 23 (tax.).

*Omalus (Chrysellampus) duplipunctatus*: Linsenmaier 1959: 22 (China, tax., descr.).

*Philoctetes duplipunctatus*: Kimsey and Bohart 1991: 255 (China, cat.); Kurzenko and Lelej 2007: 1004 (China, cat.).

**Distribution.** China (Liaoning, Jilin, Shanxi). Korea and Russian Far East (Tsuneki 1953b; Kurzenko and Lelej 2007; Lelej and Kurzenko 2012).

**Remarks.** Kimsey and Bohart (1991) considered the forms *Philoctetes duplipunctatus* f. *suzukii* and *P. duplipunctatus* f. *variegatus* invalid names. However, according to the ICBN, the two names are indeed valid.

#### 74. *Philoctetes heros* (Semenow, 1892)

[http://species-id.net/wiki/Ellampus\\_heros](http://species-id.net/wiki/Ellampus_heros)

Plate 22

*Ellampus heros* Semenow, 1892c: 71. Holotype ♀, China: Alaschan, (71 (descr.), depository: ZIN)\*.

*Ellampus heros*: Bischoff 1913: 8 (China, cat.).

*Chrysellampus heros*: Semenov-Tian-Shanskij 1932: 5 (descr., typus gen.).

*Omalus (Chrysellampus) heros*: Lisenmaier 1959: 22 (typus subgen.).

*Philoctetes heros*: Kimsey and Bohart 1991: 255 (China: Alaschan, cat.).

**Distribution.** China (Inner Mongolia).

#### 75. *Philoctetes horvathi* (Mocsáry, 1889)

[http://species-id.net/wiki/Ellampus\\_horvati](http://species-id.net/wiki/Ellampus_horvati)

Plate 23

*Ellampus wesmaeli* Mocsáry, 1882: 27. Lectotype ♀ design. by Móczár (1964a: 434), Hungary (27 (descr.), 80 (cat.) depository: HNHM)\*, nec Chevrier, 1862.

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

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

*Omalus (Omalus) horvathi*: Lisenmaier 1959: 15 (key, *horwathi* (!)), 19 (China, tax., *pusillus* group); Lisenmaier 1997a: 249 (tax., *pusillus* group).

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

*Philoctetes horvathi*: Kimsey and Bohart 1991: 256 (cat.); Rosa et al. 2013: 13 (China, cat., distr.).

**Material examined.** 1 ex., Nan-Chan le Kan Tchegu à Lan Tcheou Dr. Vaillant 1909 / 2000 à 4000m Juillet 1908 (NMLS).

**Distribution.** China (Shanxi). Widely distributed in the Palaearctic Region from Europe and North Africa to Korea (Kimsey and Bohart 1991; Linsenmaier 1997a).

**76. *Philoctetes mongolicus* (du Buysson, 1901), status revived**

[http://species-id.net/wiki/Ellampus\\_horvathi\\_mongolicus](http://species-id.net/wiki/Ellampus_horvathi_mongolicus)

*Ellampus horvathi* var. *mongolicus* du Buysson, 1901b: 98. Syntypes ♂♀, N Mongolia (98 (descr.), depository: NHMW)\*.

*Ellampus horwathi* (!) var. *mongolicus*: du Buysson 1911: 219 (China: Nan Chan, Che Yeou Ho, tax.); Bischoff 1913: 8 (cat.).

*Notozus mongolicus*: Tsuneki 1948a: 116 (China: Shanxi: Wutaishan, tax., distr.), 128 (China: Shanxi, cat.).

*Omalus (Notozus) mongolicus*: Linsenmaier 1959: 16 (key), 23 (cat., *ambiguus* group).

*Philoctetes horvathi*: Kimsey and Bohart 1991: 256 (cat.).

**Distribution.** China (Shanxi). Widely distributed from Mongolia to Central Asia and southern Russia to Volga (Trautmann 1927).

**Remarks.** *P. mongolicus* was often erroneously considered belonging to the genus *Elampus* (= *Notozus*) due to its elongated metanotal projection. However, the metanotal projection is also present in various *Philoctetes* species (e.g.: *P. putoni* (du Buysson)). Kimsey and Bohart (1991) placed *P. mongolicus* under *P. horvathi*, even if Tsuneki and Linsenmaier considered it as a valid species. Type examination has confirmed that *P. mongolicus* is indeed a valid species.

**77. *Philoctetes mordvilkoi* (Semenov-Tian-Shanskij, 1932), n. comb.**

[http://species-id.net/wiki/Ellampus\\_mordvilkoi](http://species-id.net/wiki/Ellampus_mordvilkoi)

Plate 24

*Ellampus mordvilkoi* Semenov-Tian-Shanskij, 1932: 36. Holotype ♀, China: Xinjiang: Chotan, Sajbag (36 (descr.), depository: ZIN) \*.

*Pseudomalus mordvilkoi* (!): Kimsey and Bohart, 1991: 268 (China: Singkiang [= Xinjiang]: Chotan Sajbag, cat.).

**Distribution.** China (Xinjiang).

**Remarks.** *E. mordvilkoi* shows the main characteristics of the genus *Philoctetes* sensu Kimsey and Bohart (1991). The gena is not bisected by the genal carina, the punctuation on the mesosoma is more distributed along the notaui and the anal margin of the last metasomal tergite has a distinct brownish transparent rim with a wide median notch. Therefore, we have moved this taxon into the genus *Philoctetes* Abeille.

## 78. *Philoctetes praeteritorum* (Semenov-Tian-Shanskij, 1932)

[http://species-id.net/wiki/Parellampus\\_praeteritorum](http://species-id.net/wiki/Parellampus_praeteritorum)

Plate 25

*Parellampus praeteritorum* Semenov-Tian-Shanskij, 1932: 7. Holotype ♀, China: Sichuan, Tadzinlu (7 descr.), depository: ZIN)\*.

*Philoctetes praeteritorum*: Kimsey and Bohart, 1991: 257 (China: Setchuan [= Sichuan], cat.).

**Distribution.** China (Sichuan).

## 13. Genus *Pseudomalus* Ashmead, 1902

### 79. *Pseudomalus auratus* (Linnaeus, 1758)

[http://species-id.net/wiki/Sphex\\_aurata](http://species-id.net/wiki/Sphex_aurata)

*Sphex aurata* Linnaeus, 1758: 572. Holotype ♀, Europe (572 (descr.), depository: LSL).

*Ellampus auratus* f. *maculatus* du Buysson, 1887: Tsuneki 1946: 33 (Manchuria, tax.), 38 (résumé).

*Ellampus auratus* var. *cupratus* Mocsáry, 1889: 92. Holotype ♂ [not ♀], Dalmatia (92 (descr.), depository: HNHM)\*.

*Ellampus auratus* var. *cupratus*: du Buysson 1911: 219 (China: Nan Chan, Kan Tchéou, oasis Chan Kin Hia, Tien Chouei Tsing, Koua Tchéou Kéou tsé, tax.).

*Ellampus auratus* f. *nigridorsus* Tsuneki, 1950a: 63. Syntypes ♂♀, Japan, Korea, Manchuria (63 (descr.), depository: NIAS).

*Ellampus auratus* f. *nigridorsus*: Tsuneki, 1953a: 54 (Manchuria: Tâshonshan, cat., distr.).

*Omalus (Omalus) auratus* ssp. *nigridorsus*: Linsenmaier 1968: 9 (Manchuria, tax.).

*Omalus (Omalus) auratus*: Linsenmaier 1959: 14 (key), 17 (tax., descr., *auratus* group), 196 (figs 1–4).

*Pseudomalus auratus*: Kimsey and Bohart 1991: 263 (fig. 84), 264 (cat., figs 85d, 85i); Kurzenko and Lelej 2007: 1004 (China, cat.).

**Material examined.** Heilongjiang: 1 ex., Harbin, 18.VI.1944; 1 ex., 1.VIII.1945 Alin leg. (NMNS).

**Distribution.** China (Heilongjiang, Shanxi). Widely distributed in the Holarctic Region, being introduced into the Nearctic Region by commerce, very likely with multiple introductions (Krombein 1959; Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

**Host.** *Pemphredon rugifer* Dahlbom (Hymenoptera, Crabronidae) (Tsuneki 1970a).

**Biology.** The larval habits were studied by Tsuneki (1952).

**Remarks.** Kimsey and Bohart (1991) considered *Ellampus auratus* f. *nigridorsus* Tsuneki as an invalid name. However, it is a valid name according to the ICZN.

**80. *Pseudomalus conradti* (Bischoff, 1910)**

[http://species-id.net/wiki/Ellampus\\_conradti](http://species-id.net/wiki/Ellampus_conradti)

*Ellampus conradti* Bischoff, 1910: 437. Syntypes ♂♀, Chinese Turkestan [= Xinjiang]:

Tochta Chon, Jarkand (437 (descr.), depository: MNHU)\*.

*Ellampus conradti*: Bischoff 1913: 8 (Chinese Turkestan [= Xinjiang], cat.).

*Pseudomalus conradti*: Kimsey and Bohart 1991: 267 (China, Singkiang [= Xinjiang], cat.).

**Distribution.** China (Xinjiang).

**81. *Pseudomalus corensis* (Uchida, 1927)**

[http://species-id.net/wiki/Philoctetes\\_corensis](http://species-id.net/wiki/Philoctetes_corensis)

*Philoctetes punctatus* var. *corensis* Uchida, 1927: 153. Holotype ♂, Korea: Seiryori (153 (descr.), depository: EIHU).

*Philoctetes corensis*: Uchida 1933: 1 (cat.).

*Ellampus corensis*: Tsuneki 1946: 33 (China: Shanxi, tax.); Tsuneki 1948a: 120 (type series: China: Shanxi: Takui, Nanpintsun, Henglingshan - Peihungkaokao, Wutaihan, tax., comp. notes, descr.), 128 (Shanxi, cat.); Tsuneki 1953a: 55 (North China, Manchuria [= Heilongjiang]: Harbin, Kaiyuan; Manchuria, tax., distr.); Tsuneki 1953b: 22 (North China, Manchuria, tax., aberr.).

*Omalus (Omalus) corensis*: Lisenmaier 1959: 17 (possible syn. of *Omalus joannisi* (du Buysson, 1908), *auratus* group).

*Pseudomalus corensis*: Kimsey and Bohart 1991: 268 (synonym of *Pseudomalus punctatus* (Uchida, 1927)).

**Distribution.** China (Heilongjiang, Liaoning, Shanxi). Korea (Uchida, 1927).

**Remarks.** Kimsey and Bohart (1991) placed *Philoctetes punctatus* var. *corensis* Uchida in the junior synonymic list of *Pseudomalus punctatus* (Uchida, 1927). However, Tsuneki examined the material collected by Uchida and considered *P. corensis* a valid species. We follow the latter interpretation.

**82. *Pseudomalus hypocritus* (du Buysson, 1893), n. comb.**

[http://species-id.net/wiki/Ellampus\\_hypocrita](http://species-id.net/wiki/Ellampus_hypocrita)

*Ellampus hypocrita* du Buysson, 1893: 246. Syntype ♀, Mongolia [= China]: Kansu-Yelisyn-Kuse (246 (descr.), depositories: ISEA-PAS, MNHN)\*.

*Ellampus hypocrita*: du Buysson 1911: 218 (China: Nan Chan, Chan Kin Hia, Tien Chouei Tsing, Koua Tchéou Kéou tsé, tax.); Bischoff 1913: 8 (Mongolia [= China], cat.).

*Omalus hypocritus*: Kimsey and Bohart 1991: 248 (cat.).

**Distribution.** China (Gansu, Shanxi).

**Remarks.** After the examination of the syntype specimen in the Radoszkowski collection in ISEA-PAS, we have confirmed that the species belongs to the genus *Pseudomalus* Ashmead *sensu* Kimsey and Bohart (1991).

### 83. *Pseudomalus joannisi* (du Buysson, 1908)

[http://species-id.net/wiki/Ellampus\\_joannisi](http://species-id.net/wiki/Ellampus_joannisi)

*Ellampus joannisi* du Buysson, 1908: 207. Holotype ♀, China: Nanking [= Nanjing] (207 (descr.), depository: MNHN)\*.

*Ellampus joannisi*: Bischoff 1913: 8 (Japan [= China], cat.); Tsuneki 1946: 32 (tax).

*Omalus (Omalus) joannisi*: Linsenmaier 1959: 17 (China, Manchuria [= Heilongjiang], tax., descr., comp. notes).

*Pseudomalus joannisi*: Kimsey and Bohart 1991: 268 (China: Nanking, cat.).

**Material examined.** Heilongjiang: 2♀♀, Harbin, 15.VII.1943; 1♂, 1♀, id., 9.VII.1944; 1♀, id., 9.VII.1944; 1♀, id., 10.VII.1949; 3♂♂, 8♀♀, id., 25.VI.1950; 1♂, 1♀, id., 28.VII.1950; 2♂♂, id., 21.VIII.1950; 2 exx., id., 20.VII.1953 all the specimens were collected by Alin (NMLS).

**Distribution.** China (Heilongjiang, Jiangsu). Korea (Kimsey and Bohart 1991).

### 84. *Pseudomalus sinensis* (Tsuneki, 1947)

[http://species-id.net/wiki/Ellampus\\_sinensis](http://species-id.net/wiki/Ellampus_sinensis)

*Ellampus sinensis* Tsuneki, 1947: 44. Holotype ♀; China: Beijing (44 (descr.), 45 (Beijing, comp. notes), depository: OMNH, not NIAS).

*Ellampus sinensis* f. *viridiauratus* Tsuneki, 1948a: 118. Syntypes ♂♀♀, China: Henglingshan-Peihungkaokao, Wutaishan, Yangchēng (118 (descr.), 119 (China: Shanxi: Yangchēng, Wutaishan, Henglingshan-Peihungkaokao, comp. notes), 128 (cat.), depository: KUM?).

*Ellampus sinensis* f. *nigricans* Tsuneki, 1948a: 119. Holotype ♂, China: Kiu-Taiyüan (119 (descr.), 128 (cat.), depository: KUM?).

*Ellampus sinensis*: Tsuneki 1948a: 128 (China: Beijing district, cat.).

*Omalus (Omalus) sinensis*: Linsenmaier 1959: 20 (China, tax., *pusillus* group).

*Pseudomalus sinensis*: Kimsey and Bohart 1991: 269 (China, cat.).

**Distribution.** China (Beijing, Shanxi).

**Remarks.** Kimsey and Bohart (1991) considered *Ellampus sinensis* f. *nigricans* Tsuneki and *E. sinensis* f. *viridiauratus* Tsuneki as invalid names. However, the two names are valid according to the ICZN.

**85. *Pseudomalus triangulifer* (Abeille, 1877)**

[http://species-id.net/wiki/Omalus\\_triangulifer](http://species-id.net/wiki/Omalus_triangulifer)

Plate 26

*Omalus triangulifer* Abeille, 1877: 65. Lectotype ♀ design. by Kimsey (1986: 106);

France: St. Baume (depository: MNHN)\*.

*Omalus (Omalus) triangulifer*: Linsenmaier 1959: 14 (key), 17 (tax., descr.), 196 (figs 5, 6); Linsenmaier 1997a: 248 (China: Gansu, cat.).

*Ellampus auratus triangulifer* (!): Kimsey 1986: 106 (lectotype design.).

*Pseudomalus triangulifer*: Kimsey and Bohart 1991: 269 (cat.); Rosa 2006: 78 (cat.), 108 (key), 113 (China, tax., descr.).

**Distribution.** China (Gansu). Widely distributed in the Palaearctic Region (Linsenmaier 1959, 1968, 1987, 1997a).

**86. *Pseudomalus tshingiz* (Semenov-Tian-Shanskij, 1954)**

[http://species-id.net/wiki/Ellampus\\_tshingiz](http://species-id.net/wiki/Ellampus_tshingiz)

Plate 27

*Ellampus tshingiz* Semenov-Tian-Shanskij (in Semenov-Tian-Shanskij and Nikol'skaja),

1954: 93. Holotype ♂, Sandzhu [Xinjiang], Gushan Gobi (depository: ZIN)\*.

*Pseudomalus tshingiz*: Kimsey and Bohart 1991: 264 (fig. 85a), 270 (cat.).

**Distribution.** China (Xinjiang).

**Remarks.** The type (according to the original description and labels) is from the Oasis Sandzhu [Xinjiang], Gushan Gobi and not from [Kansu]: Sachow Gobi (as reported in Kimsey and Bohart 1991).

**87. *Pseudomalus violaceus* (Scopoli, 1763)**

[http://species-id.net/wiki/Sphex\\_violacea](http://species-id.net/wiki/Sphex_violacea)

*Sphex violacea* Scopoli, 1763: 298. Holotype ♀, Italy: Trieste (298 (descr.), depository: lost).

*Ellampus violaceus* f. *virens* Mocsáry, 1889: Tsuneki 1953a: 54 (cit.).

*Ellampus violaceus*: Tsuneki 1953a: 54 (Manchuria [= Inner Mongolia]: Hairar, tax., distr.).

*Omalus (Omalus) violaceus*: Linsenmaier 1959: 14 (key), 17 (tax., descr., *auratus* group); Linsenmaier 1997b: 31 (key), 48 (Manchuria, tax., descr., fig. 16).

*Omalus violaceus*: Móczár 1967: 30 (Manchuria, key, tax., descr., distr.); Banaszak 1980: 9 (tax., biol., distr.).

*Pseudomalus violaceus*: Kimsey and Bohart 1991: 264 (fig. 85g), 270 (cat.).

**Distribution.** China (Inner Mongolia). Widely distributed in the Palaearctic Region (Kimsey and Bohart 1991).

**Remarks.** The identification by Tsuneki (1953a) should be double-checked. The specimen may be related to *P. bergi* Semenov-Tian-Shanskij, 1932.

### Tribe Chrysidini

#### 14. Genus *Chrysidea* Bischoff, 1913

##### 88. *Chrysidea pumila* (Klug, 1845)

[http://species-id.net/wiki/Chrysis\\_pumila](http://species-id.net/wiki/Chrysis_pumila)

*Chrysis pumila* Klug, 1845: tab. 45, fig. 13. Type, Sudan: Ambukohl (type lost).

*Chrysidea pumila* Bischoff 1913: 34 (cat., typ. gen.); Hammer 1936: 3 (China [Xinjiang]: Urumchi [= Ürümqi], cat.); Kimsey and Bohart 1991: 314 (cat.).

**Material examined.** 2♀♀, Harare: Ketmen, Thian Chan Occid. Monts Sussamyr Ketmen Tjube M. Pic. 1914. The specimens were collected close to the Kyrgyzstan border (Sussamyr Mt.).

**Distribution.** China (Xinjiang). Widely distributed in the Palaearctic Region (Kimsey and Bohart 1991).

#### 15. Genus *Chrysis* Linnaeus, 1761

##### 89. *Chrysis aegle* Semenov-Tian-Shanskij, 1967

[http://species-id.net/wiki/Chrysis\\_aegle](http://species-id.net/wiki/Chrysis_aegle)

Plate 28

*Chrysis (Gonodontochrysis) aegle* Semenov-Tian-Shanskij, 1967: 160. Holotype ♀, North China: Alashan, Maladzhin (depository: ZIN)\*.

*Chrysis aegle*: Kimsey and Bohart 1991: 379 (Mongolia [= Inner Mongolia]: Alashan, cat.).

**Distribution.** China (Inner Mongolia).

**Remarks.** *C. aegle* belongs to the *bihamata* group.

##### 90. *Chrysis alticata* Bohart, 1991

[http://species-id.net/wiki/Chrysis\\_alticata](http://species-id.net/wiki/Chrysis_alticata)

*Chrysis (Tetrachrysis) alticola* Mocsáry, 1914: 42. Holotype ♀, Tibet: Gyangtse, 13.000 ft. (depository: BMNH) nec Semenov-Tian-Shanskij 1912.

*Chrysis alticata* Bohart (in Kimsey and Bohart), 1991: 381. Replacement name for  
*Chrysis alticola* Mocsáry, 1914, nec Semenov-Tian-Shanskij 1912 (*ignita* group).  
*Chrysis alticata*: Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Tibet).

### 91. *Chrysis angolensis* Radoszkovsky, 1881

[http://species-id.net/wiki/Chrysis\\_angolensis](http://species-id.net/wiki/Chrysis_angolensis)

*Chrysis fuscipennis* Brullé, 1846: 38. Holotype ♀, Philippine (depository: MNHN),  
nec Dahlbom, 1829.

*Chrysis janthinus* (!) Smith, 1874b: 459. Holotype ♀, China: Shanghai (459 (descr.),  
depository: BMNH) nec Förster, 1853.

*Chrysis angolensis* Radoszkovsky, 1881: 219. Holotype, Angola (219 (descr.), type lost  
?).

*Chrysis erratica* du Buysson, 1887: 189. Syntypes ♂♀, China, Egypt (189 (descr.),  
depository: MNHN?) (synonymised by Mocsáry 1889: 370).

*Chrysis (Tetrachrysis) janthina*: Mocsáry 1889: 374 (China, descr.); Bischoff 1913: 54  
(North China, cat.).

*Chrysis janthina*: Dalla Torre 1892: 66 (China, cat.).

*Chrysis fuscipennis*: du Buysson (in André) 1895: 443 (China, tax., descr., distr.); du  
Buysson 1898a: 529 (China: Kiang-si, North Beijing, cat., distr.); du Buysson  
1899: 165 (China, cat., distr.); du Buysson 1900: 153 (China: Beijing, cat.); du  
Buysson 1901b: 101 (Central China, cat.); Bingham 1903: 386 (key), 467 (tax.,  
descr.), 468 (China, distr.); Linsenmaier 1959: 149 (*fuscipennis* group).

*Chrysis (Tetrachrysis) fuscipennis*: Mocsáry 1913b: 614 (Taiwan); Uchida 1927: 151  
(Taiwan, cat.); Tsuneki 1947: 55 (China: Beijing, Taiwan, cat., distr.); Tsuneki  
1948a: 125 (Manchuria: Yangchêng, Taiwan, tax.), 128 (Beijing distr., Manchuria,  
Taiwan, cat.); Tsuneki 1953a: 59 (China: Beijing, Formosa, cat., distr.); Tsuneki  
1953b: 26 (North China, tax., distr.). Tsuneki 1970b: 13 (Taiwan: Ilan Province;  
Tsukeng, Chuantou; Taipei Province: Ulai, Kueishanlu; Nantou Province: Puli;  
Chiai Province: Chuchi; Taitung Province: Chihpenchi; Pingtung Province: Ssu-  
chungchi, Fanshanlu, Manchou, cat.).

*Chrysis fuscipennis* var. *murasaki* Uchida, 1927: 155. Syntypes ♂♂♀♀, Japan, Korea  
(155 (descr.), depository: EIHU).

*Tetrachrysis fuscipennis*: Hammer 1950: 2 (China: Kiangsu [= Jiangsu], cat.).

*Chrysis fuscipennis* var. *takanoi* Tsuneki, 1950: 78. Holotype ♀, Taiwan: Shinka (78  
(descr.), depository: NIAS).

*Chrysis (Tetrachrysis) fuscipennis murasaki*: Tsuneki 1953a: 59 (Manchuria: Sungari,  
Kunchun, cat., distr.); Tsuneki 1953b: 26 (North China, Manchuria, tax., distr.).

*Chrysis (Chrysis) fuscipennis murasaki*: Linsenmaier 1959: 149 (North China, Manchu-  
ria, descr., distr.); Tsuneki 1961: 376 (Manchuria, cat.).

*Chrysis (Chrysis) fuscipennis fuscipennis*: Tsuneki 1970c: 48 (Taiwan, key, tax.).

*Chrysis angolensis*: Kimsey and Bohart 1991: 319 (tax.), 336 (110), 337 (tax.), 357 (fig. 113c), 383 (cat., *angolensis* group); Kurzenko and Lelej 2007: 1005 (China, cat.); Terayama et al. 2010: 3 (China, cat.), 4 (figs.), 12 (tab., biol.).

**Material examined.** 1♀, Museum Paris Checkiang Hangtchéou A. Pichon 1925; 1♀, China Ning Po V.36 Coll. Linsenmaier; 1♀, Museum Paris Kouy-Tchéou Cavalerie 1921; 1♀, Museum Paris Chine Nan-King J. de Joannis 1908; 1♀, N Formosa Chipon Aug. 1935 K. Iwata, all the specimens identified by Linsenmaier in 1959 as *Chrysis fuscipennis* Brullé. The following specimens were identified by Linsenmaier in 1974 and 1979 as *Chrysis fuscipennis murasaki* Uchida: 2♀♀, Mandschurei Maoerschan, 20.–30.VII.1939; 1♀, Mandschurei Maoerschan, 5.8.40; 1♂ and 10♀♀, Maoerschan, 5–10.VIII.1939 Mandschurei; 11♀♀, China: Manchuria. Maoershan 100 Km E. Harbin on Chinese Eastern Railway, 18.VIII.1941 V.N. Alin, Coll.; 2♂♂, Chusan China Juni 1948 Collect. Naef; 5♀♀, Mandschurei Charbin 9.VII.1944 W. Alin leg (all specimens in NMLS). 1♀, Sichuan, Tzitun, 16.IX.1893, leg. Potanin (ZIN); 1♀, Nin-sia-fu, Yellow river valley, 4.–16.VI.1908, leg. Kozlov (ZIN); 2♀♀, Lyu-li-he, 65 km SW Beijing, 14.–17.VIII.1913, leg. Vasiliev (ZIN); 1♀, Harbin, 19.VI.1911, leg. Emelyanov (ZIN); Imanpo (Manchuria), 20.VI.1911, leg. Emelyanov (ZIN); 1♀, env. Beijing, VII.1916 (ZIN).

**Distribution.** China (Heilongjiang, Jilin, Beijing, Shanxi, Shanghai, Jiangsu, Zhejiang, Jiangxi, Taiwan, Guizhou, Sichuan). World-wide except Europe (Kimsey and Bohart 1991).

**Remarks.** Hosts are *Chalybion japonicum*, *Sceliphron mandraspatanum*, and *S. deforme* (Hymenoptera, Sphecidae) (Tereyama et al. 2010).

## 92. *Chrysis angustula* Schenck, 1856

[http://species-id.net/wiki/Chrysis\\_angustula](http://species-id.net/wiki/Chrysis_angustula)

*Chrysis angustula* Schenck, 1856: 30. Lectotype ♀ design. by Morgan (1984: 9), Germany: former Duchy of Nassau (depository: SMFD).

*Chrysis (Chrysis) angustula*: Linsenmaier 1959: 151 (key), 159 (tax., descr., *ignita* group), 217 (fig. 697).

*Chrysis angustula*: Kimsey and Bohart 1991: 383 (cat., *ignita* group).

*Chrysis angustula gracilis*: Linsenmaier 1997b: 124 (China, Manchuria, tax., descr., *ignita* group).

**Material examined.** 1♀, Sjaolin [= Henan: Shaolin], 25.VIII.1940; Heilongjiang: 1♀, Harbin, 9.VII.1944, leg. Alin; 1♀, Harbin, 25.VII.1950 leg. Alin; 2♀♀, Maoershan, 100 Km E Harbin on Chinese Eastern Railway, 18.VIII.1941 V.N. Alin, coll.; all the specimens identified by Linsenmaier and Niehuis in 1998 as *Chrysis angustula* Schenck.

**Distribution.** China (Heilongjiang, Jilin, Henan). Europe and Siberia (Kimsey and Bohart 1991).

**93. *Chrysis asahinai* Tsuneki, 1950**

[http://species-id.net/wiki/Chrysis\\_asahinai](http://species-id.net/wiki/Chrysis_asahinai)

*Chrysis asahinai* Tsuneki, 1950a: 80. Holotype ♀, Manchuria (80 (descr.), depository: OMNH).

*Chrysis asahinai*: Tsuneki 1953a: 59 (Manchuria: Ouri near Liaoyüanchow, cat.), 60 (figs 2A, 2B); Kimsey and Bohart 1991: 385 (cat., *pulchella* group); Kurzenko and Lelej 2007: 1005 (Northeast China, cat.).

*Chrysis (Chrysis) asahinai*: Linsenmaier 1959: 103 (Manchuria, key, tax., *pulchella* group).

**Distribution.** China (Liaoning).

**94. *Chrysis buda* Bohart, 1991**

[http://species-id.net/wiki/Chrysis\\_buda](http://species-id.net/wiki/Chrysis_buda)

Plate 29

*Chrysis (Tetrachrysis) buddhae* Semenov-Tian-Shanskij, 1967: 179. Holotype ♀, North China: Inner Mongolia (179 (descr.), depository: ZIN)\* *nec* Mocsáry, 1913a.

*Chrysis buda* Bohart (in Kimsey and Bohart), 1991: 392. Replacement name for *Chrysis buddhae* Semenov-Tian-Shanskij, 1967 *nec* Mocsáry, 1913a (cat., *ignita* group).

*Chrysis buda*: Kurzenko and Lelej 2007: 1005 (China: Hubei, cat.).

**Distribution.** China (Inner Mongolia, Hubei).

**Remarks.** The specimen labeled as type was collected on the 20.V.1908 by Kozlov (and not 20.VI.1908 as written in the original description) in Alashan, Tzosto Canyon and not Gansu.

**95. *Chrysis buddhae* Mocsáry, 1913**

[http://species-id.net/wiki/Chrysis\\_buddhae](http://species-id.net/wiki/Chrysis_buddhae)

Plate 30

*Chrysis (Hexachrysis) buddhae* Mocsáry, 1913a: 25. Lectotype ♂, design. by Bohart (in Bohart and French 1986: 341), Taiwan: Takao [= Kaohsiung] (depository: HNHM)\*.

*Chrysis (Hexachrysis) buddhae*: Mocsáry 1913b: 619 (China, Taiwan: Takao, cat.); Bischoff 1913: 64 (China, Taiwan, cat.); Uchida 1927: 152 (China, Taiwan, cat.); Tsuneki 1963a: 1 (China, Taiwan, key), 5 (tax., comp. notes), 6 (China, Taiwan, comp. notes).

*Chrysis buddhae*: Kimsey and Bohart 1991: 392 (Taiwan, cat., *smaragdula* group).

**Material examined.** 1♀, Taiwan, Taihanroku, 8–18.IV.1908, leg. H. Sauter, *Chrysis buddhae* Semenov det. Linsenmaier 1973 (NMLS) [Linsenmaier confused the name of the authors].

**Distribution.** China (Taiwan). Borneo, India (Kimsey and Bohart 1991).

**Remarks.** The specimen listed as *Chrysis (Hexachrysis) buddhae* by Uchida (1927) was considered as *C. takasago* Tsuneki, 1963 (Tsuneki 1963a).

## 96. *Chrysis carnifex* Mocsáry, 1889

[http://species-id.net/wiki/Chrysis\\_carnifex](http://species-id.net/wiki/Chrysis_carnifex)

Plate 31

*Chrysis (Tetrachrysis) carnifex* Mocsáry, 1889: 517. Holotype ♂, China: Ta-tschiantsy (517 (descr.), depository: HNHM)\*.

*Chrysis (Tetrachrysis) carnifex*: Mocsáry 1890a: 63 (China borealis, cat.); Bischoff 1913: 49 (North China, cat.); Uchida 1927: 151 (North China, cat.); Tsuneki 1948a: 125 (China, cat., synonym of *Chrysis chrysochlora* Mocsáry, 1889); Tsuneki 1948b: 48 (North China: Shanxi, tax.).

*Chrysis carnifex*: Dalla Torre 1892: 49 (China, cat.); Kimsey and Bohart 1991: 394 (China, cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Shanxi).

**Remarks.** The type of *Chrysis (Tetrachrysis) carnifex* shares most of the characteristics with the type of *Chrysis kieriensis* Mocsáry, which is the male of *Chrysis chrysochlora* Mocsáry. The main difference is found in the punctuation on the mesosoma and on the first two metasomal tergites. Tsuneki (1948a, 1948b) considered *Chrysis (Tetrachrysis) carnifex* Mocsáry as a junior synonym of *Chrysis chrysochlora* Mocsáry, 1889.

## 97. *Chrysis cavaleriei* (du Buysson, 1908)

[http://species-id.net/wiki/Tetrachrysis\\_cavalerieri](http://species-id.net/wiki/Tetrachrysis_cavalerieri)

Plate 32

*Tetrachrysis Cavaleriei* du Buysson, 1908: 211. Holotype ♀, China: Kouy-Tchéou [= Guizhou]: Kouy-Yang (211 (descr.), depository: MNHN)\*.

*Chrysis (Tetrachrysis) cavaleriei*: Bischoff 1913: 49 (China, cat.); Tsuneki 1953b: 27 (Middle China [= Guizhou]: Kouy-Yang, tax., descr.).

*Chrysis (Chrysis) cavaleriei*: Linsenmaier 1959: 112 (China, descr., distr., *succincta* group), 205 (fig. 422); Linsenmaier 1968: 69 (China, cat.).

*Chrysis cavaleriei*: Kimsey and Bohart 1991: 394 (China, cat., *succincta* group); Kurzenko and Lelej 2007: 1005 (China, cat.); Terayama et al. 2010: 8 (China, cat.).

**Distribution.** China (Guizhou). Korea (Tsuneki 1953b).

**98. *Chrysis ceciliae* du Buysson, 1904**

[http://species-id.net/wiki/Chrysis\\_ceciliae](http://species-id.net/wiki/Chrysis_ceciliae)

Plate 33

*Chrysis Ceciliae* du Buysson, 1904: 259. Holotype ♀, Java: Malang (259 (descr.), depository: MNHN)\*.

*Chrysidea (Chrysogona) insulicola* Mocsáry, 1913b: 614. Holotype ♀, Taiwan: Takao (614 (descr.), 619 (Taiwan, cat.), depository: HNHM)\* (synonymised by Kimsey and Bohart 1991: 395).

*Chrysis (Chrysogona) insulicola*: Uchida 1927: 151 (Taiwan, cat.); Uchida 1933: 2 (Taiwan, cat.).

*Chrysis (Chrysura) insulicola*: Tsuneki 1970b: 6 (Taiwan: Ssuchungchi, Taoyeh, tax., descr., figs 5–8).

*Chrysis ceciliae*: Kimsey and Bohart 1991: 321 (fig. 104b), 329 (fig. 107f), 336 (fig. 110f), 339 (tax., *ceciliae* group), 395 (Taiwan, cat., *ceciliae* group).

**Distribution.** China (Taiwan). Java, Philippines, Malaysia, Laos (Kimsey and Bohart 1991).

**Remarks.** Tsuneki (1970b) redescribed *Chrysidea (Chrysogona) insulicola* Mocsáry.

**99. *Chrysis chinensis* Mocsáry, 1912**

[http://species-id.net/wiki/Chrysis\\_chinensis](http://species-id.net/wiki/Chrysis_chinensis)

Plate 34

*Chrysis (Tetrachrysis) ignita* var. *chinensis* Mocsáry, 1912b: 589. Holotype ♀, China: Shanghai (589 (descr.), depository: HNHM)\*.

*Chrysis (Tetrachrysis) ignita* var. *chinensis* Bischoff, 1913: 53 (China, cat.); Trautmann 1927: 147 (China: Shanghai, cat.).

*Chrysis (Chrysis) chinensis*: Linsenmaier 1959: 158 (China, Manchuria, tax., descr., distr., *ignita* group), 205 (fig. 393); Linsenmaier 1997b: 39 (key), 113 (China, Manchuria, cat., descr., distr., *ignita* group, fig. 96).

*Chrysis chinensis*: Kimsey and Bohart 1991: 396 (China: Shanghai, cat., *ignita* group); Tarbinsky 2000: 195 (key), 202 (China, cat., distr.); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Material examined.** Heilongjiang: 1♀, Harbin, 25.VI.1950 leg. Alin; 2♂♂, Harbin, 20.VII.1953, leg. Alin; 1♀, Harbin, 24.VI.1953 leg. Alin. All the specimens identified by Linsenmaier in 1959 (NMLS).

**Distribution.** China (Heilongjiang, Shanghai).

**100. *Chrysis chrysochlora* Mocsáry, 1889**  
[http://species-id.net/wiki/Chrysis\\_chrysochlora](http://species-id.net/wiki/Chrysis_chrysochlora)  
 Plate 35

*Chrysis (Tetrachrysis) chrysochlora* Mocsáry, 1889: 589. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 396), Uzbekistan: Tashkent (depository: HNHM)\*.  
*Chrysis viridans* Radoszkowski, 1891: 192. Holotype ♀, Turkmenistan, Ashkabad (192 (descr.), depository: ISEA-PAS).  
*Chrysis (Tetrachrysis) chrysochlora*: Bischoff 1910: 483 (Chinese Turkestan [= Xinjiang]: Chotan-Kiljang, cat.); Tsuneki 1948a: 125 (China: Shanxi: Hengshuichen-Henglingkuan, cat.), 126 (tax., comp. notes, distr.), 128 (cat.).  
*Chrysis (Chrysis) chrysochlora*: Linsenmaier 1959: 152 (key), 161 (China, tax., descr., distr., *ignita* group).  
*Chrysis chrysochlora*: Kimsey and Bohart, 1991: 396 (cat.); Tarbinsky 2000: 193 (key), 197 (China, cat., distr.); Rosa et al. 2013: 17 (China, cat., distr.).

**Material examined.** 7♂♂ and 10♀♀ collected at: Alashan, Din-yuan-in, 3.–5.V.1908, 14.–28.V.1908, 31.V.1908, 3.VI.1908 and 23.–26.IV.1909, leg. Kozlov (ZIN); 1♀, Huan-He Valley, 6.–20.X.1908, leg. Kozlov (ZIN); 1♀, Gansu, Pin-fan, 21.–23.VIII.1908, leg. Kozlov; 1♀, env. Sinin, 1.IX.1908, leg. Kozlov (ZIN). All the specimen identified as *Chrysis viridans*.

**Distribution.** China (Xinjiang, Inner Mongolia, Gansu, Shanxi). Turkmenistan (Radoszkowski, 1891), Iran, Lebanon, Turkey, Turkmenistan (Linsenmaier 1959, 1968), Uzbekistan (TARBINSKY 2000).

**101. *Chrysis comta* Förster, 1853**  
[http://species-id.net/wiki/Chrysis\\_comta](http://species-id.net/wiki/Chrysis_comta)

*Chrysis comta* Förster, 1853: 314. Holotype ♂, Turkey (314 (descr.), depository: lost).  
*Chrysis (Tetrachrysis) ignita* f. *comta*: Tsuneki 1948a: 126 (cat.), 127 (China: Shanxi: Luan-hsien, Nanpintsun, distr.), 128 (Shanxi, cat.).  
*Chrysis (Chrysis) comta*: Linsenmaier 1959: 151 (key), 152 (key), 158 (Manchuria, tax., descr., distr., *ignita* group), 208 (fig. 500).  
*Chrysis comta*: Móczár 1967: 111 (key, tax., descr.), 112 (Manchuria, distr.); Kimsey and Bohart 1991: 399 (cat., *ignita* group).

**Material examined.** Heilongjiang: 2♂♂, Harbin, 31.V.1943 leg. Alin; 1♂, Harbin, 20.VII.1953.

**Distribution.** China (Heilongjiang, Shanxi). Europe, southern Russia (Linsenmaier, 1959).

**102. *Chrysis consobrina* Mocsáry, 1889, status revived**

[http://species-id.net/wiki/Chrysis\\_consobrina](http://species-id.net/wiki/Chrysis_consobrina)

Plate 36

*Chrysis consobrina* Mocsáry, 1889: 458. Lectotype ♀ design. by Bohart (in Bohart and French 1986: 341), Transcaspia (depository: HNHM)\*.

*Chrysis scutellaris* ssp. *consobrina*: Semenov-Tian-Shanskij and Nikol'skaja 1954: 127 (China: Xinjiang, tax., descr.).

*Chrysis (Chrysis) soror* ssp. *consobrina*: Linsenmaier 1959: 125 (tax., descr., distr., *scutellaris* group).

*Chrysis soror*: Kimsey and Bohart 1991: 464 (cat., *scutellaris* group).

**Distribution.** China (Xinjiang).

**Remarks.** *C. consobrina* was considered a subspecies of *C. scutellaris* Fabricius by Semenov-Tian-Shanskij and Nikolskaja (1954), and later, a subspecies of *C. soror* Dahlbom (Linsenmaier 1959), the eastern greenish form of *C. scutellaris*. For this reason Kimsey and Bohart (1991) placed it in synonym of *C. soror*. However the type examination of *C. consobrina* confirms that it is a valid species because it shares only a similar colour with *C. scutellaris* and *C. soror*.

**103. *Chrysis dentipes* Radoszkowski, 1877**

[http://species-id.net/wiki/Chrysis\\_dentipes](http://species-id.net/wiki/Chrysis_dentipes)

*Chrysis dentipes* Radoszkowski, 1877: 15. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 403, Uzbekistan: Sarafchan (depository: MMU)\*.

*Chrysis eversmanni* Mocsáry, 1912a: 407. Holotype ♂, Turkestan (407 (descr.), depository: HNHM) (synonymised by Kimsey and Bohart 1991: 403).

*Chrysis (Cornuchrysis) eversmanni*: Linsenmaier 1968: 115 (China, tax., *taczanovskii* group).

*Chrysis dentipes*: Kimsey and Bohart 1991: 403 (cat., *taczanovskii* group).

**Material examined.** 1♂, 2♀: Harare Ketmen, Tjube, Thian Chan Occid. Monts Sussamyr leg. Pic 1914, *Chrysis eversmanni* Mocs. det. Linsenmaier 1973 (NMLS).

**Distribution.** China (Xinjiang). Iran, Tadzhikistan, Turkmenistan, Uzbekistan (du Buysson 1900; Mocsáry, 1912a; Semenov-Tian-Shanskij, 1954; Kimsey and Bohart 1991; Tarbinsky 2002a).

**104. *Chrysis duplopilosa* Linsenmaier, 1968**

[http://species-id.net/wiki/Chrysis\\_duplopilosa](http://species-id.net/wiki/Chrysis_duplopilosa)

*Chrysis (Chrysis) duplopilosa* Linsenmaier, 1968: 101. Holotype ♀, Tibet: Gyangtse (101 (descr.), *ignita* group, depository: BMNH).

*Chrysis duplopilosa*: Kimsey and Bohart 1991: 406 (Tibet: Gyangtse, cat., *ignita* group).

**Distribution.** China (Tibet).

**105. *Chrysis durga* Bingham, 1903**

[http://species-id.net/wiki/Chrysis\\_durga](http://species-id.net/wiki/Chrysis_durga)

Plate 37

*Chrysis durga* Bingham, 1903: 487. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 406), Burma: Mandalay (depository: BMNH)\*.

*Chrysis durga*: Kimsey and Bohart 1991: 406 (China, lectotype design., cat., *smaragdula* group).

**Distribution.** China, Burma, Laos, Malaysia (Kimsey and Bohart 1991).

**106. *Chrysis extersa* du Buysson, 1898**

[http://species-id.net/wiki/Chrysis\\_extersa](http://species-id.net/wiki/Chrysis_extersa)

*Chrysis extersa* du Buysson, 1898b: 137. Holotype ♀ China: Nyan-kin [= Nanjing] (137 (descr.), depository: MNHN).

*Chrysis extersa*: Kimsey and Bohart 1991: 410 (China: Nyan-kin [= Nanjing], cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Jiangsu).

**107. *Chrysis fasciata daphne* Smith, 1874**

[http://species-id.net/wiki/Chrysis\\_daphne](http://species-id.net/wiki/Chrysis_daphne)

*Chrysis Daphne* Smith, 1874a: 399. Holotype ♀ Japan: Hiogo (399 (descr.), depository: BMNH).

*Chrysis (Hexachrysis) zetterstedti* Dahlbom, 1845: Tsuneki 1947: 57 (China: Beijing, cat., distr.) [misid.].

*Chrysis (Tetrachrysis) daphne*: Tsuneki 1948b: 48 (tax.).

*Chrysis (Hexachrysis) fasciata zetterstedti*: Tsuneki 1953a: 60 (Manchuria: Tashonshan [= Guansu, Daxiangshan], tax., distr.) [misid.]; Tsuneki 1953b: 28 (North China, tax., distr.) [misid.].

*Chrysis (Chrysis) fasciata* var. *daphne*: Linsenmaier 1959: 163 (China (?), tax., descr., *fasciata* group).

*Chrysis (Hexachrysis) fasciata daphne*: Tsuneki 1963a: 1 (Manchuria, North China, key), 8 (Manchuria, North China, Beijing, tax., descr.), 9 (comp. notes, figs 16–23).

*Chrysis (Pyria) fasciata daphne*: Tsuneki 1970c: 49 (North China, key, tax.).

*Chrysis fasciata*: Kimsey and Bohart 1991: 410 (*smaragdula* group, cat.); Kurzenko and Lelej 2007: 1005 (Northeast China, cat.); Terayama et al. 2010: 4 (figs.), 8 (China, cat.), 12 (tab., biol.), 13 (fig. 2), 14 (fig. 7).

**Material examined.** Heilongjiang: 1♀, Harbin, 1.VIII.1943 leg. Alin, *Chrysis fasciata zetterstedti* Dhlb. det. Linsenmaier 1974 (NMLS).

**Distribution.** China (Heilongjiang, Gansu, Beijing). Japan (Smith 1874a; Linsenmaier 1959).

**Remarks.** At present, *Chrysis fasciata* var. *zetterstedti* Dahlbom, 1845 is known for certain only in Scandinavian countries and the Baltic countries. The Chinese and Japanese specimens should be considered as *Chrysis fasciata* ssp. *daphne*. Unpublished molecular data confirms that *zetterstedti* and *daphnis* belong to separate clades of the typical *Chrysis fasciata fasciata* (Paukkunen et al. 2014).

### 108. *Chrysis foochowia* Linsenmaier, 1968

[http://species-id.net/wiki/Chrysis\\_foochowia](http://species-id.net/wiki/Chrysis_foochowia)

*Chrysis (Chrysis) foochowia* Linsenmaier, 1968: 102. Holotype ♀, China: Foochow [Fujian] (102 (descr., *ignita* group), depository: BMNH).

*Chrysis foochowia*: Kimsey and Bohart 1991: 411 (China, cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (Southeast China, cat.).

**Material examined.** Fujian: 1♀, China Foochow C.R. Kellogg / Type ♀ *Chrysis* L. *foochowia* Lins. det. Linsenmaier 1966.

**Distribution.** China (Fujian).

### 109. *Chrysis fossulata* Smith, 1874

[http://species-id.net/wiki/Chrysis\\_fossulata](http://species-id.net/wiki/Chrysis_fossulata)

*Chrysis fossulatus* (!) Smith, 1874b: 459. Holotype ♀, China: Shanghai (459 (descr.), depository: BMNH).

*Chrysis (Tetrachrysis) fossulata*: Mocsáry 1889: 375 (China septentrionalis, tax., descr.); Bischoff 1913: 51 (North China, cat.).

*Chrysis fossulata*: Dalla Torre 1892: 62 (China borealis, cat.); Kimsey and Bohart 1991: 412 (China, cat., *intricans* group).

**Distribution.** China (Shanghai). Neotropical species distributed from Brazil to Venezuela (Kimsey and Bohart 1991).

**Remarks.** According to Kimsey and Bohart (1991), *Chrysis fossulata* was introduced to China, South Africa and Australia via commerce.

### 110. *Chrysis fouqueti* du Buysson, 1908

[http://species-id.net/wiki/Chrysis\\_fouqueti](http://species-id.net/wiki/Chrysis_fouqueti)

*Chrysis Fouqueti* du Buysson, 1908: 210. Holotype ♀, Viet Nam: “Tonkin” (210 (de-scr.descr.), depository: MNHN)\*.

*Chrysis (Tetrachrysis) faceta* Mocsáry, 1912b: 561. Holotype ♂, Taiwan: Takao [= Kaohsiung], (561 (descr.), depository: HNHM) nec Aaron, 1885.

*Chrysis (Tetrachrysis) faceta*: Mocsáry 1913b: 615 (Taiwan: Takao [= Kaohsiung], Taihorin, Taihorinsho, cat.), 619 (Taiwan, cat.); Bischoff 1913: 51 (Taiwan, cat.); Uchida 1927: 151 (Taiwan, cat.); Uchida 1933: 5 (Taiwan: Tainan, Shinka, cat.).

*Chrysis (Chrysis) facetana* Linsenmaier, 1968: 101. Replacement name for *Chrysis faceta* Mocsáry, 1912.

*Chrysis (Chrysis) faceta*: Tsuneki 1970b: 13 (Taiwan: Tsukeng, Chuantou, Fangliao, Fangshnlu, Paoli, tax., descr.), 14 (figs 35–37).

*Chrysis fouqueti*: Kimsey and Bohart 1991: 412 (Taiwan, cat., ignita group); Kurzenko and Lelej 2007: 1005 (Taiwan, cat.).

**Material examined.** 1♀, China Tinghai [= Qinghai], Chusom Coll. Linsenmaier / ♀ *Chrysis L. fouqueti* Buyss. det. Linsenmaier 1973.

**Distribution.** China (Qinghai, Shandong, Taiwan). Mongolia, Viet Nam (du Buysson 1908; Mocsáry, 1912).

**Remarks.** Linsenmaier (1959, 1968) considered *C. csikiana* as a subspecies of *C. fouqueti* from the Chinese mainland and *C. facetana* to be a subspecies from Taiwan.

### 111. *Chrysis fulgida* Linnaeus, 1761

[http://species-id.net/wiki/Chrysis\\_fulgida](http://species-id.net/wiki/Chrysis_fulgida)

*Chrysis fulgida* Linnaeus, 1761: 415. Lectotype ♀ design. by Morgan (1984: 9), Sweden: Uppsala (depository: LSL).

*Chrysis (Tetrachrysis) fulgida*: Trautmann 1927: 175 (E China, tax., descr.); Tsuneki 1950: 79 (comp. notes).

*Chrysis (Chrysis) fulgida*: Linsenmaier 1997b: 37 (key), 121 (colour table), 122 (Manchuria, tax., descr., ignita group, fig. 104).

*Chrysis fulgida*: Kimsey and Bohart 1991: 412 (cat.).

**Material examined.** Heilongjiang: 1♀, Harbin, 9.VII.1944 leg. Alin, identified by Linsenmaier in 1973 as *fulgida* ssp. *aequicolor* (NMLS).

**Distribution.** China (Heilongjiang). Widely distributed from Europe to Asia (Dalla Torre 1892; Tsuneki 1953b; Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

### 112. *Chrysis galloisi* (du Buysson, 1908)

[http://species-id.net/wiki/Tetrachrysis\\_galloisi](http://species-id.net/wiki/Tetrachrysis_galloisi)

*Tetrachrysis Galloisi* du Buysson, 1908: 210. Lectotype ♂ design. by Bohart (in Kimsey and Bohart 1991: 413), Japan (depository: MNHN)\*.

*Chrysis (Tetrachrysis) galloisi*: Tsuneki 1948b: 52 (tax.).

*Chrysis (Chrysis) galloisi*: Linsenmaier 1959: 150 (key), 161 (tax., descr., *ignita* group).

*Chrysis galloisi*: Kimsey and Bohart 1991: 413 (lectotype design., cat., *ignita* group);

Kurzenko and Lelej 2007: 1005 (China, cat.); Terayama et al. 2010: 4 (figs.), 8 (China, cat.), 12 (tab., biol.).

**Distribution.** China. Southeastern Russia and Russian Far East, Japan (Tsuneki 1950; Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

### 113. *Chrysis gracilenta* Mocsáry, 1889

[http://species-id.net/wiki/Chrysis\\_gracilenta](http://species-id.net/wiki/Chrysis_gracilenta)

Plate 38

*Chrysis (Tetrachrysis) gracilenta* Mocsáry, 1889: 375. Holotype ♀, China: Hong Kong (375 (descr.), depository: NHMW)\*.

*Chrysis (Tetrachrysis) gracilenta*: Bingham 1903: 437 (key), 464 (China, tax., descr.); Bischoff 1913: 52 (China, cat.).

*Chrysis gracilenta*: Dalla Torre 1892: 64 (China, cat.); Kimsey and Bohart 1991: 415 (Hong Kong, cat. *ignita* group).

**Distribution.** China (Hong Kong). Burma, India (Bingham 1903, Bischoff 1913).

### 114. *Chrysis graelsii* Guérin-Méneville, 1842

[http://species-id.net/wiki/Chrysis\\_graelsii](http://species-id.net/wiki/Chrysis_graelsii)

*Chrysis graelsii* Guérin-Méneville, 1842: 148. Holotype ♀, Spain: Barcelona (148 (descr.), depository: MSNG)\*.

*Chrysis sybarita* f. *pekinensis* Tsuneki, 1947: 57. Syntypes, China: Beijing (56 (tax., distr.), 57 (descr.), depository: NMLS)\*.

*Chrysis sybarita* Förster, 1853: 309. Holotype ♂, Hungary ((309 (descr.), Type lost ?).

*Chrysis (Chrysis) sybarita*: Linsenmaier 1959: 135 (*sybarita* group).

*Chrysis graelsii*: Kimsey and Bohart 1991: 341 (fig. 111d), 347 (tax.), 415 (cat., *graelssii* group).

**Material examined.** 2♂♂, Peking N. China 20.V.38 K. Tsuneki / Types are much larger <handwritten by Tsuneki> / Paratype *Chrysis sybarita* var. *pekinensis* K. Tsuneki (NMLS).

**Distribution.** China (Beijing). Europe, Iran, Kyrgyzstan, Siberia, Turkey (Linsenmaier 1959, 1968, 1997a; Semenov-Tian-Shanskij 1967; Tarbinsky 2002c).

**Remarks.** *Chrysis sybarita* var. *pekinensis* Tsuneki is not mentioned in Kimsey and Bohart (1991).

### 115. *Chrysis grumorum* Semenow, 1892

[http://species-id.net/wiki/Chrysis\\_grumorum](http://species-id.net/wiki/Chrysis_grumorum)

Plate 39

*Chrysis grumorum* Semenow, 1892: 92. Holotype ♂ (not ♀), Tibet: Amdo (92 (descr.), depository: ZIN)\*.

*Chrysis (Tetrachrysis) grumorum*: Bischoff 1913: 52 (Amdo, cat.).

*Chrysis grumorum*: Kimsey and Bohart 1991: 416 (Tibet: Amdo, cat., *ignita* group).

**Distribution.** China (Tibet).

### 116. *Chrysis hoozana* Mocsáry, 1913

[http://species-id.net/wiki/Chrysis\\_hoozana](http://species-id.net/wiki/Chrysis_hoozana)

Plate 40

*Chrysis hoozana* Mocsáry, 1913b: 615. Holotype ♀ (not ♂), Taiwan: Hoozan [= Fengshan] (615 (descr.), 619 (Taiwan, cat.). depository: HNHM)\*.

*Chrysis (Tetrachrysis) hoozana*: Uchida 1927: 151 (Taiwan, cat.); Uchida 1933: 5 (Taiwan, cat.).

*Chrysis (Chrysis) hoozana*: Tsuneki 1970b: 15 (Taiwan, tax., descr.).

*Chrysis hoozana*: Kimsey and Bohart 1991: 418 (Taiwan: Hoozan [= Fengshan], cat., *ignita* group).

**Distribution.** China (Taiwan).

### 117. *Chrysis hyacinthus* Semenov-Tian-Shanskij, 1967

[http://species-id.net/wiki/Chrysis\\_hyacinthus](http://species-id.net/wiki/Chrysis_hyacinthus)

Plate 41

*Chrysis (Tetrachrysis) hyacinthus* Semenov-Tian-Shanskij, 1967: 168. Holotype ♀, China [Xinjiang]: Gashun, Bugas near Hami [Kumul] (168 (descr.), depository: ZIN)\*.

*Chrysis hyacinthus*: Kimsey and Bohart 1991: 419 (North China, cat., *splendidula-senegalensis* group); Tarbinsky 2002c: 36 (sub *hiacithus* (!) key), 37 (China, cat.); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Xinjiang).

### 118. *Chrysis ignifascia* Mocsáry, 1893

[http://species-id.net/wiki/Chrysis\\_ignifascia](http://species-id.net/wiki/Chrysis_ignifascia)

*Chrysis (Holochrysis) birmanica* Mocsáry, 1893: 214. Holotype ♂, Burma (214 (descr.), depository: MSNG)\*.

*Chrysis (Holochrysis) ignifascia* Mocsáry, 1893: 215. Holotype ♀, Burma (215 (descr.), depository: MSNG)\*.

*Chrysis birmanica*: Kimsey and Bohart 1991: 420 (synonym of *ignifascia*); Rosa 2009: 221 (tax., type, cat.).

*Chrysis ignifascia*: Kimsey and Bohart 1991: 420 (China, cat., *capitalis* group).

*Chrysis (Holochrysis) ignifascia*: Rosa 2009: 233 (tax., type, cat.).

**Material examined.** 1♀, Taiwan, Koshun, Apr. 1937, coll. K. Iwata (NMLS).

**Distribution.** China (Taiwan). Burma (Mocsáry, 1893).

### 119. *Chrysis ignita* (Linnaeus, 1758)

[http://species-id.net/wiki/Sphex\\_ignita](http://species-id.net/wiki/Sphex_ignita)

*Sphex ignita* Linnaeus, 1758: 571. Lectotype ♀ design. by Richards (1935: 159), Europe (depository: LSL).

*Chrysis (Tetrachrysis) ignita*: Mocsáry 1889: 487 (tax.), 488 (China boreali, tax., descr.); Uchida 1927: 151 (North China, cat.); Tsuneki 1947: 55 (China: Beijing, cat.); Tsuneki 1948a: 126 (China: Hengshuichen-Henglingkuan, Henglingshan-Pei-hungkaokao, cat.), 128 (Beijing distr., Manchuria, Shanxi, cat.); Tsuneki 1953a: 58 (Manchuria: Wenchüansze; Heilongjiang: Harbin, tax.).

*Chrysis ignita*: Dalla Torre 1892: 69 (China boreali, cat.); du Buysson 1898a: 535 ("Montagnes au nord de Péking", cat.); du Buysson 1899: 167 (China, cat.); du Buysson 1900: 148 (China: Beijing, cat.); Kimsey and Bohart 1991: 317 (fig. 103), 336 (fig. 110a), 348 (tax., *ignita* group), 420 (cat.); Kurzenko and Lelej 2007: 1005 (China, cat.).

*Chrysis ignita* var.: Hammer 1936: 3 (China: Inner Mongolia: Hurtjertu Gol, cat.).

*Chrysis (Chrysis) ignita*: Linsenmaier 1959: 151 (key), 152 (key), 155 (tax., *ignita* group), 205 (fig. 388), 217 (fig. 696).

**Distribution.** China (Heilongjiang, Inner Mongolia, Hebei, Beijing, Shanxi). Widely distributed in the Palaearctic Region (Trautmann 1927; Linsenmaier 1959; Kimsey and Bohart 1991).

**Remarks.** Some identification may be related to other species belonging to the *ignita* group. The species is traditionally subdivided in two forms, *C. ignita* A and B after Linsenmaier (1959), now recognized as two different species: *C. terminata* Dahlbom and *C. ignita* (Linnaeus).

## 120. *Chrysis illecebrosa* Semenov-Tian-Shanskij, 1967

[http://species-id.net/wiki/Chrysis\\_illecebrosa](http://species-id.net/wiki/Chrysis_illecebrosa)

Plate 42

*Chrysis (Tetrachrysis) illecebrosa* Semenov-Tian-Shanskij, 1967: 166. Holotype ♂, North China [= Xinjiang]: Bugs near Hami [Kumul] (166 (descr.), depository: ZIN)\*.

*Chrysis illecebrosa*: Kimsey and Bohart 1991: 421 (North China, cat., *comparata* group).

**Distribution.** China (Xinjiang).

## 121. *Chrysis inaequalis* Dahlbom, 1845

[http://species-id.net/wiki/Chrysis\\_inaequalis](http://species-id.net/wiki/Chrysis_inaequalis)

*Chrysis inaequalis* Dahlbom, 1845: 8. Holotype ♀, Turkey: Bosfor (8 (descr.), type lost).

*Chrysis (Tetrachrysis) inaequalis*: Tsuneki 1947: 56 (China: Beijing, cat.); Tsuneki 1948a: 126 (China: Shanxi: Kiutauyün, Hengshuichen, Hengshuichen-Henglingkuan, cat.), 128 (Beijing distr., Shanxi, cat.); Tsuneki 1953a: 59 (Manchuria: Kaiyüan, Lushan, cat., distr.).

*Chrysis (Pentachrysis) inaequalis*: Linsenmaier 1959: 165 (North China, Manchuria, tax., descr., *inaequalis* group), 205 (fig. 405), 213 (fig. 610); Linsenmaier 1997b: 38 (key), 126 (China, Manchuria, tax., descr., *inaequalis* group, fig. 110).

*Chrysis inaequalis*: Banaszak 1980: 28 (China, Manchuria, tax.); Kimsey and Bohart 1991: 329 (fig. 107q), 331 (108b), 335 (fig. 109k), 336 (fig. 110g), 351 (tax.), 422 (cat.).

**Material examined.** ♀, Beijing, Russian mission, 5.IX.1906, leg. Y. Vasiliev (ZIN); ♀, Alashan, Din-yuan-in, 5.–6.VI.1908, leg. Kozlov (ZIN).

**Distribution.** China (Liaoning, Inner Mongolia, Beijing, Shanxi). Widely distributed in central and southern Europe, Kyrgyzstan, Turkey (Linsenmaier 1959; Kimsey and Bohart 1991), Iran (Rosa et al. 2013), Kazakhstan, Tadzhikistan, Transcaucasia, Uzbekistan (Tarbinsky 2002b), Siberia (Dalla Torre 1892), Russian Far East (Kurzenko and Lelej 2007).

**122. *Chrysis ionophris* Mocsáry, 1893**

[http://species-id.net/wiki/Chrysis\\_ionophris](http://species-id.net/wiki/Chrysis_ionophris)

Plate 43

*Chrysis (Tetrachrysis) ionophris* Mocsáry, 1893: 226. Holotype ♀, Burma (226 (descr.), depository: MSNG)\*.

*Chrysis ionophris*: du Buysson 1899: 165 (China, cat.); Kimsey and Bohart 1991: 425 (Hong Kong, Taiwan, tax., *splendidula-senegalensis* group); Rosa 2009: 239 (tax., type, cat.).

*Chrysis (Tetrachrysis) schenklingi* Mocsáry, 1913b: 618. Lectotype ♀, design. by Bohart (in Kimsey and Bohart 1991: 425), Taiwan, depository: HNHM)\* (synonymised by Kimsey and Bohart 1991: 425).

*Chrysis (Tetrachrysis) schenklingi*: Uchida 1927: 151 (Taiwan, cat.).

*Chrysis (Chrysis) schenklingi*: Tsuneki 1961: 375 (Taiwan, tax., descr., figs 22–24); Tsuneki 1970b: 14 (Taiwan: Manchou, Ssuchungchi, Hengchun, tax., descr.), 15 (figs 38–39).

**Distribution.** China (Taiwan, Hong Kong). Burma, Laos, Sumatra, Thailand (Kimsey and Bohart 1991).

**Remarks.** Tsuneki (1970b) added some morphological characteristics under the name *C. schenklingi*.

**123. *Chrysis jelisyni* Radoszkowski, 1891**

[http://species-id.net/wiki/Chrysis\\_jelisyni](http://species-id.net/wiki/Chrysis_jelisyni)

*Chrysis Jelisyni* Radoszkowski, 1891: 186. Holotype ♀, Mongolia [= China]: Kansu [= Gansu], Jelissyn-Kuce (186 (descr.), depository: ISEA-PAS)\*.

*Chrysis (Tetrachrysis) jelisyni*: Bischoff 1913: 54 (Mongolia [= China], cat.).

*Chrysis jelisyni*: Kimsey and Bohart 1991: 426 (Mongolia [= China]: Kansu, cat., *comparata-scutellaris* group); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Gansu).

**124. *Chrysis kashgarica* Mocsáry, 1912**

[http://species-id.net/wiki/Chrysis\\_kashgarica](http://species-id.net/wiki/Chrysis_kashgarica)

*Chrysis kashgarica* Mocsáry, 1912b: 550. Holotype ♂, China [Xinjiang]: Kashgar (550 (descr.), depository: HNHM)\*.

*Chrysis kashgarica*: Kimsey and Bohart 1991: 427 (China: Sinkiang [= Xinjiang], cat., *ignita* group); Tarbinsky 2000: 194 (key), 198 (China, cat.).

**Distribution.** China (Xinjiang).

**125. *Chrysis kieriensis* Radoszkowski, 1887**

[http://species-id.net/wiki/Chrysis\\_kieriensis](http://species-id.net/wiki/Chrysis_kieriensis)

*Chrysis kieriensis* Radoszkowski, 1887: 47. Holotype ♀, China [Xinjiang]: Keria-Daria (47 (descr.), depository: ISEA-PAS)\*.

*Chrysis (Tetrachrysis) kieriensis*: Mocsáry 1889: 516 (Mongolia [= China], tax., descr.); Bischoff 1913: 54 (Mongolia [= China], cat.).

*Chrysis kieriensis*: Dalla Torre 1892: 73 (Mongolia [= China], cat.); Kimsey and Bohart 1991: 427 (Mongolia [= China], cat.); Kurzenko and Lelej 2007: 1005 (China: Xinjiang, cat.).

**Distribution.** China (Xinjiang).

**126. *Chrysis kokuevi* Semenov-Tian-Shanskij, 1967**

[http://species-id.net/wiki/Chrysis\\_kukuevi](http://species-id.net/wiki/Chrysis_kukuevi)

Plate 44

*Chrysis (Tetrachrysis) kokuevi* Semenov-Tian-Shanskij, 1967: 178. Holotype ♂, China: Alashan: Dyn-yuan-in oasis (178 (descr.), depository: ZIN)\*.

*Chrysis kokuevi*: Kimsey and Bohart 1991: 428 (N China: Dyn-yuan-in oasis, cat.).

**Distribution.** China (Inner Mongolia).

**Remarks.** It belongs to the *succincta* group. The metasoma of the holotype was glued on a card beneath the specimen.

**127. *Chrysis kozlovi* Semenov-Tian-Shanskij, 1967**

[http://species-id.net/wiki/Chrysis\\_kozlovi](http://species-id.net/wiki/Chrysis_kozlovi)

Plate 45

*Chrysis (Gonodontochrysis) kozlovi* Semenov-Tian-Shanskij, 1967: 160. Holotype ♂, North China: Alashan, Tzosto Canyon (160 (descr.), depository: ZIN)\*.

*Chrysis kozlovi*: Kimsey and Bohart 1991: 429 (Mongolia [= Inner Mongolia], Tzosto Canyon, cat., *rufitarsis* group).

**Distribution.** China (Inner Mongolia).

**128. *Chrysis kukunorensis* Semenov-Tian-Shanskij, 1967**

[http://species-id.net/wiki/Chrysis\\_kukunorensis](http://species-id.net/wiki/Chrysis_kukunorensis)

Plate 46

*Chrysis (Tetrachrysis) kukunorensis* Semenov-Tian-Shanskij, 1967: 178. Holotype ♀, China [Qinghai]: SE lake Kukunor [= Qinghai lake] (178 (descr.), depository: ZIN)\*.

*Chrysis kukunorensis*: Kimsey and Bohart 1991: 429 (North China: SE Lake Kukunor, cat.).

**Material examined.** 1♀, China: Gansu Xiahe (Labhran) 3000–3500 m, 13–23.7.91, leg. P. Salk, Linsenmaier det. 1995 (NMLS).

**Distribution.** China (Qinghai, Gansu).

**Remarks.** It belongs to the *ignita* group.

**129. *Chrysis lama* Mocsáry, 1914**

[http://species-id.net/wiki/Chrysis\\_lama](http://species-id.net/wiki/Chrysis_lama)

Plate 47

*Chrysis lama* Mocsáry, 1914: 45. Lectotype ♂ design. by Bohart (in Kimsey and Bohart 1991: 431), Tibet: Gyantse (depository: BMNH)\*.

*Chrysis lama*: Kimsey and Bohart 1991: 431 (Tibet: Gyantse, lectotype design., cat., *ignita* group).

**Distribution.** China (Tibet).

**130. *Chrysis lincea* Fabricius, 1775**

[http://species-id.net/wiki/Chrysis\\_lincea](http://species-id.net/wiki/Chrysis_lincea)

*Chrysis lincea* Fabricius, 1775: 367. Holotype, Sierra Leone (367 (descr.), depository: Drury coll.).

*Chrysis lyncea* (!): du Buysson 1898b: 560 (China, cat.).

*Chrysis (Pyria) lyncea* (!): Linsenmaier 1959: 178 (*lyncea* group).

*Chrysis lincea*: Kimsey and Bohart 1991: 326 (fig. 106u), 331 (figs 108o, 108p), 352 (cat.), 357 (fig. 113f), 433 (*lincea* group, cat.).

**Distribution.** China. Widely distributed in Asia, Australia and the Afrotropical Region (Linsenmaier 1959; Kimsey and Bohart 1991; Madl and Rosa 2012).

**131. *Chrysis longissima* du Buysson, 1898**

[http://species-id.net/wiki/Chrysis\\_longissima](http://species-id.net/wiki/Chrysis_longissima)

*Chrysis longissima* du Buysson, 1898b: 529. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 433), China: Kiang-si [= Jiangxi] (depository: MNHN).

*Chrysis longissima*: du Buysson 1899: 165 (China, cat.); Kimsey and Bohart 1991: 433 (China: Kiang-si [= Jiangxi], cat.); Kurzenko and Lelej 2007: 1005 (China, cat.).

*Chrysis (Tetrachrysis) longissima*: Bischoff 1913: 55 (China: Kiang-si [= Jiangxi], cat.).

**Distribution.** China (Jiangxi).

**132. *Chrysis longula aeneopaca* Linsenmaier, 1959**

[http://species-id.net/wiki/Chrysis\\_longula\\_aeneopaca](http://species-id.net/wiki/Chrysis_longula_aeneopaca)

*Chrysis (Chrysis) longula* ssp. *aeneopaca* Linsenmaier, 1959: 160. Holotype ♀, Transcaspia (160 (type series: China, Fennoscandia, Japan, Siberia, Transcaspia, descr.), *ignita* group, depository: NMLS)\*.

*Chrysis longula*: Kimsey and Bohart 1991: 433 (cat.).

**Distribution.** China. Fennoscandia, Japan, Siberia, Transcaspia (Linsenmaier 1959).

**133. *Chrysis mane* Semenov-Tian-Shanskij, 1912**

[http://species-id.net/wiki/Chrysis\\_mane](http://species-id.net/wiki/Chrysis_mane)

Plate 48

*Chrysis mane* Semenov-Tian-Shanskij, 1912: 192. Lectotype ♂, China: Alashan (192 (descr.), depository: ZIN)\*.

*Chrysis mane*: Kimsey and Bohart 1991: 436 (China [not Mongolia]: Gansu, Quinghai, cat., *ignita* group).

**Material examined.** 33♂♂, Din-yuan-in, IV.-VI.1908–1909, leg. Kozlov (ZIN); 1♂, env. Lang Zhou, 24.IV.1909, leg. Kozlov (ZIN); 4♀♀, env. Sinin, 1.–6.IX.1908, leg. Kozlov (ZIN); 19♀♀, Din-yuan-in, Alashan, IX.1908, leg. Kozlov (ZIN); 1♀, Ning-sia-fu, Yellow river Valley, 1.–4.VI.1908, leg. Kozlov (ZIN); 1♀, between Tsing-yung-siang and Pilung-gu-ang, 1908, leg. Kozlov (ZIN); 3♀♀, Alashan, Tzosto Canyon, 20.–26.V.1908, leg. Kozlov (ZIN).

**Distribution.** China (Gansu, Qinghai, Inner Mongolia).

**Remarks.** The lectotype bears the locality label: Alashan, oasis Din-yuan-in, 23.–26.IV.1909, expedition Kozlov.

**134. *Chrysis maracandensis* Radoszkowski, 1877**

[http://species-id.net/wiki/Chrysis\\_maracandensis](http://species-id.net/wiki/Chrysis_maracandensis)

*Chrysis maracandensis* Radoszkowski, 1877: 14. Lectotype ♂ [not ♀] design. by Bohart (in Kimsey and Bohart 1991: 436), Uzbekistan: Sarabschan (depository: MMU)\*.

*Chrysis (Tetrachrysis) maracandensis*: Bischoff 1910: 473 (Chinese Turkestan [= Xinjiang]: Pjalma-Chotan, cat.).

*Chrysis maracandensis*: Kimsey and Bohart 1991: 436 (cat., *comparata-scutellaris* group).

**Distribution.** China (Xinjiang). Turkmenistan, Uzbekistan (Kimsey and Bohart 1991; Tarbinsky 2002c).

**135. *Chrysis marginata* Mocsáry, 1889**

[http://species-id.net/wiki/Chrysis\\_marginata](http://species-id.net/wiki/Chrysis_marginata)

*Chrysis marginata* Mocsáry 1889: 451. Holotype ♀; Turkestan (451 (descr.), depository: ISEA-PAS)\*.

*Chrysis (Tetrachrysis) marginata*: Bischoff 1910: 479 (Chinese Turkestan [= Xinjiang]: Pjalma-Chotan, cat.); Semenov-Tian-Shanskij and Nikol'skaja 1954: 127 (China: Xinjiang, tax.).

*Chrysis (Chrysis) marginata*: Lisenmaier 1959: 146 (key, tax., descr., *comparata* group), 204 (fig. 373).

*Chrysis marginata*: Kimsey and Bohart 1991: 436 (cat., *comparata* group); Tarbinsky 2002c: 34 (China: Xinjiang, key, cat., distr.), 42 (figs 18–19).

**Distribution.** China (Xinjiang). Southeastern Europe, Cyprus, Greece, Iran, Kazakhstan, Palestine, Tadzhikistan, Turkey, Turkmenistan, Uzbekistan (Lisenmaier 1959; Tarbinsky 2002c; Rosa et al. 2013).

**136. *Chrysis matutina* Semenov-Tian-Shanskij, 1967**

[http://species-id.net/wiki/Chrysis\\_matutina](http://species-id.net/wiki/Chrysis_matutina)

Plate 49

*Chrysis (Tetrachrysis) matutina* Semenov-Tian-Shanskij, 1967: 179. Holotype ♀, China: Gansu (179 (descr.), depository: ZIN)\*.

*Chrysis matutina*: Kimsey and Bohart 1991: 437 (China: Hansiu, cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China: Hubei, cat., *ignita* group).

**Distribution.** China (Gansu, Hubei).

**137. *Chrysis mongoliana* Bohart, 1991**

[http://species-id.net/wiki/Chrysis\\_mongoliana](http://species-id.net/wiki/Chrysis_mongoliana)

Plate 50

*Chrysis (Tetrachrysis) mongolica* Semenov-Tian-Shanskij, 1967: 179. Holotype ♀, Mongolia: Transbaikal, Ingoda river (type series: N China: Alashan; 179 (descr.), depository: ZIN)\* nec Mocsáry, 1914.

*Chrysis mongoliana* Bohart (in Kimsey and Bohart), 1991: 440. Replacement name for *Chrysis (Tetrachrysis) mongolica* Semenov-Tian-Shanskij, 1967 nec Mocsáry, 1914.

*Chrysis mongoliana*: Kurzenko and Lelej 2007: 1005 (China: Gansu, cat.).

**Material examined.** 1♀, Alashan, Din-yuan-in, 20.V.1908, leg. Kozlov (ZIN); 1♀, Alashan, Tzosto Canyon, 25.V.1908, leg. Kozlov (ZIN):

**Distribution.** China (Inner Mongolia, Gansu).

**138. *Chrysis nigricincta* Bischoff, 1910**

[http://species-id.net/wiki/Chrysis\\_nigricincta](http://species-id.net/wiki/Chrysis_nigricincta)

*Chrysis (Tetrachrysis) nigricincta* Bischoff, 1910: 475. Holotype ♂, Chinese Turkestan [= Xinjiang]: Pjalma-Chotan (475 (descr.), depository: MNHU)\*.

*Chrysis (Tetrachrysis) nigricincta*: Bischoff 1913: 56 (Chinese Turkestan [= Xinjiang], cat.).

*Chrysis nigricincta*: Kimsey and Bohart 1991: 443 (China: Sinkiang [= Xinjiang], cat.).

**Distribution.** China (Xinjiang).

**139. *Chrysis nigropilosa* Tsuneki, 1970**

[http://species-id.net/wiki/Chrysis\\_nigropilosa](http://species-id.net/wiki/Chrysis_nigropilosa)

*Chrysis (Tetrachrysis) nigropilosa* Tsuneki, 1970b: 16. Holotype ♀, Taiwan: Chiai Province, Fenchifu, 1400 m (16 (descr.), 17 (type series: Taiwan: Fenchifu, Chiensching, descr., figs 42–48), depository: OMNH, not NIAS).

*Chrysis nigropilosa*: Kimsey and Bohart 1991: 443 (Taiwan: Chiai, Fenchifu, cat.).

**Distribution.** China (Taiwan).

**140. *Chrysis parallela* Brullé, 1846**

[http://species-id.net/wiki/Chrysis\\_parallelia](http://species-id.net/wiki/Chrysis_parallelia)

Plate 51

*Chrysis parallela* Brullé, 1846: 29. Holotype ♀ [not ♂], Indonesia: Timor Is. (29 (descr.), depository: MNHN).

*Chrysis parallela*: du Buysson 1901b: 104 (China, cat.); Kimsey and Bohart 1991: 447 (cat., *smaragdula* group).

*Chrysis fukaii* Rohwer, 1911: 478. Holotype ♀, Taiwan: Horisha (478 (descr.), depository: USNM) (synonymised by Kimsey and Bohart 1991).

*Chrysis assamensis* Mocsáry, 1913a: 24. Holotype ♀, India: Assam (24 (descr.), depository: HNHM)\* (synonymised by Kimsey and Bohart 1991).

*Chrysis principalis* var. *assamensis*: Tsuneki 1963a: 4 (Taiwan, tax.).

*Chrysis fukaii*: Tsuneki 1963a: 4 (possible syn. of *principalis* Smith, 1874); Tsuneki 1970b: 19 (synonym of *principalis* Smith, 1874).

**Distribution.** China (Taiwan). Widely distributed in the Oriental Region (Kimsey and Bohart 1991).

**Remarks.** *Chrysis fukaii* Rohwer was previously synonymised with *Chrysis principalis* Smith, 1874 by Tsuneki (1970), who also considered *C. assamensis* as a colour variation of *C. principalis* (Tsuneki 1963a).

#### 141. *Chrysis pleskei* Semenow, 1892

[http://species-id.net/wiki/Chrysis\\_pleskei](http://species-id.net/wiki/Chrysis_pleskei)

Plate 52

*Chrysis Pleskei* Semenow, 1892a: 257. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 449), China [Xinjiang]: Sandzhu (depository: ZIN)\*.

*Chrysis (Tetrachrysis) pleskei*: Bischoff 1910: 483 (Chinese Turkestan [= Xinjiang]: Pjalma-Chotan, cat.); Bischoff 1913: 57 (Chinese Turkestan [= Xinjiang]: Pjalma-Chotan, cat.).

*Chrysis pleskei*: Kimsey and Bohart 1991: 449 (China: Sinkiang [= Xinjiang], cat., *comparata-scutellaris* group); Kurzenko and Lelej 2007: 1005 (China: Xinjiang: Sandzhu, cat.).

**Distribution.** China (Xinjiang).

#### 142. *Chrysis potanini* Radoszkowski, 1891

[http://species-id.net/wiki/Chrysis\\_potanini](http://species-id.net/wiki/Chrysis_potanini)

*Chrysis potanini* Radoszkowski, 1891: 186. Holotype ♂, Mongolia [= China]: Tufyn (ISEA-PAS)\*.

*Chrysis (Tetrachrysis) potanini*: Bischoff 1911: 57 (Mongolia [= China], cat.).

*Chrysis potanini*: Kimsey and Bohart 1991: 450 (Mongolia [= China], cat.).

**Distribution.** China.

**Remarks.** It belongs to the *comparata* group.

### 143. *Chrysis principalis* Smith, 1874

[http://species-id.net/wiki/Chrysis\\_principalis](http://species-id.net/wiki/Chrysis_principalis)

*Chrysis principalis* Smith, 1874b: 461. Holotype ♀, China: Shanghai (46 (descr.), depository: HEC).

*Chrysis (Hexachrysis) principalis*: Mocsáry 1889: 559 (China, descr., distr.); Bischoff 1910: 490 (Taiwan, cat.); Mocsáry 1913b: 619 (Taiwan: Takao [= Kaohsiung], Taihorinsho, Anping, Kosempo, cat.); Uchida 1927: 152 (Taiwan, North China, cat.); Uchida 1933: 4 (Taiwan, North China, cat.); Tsuneki 1948a: 127 (China: Shanxi: Yangchêng, cat., distr.), 128 (Shanxi, cat.); Tsuneki 1953b: 28 (East coast of China, Taiwan, tax.); Tsuneki 1961: 377 (North China, Taiwan, tax.); Tsuneki 1963a: 2 (East China, Taiwan, key, tax., descr., distr.), 3 (figs 1–8), 4 (China as far north as Manchuria (Dairen), Taiwan: Taihoku, Heito, Kuraru, distr., comp. notes), 9 (comp. notes, fig. 9).

*Chrysis principalis*: Dalla Torre 1892: 85 (China, cat.); du Buysson 1898a: 537 (China: Kiang-si [= Jiangxi], cat.), 558 (North China: Pena, cat.); du Buysson 1899: 168 (China, cat.); du Buysson 1900: 153 (China: Beijing, cat.); Bingham 1903: 440 (key), 490 (tax., descr.), 491 (China, distr.); Kimsey and Bohart 1991: 450 (China: Shanghai, cat., *smaragdula* group); Kurzenko and Lelej 2007: 1005 (China, cat.); Terayama et al. 2010: 8 (China, Taiwan, cat.).

*Hexachrysis principalis*: Hammer 1950: 2 (China: Kiangsu [= Jiangsu], cat.).

*Chrysis (Pyria) principalis*: Tsuneki 1970b: 18 (Taiwan, cat.).

**Material examined.** 1♀, Taiwan, Chipon, VIII.1935, leg. K. Iwata, det. Linsenmaier 1974 (NMLS).

**Distribution.** China (Liaoning, Beijing, Shanxi, Jiangsu, Shanghai, Jiangxi, Taiwan). India, Sri Lanka, Sumatra, Java, Celebes, Siam, Aru Is., Korea (Tsuneki 1953b).

**Remarks.** Tsuneki (1970b) considered *C. buddhae* Mocsáry, 1913 and *C. fukai* Rowhwer, 1911 junior synonyms of *C. principalis* Smith, 1874. Kimsey and Bohart (1991) considered *C. buddhae* Mocsáry, 1913 as a valid species and *C. fukai* as a synonym of *C. parallelala* Brullé, 1846.

### 144. *Chrysis przewalskii* Radoszkovski, 1887

[http://species-id.net/wiki/Chrysis\\_przewalskii](http://species-id.net/wiki/Chrysis_przewalskii)

*Chrysis Przewalskii* Radoszkowski, 1887: 46. Holotype ♂, Mongolia [= China]: Zaïdam (46 (descr.), depository: ISEA-PAS)\*.

*Chrysis (Tetrachrysis) przewalskii*: Mocsáry 1889: 504 (Mongolia [= China], tax., descr.); Bischoff 1913: 57 (Mongolia [= China], cat.).

*Chrysis przewalskii*: Dalla Torre 1892: 86 (Mongolia [= China], cat.); Kimsey and Bohart 1991: 452 (Mongolia [= China], Keria Mts., cat., *pulchella* group).

**Distribution.** China (Xinjiang, Qinghai).

**145. *Chrysis rutilans extranea* Linsenmaier, 1959**

[http://species-id.net/wiki/Chrysis\\_rutilans\\_extranea](http://species-id.net/wiki/Chrysis_rutilans_extranea)

*Chrysis (Chrysis) rutilans* ssp. *extranea*: Linsenmaier 1959: 128. Holotype ♂, Japan (128 (key, tax., descr., *splendidula* group), 203 (fig. 302), 211 (figs 566, 569); depository: NMLS)\*.

*Chrysis rutilans*: Radoszkovsky 1866: 12 (China, tax.); Kimsey and Bohart 1991: 458 (cat., *splendidula* group).

*Chrysis (Chrysis) rutilans* ssp. *extranea*: Linsenmaier 1997b: 101 (China [Heilongjiang], tax.).

**Material examined.** Heilongjiang: 1♂, Harbin, 18.VI.1944 [Paratype]; 1♂ labeled: [Szechuen, China, Kintung, Chauchiati 24.IV.49 Y.W. Djon] [Paratype] (NMLS).

**Distribution.** China (Heilongjiang, Sichuan). Europe and Eurasia (Linsenmaier 1959, Kimsey and Bohart 1991).

**Remarks.** The specimens identified as *C. rutilans* Olivier by Radoszkovsky (1866) is very likely referable to other species, based on wrong identifications found in his collection.

**146. *Chrysis rutiliventris nankingensis* Linsenmaier, 1959**

[http://species-id.net/wiki/Chrysis\\_rutiliventris\\_nankingensis](http://species-id.net/wiki/Chrysis_rutiliventris_nankingensis)

*Chrysis (Chrysis) rutiliventris* ssp. *nankingensis* Linsenmaier, 1959: 153. Holotype ♀, China [Jiangsu]: Nanking [=Nanjing] (153 (descr.), *ignita* group, depository: NMLS)\*.

*Chrysis rutiliventris*: Kimsey and Bohart 1991: 458 (China: Nan King [= Nanjing], cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Material examined.** Jiangsu: 1♀, Nanking China 30.IV.23 / Presented by Van Dyke collector / Type ♀ *Chrysis* L. *rutiliventris* ssp. *nankingensis* det. Linsenmaier 1959 (NMLS).

**Distribution.** China (Jiangsu). Europe, Eurasia and North Africa (Kimsey and Bohart 1991).

**147. *Chrysis schalfeewi* Semenow, 1892**

[http://species-id.net/wiki/Chrysis\\_schalfeewi](http://species-id.net/wiki/Chrysis_schalfeewi)

Plate 53

*Chrysis Schalfeewi* Semenow, 1892: 80. Holotype ♂, China [Xinjiang]: Sandzhu (80 (descr.), depository: ZIN)\*.

*Chrysis (Tetrachrysis) schalfeewi* (!): Bischoff 1913: 58 (China, cat.). Incorrect emendation.

*Chrysis schalfeewi*: Kimsey and Bohart 1991: 459 (China: Sinkiang [= Xinjiang]: cat., *comparata-scutellaris* group); Kurzenko and Lelej 2007: 1005 (China: Xinjiang, cat.).

**Distribution.** China (Xinjiang).

**148. *Chrysis serena* Radoszkowski, 1891**

[http://species-id.net/wiki/Chrysis\\_serena](http://species-id.net/wiki/Chrysis_serena)

*Chrysis serena* Radoszkowski, 1891: 194. Holotype ♂, Iran: Sarakhs (194 (descr.), depository: ISEA-PAS)\*.

*Chrysis (Chrysis) pyrrhina* ssp. *serena*: Linsenmaier 1968: 82 (Manchuria [= Heilongjiang], tax., descr., distr., *viridula* group).

*Chrysis pyrrhina* Dahlbom, 1854: Kimsey and Bohart 1991: 454 (cat.).

**Material examined.** Heilongjiang: 1♀, Harbin, 19.VII.1953 (NMLS).

**Distribution.** China (Heilongjiang).

**149. *Chrysis sinensis* du Buysson, 1898**

[http://species-id.net/wiki/Chrysis\\_ignita\\_sinensis](http://species-id.net/wiki/Chrysis_ignita_sinensis)

*Chrysis ignita* var. *sinensis* du Buysson, 1898b: 139. Holotype ♀, China: Shanghai (139 (descr.), depository: MNHN).

*Chrysis (Tetrachrysis) ignita* var. *sinensis*: Bischoff 1913: 53 (China, cat.); Trautmann 1927: 145 (cat.), 147 (Shanghai, tax.).

*Chrysis (Chrysis) sinensis*: Linsenmaier 1959: 152 (key), 155 (China, tax., descr., *ignita* group).

*Chrysis sinensis*: Kimsey and Bohart 1991: 463 (cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China, cat.).

**Distribution.** China (Shanghai). Japan (Kimsey and Bohart 1991).

**150. *Chrysis spinidens* Mocsáry, 1887**

[http://species-id.net/wiki/Chrysis\\_spinidens](http://species-id.net/wiki/Chrysis_spinidens)

*Chrysis (Tetrachrysis) spinidens* Mocsáry (inédite) in Radoszkowski, 1887: 48. Holotype ♂, Mongolia [= China]: Zaïdam (48 (descr.), depository: ISEA-PAS)\*.

*Chrysis spinidens*: Dalla Torre 1892: 97 (Mongolia [= China], cat.); Kimsey and Bohart 1991: 464 (Mongolia [= China], cat.).

*Chrysis (Tetrachrysis) spinidens*: Bischoff 1913: 59 (Mongolia [= China], cat.).

**Distribution.** China (Qinghai).

**Remarks.** It belongs to the *ignita* group.

**151. *Chrysis splendidula* Rossi, 1790**

[http://species-id.net/wiki/Chrysis\\_splendidula](http://species-id.net/wiki/Chrysis_splendidula)

*Chrysis splendidula* Rossi, 1790: 76. Syntypes, Italy (76 (descr.), depository: MNHU)\*.

*Chrysis (Tetrachrysis) splendidula*: Tsuneki 1953a: 59 (Manchuria: Ronshui near Heiho, tax., distr.); Tsuneki 1953b: 26 (Manchuria, cat., distr.).

*Chrysis (Chrysis) splendidula*: Linsenmaier 1959: 127 (tax., descr., distr., *splendidula* group), 203 (fig. 301).

*Chrysis splendidula*: Kimsey and Bohart 1991: 341 (fig. 111g), 465 (cat., *splendidula* gr.).

**Distribution.** China (Heilongjiang). Widely distributed in the Palaearctic Region from south Europe and North Africa to Central Asia, Korea and Japan (Kimsey and Bohart 1991).

**152. *Chrysis strauchi* Semenow, 1892**

[http://species-id.net/wiki/Chrysis\\_strauchi](http://species-id.net/wiki/Chrysis_strauchi)

Plate 54

*Chrysis Strauchi* Semenow, 1892a: 85. Holotype ♂, Chinese Turkestan [= Xinjiang]: oasis Sandzhu (85 (descr.), depository: ZIN)\*.

*Chrysis (Tetrachrysis) strauchi* (!): Bischoff 1910: 483 (Chinese Turkestan [= Xinjiang], cat.).

*Chrysis (Tetrachrysis) strauchi*: Bischoff 1913: 60 (Chinese Turkestan [= Xinjiang], cat.).

*Chrysis strauchi*: Kimsey and Bohart 1991: 466 (China [Xinjiang], cat., *comparata-scutellaris* group); Kurzenko and Lelej 2007: 1005 (China: Xinjiang, cat.).

**Distribution.** China (Xinjiang).

**153. *Chrysis taihorina* Mocsáry, 1913**

[http://species-id.net/wiki/Chrysis\\_taihorina](http://species-id.net/wiki/Chrysis_taihorina)

Plate 55

*Chrysis (Tetrachrysis) taihorina* Mocsáry, 1913b: 617. Holotype ♂, Taiwan: Taihorin (617 (descr.), 619 (Taiwan, cat.), depository: HNHM)\*.

*Chrysis (Tetrachrysis) taihorina*: Uchida 1927: 151 (Taiwan, cat.); Uchida 1933: 5 (Taiwan, cat.).

*Chrysis (Chrysis) taihorina*: Tsuneki 1970b: 16 (Taiwan, cat.).

*Chrysis taihorina*: Kimsey and Bohart 1991: 469 (Taiwan, cat., *ignita* group).

**Distribution.** China (Taiwan).

**154. *Chrysis taiwana* Tsuneki, 1970**

[http://species-id.net/wiki/Chrysis\\_taiwana](http://species-id.net/wiki/Chrysis_taiwana)

*Chrysis (Chrysura) taiwana* Tsuneki, 1970b: 7. Holotype ♂, Taiwan [Pintung Province]: Hengchun (7 (tax., descr., figs 9–13), 8 (Taiwan, Hengchun), depository: OMNH).

*Chrysis taiwana*: Kimsey and Bohart 1991: 470 (Taiwan, cat., *capitalis* group).

**Distribution.** China (Taiwan).

**155. *Chrysis takasago* Tsuneki, 1963**

[http://species-id.net/wiki/Chrysis\\_takasago](http://species-id.net/wiki/Chrysis_takasago)

*Chrysis (Hexachrysis) takasago* Tsuneki, 1963a: 4. Syntypes ♀♀, Taiwan: Gyochi, Taihoku, Shinka, Kuraru, Urai (1 (Taiwan, key), 4 (tax., descr.), 5 (comp. notes, figs 10–12), depository: OMNH).

*Chrysis (Pyria) principalis* ssp. *takasago*: Tsuneki 1970b: 19 (Taiwan: Ilan, Hualien, Nantou, Taitung, Pingtung, tax., aberr.).

*Chrysis takasago*: Kimsey and Bohart 1991: 470 (Taiwan, cat., *smaragdula* group).

**Distribution.** China (Taiwan).

**156. *Chrysis takeuchii* Tsuneki, 1950**

[http://species-id.net/wiki/Chrysis\\_takeuchii](http://species-id.net/wiki/Chrysis_takeuchii)

*Chrysis (Tetrachrysis) takeuchii* Tsuneki, 1950: 76. Holotype ♀, Taiwan: Horisha (76 (descr.), 77 (type series: Taiwan: Horisha, Takesaki), depository: OMNH).

*Chrysis (Chrysis) takeuchii*: Tsuneki 1970b: 14 (Taiwan: Nanshanchi, tax., descr.), 15 (figs 40–41).

*Chrysis takeuchii*: Kimsey and Bohart 1991: 470 (Taiwan: Horisha, cat.).

**Distribution.** China (Taiwan).

**157. *Chrysis talitha* Mocsáry, 1913**

[http://species-id.net/wiki/Chrysis\\_talitha](http://species-id.net/wiki/Chrysis_talitha)

Plate 56

*Chrysis (Tetrachrysis) Talitha* Mocsáry, 1913b: 616. Holotype ♀, Taiwan: Taihorinsho (616 (descr.), 619 (Taiwan, cat.), depository: HNHM)\*.

*Chrysis (Tetrachrysis) talitha*: Uchida 1927: 152 (Taiwan, cat.); Uchida 1933: 5 (Taiwan, cat.).

*Chrysis (Chrysis) talitha*: Tsuneki 1970b: 15 (Taiwan: Taihorinsho, cat.).

*Chrysis talitha*: Kimsey and Bohart 1991: 470 (Taiwan: Taihorinsho, cat., *splendidula-senegalensis* group).

**Distribution.** China (Taiwan).

**158. *Chrysis tibetana* Mocsáry, 1914**

[http://species-id.net/wiki/Chrysis\\_tibetana](http://species-id.net/wiki/Chrysis_tibetana)

Plate 57

*Chrysis (Tetrachrysis) tibetana* Mocsáry, 1914: 43. Lectotype ♂ design. by Bohart (in Kimsey and Bohart 1991: 471), Tibet: Gyangtse (depository: BMNH)\*.

*Chrysis tibetana*: Kimsey and Bohart 1991: 471 (Tibet: Gyangtse, lectotype design., cat., *ignita* group).

**Material examined.** Tibet: Paralectotypes, 1♂, Gyangtse. 13,000ft June 1904 Tibet Exp. H.J. Walton 1905–173; 1♀, Tibet: Kyishong. 14,500 ft 10.VII.1924 Maj. R.W.G. Hingston / Everest Exp. Brit. Mus. 1924–386; both specimens identified by Lisenmaier in 1966 (NMLS).

**Distribution.** China (Tibet).

**159. *Chrysis tsingtauensis* Bischoff, 1910**

[http://species-id.net/wiki/Chrysis\\_tsingtauensis](http://species-id.net/wiki/Chrysis_tsingtauensis)

*Chrysis (Tetrachrysis) tsingtauensis* Bischoff, 1910: 482. Lectotype ♂ design. by Bohart (in Kimsey and Bohart 1991: 471), China [Qingdao]: Kiautschau [= Jiaozhou Bay], Tsingtau (MNHU)\*.

*Chrysis (Tetrachrysis) tsingtauensis*: Bischoff 1913: 60 (Tsingtau, cat.).

*Chrysis tsingtauensis*: Kimsey and Bohart 1991: 471 (China [Qingdao]: Kiautschau, Tsingtau, lectotype design., cat., *ignita* group).

**Material examined.** 1♂, Shanghai, 15.V.1923; 1♀, China “C.F.”, Lju Coll.; both specimens identified by Lisenmaier 1966, but to be considered as doubtful identifications.

**Distribution.** China (Shandong, Shanghai).

**160. *Chrysis varicolor* Smith, 1874**

[http://species-id.net/wiki/Chrysis\\_varicolor](http://species-id.net/wiki/Chrysis_varicolor)

*Chrysis varicolor* Smith, 1874b: 482. Holotype ♂, China [Fujian]: Foochow [= Fuzhou] (482 (descr.), depository: BMNH).

*Chrysis (Tetrachrysis) variicolor* (!): Mocsáry 1889: 539 (China: Ta-tschan-sy, tax., descr.).

*Chrysis variicolor* (!): Dalla Torre 1892: 105 (China borealis, cat.).

*Chrysis (Hexachrysis) variicolor* (!): Bischoff 1913: 68 (North China, cat.).

*Chrysis varicolor*: Kimsey and Bohart 1991: 474 (cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China: Fujian, cat.).

**Distribution.** China (Fujian).

### 161. *Chrysis vicaria* Mocsáry, 1913

[http://species-id.net/wiki/Chrysis\\_vicaria](http://species-id.net/wiki/Chrysis_vicaria)

Plate 58

*Chrysis (Hexachrysis) vicaria* Mocsáry, 1913a: 11. Lectotype ♂ design. by Bohart (in Bohart and French 1986: 343), China: Taiwan: Taihorinsho (11 (descr.), 12 (type series: Takao, Fuhosho, Tainan, Taihorinsho), depository: HNHM)\*.

*Chrysis (Hexachrysis) vicaria*: Mocsáry 1913b: 619 (Taiwan: Anping, Takao, Taihorinsho, Tainan, Fuhosho, cat.); Bischoff 1913: 68 (Taiwan, cat.); Uchida 1927: 152 (Taiwan, cat.).

*Chrysis (Hexachrysis) fasciata vicaria*: Tsuneki 1962: 2 (Taiwan, cat.); Tsuneki 1963a: 1 (Taiwan and probably eastern coast of China, key), 6 (tax., descr.), 7 (Taiwan, comp. notes, figs 13–15), 9 (comp. notes).

*Chrysis (Pyria) fasciata vicaria*: Tsuneki 1970b: 19 (Taiwan: Ilan, Nantou, Pingtung, cat.); Tsuneki 1970c: 49 (Taiwan, key, tax.).

*Chrysis vicaria*: Kimsey and Bohart 1991: 476 (Taiwan: Taihorinsho, cat., *smaragdula* group); Terayama et al. 2010: 9 (China (?), Taiwan, cat.).

**Material examined.** 1♀, Taiwan; Kosempo 7–19.IV.1908 leg. H. Sauter, identified by Linsenmaier 1973 (NMLS).

**Distribution.** China (Taiwan).

**Remarks.** Tsuneki (1962, 1963a, 1970b) considered *C. vicaria* as a subspecies of *C. fasciata* Olivier, 1790.

### 162. *Chrysis violenta ultramonticola* Linsenmaier 1968

[http://species-id.net/wiki/Chrysis\\_violenta\\_ultramonticola](http://species-id.net/wiki/Chrysis_violenta_ultramonticola)

*Chrysis (Chrysis) violenta* ssp. *ultramonticola* Linsenmaier, 1968: 97. Holotype ♀, Tibet: Tropde, 11.000 ft (97 (Tibet: Tropde, 11.000 ft; Rongshar, 13.000 ft, descr.), *ignita* group, depository: BMNH).

*Chrysis violenta*: Kimsey and Bohart 1991: 477 (Tibet, Everest Region: Tropde, cat., *ignita* group).

**Distribution.** China (Tibet). Nepal (Boesi et al. 2005).

**Host.** Boesi et al. (2005) found three specimens of *C. violenta ultramonticola* in the nest of *Ancistrocerus sikkimensis* Bingham (Hymenoptera, Vespidae, Eumeninae).

### 163. *Chrysis viridula* Linnaeus, 1761

[http://species-id.net/wiki/Chrysis\\_viridula](http://species-id.net/wiki/Chrysis_viridula)

*Chrysis viridula* Linnaeus, 1761: 415. Holotype ♂; Europe (415 (descr.), depository: LSL).

*Chrysis (Tetrachrysis) viridula* f. *apicata* Uchida, 1927: Tsuneki 1948b: 47 (Manchuria, tax.).

*Chrysis (Tetrachrysis) viridula*: Tsuneki 1953a: 59 (Manchuria [Jilin]: Chintsang, North of Kunchun, tax., distr.).

*Chrysis (Chrysis) viridula*: Linsenmaier 1959: 129 (key, *viridula* group), 130 (tax., descr.), 203 (fig. 304), 211 (figs 561, 562).

*Chrysis viridula*: Kimsey and Bohart 1991: 329 (fig. 107a), 341 (fig. 111h), 367 (cit.), 329 (fig. 197a), 341 (fig. 111h), 477 (cat.).

**Distribution.** China (Jilin). Widely distributed in the Palaearctic to Russian Far East (Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

**Remarks.** In Kimsey and Bohart (1991) *Chrysis viridula* var. *apicata* Uchida, 1927 from Japan is included in the synonymous list for *viridula*, but according to Tsuneki (1948b, 1953a), it is a synonym of *splendidula* Rossi, 1790.

### 164. *Chrysis volatilis* Smith, 1874

[http://species-id.net/wiki/Chrysis\\_volatilis](http://species-id.net/wiki/Chrysis_volatilis)

*Chrysis volatilis* Smith, 1874b: 459. Holotype ♀, Shanghai (459 (descr.), depository: BMNH).

*Chrysis (Tetrachrysis) volatilis*: Mocsáry 1889: 374 (Shanghai, descr., cat.); Bischoff 1913: 61 (North China, cat.).

*Chrysis volatilis*: Dalla Torre 1892: 109 (Shanghai, cat.); Kimsey and Bohart 1991: 478 (China: Shanghai, cat., *ignita* group); Kurzenko and Lelej 2007: 1005 (China: Shanghai cat.).

**Distribution.** China (Shanghai).

## 16. Genus *Chrysura* Dahlbom, 1845

### 165. *Chrysura hirsuta* (Gerstaecker, 1869)

[http://species-id.net/wiki/Chrysis\\_hirsuta](http://species-id.net/wiki/Chrysis_hirsuta)

*Chrysis hirsuta* Gerstaecker, 1869: 185. Holotype ♀, Austria: Ober-Kärnthen (depository: MNHU)\*.

*Chrysis davidi* du Buysson, 1898a: 524. Holotype ♀, China: Jehol [= Johol] (depository: MNHN).

*Chrysis davidi*: du Buysson, 1899: 163 (China, cat.).

*Chrysis (Holochrysis) davidi*: Bischoff 1913: 38 (North China, cat.); Tsuneki 1948a: 125a (China: Shanxi: Hengshuichen-Hengliguan, cat., distr.); 128 (China: Bei-

jing distr., Manchuria, Shanxi, cat.); Tsuneki 1948b: 47 (North China: Rehe, Shanxi, tax.); 51 (résumé); Tsuneki 1950: 67 (comp. notes); Tsuneki 1953b: 24 (North China, (Johol, Shanxi), cat.); Linsenmaier 1959: 79 (synonym of *hirsuta*). *Chrysis (Chrysogona) hirsuta*: Linsenmaier 1959: 79 (key, tax., descr., biol., *pustulosa* group), 202 (fig. 244). *Chrysis hirsuta*: Móczár 1967: 73 (China, key, tax., descr., biol.). *Chrysura hirsuta*: Kimsey and Bohart 1991: 490 (cat., *radians* group); Kurzenko and Lelej 2007: 1006 (China, cat.); Terayama et al. 2010: 4 (fig.), 9 (China, cat.), 12 (tab., biol.).

**Material examined.** 1♀, Kouy-Théou Cavalaire, 1921 (NMLS).

**Distribution.** China (Liaoning, Hebei, Beijing, Shanxi, Guizhou). Central Europe and Fennoscandia, south European mountains, Korea, Japan (Linsenmaier 1959; Tsuneki 1953b).

**Remarks.** Tsuneki (1948b) placed *C. iwatai* Tosawa, 1942 in synonym of *C. davidi* du Buysson. *C. iwatai* is considered as a valid species in the genus *Chrysis* by Kimsey and Bohart (1991: 426). Tsuneki (1950: 67) provided a comparison of *C. (Holochrysis) davidi* and *C. koma* Tsuneki, 1950. *Osmia orientalis* (Hymenoptera, Megachilidae) is recorded as its host (Terayama et al. 2010).

## 166. *Chrysura refulgens* (Spinola, 1806)

[http://species-id.net/wiki/Chrysis\\_refulgens](http://species-id.net/wiki/Chrysis_refulgens)

*Chrysis refulgens* Spinola, 1806: 8. Holotype ♀, Italy (8 (descr.), depository: MRSN)\*.

*Chrysis artifex* Smith, 1874b: 456. Holotype ♂, Hong Kong (456 (descr.), depository: BMNH) (synonymised by Kimsey and Bohart 1991).

*Chrysis (Holochrysis) artifex*: Mocsáry, 1889: 247 (tax., descr.), 248 (Hong Kong), Bischoff 1913: 37 (North China, cat.).

*Chrysis artifex*: Dalla Torre 1892: 44 (China, cat.).

*Chrysura refulgens*: Kimsey and Bohart 1991: 495 (cat., *radians* group).

**Distribution.** China (Hong Kong). Widely distributed in the Mediterranean basin (Linsenmaier 1959).

## 17. Genus *Euchroeus* Latreille, 1809

### 167. *Euchroeus mongolicus* Tsuneki, 1947

[http://species-id.net/wiki/Euchroeus\\_purpuratus\\_mongolicus](http://species-id.net/wiki/Euchroeus_purpuratus_mongolicus)

Plate 59

*Euchroeus purpuratus* f. *mongolicus* Tsuneki, 1947: 54. Holotype ♀, China: Inner Mongolia: Apaka (54 (descr., biol.), 55 (ecol.), depository: NIAS).

*Euchroeus purpuratus mongolicus*: Tsuneki 1948a: 124 (China: Manchuria, Nanpingsun, tax., descr.), 128 (Shanxi, cat.).

*Euchroeus (Euchroeus) mongolicus*: Lisenmaier 1959: 73 (Mongolia [= Inner Mongolia], tax., descr.), 200 (fig. 213).

*Brugmoia quadrata* (Shuckard, 1837): Kimsey and Bohart 1991: 296 (cat.).

**Material examined.** Paratypes, 2♂♂2♀♀, Apaka, Inner Mongolia, 4.VI.1939, K. Tsuneki, *Euchroeus purpuratus mongolicus* m. (NMLS).

**Distribution.** China (Inner Mongolia, Shanxi).

**Host.** Possible host is *Podalonia caucasica* Morawitz (Hymenoptera, Sphecidae).

**Remarks.** *Euchroeus mongolicus* was synonymised with *Brugmoia quadrata* (= *Euchroeus purpuratus*) by Kimsey and Bohart (1991). But, the generic name *Euchroeus* Latreille, 1809 and specific name *Chrysis purpurata* Fabricius, 1787 were conserved by ICZN (1998). As a result the generic name *Brugmoia* Radoszkowski, 1877 (used by Kimsey and Bohart (1991)) is a junior synonym of *Euchroeus* Latreille, 1809, and the name *quadrata* is a junior synonym of *purpurata*.

*E. mongolicus* is well characterized by the male's colouration (similar to that of the female, in contrast with the green-blue colouration of the males belonging to this genus) and by its sparse punctuation, the smallest mandibles and shorter tongue compared with the typical *E. purpuratus*.

## 168. *Euchroeus orientis* (Semenov-Tian-Shansky, 1909)

[http://species-id.net/wiki/Pseudochrysis\\_purpurata\\_orientis](http://species-id.net/wiki/Pseudochrysis_purpurata_orientis)

Plates 60, 61

*Pseudochrysis purpurata* ssp. *orientis* Semenov-Tian-Shansky, 1909: 214 [nec *Euchroeus*].

Lectotype ♂ design. by Kimsey (in Kimsey and Bohart 1991: 296), Dzungaria Chinense [= Xinjiang]: Bugas near Hami (depository: ZIN)\*.

*Euchroeus purpuratus* var. *orientalis* (!): Bischoff 1913: 29 (Dzungaria).

*Brugmoia purpurata* ssp. *orientis*: Kimsey and Bohart 1991: 296 (China: Dzungaria Chinense [= Xinjiang]: Hami, cat.).

**Material examined.** Paralectotype, 1♀, Dzungaria Chinense [= Xinjiang]: Bugas near Hami, 7.IX.1895, expedition Kozlov (ZIN).

**Distribution.** China (Xinjiang).

**Remarks.** The oriental specimens examined (from China to Kyrgyzstan) are differentiated from the typical *Euchroeus purpuratus* (Fabricius, 1787) and are considered as a valid species. The coarse body sculpture and different colouration between the two demonstrate that they are different species.

## 18. Genus *Praestochrysis* Linsenmaier, 1959

### 169. *Praestochrysis lachesis* (Mocsáry, 1913)

[http://species-id.net/wiki/Chrysis\\_lachesis](http://species-id.net/wiki/Chrysis_lachesis)

Plate 62

*Chrysis (Pentachrysis) lachesis* Mocsáry, 1913a: 7. Holotype ♂, Taiwan: Taihorisho (7 (descr.), depository: HNHM)\*.

*Chrysis (Pentachrysis) lachesis*: Mocsáry 1913b: 619 (Taiwan, cat.); Bischoff 1913: 62 (Taiwan, cat.); Uchida 1927: 152 (Taiwan, cat.); Tsuneki 1955: 35 (key), 40 (tax., descr.), 41 (Taiwan: Taihorihsho); Tsuneki 1970b: 18 (Taiwan, cat.).

*Chrysis (Pentachrysis) basilacuna* Sugihara, 1932: 372. Type ?; Taiwan (372 (descr.), depository unknown).

*Chrysis (Pentachrysis) basilacuna*: Tsuneki 1955: 35 (key), 41 (tax., descr.), 42 (figs 7–14), 43 (Taiwan: Taihoku); Tsuneki 1970b: 18 (synonym of *lachesis*).

*Praestochrysis lachesis*: Kimsey and Bohart 1991: 532 (Taiwan, cat.).

**Distribution.** China (Taiwan).

**Remarks.** Tsuneki (1955) assumed that *C. lachesis* was a synonym of *C. basilacuna*. According to his description, the only distinguishing characteristic between the two species is the length of the antennal segments, which we think that could be a sexual dimorphic characteristic. Tsuneki was not able to study the type of *C. lachesis* and postponed discussion of the possible synonymy. Later, Tsuneki (1970b) considered *C. basilacuna* a synonym of *C. lachesis* without further discussion, but he surely examined all of the material available in the area. Kimsey and Bohart (1991) did not examine the type of *C. basilacuna* and placed it in the genus *Chrysis*. However, the anal margin of the third tergite with five teeth excludes this species from the genus *Chrysis* s. str., and we agree with Tsuneki's interpretation.

### 170. *Praestochrysis ribbei* (Mocsáry, 1889)

[http://species-id.net/wiki/Chrysis\\_ribbei](http://species-id.net/wiki/Chrysis_ribbei)

Plate 63

*Chrysis (Pentachrysis) ribbei* Mocsáry, 1889: 524. Lectotype ♀ design. by Bohart (in Bohart and French 1986: 342), Celebes (depository: HNHM)\*.

*Chrysis (Pentachrysis) shanghaiensis* var. *ribbei*: Bischoff 1910: 486 (China: Canton [= Guangzhou], cat.).

*Chrysis (Pentachrysis) ribbei*: Tsuneki 1955: 43 (possible syn. of *Praestochrysis shanghaiensis*).

*Praestochrysis ribbei*: Kimsey and Bohart 1991: 534 (cat.).

**Distribution.** China (Guangdong). Indonesia, Thailand (Kimsey and Bohart 1991).

**171. *Praestochrysis shanghaiensis* (Smith, 1874)**

[http://species-id.net/wiki/Chrysis\\_shanghaiensis](http://species-id.net/wiki/Chrysis_shanghaiensis)

*Chrysis Shanghaiensis* Smith, 1874b: 460. Holotype ♀, China: Shanghai (469 (descr.), depository: BMNH).

*Chrysis (Pentachrysis) mandarina* Mocsáry, 1889: 522. Holotype ♀, China: Ta-tschian-sy (522 (descr.), depository: HNHM) (synonymised by Kimsey and Bohart 1991: 534).

*Chrysis (Pentachrysis) shanghaiensis*: Mocsáry, 1889: 522 (China borealis, tax., descr.); Bischoff 1910: 486 (China [Shandong]: Kiautschou [= Jiaozhou Bay], cat.); Bischoff 1913: 63 (North China, cat.); Uchida 1927: 152 (North China, Taiwan, cat.); Tsuneki 1953a: 60 (South Manchuria [Liaoning]: Dairen [= Dalian], Tashonshan, tax.); Tsuneki 1955: 36 (key), 43 (tax.), 44 (descr., figs 15–20, 46 (China, Dairen [= Dalian], Taiwan, biol.); Tsuneki 1970b: 18 (Taiwan: Penpuchi, Kuanfu, cat.); Tsuneki 1970c: 49 (eastern part of China, Manchuria, North China, key, tax.).

*Chrysis shanghaiensis*: Dalla Torre 1892: 95 (China borealis, cat.); du Buysson 1898c: 82 (China: Tché-li, Han-Kéou, Shanghai, tax., biol., morphology), pl. 1 (figs 1–7); du Buysson 1901a: 29 (China: Tché-li, Shanghai, tax., biol.); Seurat 1901: 236 (Shanghai, tax., biol.); Bingham 1903: 438 (key), 477 (tax., descr.), 478 (China, distr.); Hammer 1950: 1 (China: Kiansu [= Jiangsu], cat.).

*Praestochrysis shanghaiensis*: Kimsey and Bohart 1991: 534 (China, cat.); He et al. 2004: 889 (cat.); Kurzenko and Lelej 2007: 1006 (China, Taiwan, cat.); Terayama et al. 2010: 6 (figs.), 9 (China, Taiwan, cat.), 12 (tab., biol.).

**Material examined.** 1♂, China, 1947, Ming Po, Coll. Linsenmaier; 1♀ / J. de Joannis / with pinned cocoon; 1♂, [Hori, Formosa, 25.V.'32 / L. Gressitt Collection; 1♂, China, Ningpo, 1. –5.7.1934, Naef; 2♀♀, Chusan [= Zhoushan, Zhejiang] China, Juni, 1948, Collect. Naef. All the specimens were identified by Linsenmaier (NMLS).

**Distribution.** China (Liaoning, Jiangsu, Shandong, Jiangsu, Shanghai, Zhejiang, Taiwan, Jiangxi, Hubei, Hunan). Japan, Indin (He et al. 2004).

**Host.** *Monema flavescens* (Lepidoptera, Limacodidae) (du Buysson 1898c, 1901a, Seurat 1901). Various studies on the parasitism by *P. shanghaiensis* have been published (Yamada 1980, 1987a, 1987b, 1988, 1990, 1991; Komeda and Hisamatsu 2005).

**19. Genus *Primeuchroeus* Linsenmaier, 1968****172. *Primeuchroeus crassiceps* (Tsuneki, 1970)**

[http://species-id.net/wiki/Chrysis\\_crassiceps](http://species-id.net/wiki/Chrysis_crassiceps)

*Chrysis (Chrysura) crassiceps* Tsuneki 1970b: 8. Holotype ♀, Taiwan: Chiai Province: Kuanhua (8 (tax., descr., figs 12–22), 9 (Taiwan: Kuanhua, descr.), depository: NIAS).

*Primeuchroeus crassiceps*: Bohart 1988: 22 (fig.1), 23 (key); Kimsey and Bohart 1991: 541 (Taiwan: Chiai Prov.: Kuanhua, cat., *siamensis* group); Wei et al., 2014a: 45 (key, tax., descr.), 46 (figs 1–2, ♀), 47 (figs 3–9, ♀, *siamensis* group), 48 (figs 10–11, ♂), 49 (figs 12–18, ♂).

**Distribution.** China (Taiwan, Yunnan).

### 173. *Primeuchroeus kansitakuanus* (Tsuneki, 1970)

[http://species-id.net/wiki/Chrysis\\_kansitakuanus](http://species-id.net/wiki/Chrysis_kansitakuanus)

*Chrysis kansitakuanus* Tsuneki 1970b: 9. Holotype ♀, Taiwan: Chiai Province: Kan-sitaku (9 (tax., descr.), 10 (Taiwan, Kansitaku, descr., figs 23–26, comp. notes), depository: OMNH, not NIAS).

*Primeuchroeus kansitakuanus*: Bohart 1988: 22 (fig.2), 23 (key); Kimsey and Bohart 1991: 542 (*ghilianii* group); Wei et al. 2014a: 45 (key), 48 (China: Zhejiang: Lin'an, Mt. Qingliangfeng; Fujian: Da'an; Hubei, Jingmen, Jingshan; Hunan: Mt. Huping, Shinianzigou; Mt. Huping, Shinianzigou; Mt. Huping, Zongfeng; Mt. Huping, Shuawu village; Huaihua; Guangzhou: Wangzishan Forest Park; Liuxihe Forest Park; Guangdong: Chebaling National Nature Reserve; Hainan: Mt. Wu-zhi; Guizhou: Tianzhu; Mayang River, Dahe Dam; Yunnan: Jinggu, Yunhai Reserve; Yingjiang; Chenggong, Luoyang, tax.), 50 (figs 19–20, ♀), 51 (figs 21–27, ♀, descr.), 52 (biol., *ghiliani* group).

**Distribution.** China (Zhejiang, Fujian, Taiwan, Hubei, Hunan, Guangdong, Hainan, Guizhou, Yunnan). Malaysia, Viet Nam (Kimsey and Bohart 1991).

### 174. *Primeuchroeus yongdaerianus* Kim, 2013

[http://species-id.net/wiki/Primeuchroeus\\_yongdaerianus](http://species-id.net/wiki/Primeuchroeus_yongdaerianus)

*Primeuchroeus yongdaerianus* Kim, 2013: 95. Holotype ♀, Korea: Inje-gun, Buk-myeon, Yongdae-ri (95 (tax., descr.), 96 (figs 1A–1D, ecol., comp. notes)).

*Primeuchroeus yongdaerianus*: Wei et al. 2014a: 45 (key), 52 (China: Yunnan: Gaoli-gongshan National Nature Reserve; Mailongxia, tax., descr.), 53 (figs 28–29), 54 (figs 30–36), 55 (biol., *siamensis* group).

**Distribution.** China (Yunnan). Korea (Kim 2013).

## 20. Genus *Pseudospinolia* Linsenmaier, 1951

### 175. *Pseudospinolia humboldti* (Dahlbom, 1845)

[http://species-id.net/wiki/Chrysura\\_humboldti](http://species-id.net/wiki/Chrysura_humboldti)

*Chrysura humboldti* Dahlbom, 1845: 6. Holotype ♂, Rhodes (6 (descr.), depository: NHRS)\*.

*Pseudochrysis humboldti*: Tsuneki 1953a: 58 (China, tax.).

*Euchroeus (Pseudospinolia) humboldti*: Linsenmaier 1959: 67 (key, descr.), 201 (fig. 227).

*Pseudospinolia humboldti*: Kimsey and Bohart 1991: 547 (cat., distr.).

**Distribution.** China (Shanxi). Widely distributed in the Palaearctic Region (Kimsey and Bohart, 1991).

### 176. *Pseudospinolia incrassata* (Spinola, 1838)

[http://species-id.net/wiki/Chrysis\\_incrassata](http://species-id.net/wiki/Chrysis_incrassata)

*Chrysis incrassata* Spinola, 1838: 454. Syntypes ♀♀, Corse (454 (descr.), depository: MRSN)\*.

*Pseudochrysis incrassata*: Tsuneki 1953a: 57 (Manchuria [Liaoning]: Dairen [= Dalian], cat., distr.).

*Euchroeus (Pseudospinolia) incrassata*: Linsenmaier 1959: 67 (key, tax.), 68 (distr., descr.), 200 (fig. 207).

*Pseudospinolia incrassata*: Kimsey and Bohart 1991: 546 (fig. 138f), 547 (cat., distr.).

**Distribution.** China (Liaoning). Widely distributed in the Palaearctic Region (Linsenmaier 1959).

### 177. *Pseudospinolia neglecta* (Shuckard, 1837)

[http://species-id.net/wiki/Chrysis\\_neglecta](http://species-id.net/wiki/Chrysis_neglecta)

*Chrysis neglecta* Shuckard, 1837: 169. Lectotype ♀ design. by Morgan (1984: 9), England (depository: BMNH).

*Pseudochrysis neglecta*: Trautmann 1927: 92 (key), 99 (Tianshan [Xinjiang ?], descr., biol., distr.).

*Euchroeus (Pseudospinolia) neglectus*: Linsenmaier 1959: 65 (key), 66 (tax., descr.), 200 (fig. 206).

*Pseudospinolia neglecta*: Kimsey and Bohart 1991: 546 (fig. 138c), 548 (cat.); Rosa 2006: 30 (biol.), 32 (biol.), 40 (ecol.), 52 (ecol.), 55 (biogeogr.), 78 (cat.), 200 (China, tax., descr., biol.).

**Distribution.** China (Xinjiang?). Widely distributed in the Palaearctic Region (Bohart and Kimsey 1991).

## 21. Genus *Stilbum* Spinola, 1806

### 178. *Stilbum calens* (Fabricius, 1781)

[http://species-id.net/wiki/Chrysis\\_calens](http://species-id.net/wiki/Chrysis_calens)

*Chrysis calens* Fabricius, 1781: 455. Holotype ♀, Siberia (455 (descr.), depository: BMNH)\*.

*Stilbum splendidum* var. *calens*: du Buysson 1900: 156 (China: Beijing, cat.).

*Stilbum cyanurum* var. *calens*: Hammer 1936: 3 (China [Inner Mongolia]: Hurtjertu Gol, tax.).

*Stilbum cyanurum cyanurum* f. *calens* (!): Tsuneki 1947: 53 (China [Inner Mongolia]: Apaka); Tsuneki 1948a: 124 (China: Shanxi: Nanpintsun, Manchuria: Tonei, tax., distr.), 128 (Shanxi, cat.); Tsuneki 1953a: 58 (Manchuria [Liaoning]: Dairen [= Dalian], Tungning, cat., distr.).

*Stilbum calens* ssp. *zimmermanni* Lisenmaier, 1959: Lisenmaier 1968: 123 (China, cat.).

*Stilbum calens* ssp. *wesmaeli* Dahlbom, 1845: Lisenmaier 1997b: 134 (China, tax., descr.).

**Material examined.** 1♂, Valley of the river Kuldgi, V.VI.1878, leg. Regel (ZIN). 1♂, Alashan, Din-yuan-in, 8.–9.VI.1908, expedition Kozlov (ZIN).

**Distribution.** China (Liaoning, Beijing, Inner Mongolia, Shanxi). Widely distributed in the Palaearctic Region (Tsuneki 1948a; Lisenmaier 1959).

### 179. *Stilbum cyanurum* (Forster, 1771)

[http://species-id.net/wiki/Chrysis\\_cyanura](http://species-id.net/wiki/Chrysis_cyanura)

*Chrysis cyanura* Forster, 1771: 89. Holotype ♂, Spain (89 (descr.), depository: BMNH).

*Chrysis splendida* Fabricius, 1775: 357. Syntypes, Australia (357 (descr.), depositories: BMNH, ZMU)\*.

*Chrysis amethystina* Fabricius, 1775: 359. Syntypes, Australia (359 (descr.), depositories: BMNH, ZMU).

*Stilbum splendidum*: Smith 1864: 144 (China, tab.); Radoszkovsky 1866: 14 (China, cat.); du Buysson 1900: 156 (China: Hong Kong, cat.).

*Stilbum splendidum* var. *caspicum* du Buysson (In André), 1896: 680. Syntypes, Turkmenistan: Otreck, Ethiopia: Abissinia (680 (descr.), depository: ISEA-PAS, MNHN)\*.

*Stilbum cyanurum*: du Buysson 1898a: 544 (China: Kiang-si [= Jiangxi], cat.); du Buysson 1899: 169 (China, cat.); Hammer 1936: 3 (China [Inner Mongolia]: Hurtjertu Gol, cat.); Tsuneki 1948b: 50 (Manchuria, North China, Taiwan, tax.); Kimsey and Bohart 1991: 567 (cat.), Kurzenko and Lelej 2007: 1006 (China, cat.); Terayama et al. 2010: 6 (fig.), 9 (China, Taiwan, cat.), 12 (tab., biol.), 13 (fig. 4).

*Stilbum splendidum* var. *caspicum*: du Buysson 1898a: 561 (China, cat.); Zimmermann 1937: 657 (tax.).

*Stilbum splendidum* var. *amethystinum*: Mocsáry 1913b: 613 (tax.), 614 (Taiwan, cat.); du Buysson 1898a: 561 (China, cat.); Uchida 1927: 151 (Taiwan, China, cat.); Yasumatsu 1938: 73 (China, cat.).

*Stilbum cyanurum* var. *auratum* Trautmann, 1920: 240. Holotype ♀, China (240 (descr.), depository: MNHU); Trautmann 1927: 81 (China, tax.), 82 (Central China, Kansu, tax.).

*Stilbum cyanurum* var. *splendidum*: Uchida 1927: 151 (Taiwan, cat.); Tsuneki 1970b: 19 (cat.), 20 (Taiwan: Ilan Province: Chuantou, Tsukeng; Hualien Province: Liyuchih; Nantou Province: Puli, Jihyuehtan; Taitung Province: Chihpenchi; Pingtung Province: Checheng, Kentin Park, tax.).

*Stilbum cyanurum cyanurum*: Zimmermann 1937: 650 (East China, tax., distr.), 656 (Central China, type); Tsuneki 1947: 52 (China: Shanxi, tax.); *Stilbum cyanurum*: Hammer 1950: 1 (China: Kiangsu [= Jiangsu], tax.); Tsuneki 1953a: 24 (North China, Manchuria, tax.); *Stilbum cyanurum cyanurum*: Tsuneki 1953b: 58 (Manchuria: Chinchow, cat.); Linsenmaier 1959: 180 (key, tax.), 181 (China, descr.), 216 (fig. 686); *Stilbum cyanurum cyanurum*: Móczár 1967: 117 (key, tax., descr.), 118 (Manchuria, biol.).

*Stilbum cyanurum* f. *auratum*: Zimmermann 1937: 656 (Central China, tax.).

*Stilbum calens* ssp. *auratum*: Linsenmaier 1959: 182 (China, Kansu, tax.).

**Material examined.** Guandong: 1♂, Canton [= Guangzhou], 1910; Yunnan: 2♂♂, Ta-pin-tze, leg. R.P. Delavay; 1♀, Macao; 1♂, Taiwan, Takao, 1923; 1♀, id., 29.IX.1907; 1♀, Taihanroku; 1♀, Taipei, 1.V.1976; all the specimens identified by Linsenmaier (NMLS). 1♂, Alashan, Din-yuan-in, 17. –20.VIII.1908, leg. Kozlov (ZIN). 62 exx. under the name *S. cyanurum auratum* housed in ZIN with the following labels:; Din-yuan-in, Alashan, 17.–18.VI.1908 and 22.IV.1909, leg. Kozlov; Alashan, Golih-Goli Canyon; Alashan, Shan-Shun Canyon, 17. –18.VI.1908, leg. Kozlov.

**Distribution.** China (Liaoning, Inner Mongolia, Shanxi, Gansu, Shandong, Jiangsu, Taiwan, Jiangxi, Guangdong, Hong Kong, Macao, Yunnan). Widely distributed in the Oriental, Palaearctic, Afrotropical and Australian Regions (Kimsey and Bohart 1991).

## 22. Genus *Trichrysis* Lichtenstein, 1876

### 180. *Trichrysis cyanea* (Linnaeus, 1758)

[http://species-id.net/wiki/Sphex\\_cyanea](http://species-id.net/wiki/Sphex_cyanea)

*Sphex cyanea* Linnaeus, 1758: 572. Lectotype ♂ design. by Morgan (1984: 10), Europe (depository: LSL).

*Chrysis (Trichrysis) cyanea*: Tsuneki 1947: 55 (China: Beijing, cat., distr.); Tsuneki 1950: 70 (comp. notes); Tsuneki 1953a: 58 (Manchuria, Kaiyüan, Shorei, Yiya-

saka, tax., distr.); Tsuneki 1953b: 25 (North China, Manchuria, tax.); Lisenmaier 1959: 169 (key), 170 (tax., descr., biol.), 205 (fig. 383).

*Trichrysis cyanea*: Kimsey and Bohart 1991: 571 (cat.).

**Distribution.** China (Liaoning, Beijing). Widely distributed in Europe and western Asia to Siberia, Russian Far East, Korea and Japan (Kurzenko and Lelej 2007).

### 181. *Trichrysis imperiosa* (Smith, 1874)

[http://species-id.net/wiki/Chrysis\\_imperiosa](http://species-id.net/wiki/Chrysis_imperiosa)

*Chrysis imperiosus* (!) Smith, 1874b: 460. Lectotype ♀ design. by Bohart (in Kimsey and Bohart 1991: 533), Australia: Queensland, Moreton Bay (460 (descr.), depository: BMNH).

*Chrysis imperiosa*: du Buysson 1898a: 536 (“Montagnes de Song-Chai”, cat.); du Buysson 1899: 168 (China, cat.).

*Chrysis (Pentachrysis) imperiosa*: Mocsáry 1913b: 619 (Taiwan: Juhosho, cat.); Uchida 1927: 152 (Taiwan, cat.); Tsuneki 1970b: 18 (Taiwan, cat.).

*Chrysis (Trichrysis) imperiosa*: Lisenmaier 1959: 170 (tax., *lusca* group); Lisenmaier 1994: 193 (tax.).

*Praestochrysis imperiosa*: Strumia 1996: 62 (Taiwan, tax.).

**Distribution.** China (Taiwan). Australia, Thailand (Smith, 1874b; Tsuneki, 1963b).

**Remarks.** Lisenmaier (1994, 1997a) and Madl and Rosa (2012) moved the species group *lusca* (including *lusca* and *imperiosa*) from the genus *Praestochrysis* Lisenmaier to genus *Trichrysis* Lichtenstein. Kimsey and Bohart (1991) treated *Praestochrysis imperiosa* (Smith, 1874) as a junior synonym of *P. lusca* (Fabricius, 1804). But *P. imperiosa* is distinctly different from *P. lusca* (Fabricius) (Strumia 1996).

### 182. *Trichrysis lusca* (Fabricius, 1804)

[http://species-id.net/wiki/Chrysis\\_lusca](http://species-id.net/wiki/Chrysis_lusca)

Plate 64

*Chrysis lusca* Fabricius, 1804: 171. Holotype ♀, Italy (accidentally introduced) (171 (descr.), depository: ZMU)\*.

*Chrysis lusca*: du Buysson 1898a: 536 (Macao, cat.); du Buysson 1899: 168 (China, cat.).

*Chrysis (Pentachrysis) lusca*: Bischoff 1910: 486 (Taiwan, cat.); Mocsáry 1913a: 11 (Taiwan, cat.); Mocsáry 1913b: 619 (Taiwan, cat.); Uchida 1927: 152 (Taiwan, cat.); Tsuneki 1953b: 28 (Taiwan, cat.); Tsuneki 1955: 35 (key), 36 (tax.), 37 (figs 1–6), 38 (East China, Taiwan, distr.); Tsuneki 1970b: 17 (tax.), 18 (Taiwan, Provinces of Taipei, Taoyuan, Illan, Huallien, Nantou, Chiai, Taitung, Pingtung, cat.); Tsuneki 1970c: 49 (Taiwan, key, tax.).

*Pentachrysis lusca*: Hammer 1950: 2 (China: Peitaiho, Taiwan, cat.).

*Praestochrysis lusca*: Kimsey and Bohart 1991: 533 (cat.); Kurzenko and Lelej 2007: 1006 (China, cat.).

*Chrysis (Trichrysis) lusca*: Linsenmaier 1994: 193 (tax.).

**Material examined.** 2♀♀, Taiwan, Chipon, VIII.1935 leg. K. Iwata, det. Enslin; 1♀, Taiwan, Sozan, VIII.1935, leg. K. Iwata det. Linsenmaier (NMLS).

**Distribution.** China (Hebei, Taiwan, Macao). Widely distributed in the Palaearctic and Oriental Regions (Kimsey and Bohart 1991).

**Remarks.** Linsenmaier (1994, 1997a) and Madl and Rosa (2012) moved the species group *lusca* (including *lusca* and *imperiosa*) from the genus *Praestochrysis* Linsenmaier to the genus *Trichrysis* Lichtenstein.

### 183. *Trichrysis luzonica* (Mocsáry, 1889)

[http://species-id.net/wiki/Chrysis\\_luzonica](http://species-id.net/wiki/Chrysis_luzonica)

*Chrysis (Trichrysis) luzonica* Mocsáry, 1889: 328. Holotype ♀, Philippines: Luzon (328 (descr.), depository: ISEA-PAS).

*Chrysis (Trichrysis) taial* Tsuneki, 1970b: 11. Holotype ♀, Taiwan; Nanton Province: Puli (11 (tax., descr.), 12 (Taiwan, Puli; Tsukeng, Chantou, Sschungchi, Manchou, Oluampi, Kentin Park, Fanshanlu, descr., figs 30–34), depository: OMNH, not NIAS) (synonymised by Kimsey and Bohart 1991: 572).

*Trichrysis luzonica*: Bohart 1987: 348 (Taiwan, key); Kimsey and Bohart 1991: 572 (Hong Kong, cat.).

**Distribution.** China (Taiwan, Hong Kong). Philippines (Mocsáry 1889).

### 184. *Trichrysis pellucida* (du Buysson, 1887)

[http://species-id.net/wiki/Chrysis\\_pellucida](http://species-id.net/wiki/Chrysis_pellucida)

*Chrysis pellucida* du Buysson, 1887: 183. Syntypes ♂♀, China, Turkey (183 (descr.), 184 (China), depository: MNHN).

*Chrysis (Trichrysis) buyssoni* Mocsáry, 1889: 323. Replacement name for *Chrysis pellucida* du Buysson 1887 nec *Brugmoia pellucida* Radoszkowski, 1877.

*Chrysis pellucida*: du Buysson, 1898a: 525 (China: Jehol [=Johol]: “Nord de Péking”, cat.); du Buysson, 1899: 164 (China, cat.); du Buysson, 1900: 144 (China: Beijing, cat.).

*Chrysis (Trichrysis) pellucida*: Bischoff, 1913: 46 (China, cat.); Tsuneki 1953b: 25 (North China: Jehol, cat.); Linsenmaier 1959: 169 (China, key, tax.).

*Chrysis (Monochrysis) coreana* Uchida, 1927: Tsuneki 1948b: 47 (tax., syn.); 51 (résumé);

*Trichrysis buyssoni*: Kimsey and Bohart 1991: 571 (cat.).

**Distribution.** China (Inner Mongolia, Hebei, Beijing). Middle East to China and Russian Far East (Kimsey and Bohart 1991; Kurzenko and Lelej 2007).

**Remarks.** *Chrysis (Trichrysis) buyssoni* Mocsáry was a replacement name for *Trichrysis pellucida* (du Buysson, 1887). However, after 1889, the name *Brugmoia pellucida* Radoszkowski was considered belonging to the genus *Euchroeus* Latreille and no longer congeneric. According to the Code (Art. 59), a junior secondary homonym replaced before 1961 is permanently invalid unless the substitute name is not in use and the relevant taxa are no longer considered congeneric, in which case the junior homonym is not to be rejected on grounds of that replacement.

### 185. *Trichrysis secernenda* (Mocsáry, 1912)

[http://species-id.net/wiki/Chrysis\\_secernenda](http://species-id.net/wiki/Chrysis_secernenda)

Plate 65

*Chrysis (Trichrysis) secernenda* Mocsáry, 1912a: 376. Lectotype ♂ design. by Bohart (in Bohart and French 1986: 342), Uzbekistan: Gouldsha (type series: China: Xinjiang, paralectotypes) (depository: HNHM)\*.

*Trichrysis secernenda*: Kimsey and Bohart 1991: 573 (cat.).

**Distribution.** China (Xinjiang).

### 186. *Trichrysis triacantha* (Mocsáry, 1889)

[http://species-id.net/wiki/Chrysis\\_triacantha](http://species-id.net/wiki/Chrysis_triacantha)

*Chrysis (Trichrysis) triacantha* Mocsáry, 1889: 325. Holotype ♀, Indonesia: Sumatra (325 (descr.), depository: NHMW)\*.

*Chrysis (Trichrysis) formosana* Mocsáry, 1912a: 380. Lectotype ♀ design. by Bohart (in Bohart and French 1986: 341), Taiwan: Takao [= Kaohsiung] (HNHM)\* (synonymised by Kimsey and Bohart 1991: 574).

*Chrysis (Trichrysis) sauteri* Mocsáry, 1912a: 381. Holotype ♂, Taiwan: Takao [= Kaohsiung] (381 (descr.), depository: HNHM)\* (synonymised by Kimsey and Bohart 1991: 574).

*Chrysis (Trichrysis) formosana*: Bischoff 1913: 45 (Taiwan, cat.); Mocsáry 1913b: 614 (Taiwan: Takao [= Kaohsiung], Kankau, tax.), 619 (Taiwan, cat.)). Uchida 1927: 151 (Taiwan, cat.); Uchida 1933: 3 (Taiwan, cat.); Tsuneki 1970b: 10 (tax.), 11 (Taiwan: Chantou, Tsukeng, Penpuchi, Jihuetan, Chulu, Chichpenchi, Ssuchungchi, Manchou, Fanshanlu, Kentin, Uluampi, descr.), 12 (comp. notes, figs 27–29).

*Chrysis (Trichrysis) sauteri* Mocsáry, 1913b: 614 (Taiwan, cat.); Mocsáry, 1913c: 289 (Taiwan, cat.); Uchida 1927: 151 (Taiwan, cat.); Tsuneki 1970b: 13 (Taiwan, tax.).

*Chrysis (Trichrysis) tonkinensis* Mocsáry, 1914: 25. Holotype ♀ [not ♂], Viet Nam: Tonkin (25 (descr.), depository: HNHM)\* (synonymised by Kimsey and Bohart 1991: 574).

*Chrysis (Trichrysis) tonkinensis* var. *cyanescens* Mocsáry, 1914: 26. Holotype ♀, China: Poo Chow [= Fujian] (26 (descr.), depository: BMNH) (synonymised by Kimsey and Bohart 1991: 574).

*Chrysis (Trichrysis) bicarinata* Tsuneki, 1950: 69. Holotype ♀, Hong Kong (69 (descr.), depository: 70 (comp. notes), EIHU) (synonymised by Kimsey and Bohart 1991: 574).

*Chrysis (Trichrysis) tonkinensis*: Linsenmaier 1959: 169 (China, tax., descr.); Tsuneki 1961: 374 (Hong Kong, tax., descr., figs 19–21).

*Trichrysis triacantha*: Kimsey and Bohart 1991: 573 (Oriental: widespread, cat.); Terayama et al. 2010: 4 (fig.), 9 (Taiwan, cat.), 12 (tab., biol.).

**Distribution.** China (Fujian, Taiwan, Hong Kong). Widely distributed in the Oriental Region (Kimsey and Bohart 1991).

### 187. *Trichrysis trigona* (Mocsáry, 1889)

[http://species-id.net/wiki/Chrysis\\_trigona](http://species-id.net/wiki/Chrysis_trigona)

Plate 66

*Chrysis (Trichrysis) trigona* Mocsáry, 1889: 327. Holotype ♀, Celebes: Bonthain (327 (descr.), depository: HNHM)\*.

*Trichrysis trigona*: Kimsey and Bohart 1991: 574 (Hong Kong, cat.).

**Distribution.** China (Hong Kong). Indonesia, Laos (Kimsey and Bohart 1991).

## Subfamily Parnopinae

### 23. Genus *Parnopes* Latreille, 1797

#### 188. *Parnopes popovi* Eversmann, 1857

[http://species-id.net/wiki/Parnopes\\_popovi](http://species-id.net/wiki/Parnopes_popovi)

*Parnopes popovi* Eversmann, 1857: 567. Holotype ♀, Siberia (567 (descr.), depository: ISEA-PAS)\*.

*Parnopes sinensis* Smith, 1874b: 454. Holotype ♂, China: Shanghai (454 (descr.), depository: BMNH) (synonymised by Mocsáry 1889).

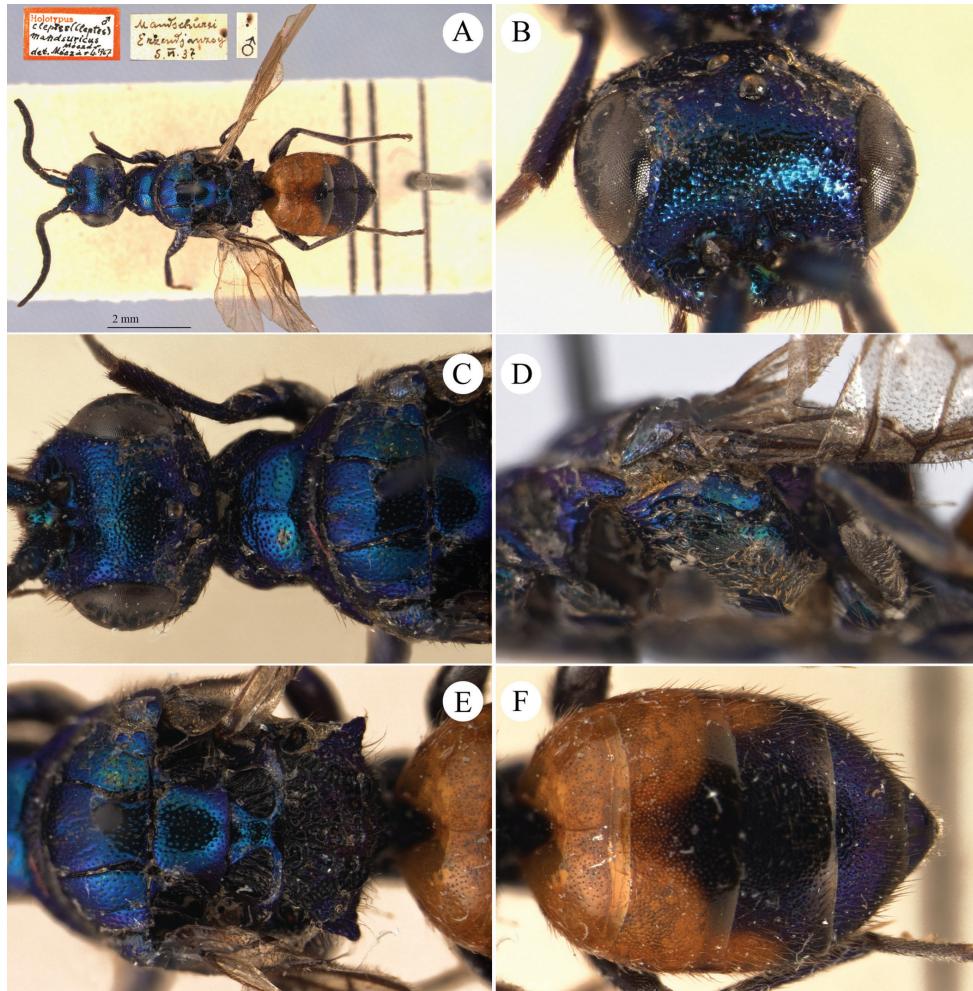
*Parnopes popovii* (!): Mocsáry 1889: 614 (China: Shanghai, Tschifu, Ta-tschan-sy, descr., distr.); Dalla Torre 1892: 112 (China, cat.).

*Parnopes popovi*: du Buysson (in André) 1896: 689 (China septentrionalis [Shandong]: Tschi-fu, cat.); Tsuneki 1953a: 58 (Manchuria [Heilongjiang]: Harbin, Yayasaka, cat., distr.); Tsuneki 1953b: 24 (North China, Manchuria, tax.); Kimsey 1987a: 86 (key), 89 (cat.); Kimsey and Bohart 1991; Kurzenko and Lelej 2007: 1005 (China, cat.).

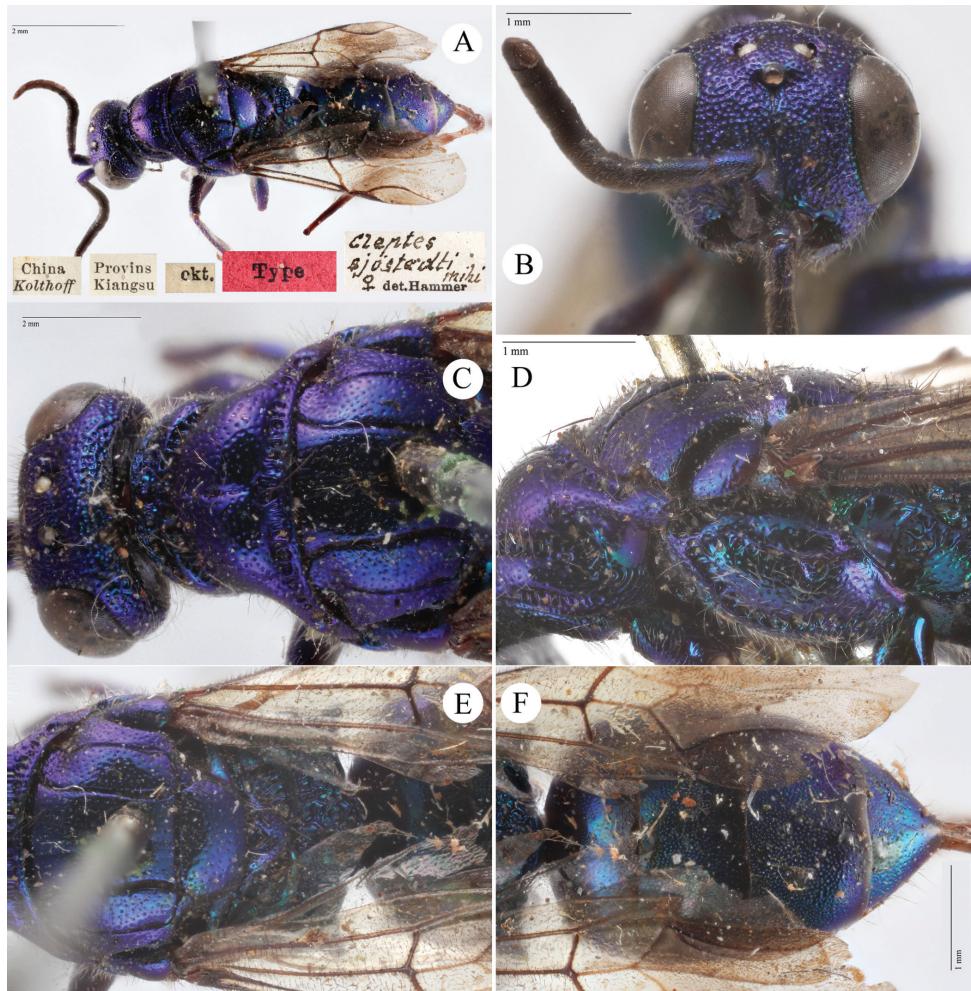
**Material examined.** 1 ex., Imian Station, along the East Chinese railway, 18.VII.1914 (ZIN).

**Distribution.** China (Heilongjiang, Shanghai, Shandong). Siberia and Korea (Tsuneki 1953b).

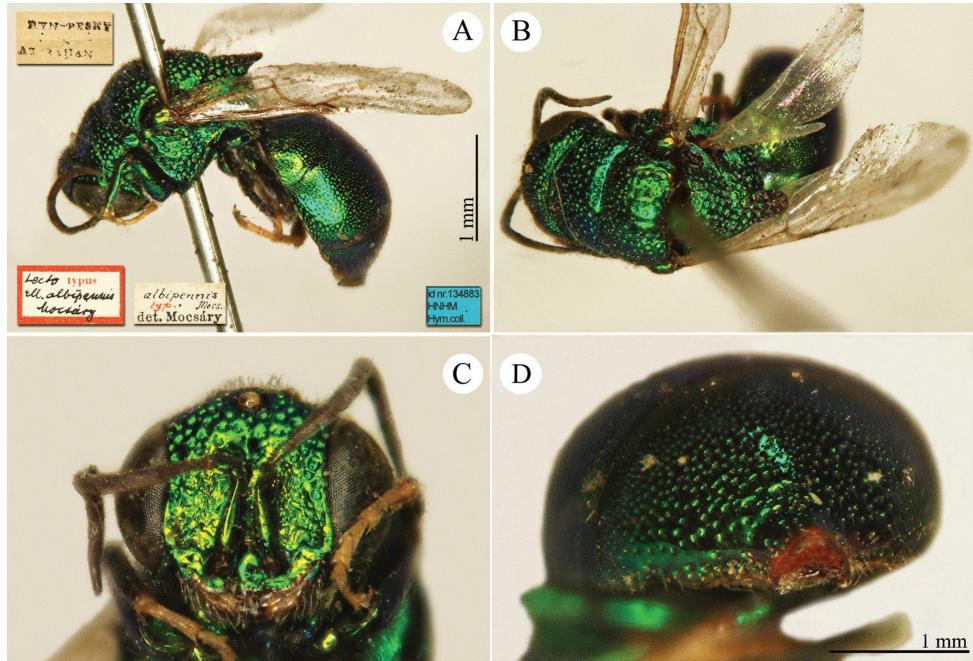
## Plates



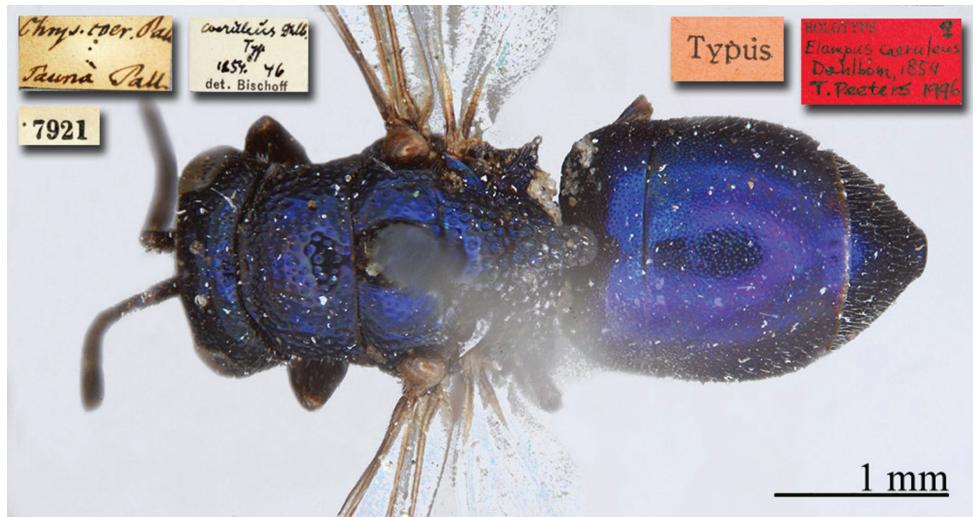
**Plate I.** *Cleptes mandsuricus* Móczár, holotype. **A** Habitus, dorsal view **B** head, frontal view **C** head and anterior part of mesosoma, dorsal view **D** mesopleuron, lateral view **E** mesosoma, dorsal view **F** metasoma, dorsal view.



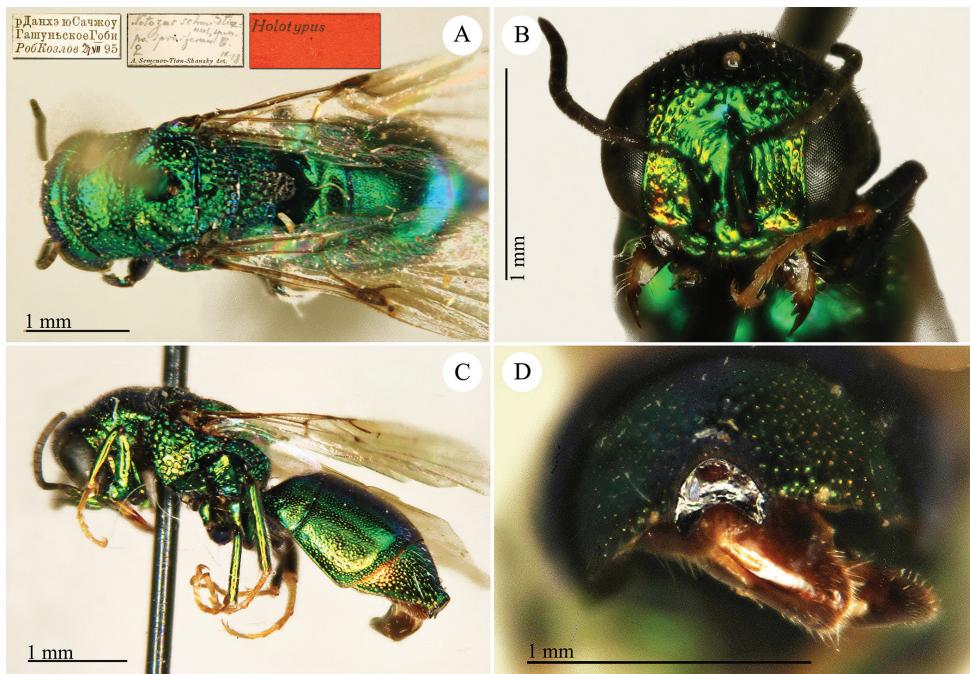
**Plate 2.** *Cleptes sjostedti* Hammer, holotype. **A** Habitus, dorso-lateral view **B** head, frontal view **C** head and anterior part of mesosoma, dorsal view **D** mesopleuron, lateral view **E** mesonotum, metanotum and propodeum, dorsal view **F** metasoma, dorsal view.



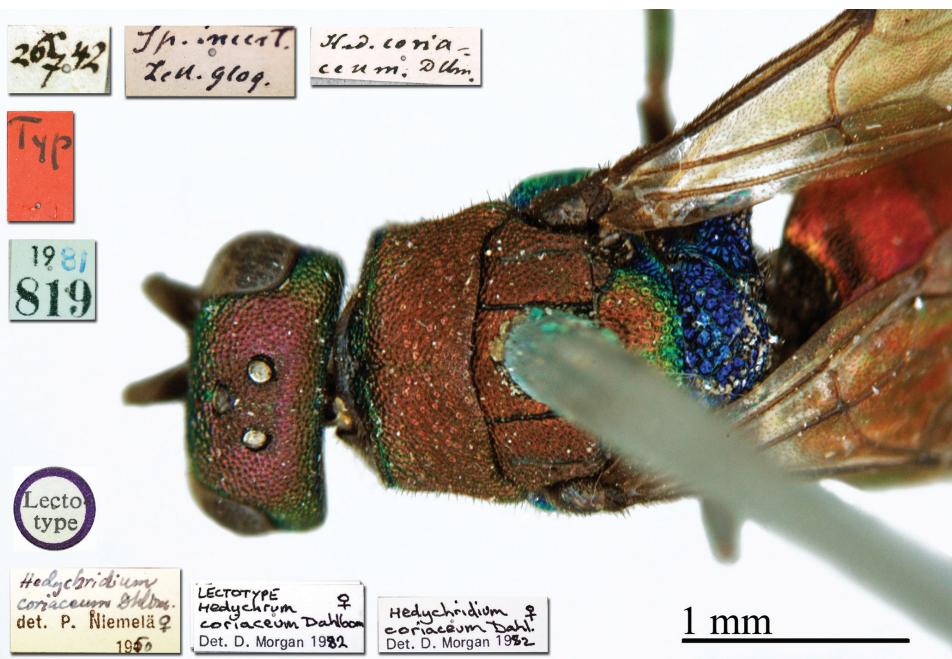
**Plate 3.** *Elampus albipennis* (Mocsáry), lectotype. **A** Habitus, lateral view **B** habitus, dorsal view **C** head, frontal view **D** mesosoma, posterior view.



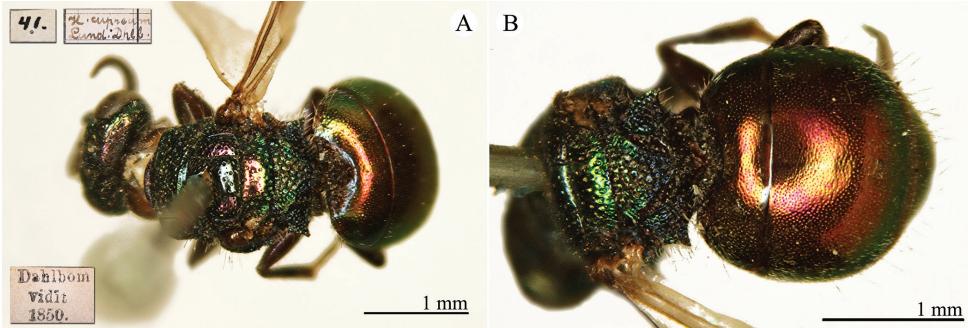
**Plate 4.** *Elampus coerulescens* Dahlgren, syntype, habitus, dorsal view.



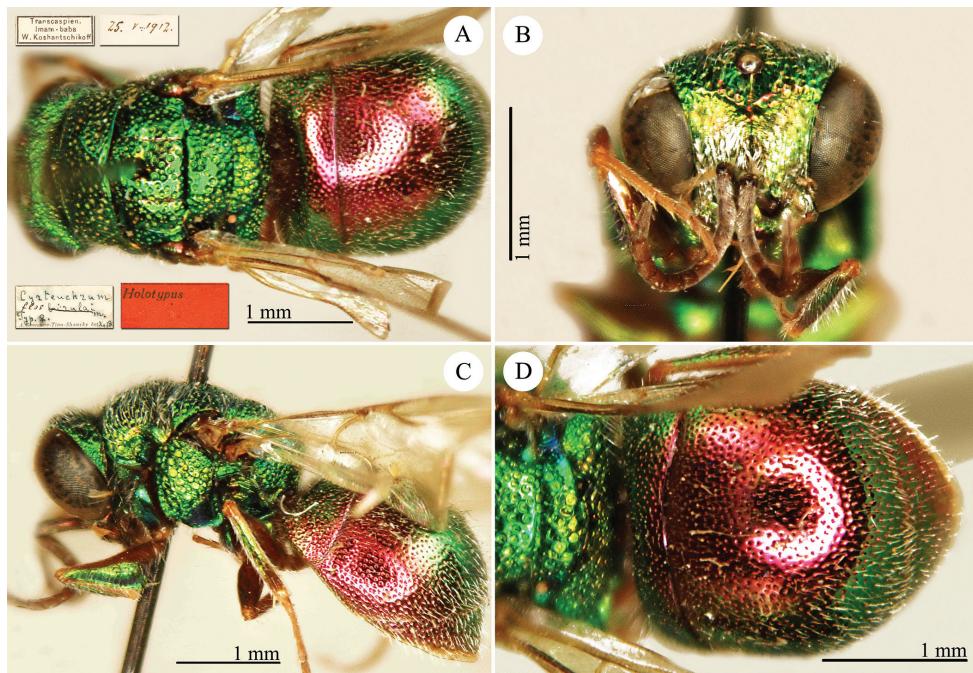
**Plate 5.** *Elampus schmidtianus* (Semenov-Tian-Shanskij), holotype. **A** Habitus, dorsal view **B** head, frontal view **C** habitus, lateral view **D** third metasomal tergite, posterior view.



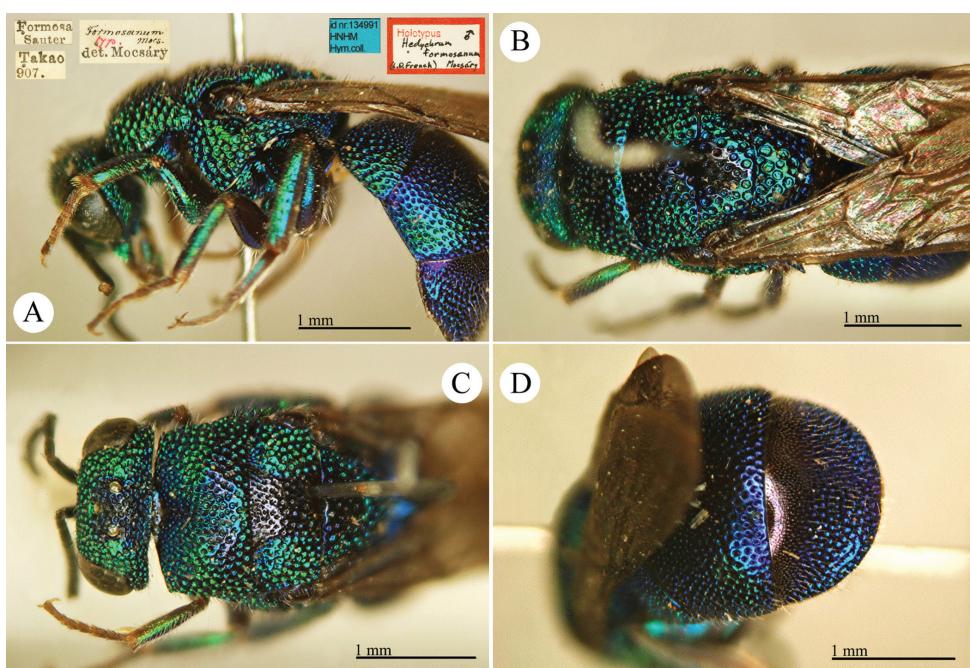
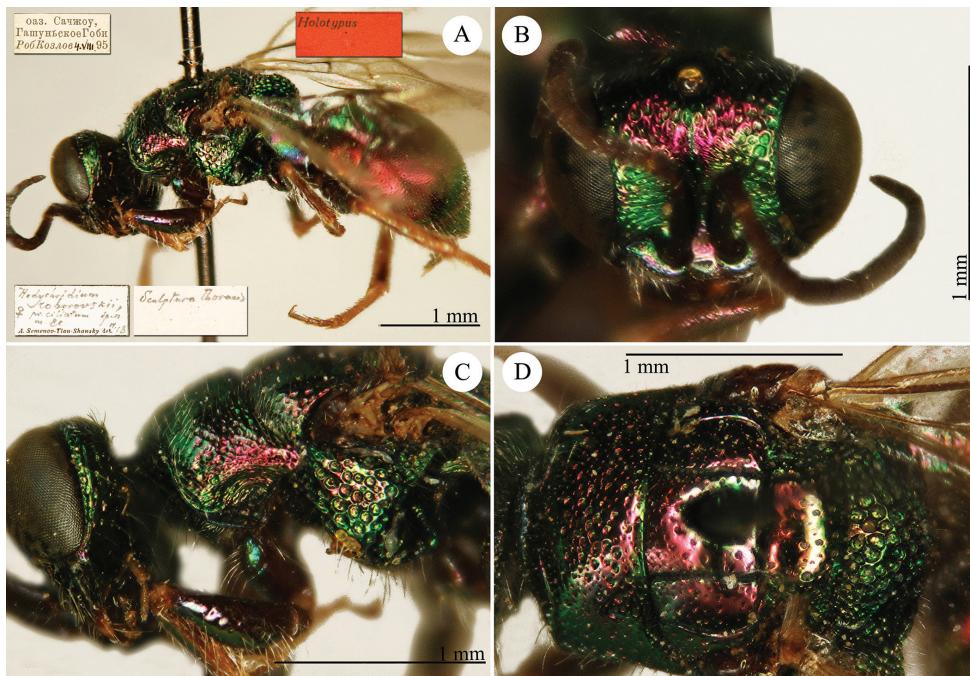
**Plate 6.** *Hedychrnidium coriaceum* (Dahlbom), lectotype, head and mesosoma, dorsal view.

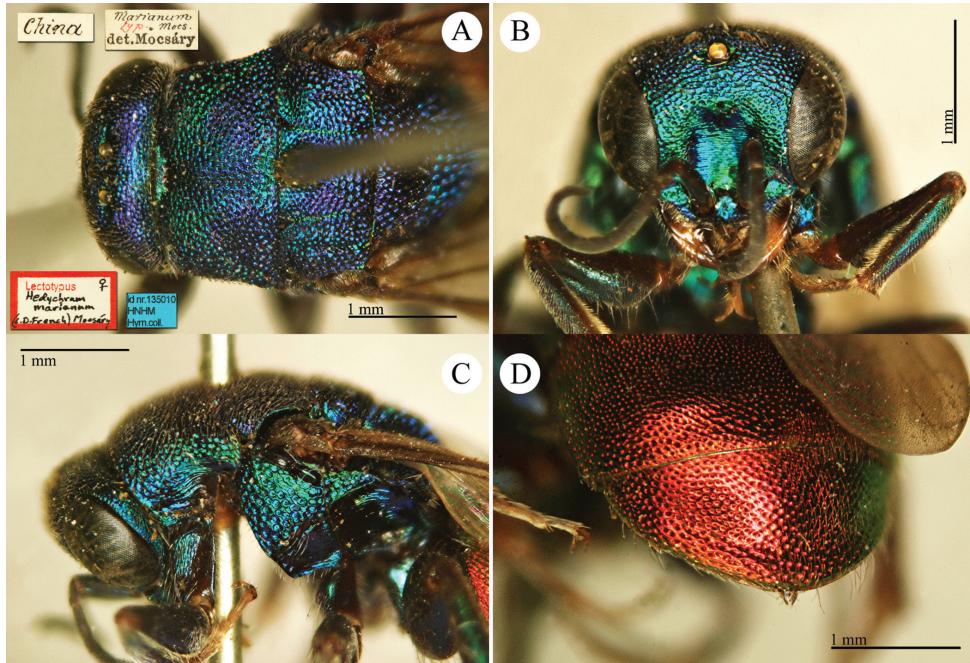


**Plate 7.** *Hedychridium cupreum* (Dahlbom), lectotype. **A** Habitus, dorsal view **B** metanotum, propodeum and metasoma, dorsal view.

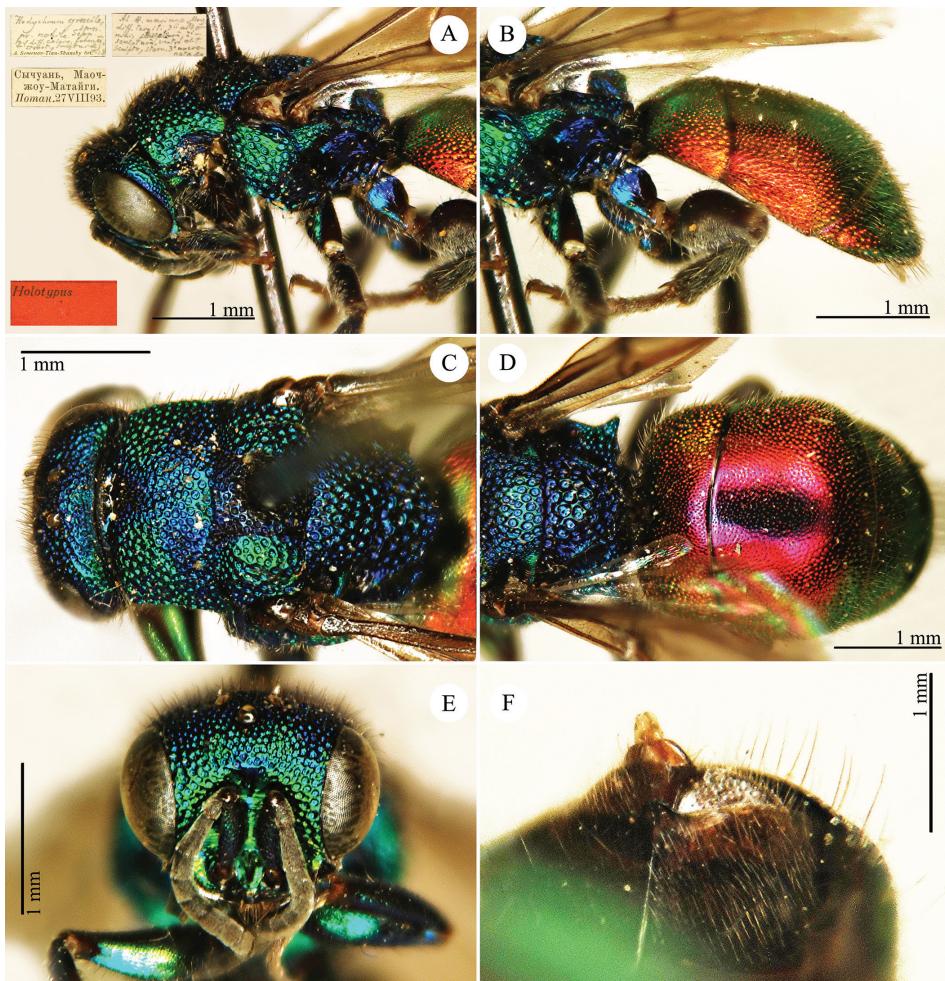


**Plate 8.** *Hedychridium flos* (Semenov-Tian-Shanskij), holotype. **A** Habitus, dorsal view **B** head, frontal view **C** habitus, lateral view **D** metasoma, dorsal view.





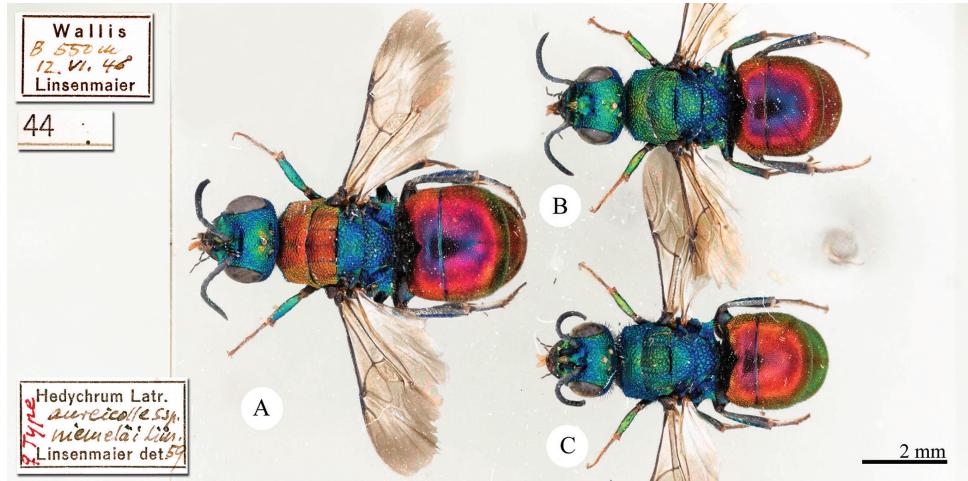
**Plate II.** *Hedychrum marianum* Mocsáry, lectotype. **A** Head and mesosoma, dorsal view **B** head, frontal view **C** head and mesosoma, lateral view **D** second and third metasomal tergites, dorso-lateral view.



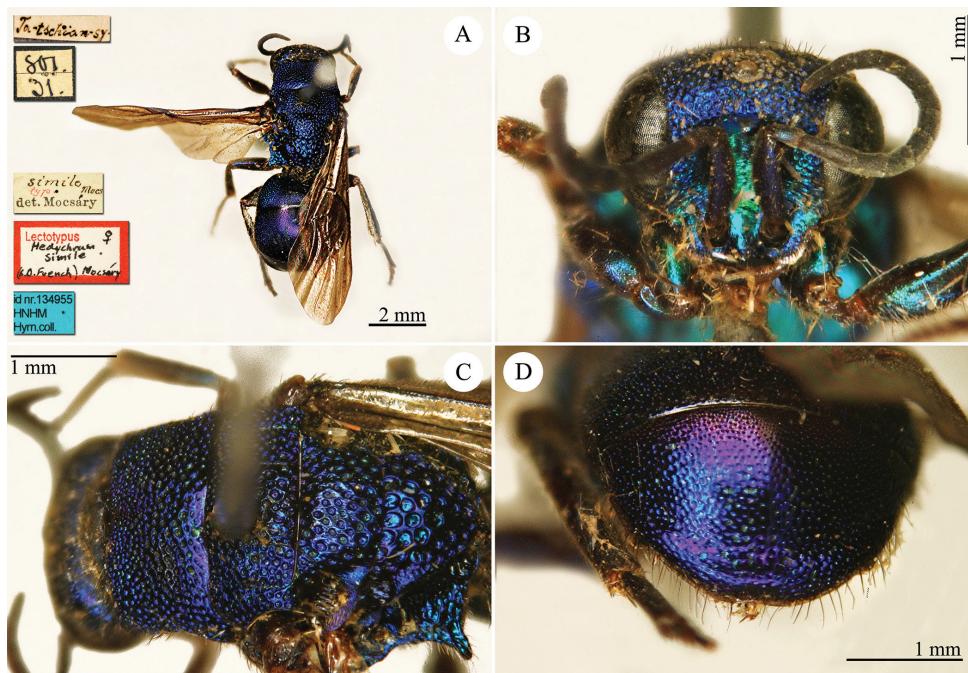
**Plate 12.** *Hedychrum gracile* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, lateral view **B** pro-podeum and metasoma, lateral view **C** head and mesosoma, dorsal view **D** metanotum, propodeum and metasoma, dorsal view **E** head, frontal view **F** mesosoma, margin of the last visible sternite, ventral view.



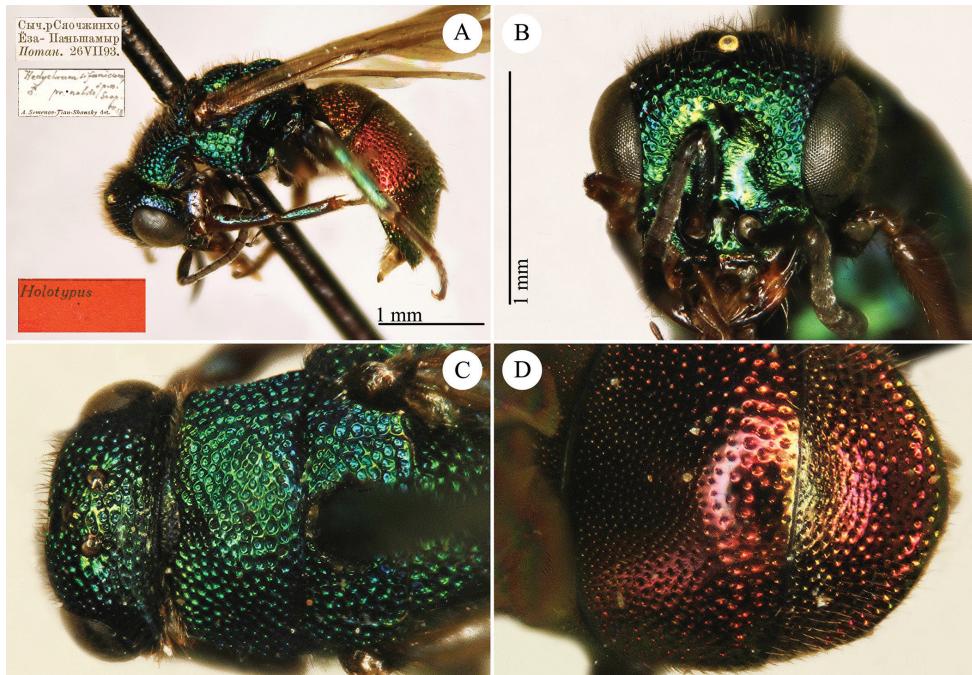
**Plate 13.** *Hedychrum longicolle* Abeille, lectotype, habitus, dorsal view.



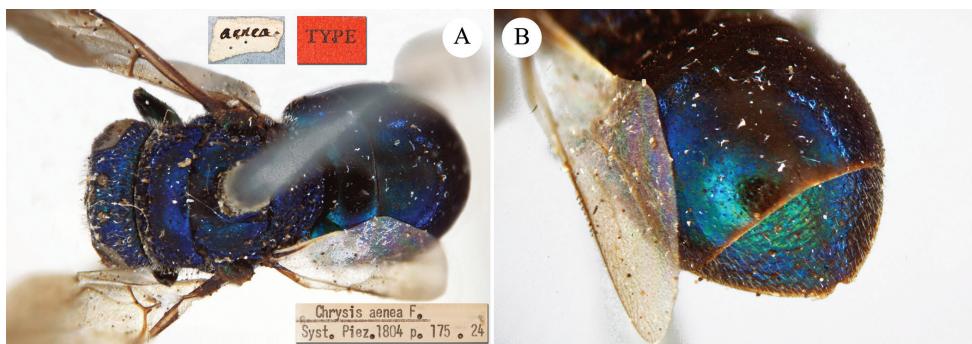
**Plate 14.** *Hedychrum niemelai* Linsenmaier, habitus, dorsal view. **A** Holotype female **B, C** paratypes, males.



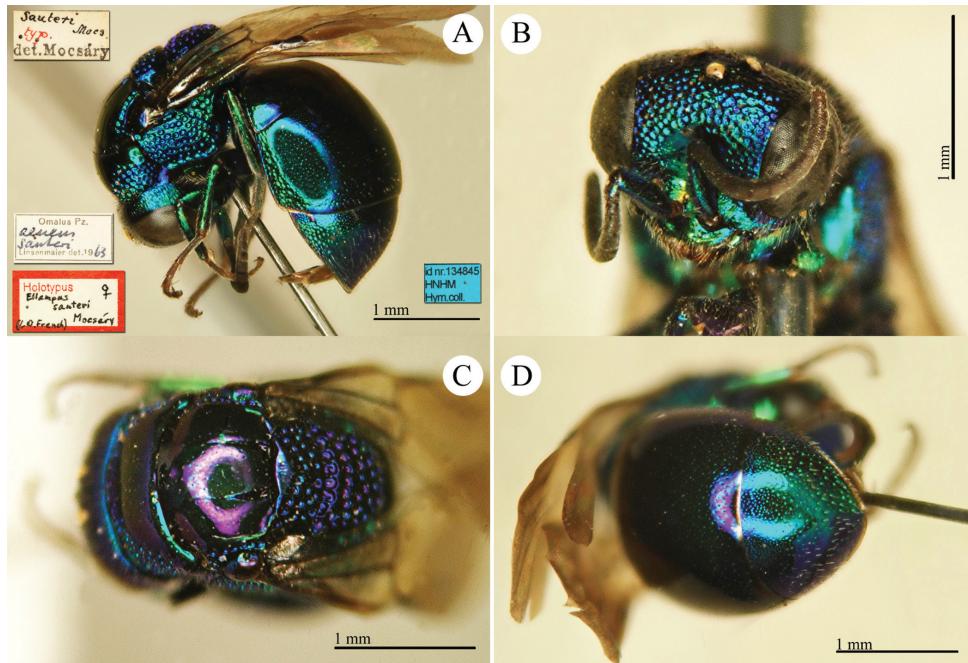
**Plate 15.** *Hedychrum simile* Mocsáry, lectotype. **A** Habitus, dorsal view **B** head, frontal view **C** mesosoma, dorsal view **D** third metasomal tergite, dorsal view.



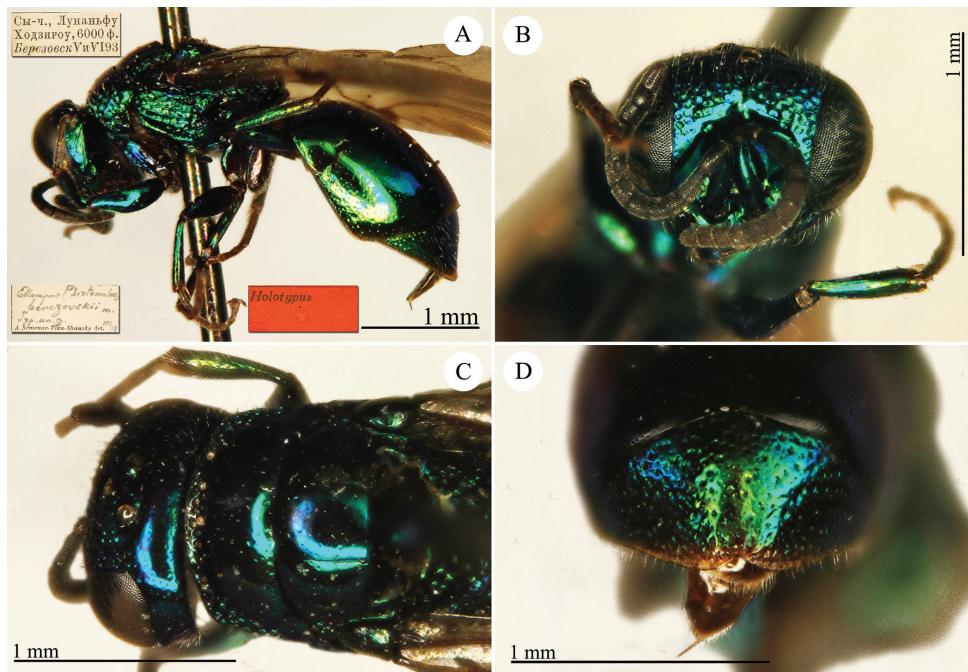
**Plate 16.** *Hedychrum sinicum* Semenov-Tian-Shanskij, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergite, dorsal view.



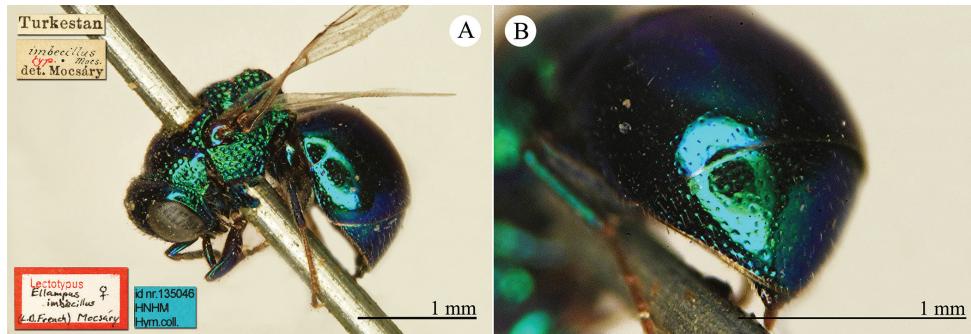
**Plate 17.** *Omalus aeneus* (Fabricius), holotype. **A** Habitus, dorsal view **B** second and third metasomal tergites, dorsal view.



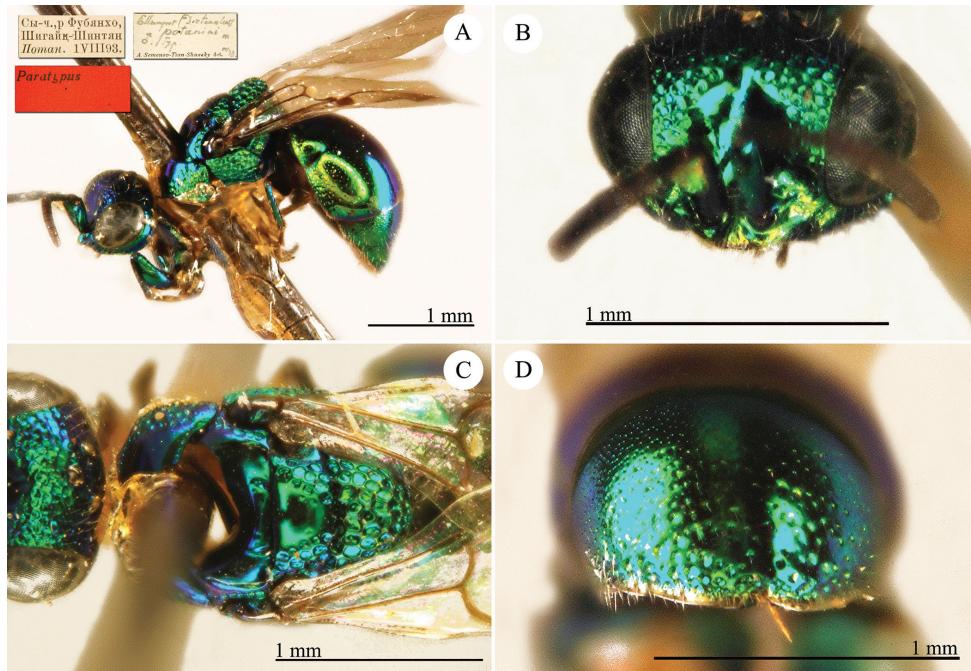
**Plate 18.** *Ellampus sauteri* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** metasoma, dorsal view.



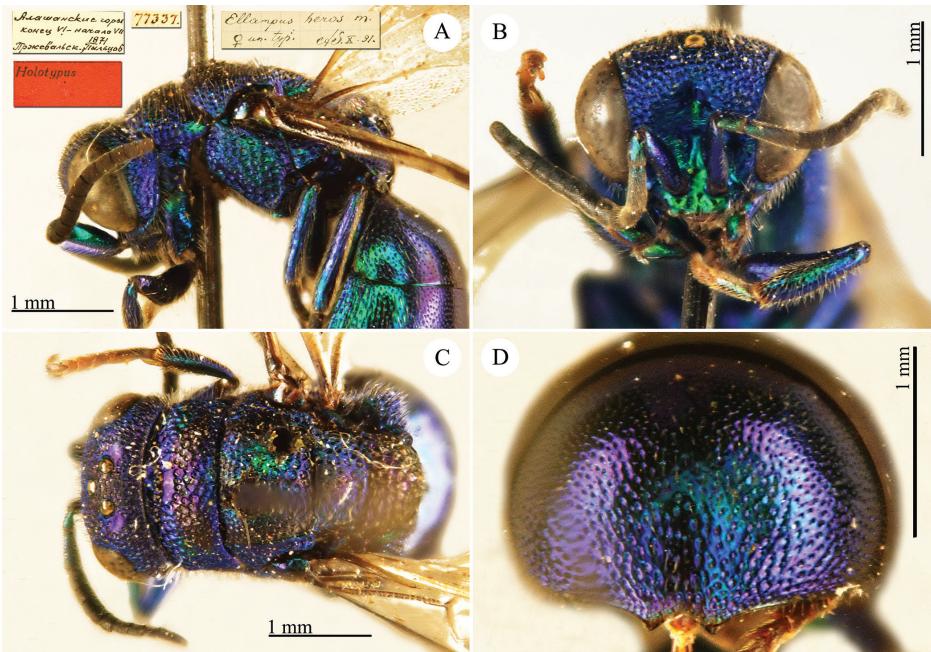
**Plate 19.** *Omalus berezovskii* (Semenov-Tian-Shanskij), holotype. **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** third metasomal tergite, posterior view.



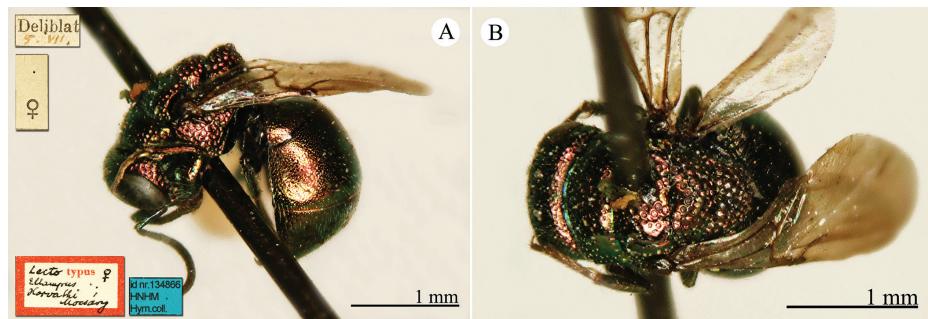
**Plate 20.** *Omalus imbecillus* (Mocsáry), lectotype. **A** Habitus, lateral view **B** second and third metasomal tergites, dorso-lateral view.



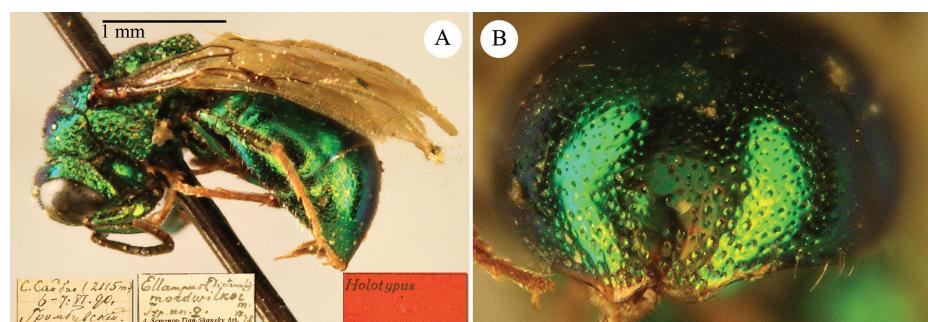
**Plate 21.** *Omalus potanini* (Semenov-Tian-Shanskij), paralectotype (?). **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** third metasomal tergite, posterior view.



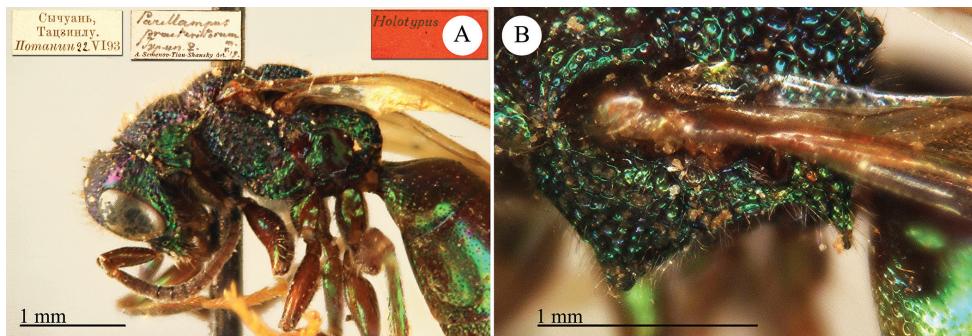
**Plate 22.** *Philocetes heros* (Semenow), holotype. **A** Head, mesosoma and anterior part of metasoma, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** third metasomal tergite, posterior view.



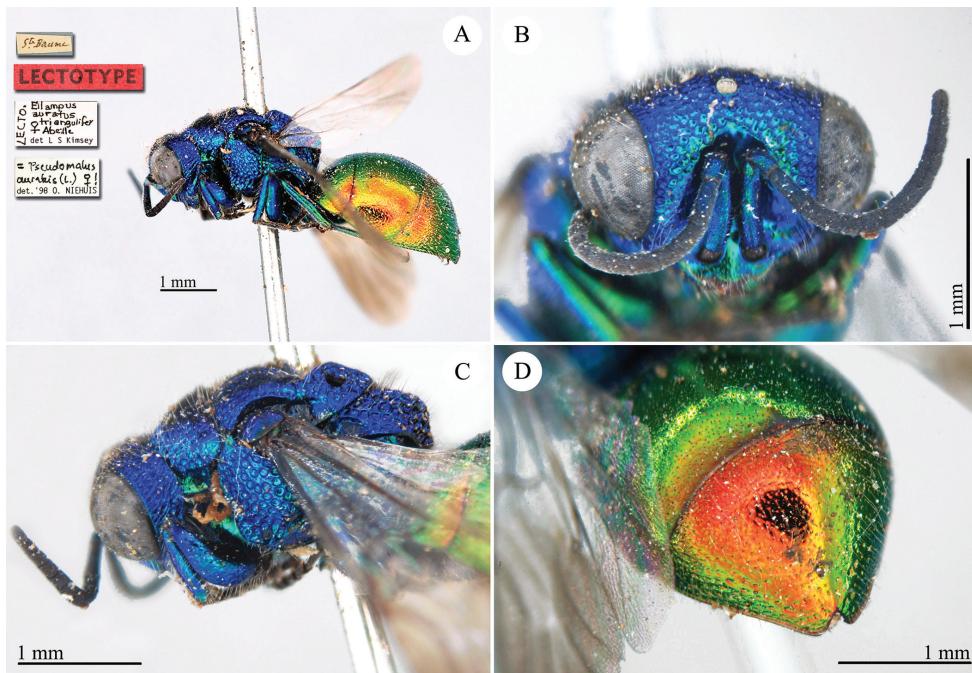
**Plate 23.** *Philocetes horvathi* (Mocsáry), lectotype. **A** Habitus, lateral view **B** mesosoma, dorsal view.



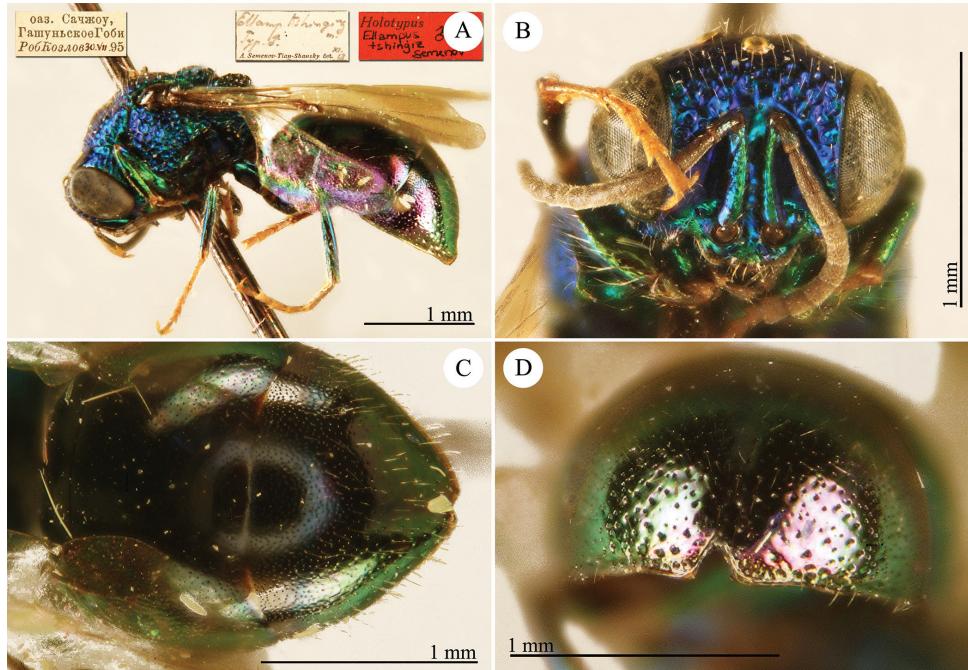
**Plate 24.** *Philocetes mordvilkoi* (Semenov-Tian-Shanskij), holotype. **A** Habitus, lateral view **B** third metasomal tergite, dorsal view.



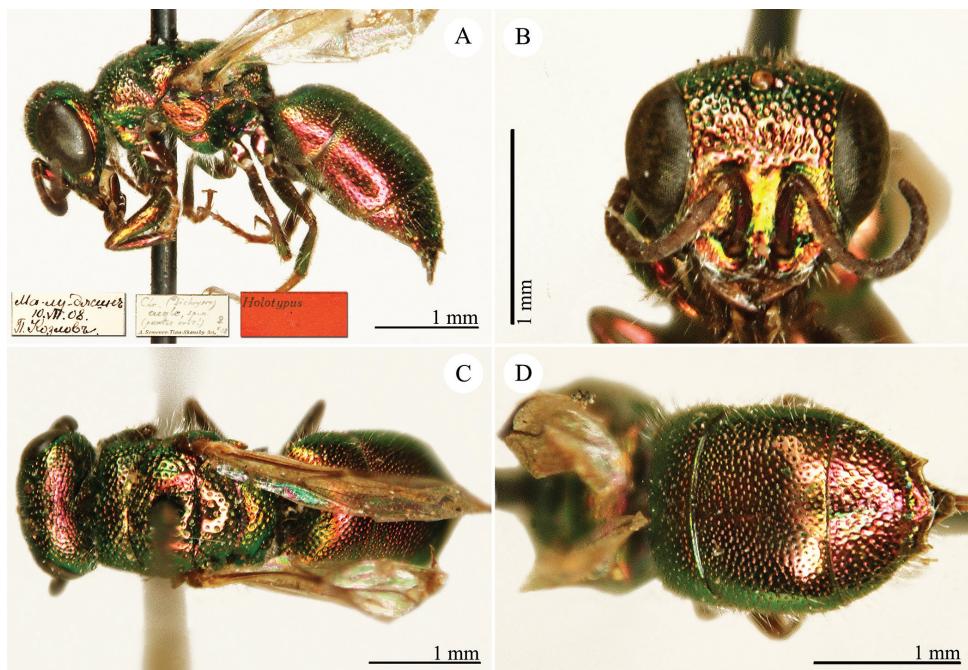
**Plate 25.** *Philocetes praeteritorum* (Semenov-Tian-Shanskij), holotype. **A** Habitus, lateral view **B** mesopleuron and propodeum, dorso-lateral view.



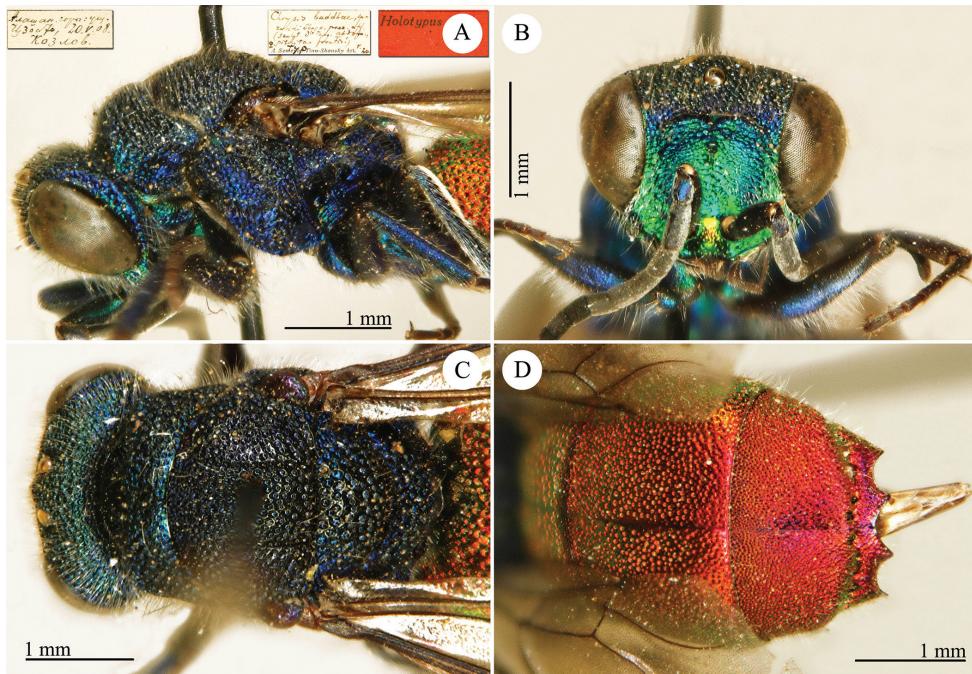
**Plate 26.** *Pseudomalus triangulifer* (Abeille), lectotype. **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, lateral view **D** second and third metasomal tergites, dorso-lateral view.



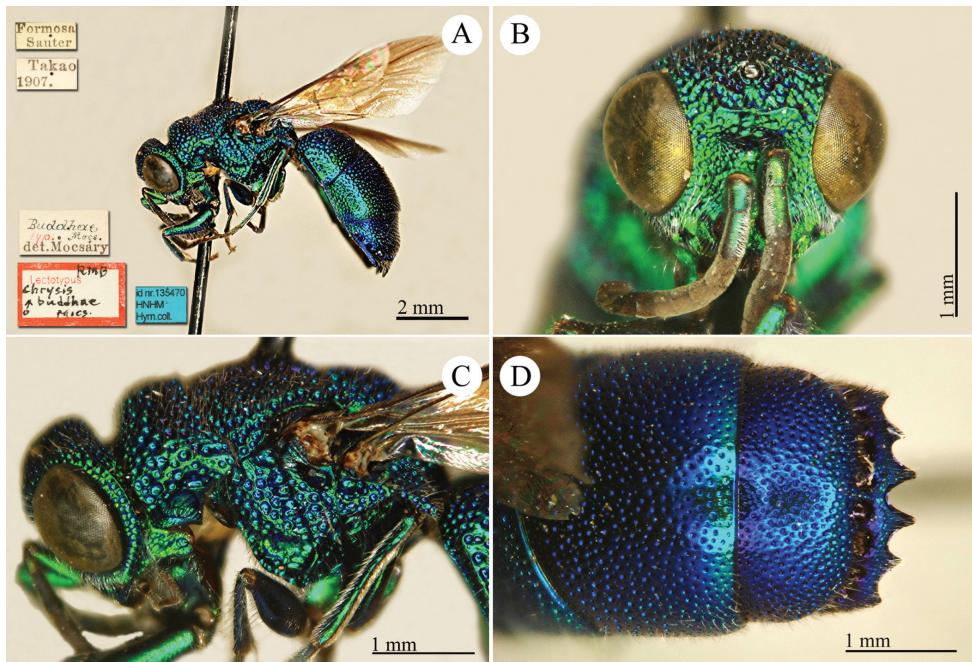
**Plate 27.** *Pseudomalus tshingiz* (Semenov-Tian-Shanskij), holotype. **A** Habitus, lateral view **B** head, frontal view **C** metasoma, dorsal view **D** third metasomal tergite, posterior view.



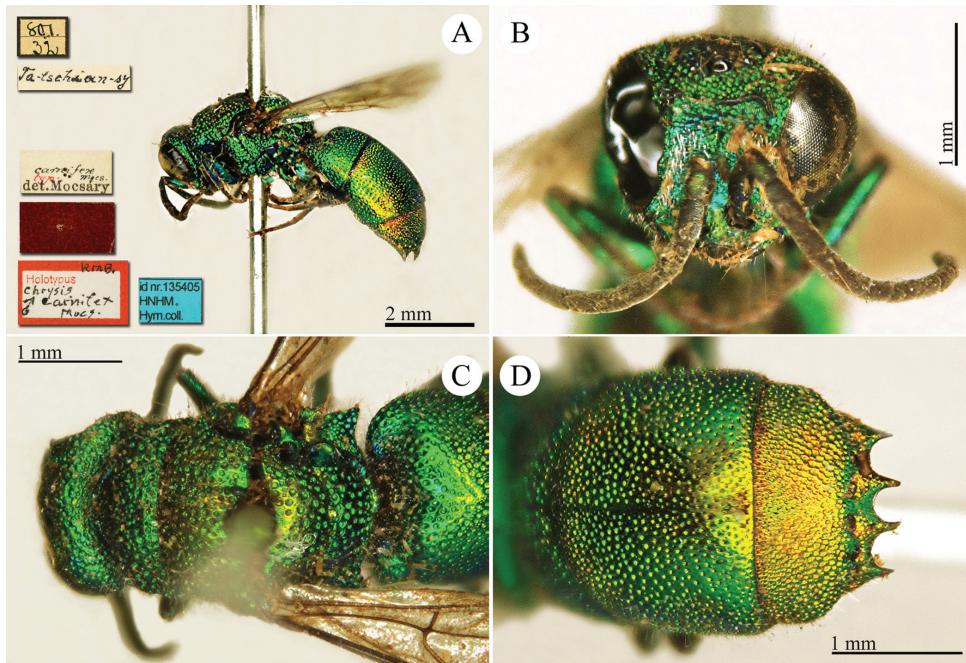
**Plate 28.** *Chrysis aegle* Semenov-Tian-Shanskij, holotype. **A** Habitus, lateral view **B** head, frontal view **C** habitus, dorsal view **D** metasoma, dorsal view.



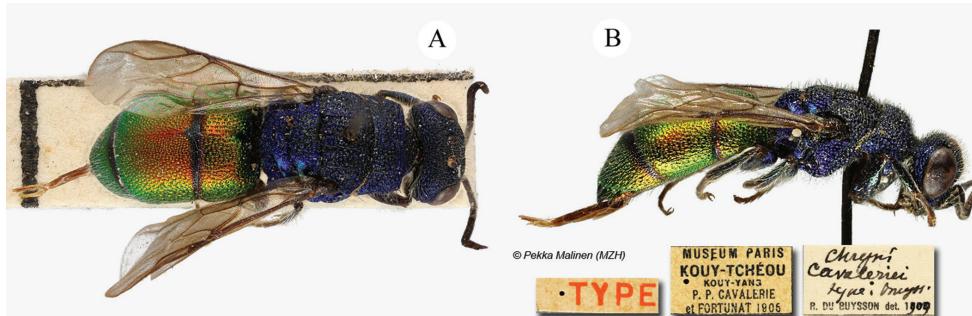
**Plate 29.** *Chrysis buda* Bohart, 1991, holotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



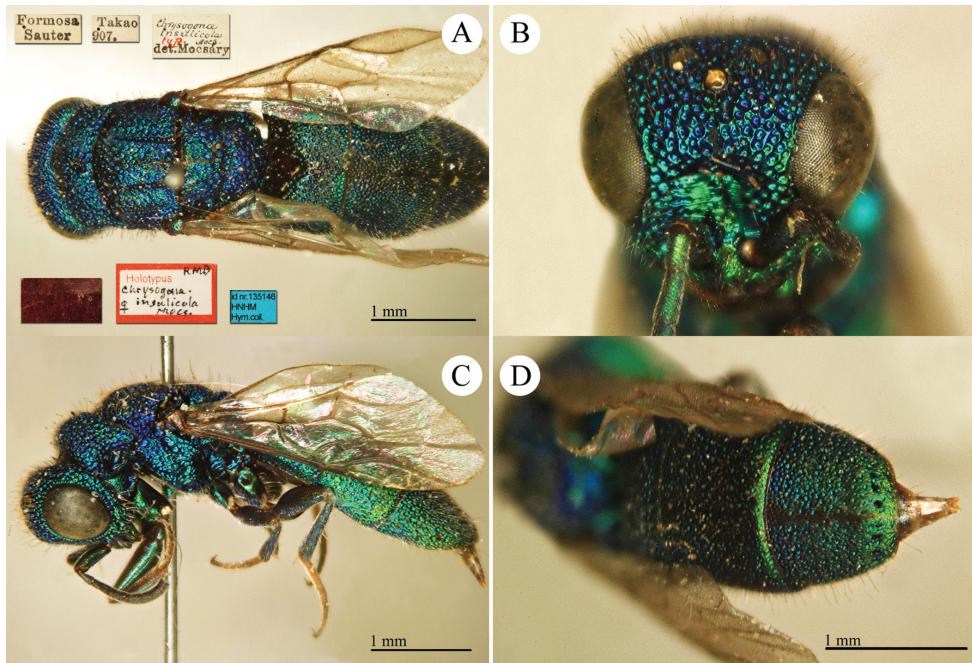
**Plate 30.** *Chrysis buddhae* Mocsáry, lectotype. **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, lateral view **D** second and third metasomal tergites, dorsal view.



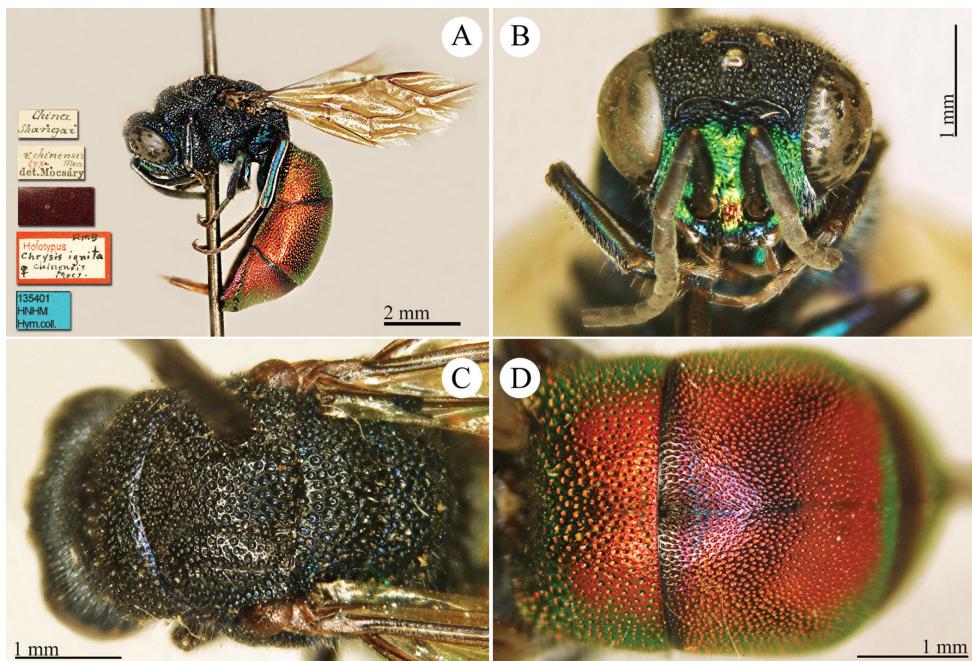
**Plate 31.** *Chrysis carnifex* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



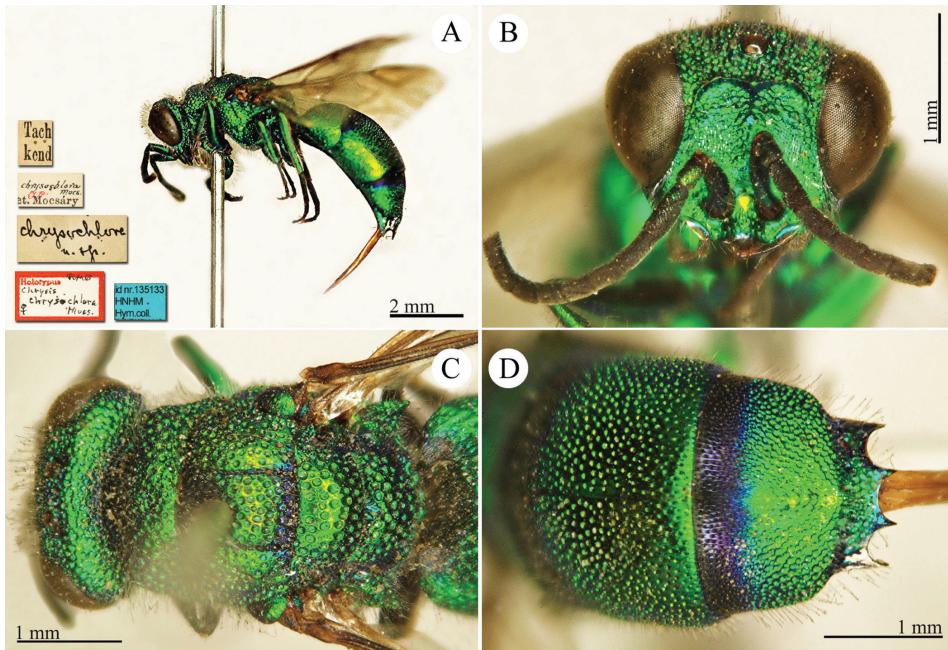
**Plate 32.** *Chrysis cavaleriei* (du Buysson), holotype. **A** Habitus, dorsal view **B** habitus, lateral view (photos courtesy of Pekka Malinen).



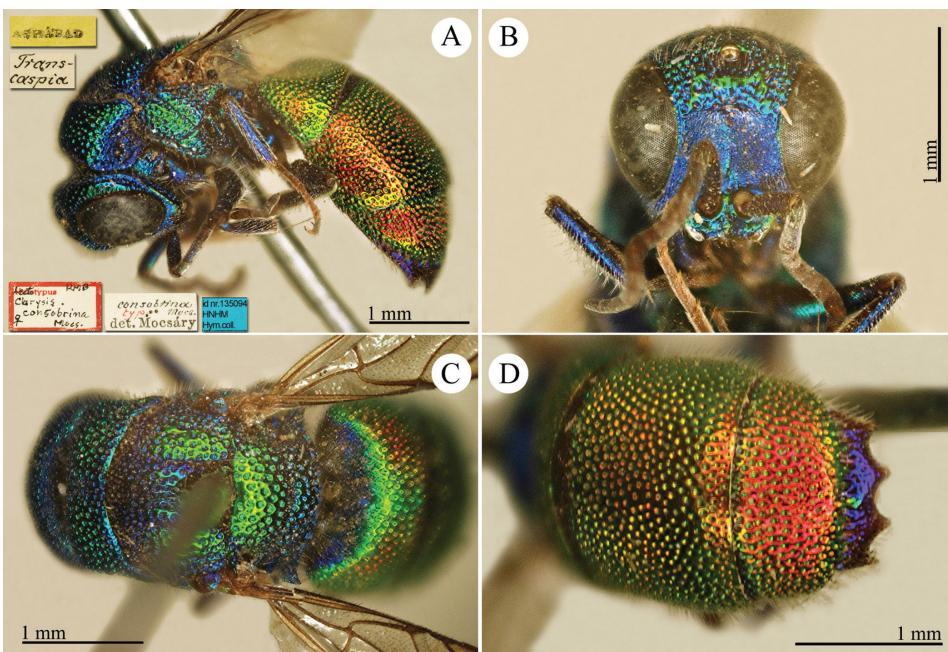
**Plate 33.** *Chrysidea insulicola* Mocsáry, holotype. **A** Habitus, dorsal view **B** head, frontal view **C** habitus, lateral view **D** second and third metasomal tergites, dorso-lateral view.



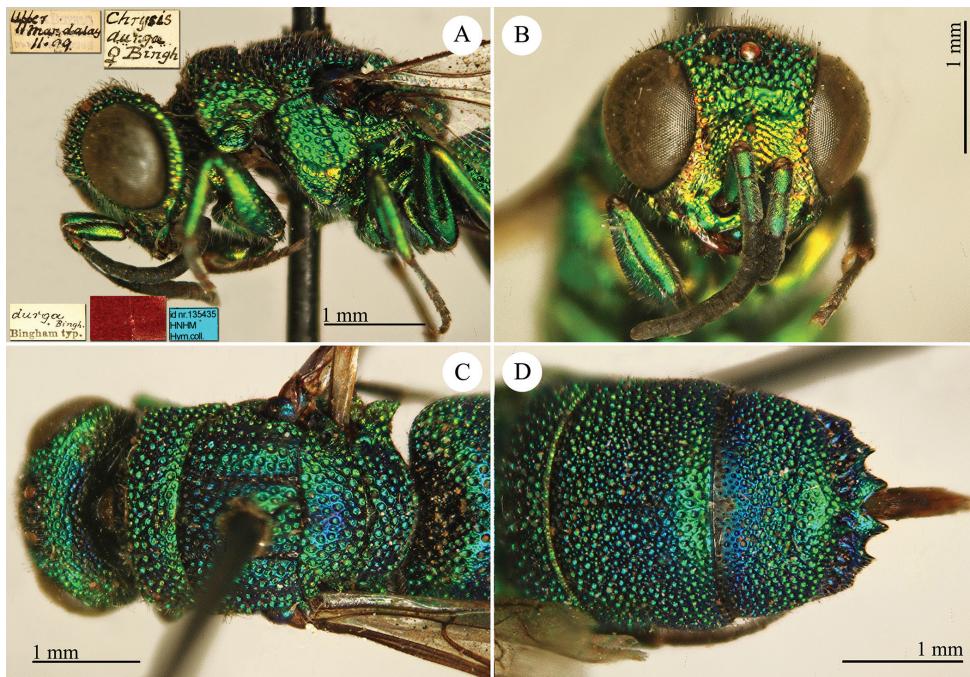
**Plate 34.** *Chrysis chinensis* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** first and second metasomal tergites, dorsal view.



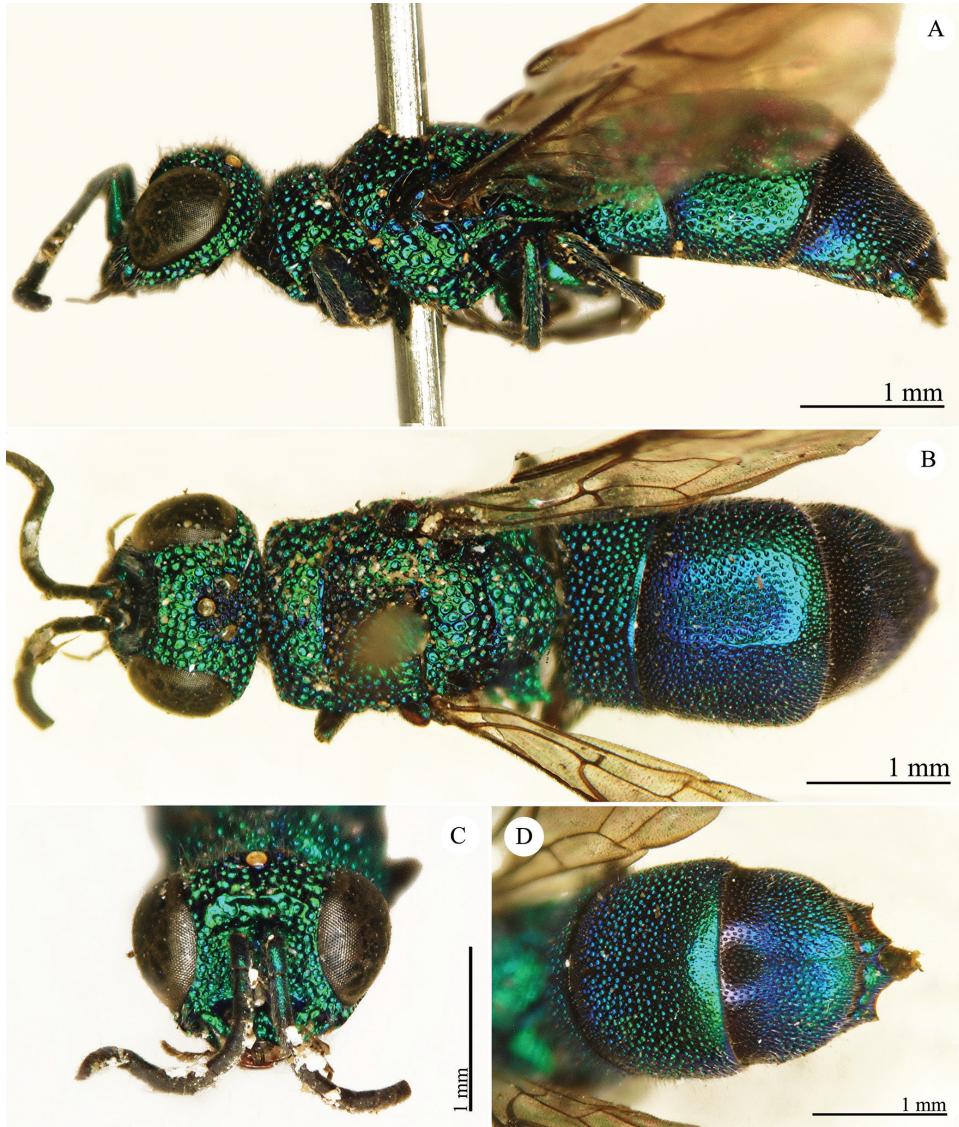
**Plate 35.** *Chrysis chrysochlora* Mocsáry, lectotype (given as holotype in the picture). **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



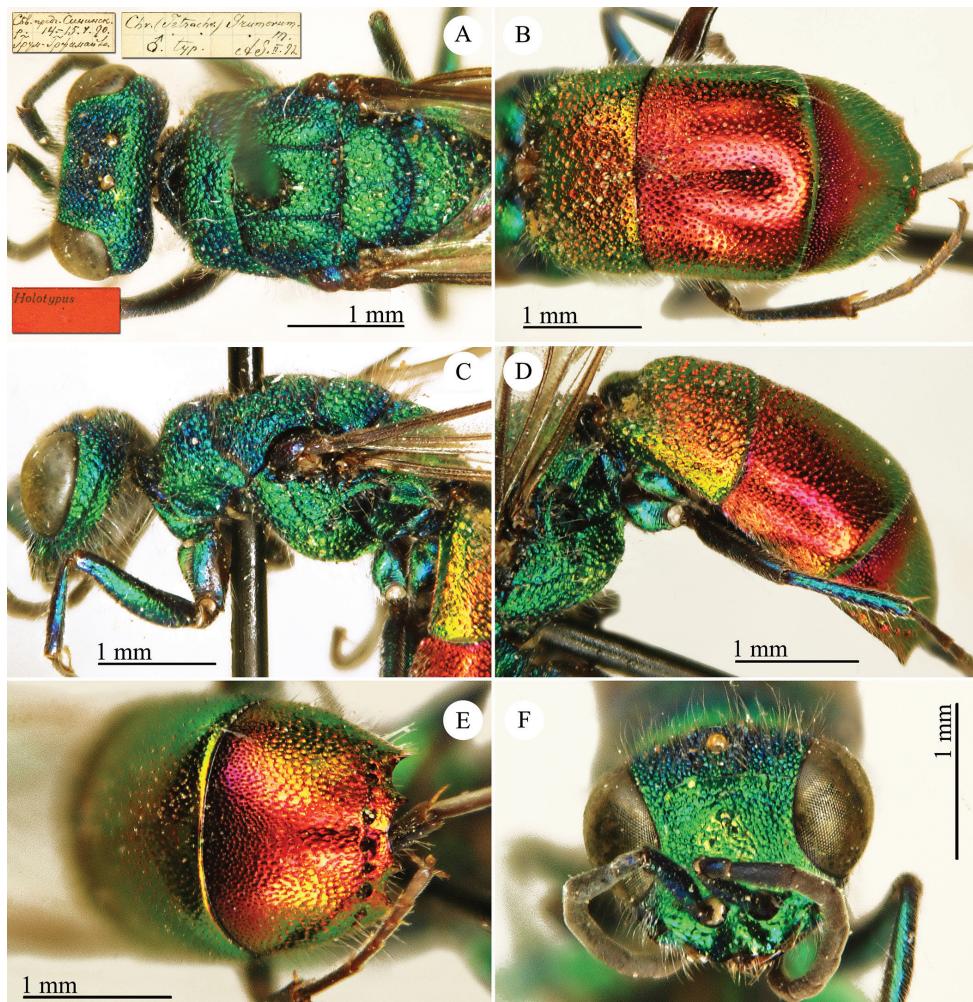
**Plate 36.** *Chrysis consobrina* Mocsáry, lectotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



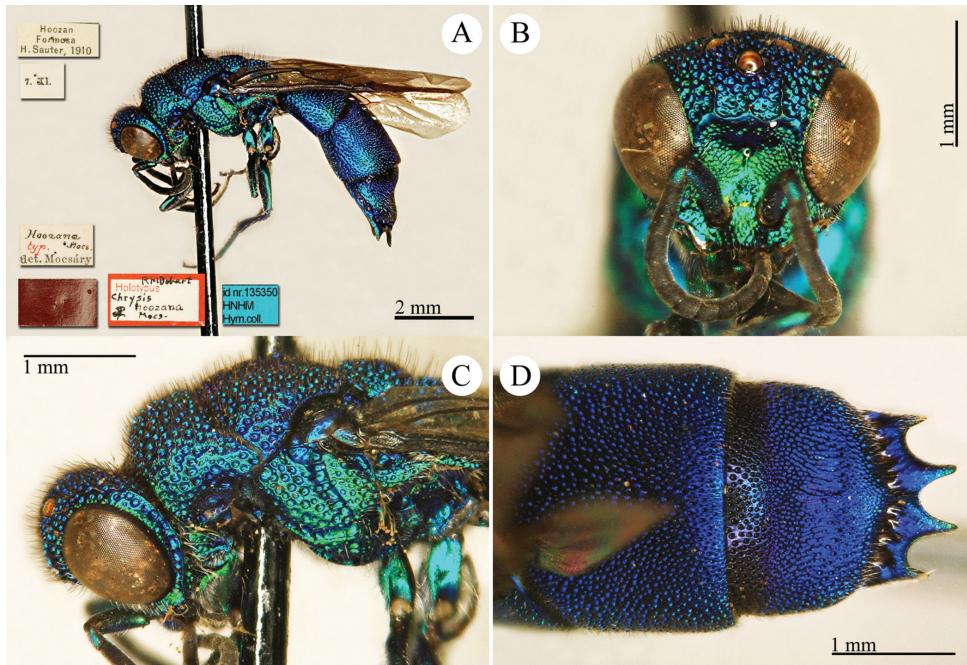
**Plate 37.** *Chrysis durga* Bingham, lectotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



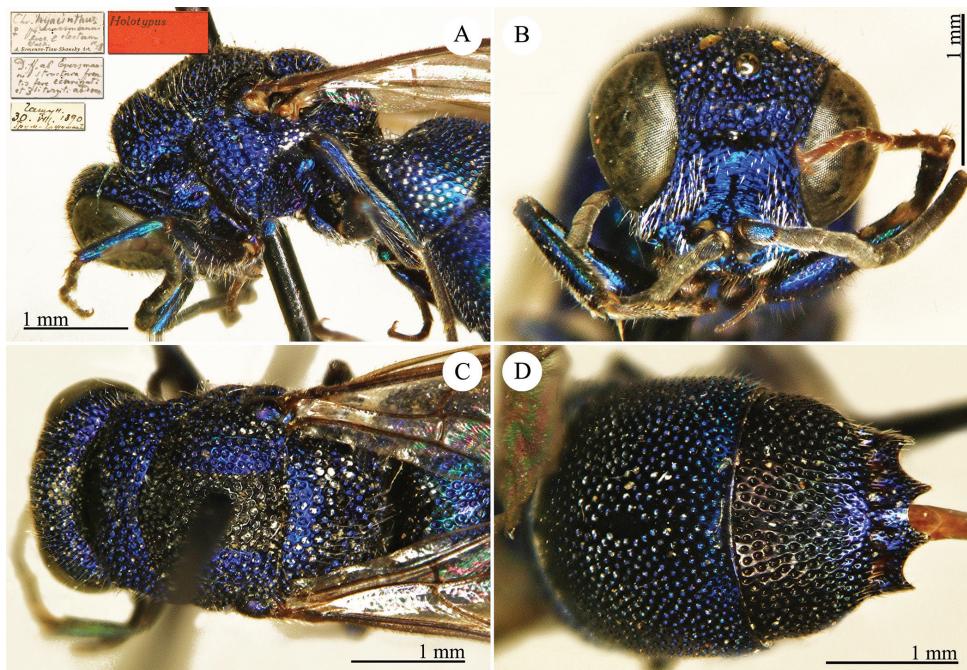
**Plate 38.** *Chrysis gracilenta* Mocsáry, holotype. **A** Habitus, lateral view **B** habitus, dorsal view **C** head, frontal view **D** second and third metasomal tergites, dorsal view.



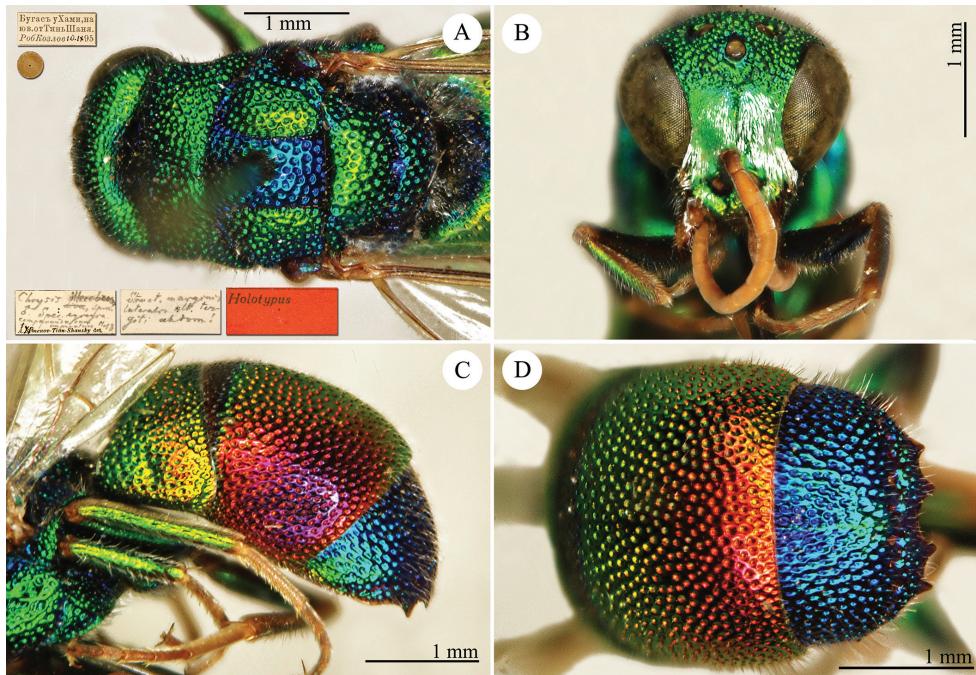
**Plate 39.** *Chrysis grumorum* Semenow, holotype. **A** Head and mesosoma, dorsal view **B** metasoma, dorsal view **C** head and mesosoma, lateral view **D** metasoma lateral view **E** third metasomal tergite, dorsal view **F** head, frontal view.



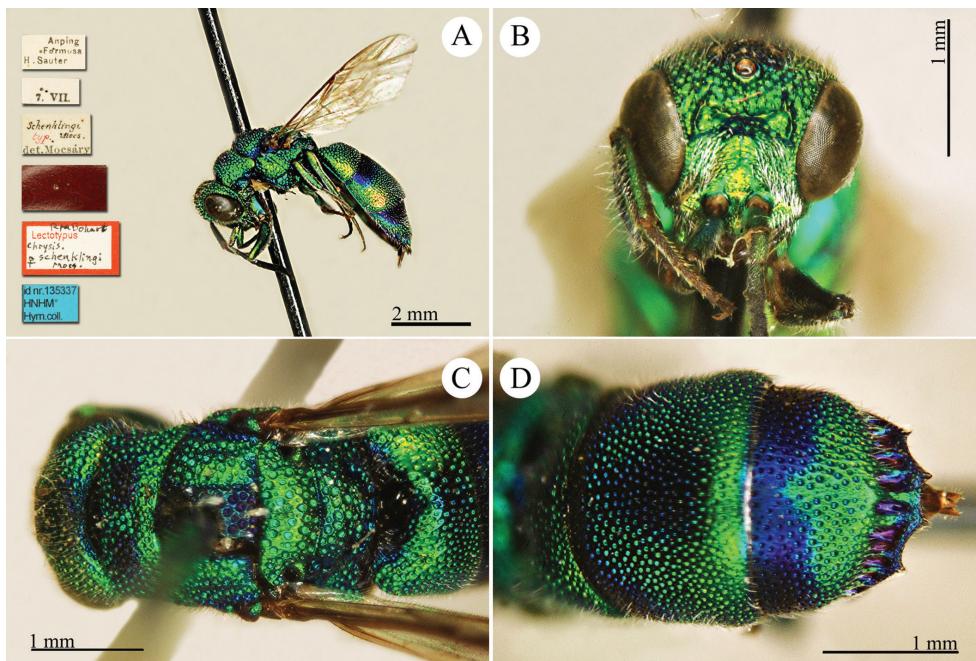
**Plate 40.** *Chrysis hoozana* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, lateral view **D** second and third metasomal tergites, dorsal view.



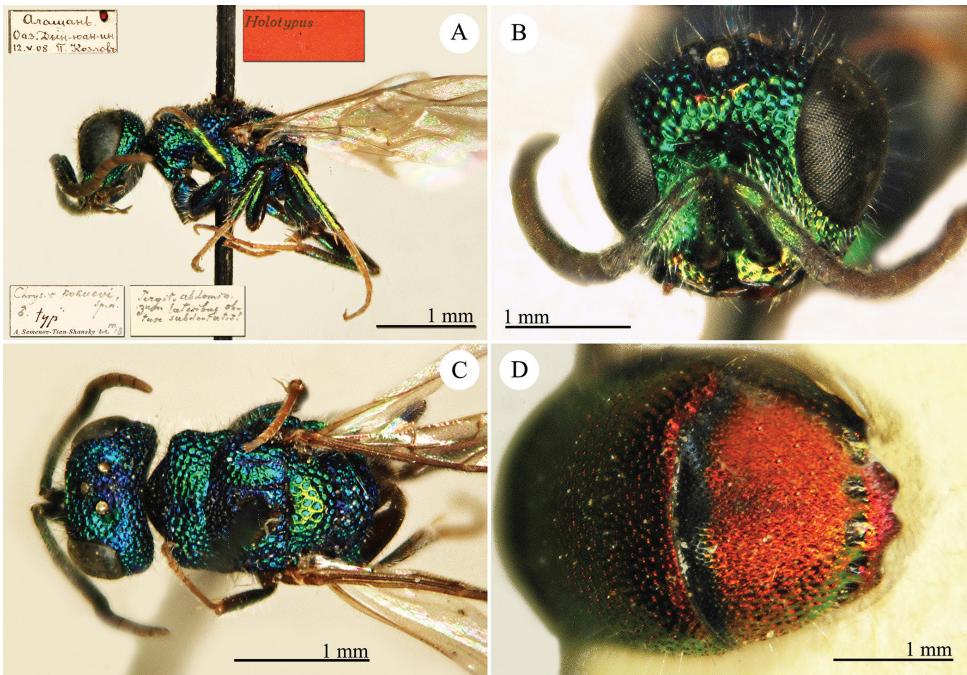
**Plate 41.** *Chrysis hyacinthus* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



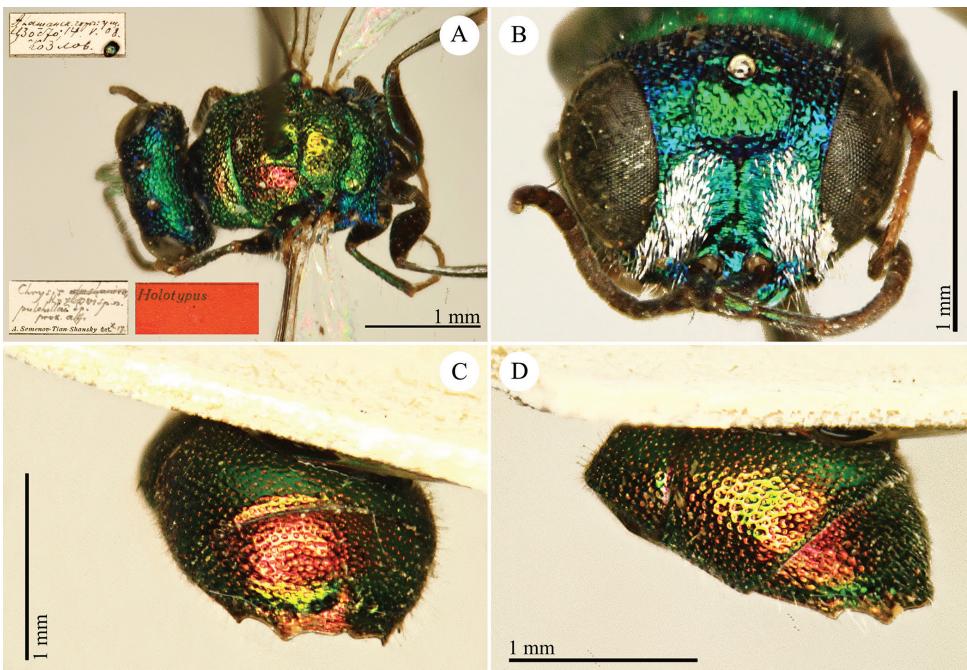
**Plate 42.** *Chrysis illecebrosa* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, dorsal view  
**B** head, frontal view **C** metasoma, lateral view **D** second and third metasomal tergites, dorsal view.



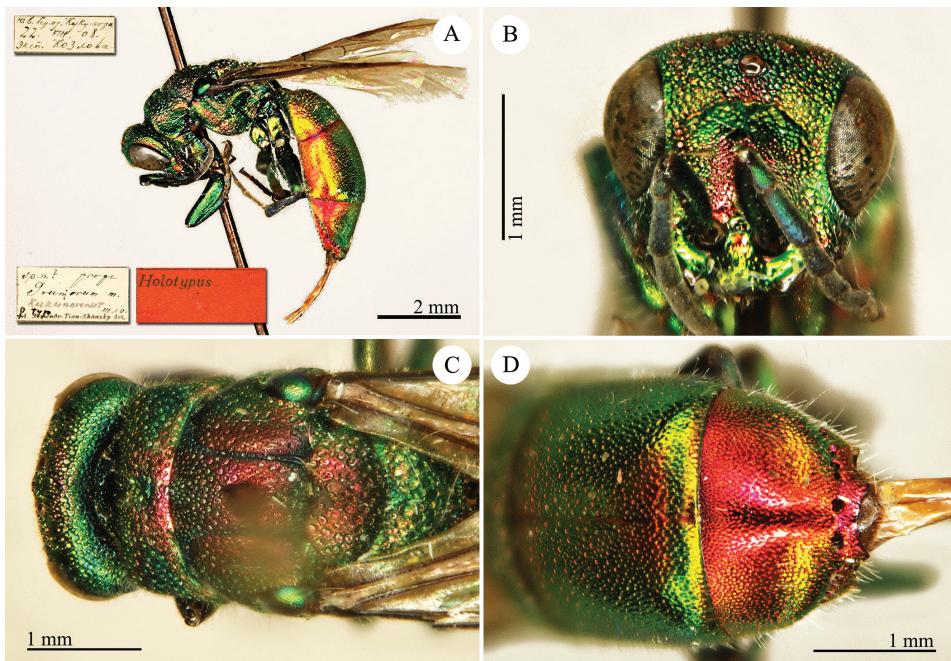
**Plate 43.** *Chrysis schenklingi* Mocsáry, lectotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



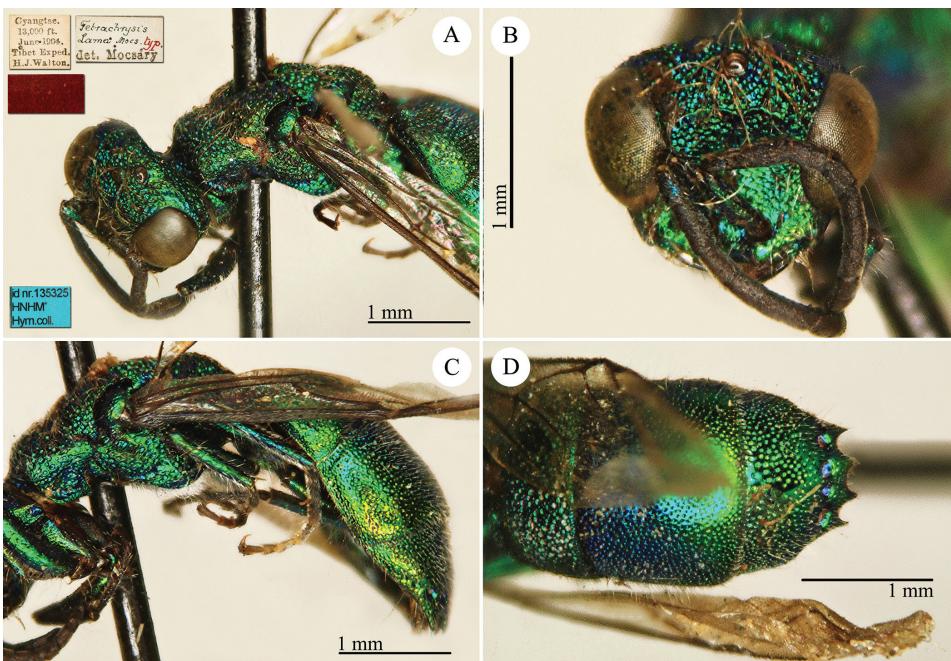
**Plate 44.** *Chrysis kokuevi* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** head and metasoma, dorsal view **D** third metasomal tergite, dorsal view.



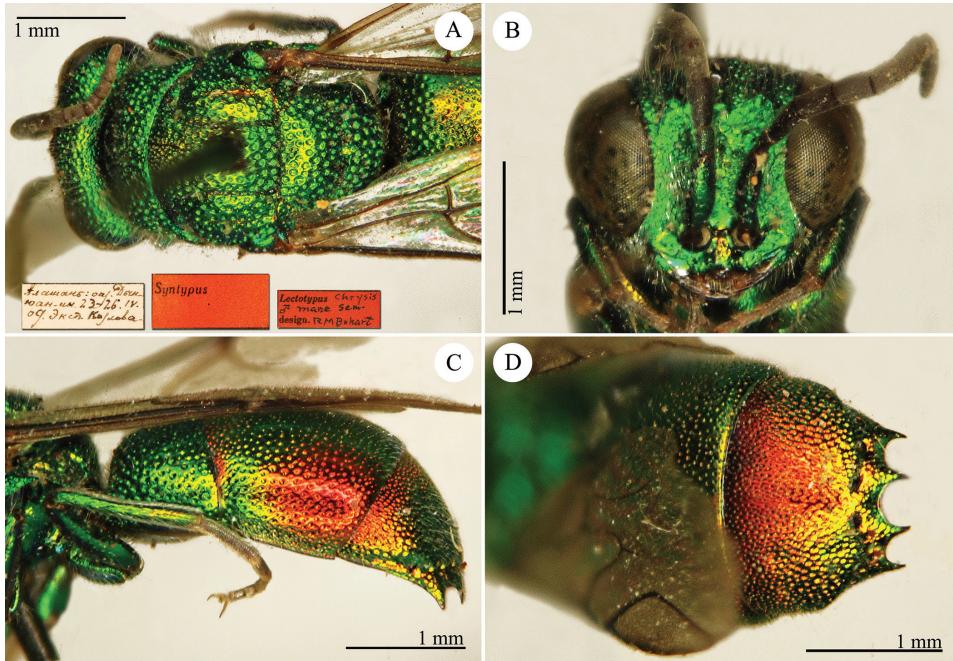
**Plate 45.** *Chrysis kozlovi* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, dorsal view **B** head, frontal view **C** third metasomal tergite, dorsal view **D** second and third metasomal tergites, dorso-lateral view.



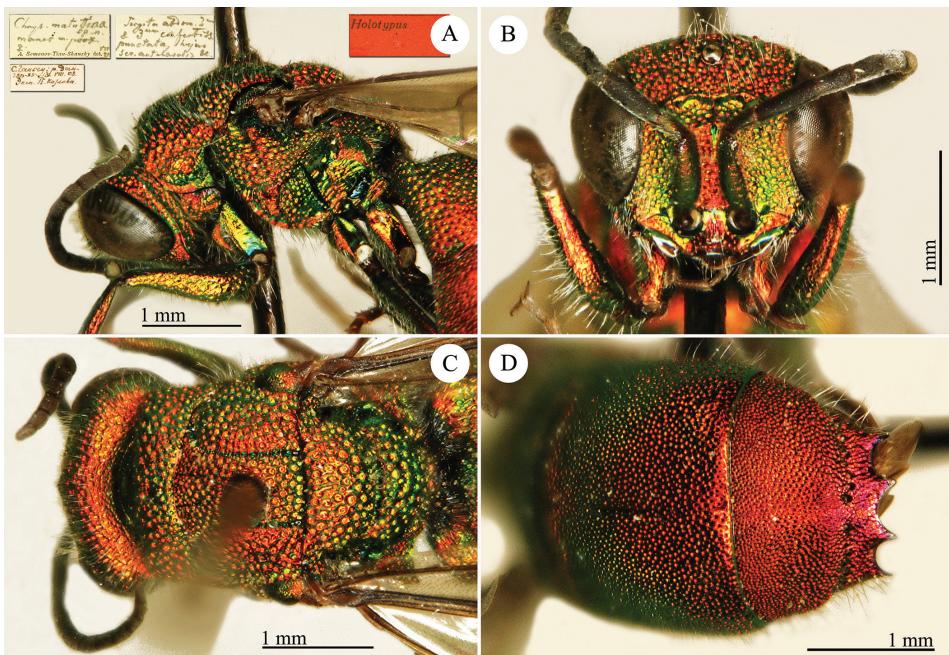
**Plate 46.** *Chrysis kukunorensis* Semenov-Tian-Shanskij, holotype. **A** Habitus, lateral view **B** head, frontal view **C** head and metasoma, dorsal view **D** second and third metasomal tergites, dorsal view.



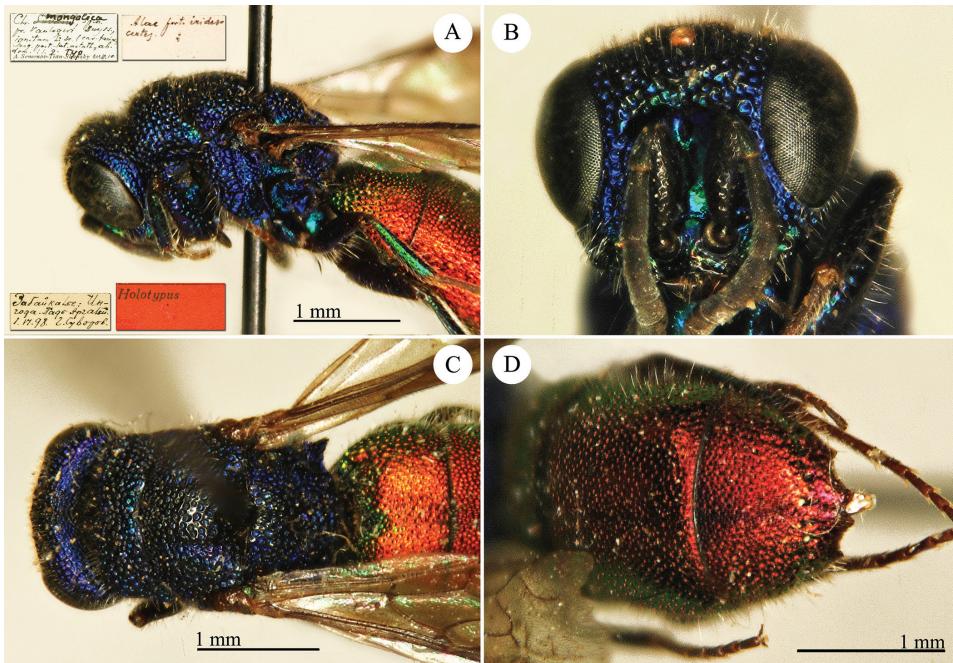
**Plate 47.** *Chrysis lama* Mocsáry, lectotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** mesosoma and metasoma lateral view **D** metasoma, dorsal view.



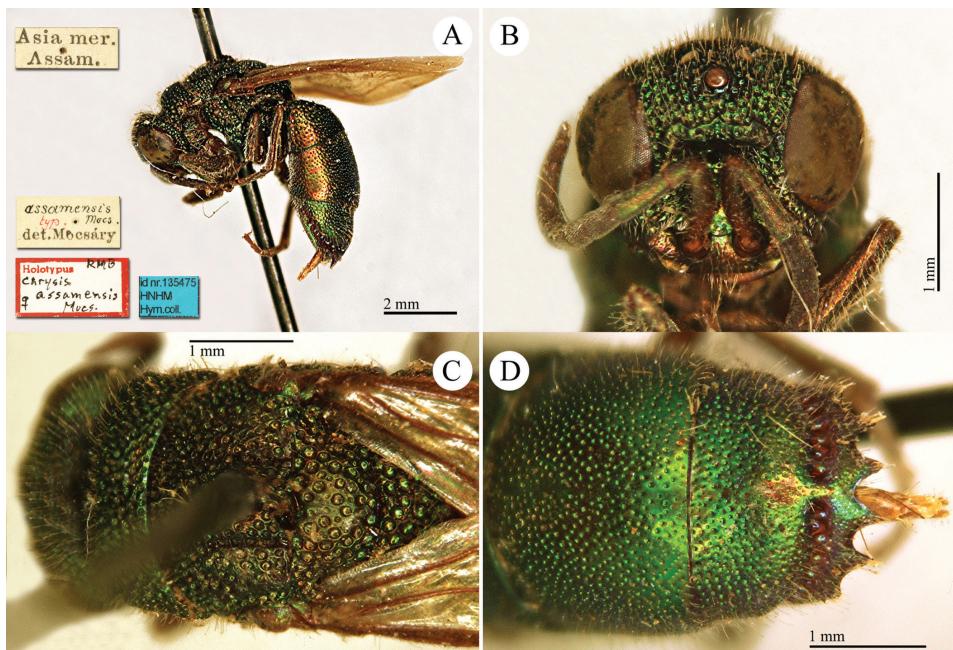
**Plate 48.** *Chrysis mane* Semenov-Tian-Shanskij, lectotype. **A** Head and mesosoma, dorsal view **B** head, frontal view **C** metasoma lateral view **D** third metasomal tergite, dorsal view.



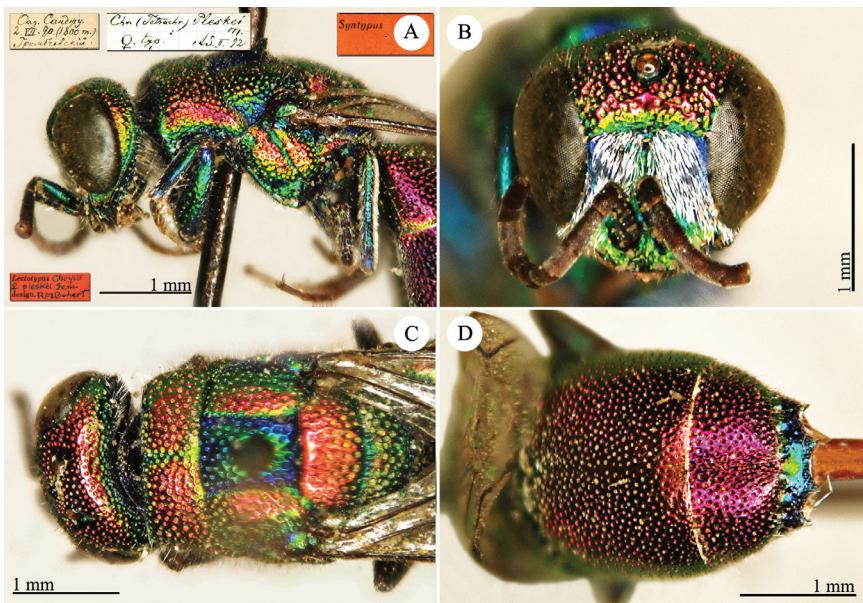
**Plate 49.** *Chrysis matutina* Semenov-Tian-Shanskij, holotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** Head and mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



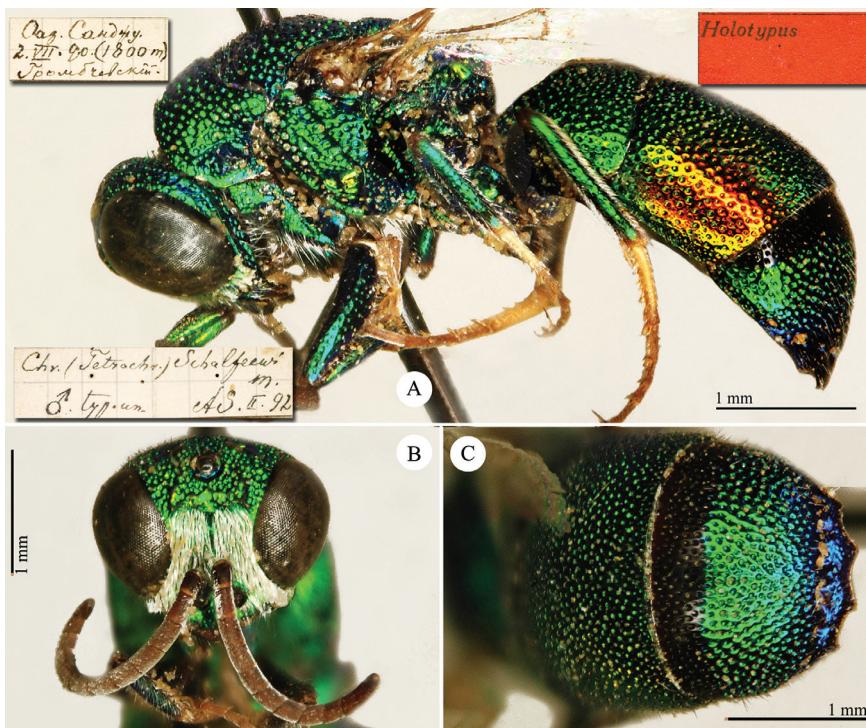
**Plate 50.** *Chrysis mongoliana* Bohart, 1991, holotype. **A** Head, mesosoma and anterior part of metasoma, lateral view **B** head, frontal view **C** head, mesosoma and anterior part of metasoma, dorsal view **D** second and third metasomal tergites, dorsal view.



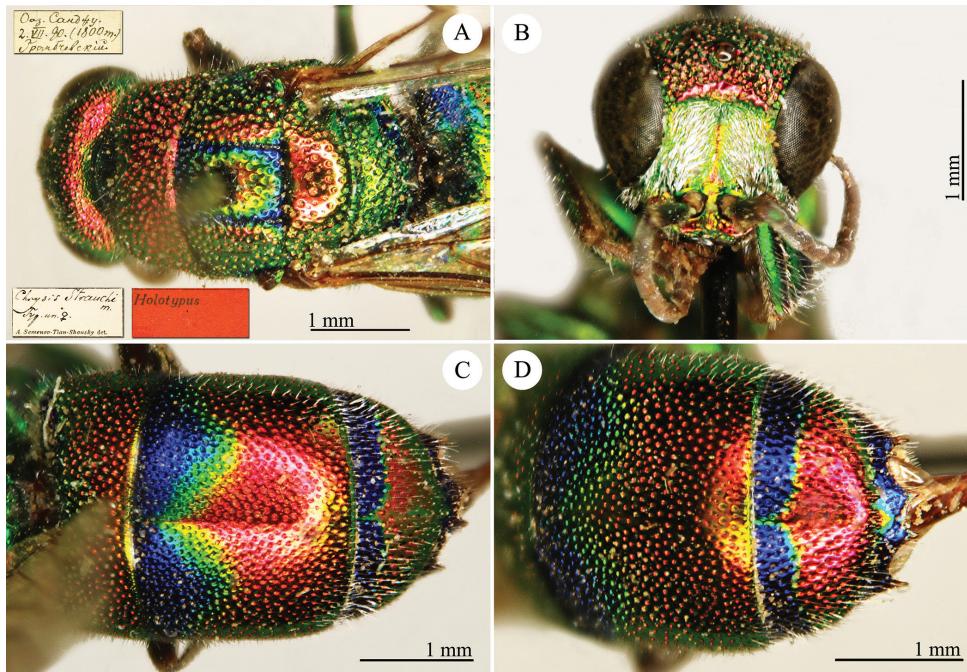
**Plate 51.** *Chrysis assamensis* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



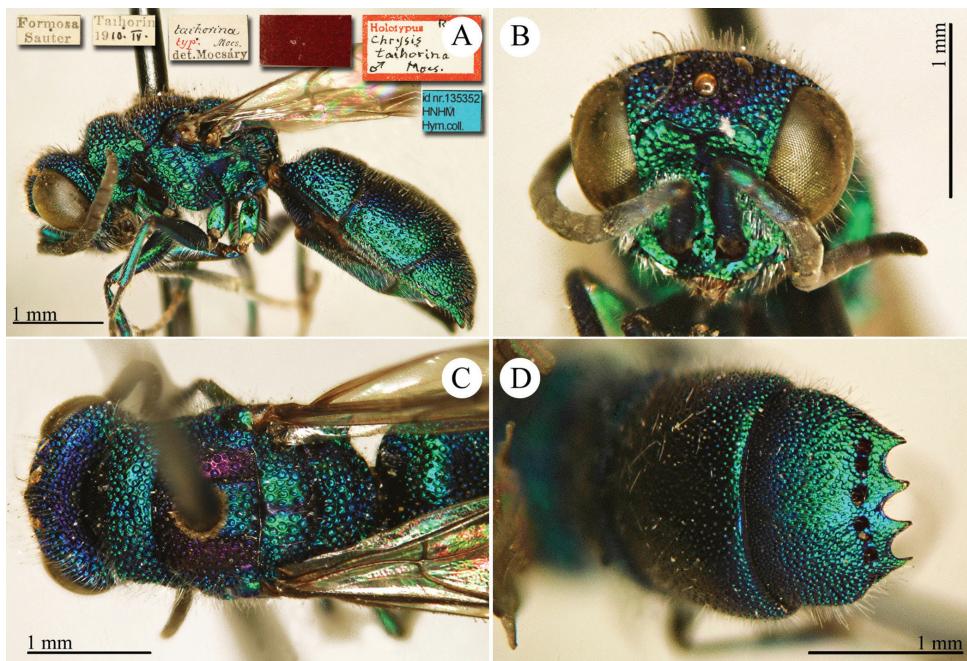
**Plate 52.** *Chrysis pleskei* Semenov-Tian-Shanskij, lectotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** Head and mesosoma, dorsal view **D** second and third metasomal tergites, dorsal view.



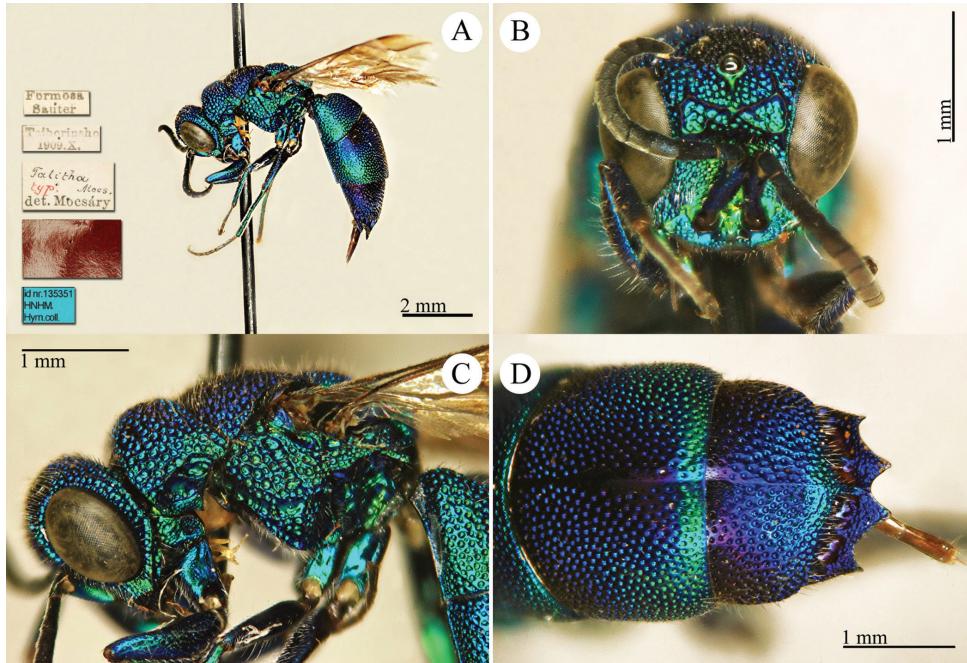
**Plate 53.** *Chrysis schalfeewi* Semenow, holotype. **A** Habitus, lateral view **B** head, frontal view **C** third metasomal tergite, dorsal view.



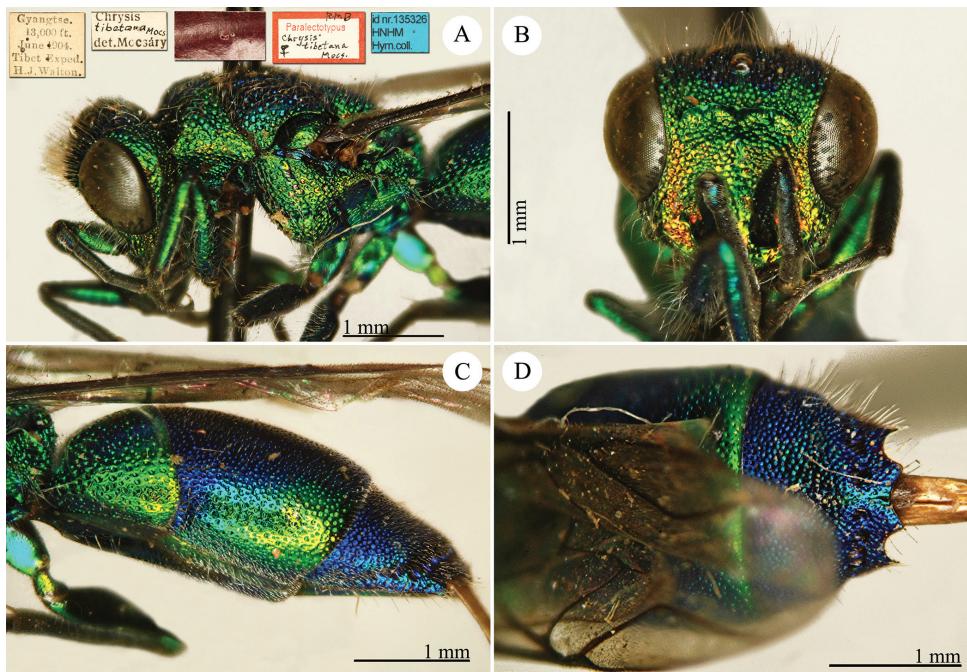
**Plate 54.** *Chrysis struchi* Semenow, holotype. **A** Head and mesosoma, dorsal view **B** head, frontal view **C** metasoma, dorsal view **D** second and third metasomal tergites, dorsal view.



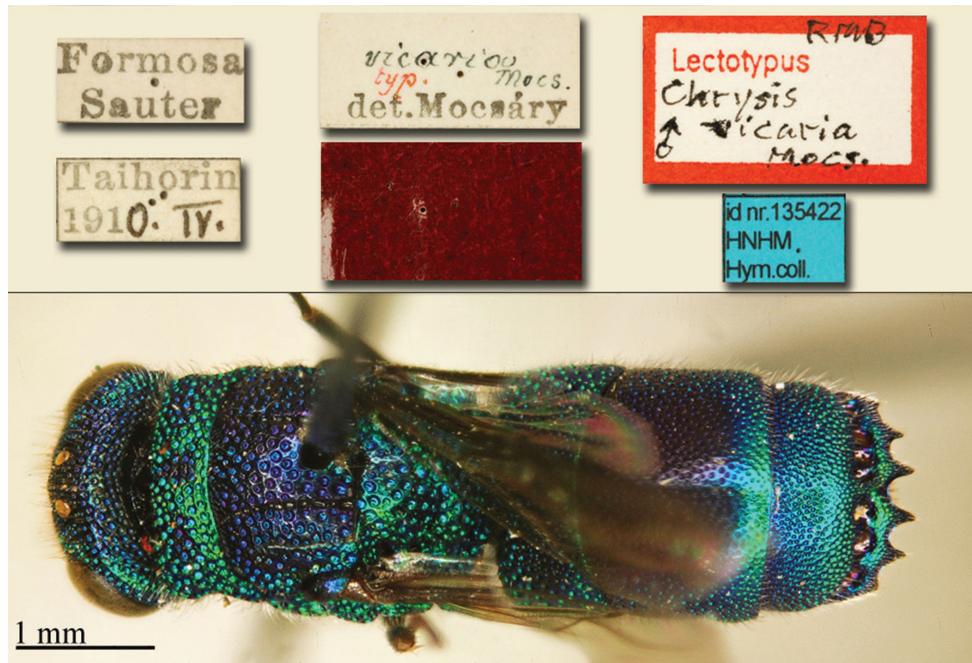
**Plate 55.** *Chrysis taihorina* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** third metasomal tergite, dorsal view.



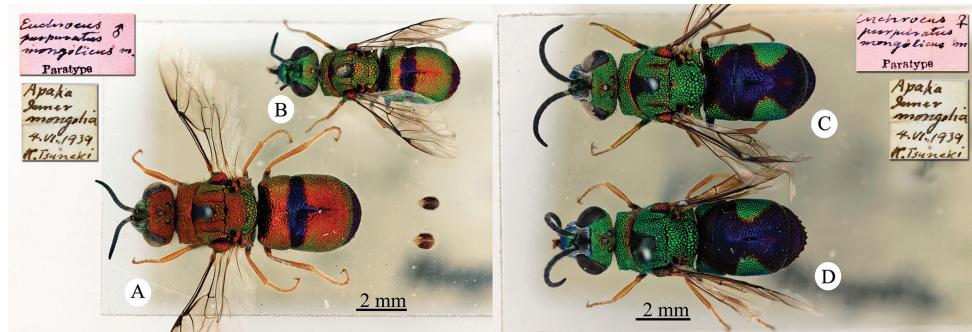
**Plate 56.** *Chrysis talitha* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** head and mesosoma, lateral view **D** second and third metasomal tergites, dorsal view.



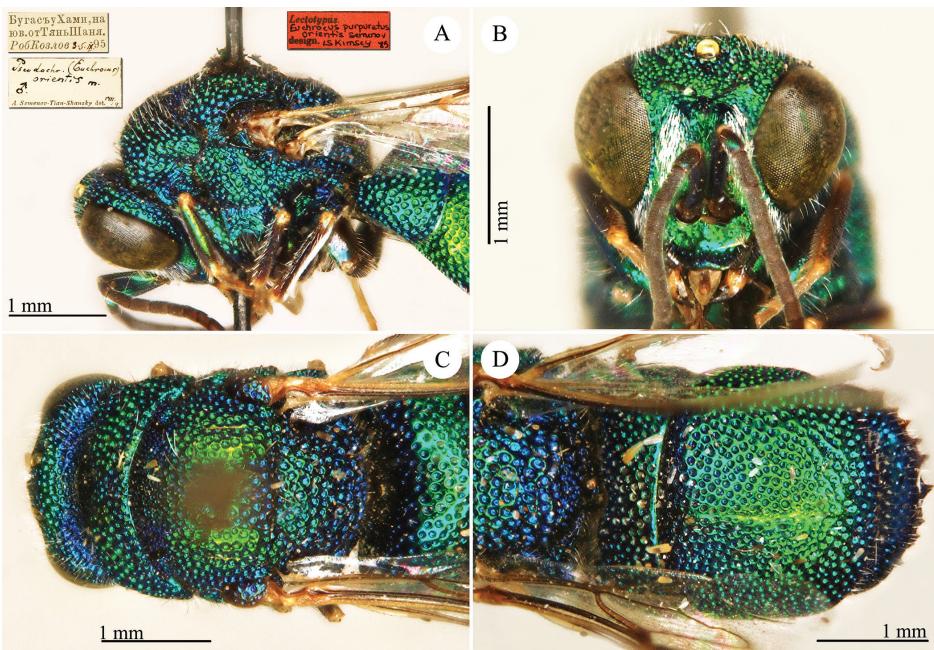
**Plate 57.** *Chrysis tibetana* Mocsáry, paralectotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** metasoma, lateral view **D** third metasomal tergite, dorsal view.



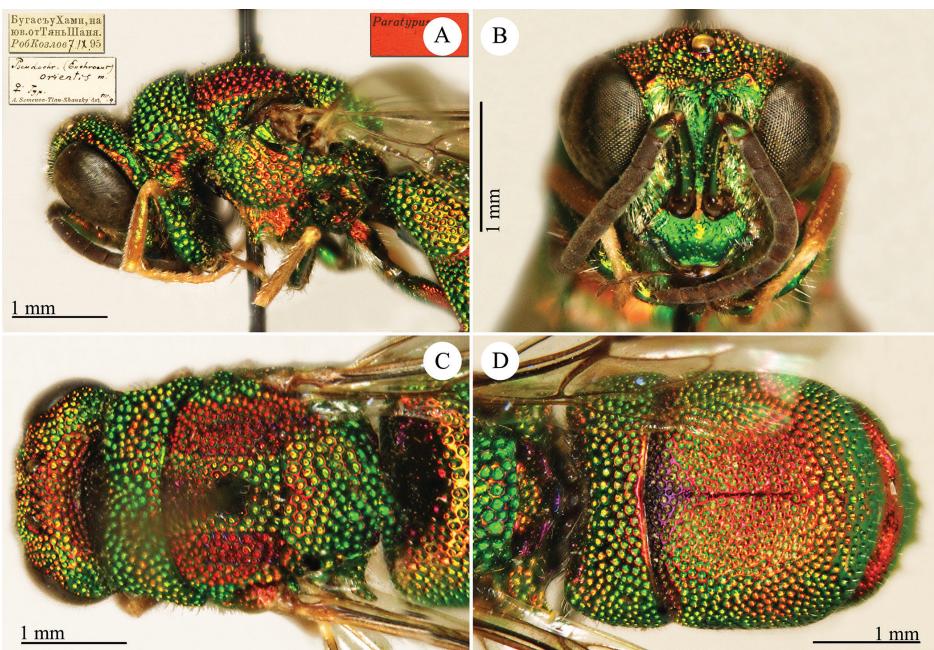
**Plate 58.** *Chrysis vicaria* Mocsáry, lectotype, habitus, dorsal view.



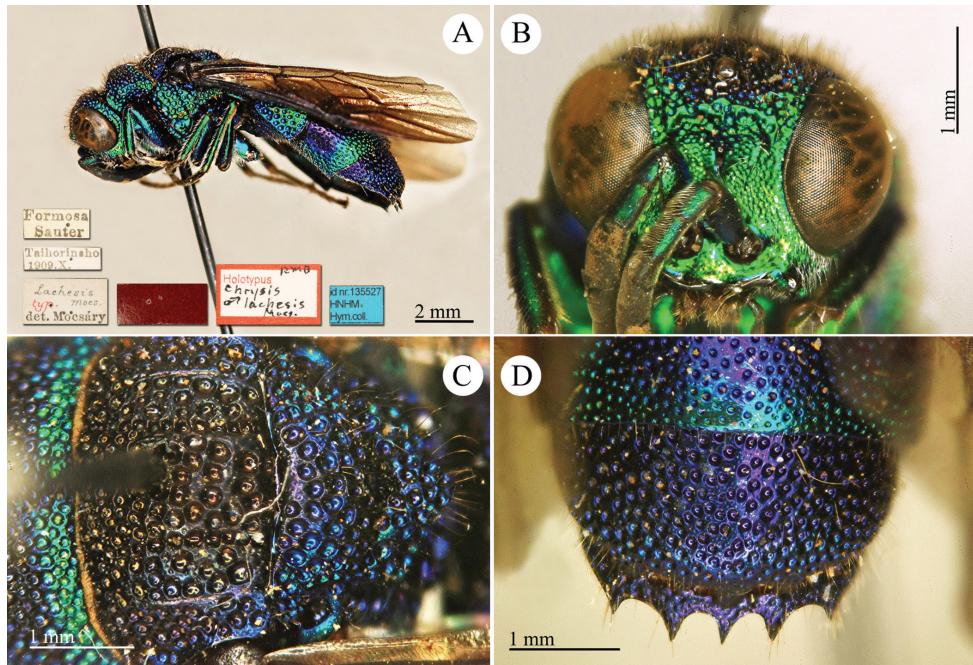
**Plate 59.** *Euchroeus mongolicus* Tsuneki, paratypes, habitus, dorsal view. **A, B** Males, dorsal view **C, D** females, dorsal view.



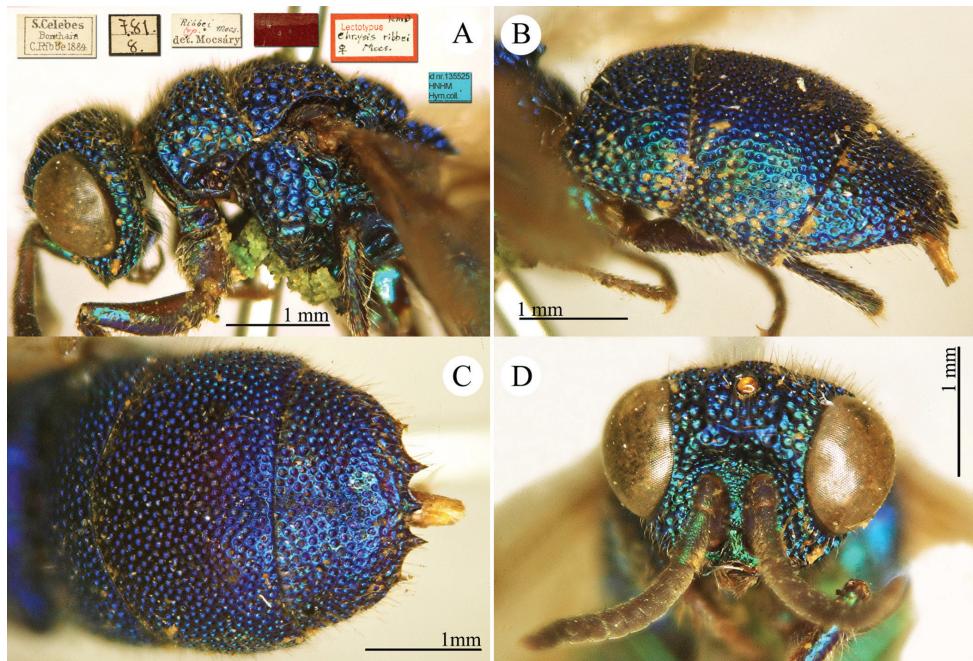
**Plate 60.** *Euchroeus orientis* (Semenov-Tian-Shanskij), lectotype. **A** Head and mesosoma, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** metasoma, dorsal view.



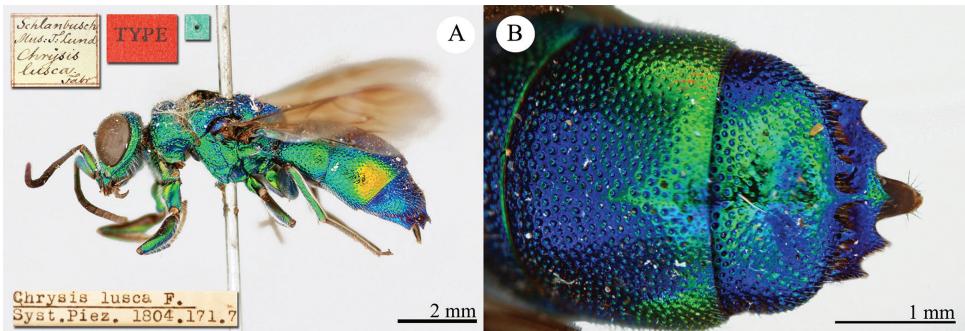
**Plate 61.** *Euchroeus orientis* (Semenov-Tian-Shanskij), paralectotype, female. **A** Head and mesosoma, lateral view **B** head, frontal view **C** head and mesosoma, dorsal view **D** first and second metasomal tergites, dorsal view.



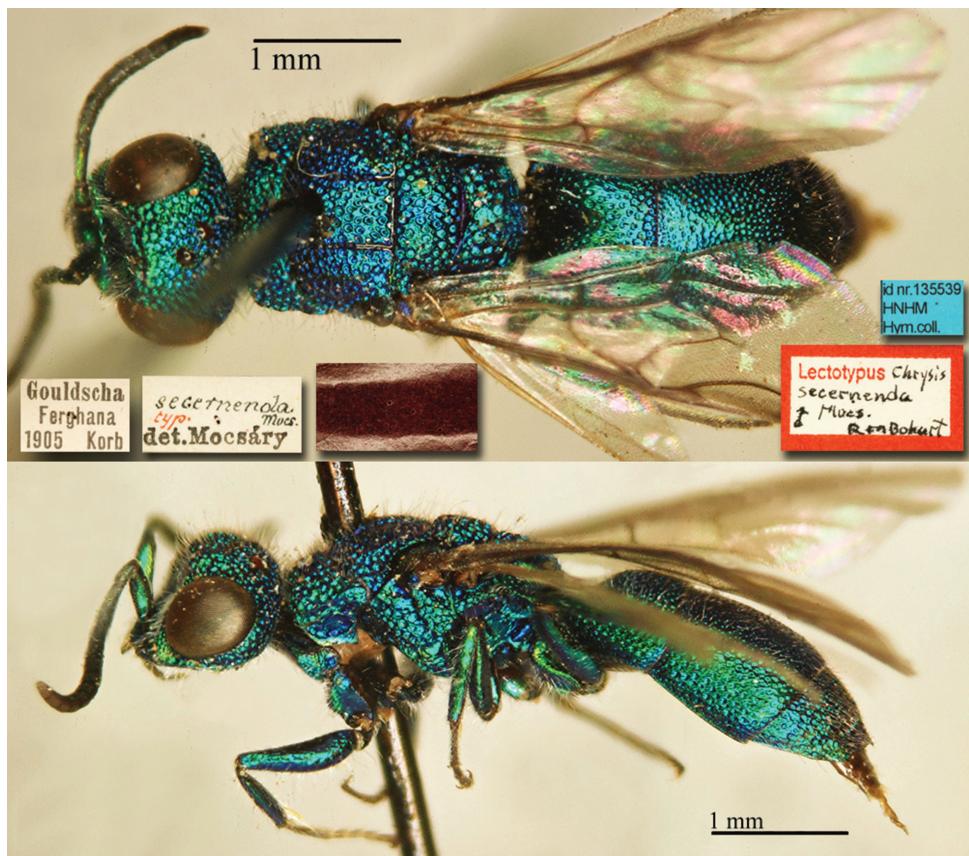
**Plate 62.** *Chrysis lachesis* Mocsáry, holotype. **A** Habitus, lateral view **B** head, frontal view **C** mesosoma, dorsal view **D** third metasomal tergite, dorsal view.



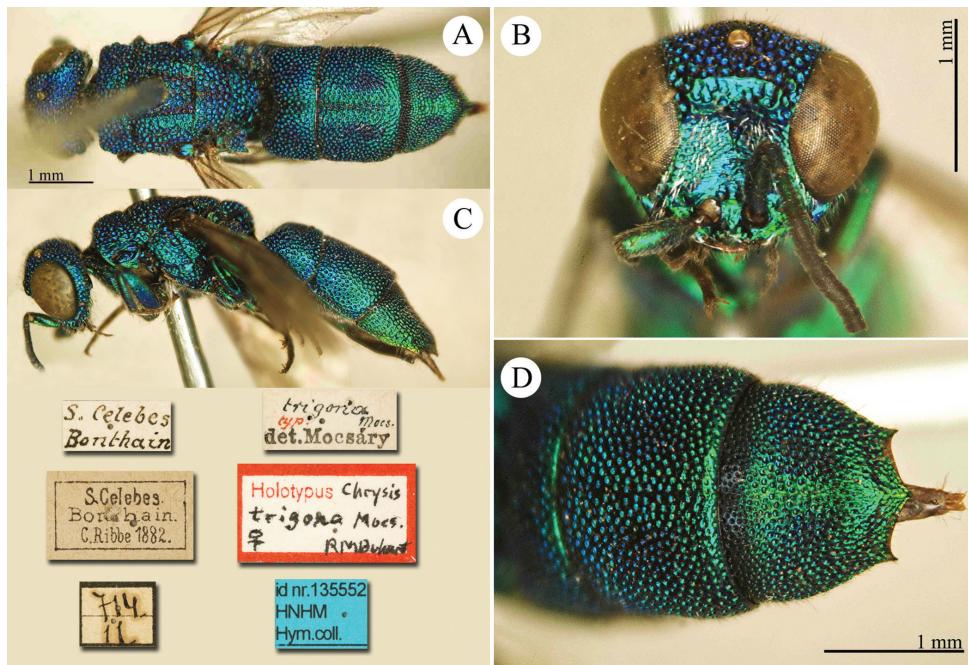
**Plate 63.** *Praestochrysis ribbei* (Mocsáry, 1889), lectotype. **A** Head and mesosoma, dorsal view **B** metasoma, lateral view **C** second and third metasomal tergites, dorsal view **D** head, frontal view.



**Plate 64.** *Trichrysis lusca* (Fabricius), holotype. **A** Habitus, lateral view **B** second and third metasomal tergites, dorsal view.



**Plate 65.** *Trichrysis secernenda* (Mocsáry), lectotype. **A** Habitus, dorsal view **B** habitus, lateral view.



**Plate 66.** *Trichrysis trigona* (Mocsáry), holotype. **A** Habitus, dorsal view **B** head, frontal view **C** habitus, lateral view **D** second and third metasomal tergites, dorsal view.

## II. Taxa to be excluded from China

### 1. *Chrysis coerulans* Fabricius, 1804

**Remarks.** Radoszkovsky (1866) identified two specimens as *Chrysis coerulans* Fabricius, but it is a misidentification, as *C. coerulans* is a Nearctic species (currently *Chrysis nitidula* Fabricius, 1775). Radoszkovski was not sure about his identification: “J'ai placé cette espèce sous le nom de *coerulans*; quoique plus rapprochée par la couleur de cette dernière espèce, elle ressemble en même temps par sa forme à la *chrysis nitidula*”. Dalla Torre (1892, sub *caerulea* Fabr.) reported the same datum for China.

### 2. *Chrysis syriaca* Guérin-Méneville, 1842

**Remarks.** Bischoff (1913: 51) erroneously listed *C. nomima* du Buysson (currently *C. syriaca*) as being from China, rather than from Algeria and Egypt.

### 3. *Holopyga gloriosa viridis* Guérin-Méneville, 1842

**Remarks.** *Holopyga viridis* is present from North Africa to Palestine (Lisenmaier 1959, 1999) with records also found further west towards Oman (Lisenmaier 1994). Its appearance in China is dubious and the specimens identified by Tsuneki (1947, 1948a) must be double-checked.

## III. Doubtful taxa mentioned in China

### 1. *Cleptes nitidulus* (Fabricius, 1793)

**Remarks.** The report of *C. nitidulus* in the east Palaearctic (Uchida 1926) was considered debatable by Ha et al. (2011). Therefore, *C. nitidulus* is temporarily excluded from the checklist of the Chinese *Cleptes*.

### 2. *Cleptes semiauratus* (Linnaeus, 1758)

**Remarks.** As in the previous case, Sheng et al. (1998) reported *C. semiauratus* as a new record to China. After examining the specimens, Wei et al. (2013) discovered that the specimen evidently belonged to an undescribed species (*C. shengi* Wei, Rosa and Xu, 2013). However *C. semiauratus* may be present in the most western part of the country.

### 3. *Hedychrum coerulescens* Schuckard, 1837

**Remarks.** Tsuneki (1946, 1947, 1948a) listed *Hedychrum coerulescens* Schuckard, 1837 nec Lepeletier, 1806, nec Chevrier, 1862. The occurrence of this species in China is surely in error. Tsuneki based the identification on a very short diagnosis of two specimens housed in BMNH without locality labels. At present these species cannot be recognized and the description is not adequate to identify the species. Furthermore, the name *Hedychrum coerulescens* Schuckard is a primary junior homonym of *Hedychrum coerulescens* Lepeletier, 1806 (currently *Pseudomalus violaceus* (Scopoli, 1763)).

### 4. *Holopyga amoenula amoenula* Dahlbom, 1854

**Remarks.** The presence of *Holopyga amoenula amoenula* Dahlbom, 1854 (sub *H. gloriosa amoenula* in du Buysson (1911) and Tsuneki (1948a)) is restricted to the island of Rhodes. The Chinese records identified by du Buysson and Tsuneki must be double-checked so as to confirm their identity.

### 5. *Loboscelidia defecta* Kieffer, 1916

**Remarks.** It was listed from south China by Kimsey and Bohart (1991), but was recently excluded from the Chinese fauna by Kimsey (2012).

### 6. *Pseudomalus bergi* (Semenov-Tian-Shanskij, 1932)

**Remarks.** Kimsey and Bohart (1991) mistakenly listed *bergi* as having originally described from China, but the correct locality is “Prov. Heptapotamica (Semiretsh’ye); vallis fl. Kora in montibus Alatau Dzungarico”. “Dzungarian Alatau” is a mountain range found along the boundary between Dzungaria (China) and Zhetysu (Kazakhstan), however the Kora river is located within the former Soviet country. Regardless, the species may be present in China too.

### 7. *Pseudomalus pusillus* (Fabricius, 1804)

**Remarks.** Listed in China by Berland and Bernard (1938: 35, Shanxi: Nan-chan) and by Balthasar (1954) without any precise locality.

## Conclusion

The current number of known Chinese chrysidid species and subspecies is 188 in total. We excluded some published yet doubtful data due to uncertain identifications. Overall, the Chinese chrysidid fauna is still poorly known, comparing with the fauna of the adjacent countries both in the Palearctic Region (e.g. Korea, Mongolia, Far East Russia, Tajikistan) and the Oriental Region (e.g. Burma, Vietnam). We expect a higher number of taxa for China as results of its geographical position, climatic condition and topographical structure.

## Acknowledgements

We are grateful to the following curators for their cooperation and assistance in the study of the type material: Dr. Marco Bernasconi (NMLS, Switzerland); Dr. Roy Danielsson (LZM, Sweden); Dr. Frank Koch (MNHU, Germany); Dr. Bernard Merz (MHNG, Switzerland); Dr. Luca Picciau (MRSN, Italy); Dr. Roberto Poggi (MSNG, Italy); Dr. Fabrizio Rigato (MSNM, Italy); Dr. Zoltán Vas (HNHM, Hungary); Dr. Hege Vårdal (NHRS, Sweden); Dr. Lars Bjørn Vilhelmsen (ZMU, Denmark); Dr. Bogdan Wiśniowski, Dr. Daniel Kubisz and Dr. Dawid Moroń (ISEA-PAS, Poland); Dr. Herbert Zettel and Dr. Dominique Zimmermann (NHMW, Austria); Dr. Sergey

Belokobylskij (ZIN, Russia). We are also grateful to Jessica Ordman (Rome) for the English proofreading, Dr. Toshiharu Mita (Kumamoto, Japan) for translations of some Japanese articles, Dr. Katerina Martinova (Kiev, Ukraine) and Dr. Liubov Fedorova for translations of some Russian articles, and Dr. Pekka Malinen (Finnish Museum of Natural History, Helsinki, Finland) for the pictures of *Chrysis cavaleriei* (du Buysson). Special thanks to two anonymous reviewers and subject editor Dr. Michael Engel for their valuable suggestions to improve the manuscript.

The study was partly supported by the National Basic Research Program of China (No. 2013CB127600) and the National Natural Science Foundation of China (30770265).

## References

- Abeille de Perrin E (1877) Diagnoses d'espèces nouvelles et remarques sur des espèces rares. Feuille jeunes naturaliste 7: 65–68.
- Abeille de Perrin E (1878) Diagnoses de Chrysides nouvelles. Published by the author, Marseille, 6 pp.
- Abeille de Perrin E (1879) Synopsis critique et synonymique des Chrysides de France. Annales de la Société Linnéenne de Lyon 26: 1–108.
- Aguiar AP, Deans AR, Engel MS, Forshage M, Huber JT, Jennings JT, Johnson NF, Lelej AS, Longino JT, Lohrmann V, Miko I, Ohi M, Rasmussen C, Taeger A, Yu DSK (2013) Order Hymenoptera Linnaeus, 1758. In: Zhang ZQ (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. Zootaxa 3703: 1–82. doi:10.11646/zootaxa.3703.1.12
- Arens W (2010) Revision der *Hedychridium roseum*-Gruppe in Kleinasiens (Hymenoptera: Chrysidae), mit Neubewertung zahlreicher europaeischer Taxa und Beschreibung zweier neuer Arten. Linzer Biologische Beiträge 42(1): 401–458.
- Ashmead WH (1902) Classification of the fossorial, predaceous and parasitic wasps, or the superfamily Vespoidea. The Canadian Entomologist 34: 79–88, 131–137, 163–166, 203–210, 219–231, 268–273, 287–291. doi: 10.4039/Ent3479-4
- Balthasar V (1954) Zlatěnky – Chryridoidea. Fauna ČSR. Svazek 3. (Řád: Blanokřídlí-Hymenoptera). Československá Akademie Věd., Praha.
- Banaszak J (1980) Złotolitki. Chrysidae. Katalog Fauny Polski, Polska Akademia Nauk. Instytut Zoologii, Warzaw, vol. 35, 47 pp.
- Berland L, Bernard F (1938) Hyménoptères vespiformes. III. (Cleptidae, Chrysidae, Trigonalidae). Faune de France vol.: 34. Office Central de Faunistique. Fédération Française des Société des Sciences Naturelles. Le Chevalier, Paris, 145 pp.
- Bingham CT (1903) The Fauna of British India, including Ceylon and Burma. Hymenoptera, Vol. II. Ants and Cuckoo-wasps. Taylor & Francis, London, 528 pp.
- Bischoff H (1910) Die Chrysiden des Königlichen Zoologischen Museums zu Berlin. Mitteilungen aus dem Zoologischen Museum in Berlin 4: 426–493.

- Bischoff H (1913) Hymenoptera. Fam. Chrysidae. In: Wytsman P (Ed.) Genera insectorum. Fascicule 151. Bruxelles, L. Desmet-Verteneuil, 86 pp. + 5 pls.
- Bohart RM (1987) A Key to *Trichrysis* and new species from Sri Lanka and Africa (Hymenoptera: Chrysidae). Pan-Pacific Entomologist 63 (4): 347–351.
- Bohart RM (1988) A key to species of the genus *Primeuchroeus* and descriptions of new species (Hymenoptera: Chrysidae). Insecta Mundi 2(1): 21–27.
- Bohart RM, French LD (1986) Designation of Chrysidid Lectotypes in the Mocsáry Collection at the Hungarian National Museum, Budapest (Hymenoptera: Chrysidae). Pan-Pacific Entomologist 62(4): 340–343.
- Buysson R du (1887) Descriptions de Chrysidiades nouvelles. Revue d'Entomologie 6: 167–201.
- Buysson R du (in André) (1891–1896) Species des Hyménoptères d'Europe & d'Algérie. Tome Sixième. Les Chrysides. Vve Dubosclard, Paris, I–XII + 13–758 + 64 unnumbered pages + 32 pls. (1891) 1–88, (1892) 89–208, (1893) 209–272, (1894) 273–400, (1895) 401–624, (1896) 625–756 + 1–22, (1891–1896) 64 unnumbered pages + 32 pls. [Dating after Derksen and Scheiding 1963].
- Buysson R du (1893) Contribution aux Chrysides du Globe – 2 serie. Revue d'Entomologie de France 2: 245–252.
- Buysson R du (1898a) Étude des Chrysidiades du Muséum de Paris. Annales de la Société Entomologique de France 66(4): 518–580.
- Buysson R du (1898b) Contribution aux Chrysides du Globe – 3 série. Revue d'Entomologie 17: 125–147.
- Buysson R du (1898c) La *Chrysis shangaiensis* Sm. Annales de la Société Entomologique de France 67(1): 80–83.
- Buysson R du (1899) Catalogue des Insectes Hyménoptères de la famille des Chrysidiades du Muséum de Paris. Bulletin du Muséum National d'Histoire Naturelle Paris 5(4): 159–169.
- Buysson R du (1900) Contribution aux Chrysidiades du Globe – 4 série. Revue d'Entomologie 19: 125–158.
- Buysson R du (1901a) Sur la *Chrysis shangaiensis*. Bulletin de la Société Entomologique de France 1901: 29–30.
- Buysson R du (1901b) Sur quelques Chrysidiades du Musée de Vienne. Annalen des k. k. naturhistorischen Hofmuseums 16: 97–104.
- Buysson R du (1904) Contribution aux Chrysidiades du Globe – 5 série. Revue d'Entomologie 23: 253–275.
- Buysson R du (1908) Hyménoptères nouveau. Revue d'Entomologie 27: 207–19.
- Buysson R du (1911) Mission Pelliot-Vaillant dans l'Asie Centrale. Collections recueillies par M.le dr. Vaillant. Hyménoptères. Bulletin du Muséum d'Histoire Naturelle 4: 217–219.
- Chevrier F (1862) Description des Chrysides du bassin du Léman. Ramboz & Schuchardt, Genève, 131 pp.
- Chevrier F (1869) Description de deux Chrysides du bassin du Léman. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 3: 44–48.
- Coquebert AJ (1801) Illustratio iconographica insectorum quae in Musæis Parisinis observavit et in lucem edidit Joh. Christ. Fabricius, praemissis ejusdem descriptionibus; Accedunt

- species plurimæ, vel minus aut nondum cognitæ. Tabularum decas secunda. Parisiis, (Didot), 47–90.
- Dahlbom AG (1829) Monographia Chrysididarum Sueciae. Lundini Gothor, 19 pp.
- Dahlbom AG (1845) Dispositio methodica specierum Hymenopterorum, secundum Familias Insectorum naturales. Particula secunda. Dissert. Lund, Berling, 20 pp.
- Dahlbom AG (1854) Hymenoptera Europaea praecipue borealia; formis typicis nonnullis specierum generumve Exoticorum aut Extraneorum propter nexum systematicum associatis, per familias, genera, species et varietates disposita ae descripta. 2. Chrysis in sensu Linnaeano. Friedrich Nicolai, Berlin XXIV + 412 pp.
- Dalla Torre CG de (1892) Catalogus hymenopterorum hucusque descriptorum systematicus et synonymicus. Volumen VI: Chrysididae (Tubulifera). Guilelmi Engelmann, Lipsiae, viii + 118 pp.
- Fabricius JC (1775) Systema entomologiae, sistens insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus. Flensburgi, Lipsiae. (Kort), pp. [1–31], 1–832.
- Fabricius JC (1781) Species insectorum, exhibentes eorum differentias specificas, synomina auctorum, loca natalia, metamorphosin, adiectis observationibus, descriptionibus. Tomo I. C.E. Bohnii, Hamburgi et Kiloni, 522 pp. + VIII.
- Fabricius JC (1787) Mantissa insectorum sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Tom. II. Hafniae. Proft. pp. [1]: 1–382.
- Fabricius JC (1794) Entomologia Systematica emendata et aucta secundum classes, ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Tomo IV, C.G. Proft, Hafniae, VII + 472 pp.
- Fabricius JC (1804) Systema Piezatorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus. Brunsvigae 439 pp. + 14 [154–157, 170–177].
- Forster JR (1771) Novae species insectorum. Centuria I. T. Davies & B. White, London, VIII + 100 pp.
- Förster A (1853) Eine Centurie neuer Hymenopteren. Beschreibungen neuer Arten aus der Familiae der Chrysididen. Verhandlungen des naturhistorischen Vereins der preussischen Rheinlande und Westfalens 10: 266–362.
- Guérin-Méneville FE (1842) Description de quelques Chrysidides nouvelles. Revue Zoologique 5(5): 144–150.
- Ha HH, Lee JW, Kim JK (2011) Taxonomic review of Korean *Cleptes* Latreille (Hymenoptera: Chrysididae: Cleptinae), with description of one new species. Journal of Asia-Pacific Entomology 14: 489–495. doi: 10.1016/j.aspen.2011.05.005
- Hammer K (1936) Schwedisch-chinesische wissenschaftliche Expedition nach den nordwestlichen Provinzen Chinas. 43. Hymenoptera. 8. Scoliiden, Mutilliden und Chrysididen. Arkiv för Zoologi 27A(23): 1–3.
- Hammer K (1950) Über einige von Kjell Kolthoff und anderen in China gesammelten Hymenoptera. Chrysididae, Cleptidae, Mutillidae. Arkiv för Zoologi 42A: 1–12.
- He JH. (2004) Hymenopteran Insect Fauna of Zhejiang. Science Press, Beijing, China. [in Chinese]

- Kim CW (1970) Illustrated Encyclopedia of Fauna and Flora of Korea: Insecta (III). Samhwa Press, Korea, 891 pp.
- Kim JK (2013) Description of a new species of the genus *Primeuchroeus* Lisenmaier, 1968 (Hymenoptera, Chrysidae) from Korea and redescription of *P. malayensis* (Lisenmaier, 1982). Zootaxa 3686(1): 95–98. doi: 10.11646/zootaxa.3686.1.7
- Kimsey LS (1986) Designation of Chrysidid Lectotypes. Pan-Pacific Entomologist 62(2): 105–110.
- Kimsey LS (1987a) Review of the Subfamily Parnopinae (Hymenoptera, Chrysidae). Journal of the Kansas Entomological Society 60(1): 83–91.
- Kimsey LS (1987b) New species of *Cleptes* Latreille from Asia and North America (Chrysidae, Hymenoptera). Pan-Pacific Entomologist 63(1): 56–59.
- Kimsey LS (1988) Loboscelidiinae, new species and a new genus from Malaysia (Chrysidae, Hymenoptera). Psyche 95(1–2): 67–79. doi: 10.1155/1988/16535
- Kimsey LS (1995) New amisegine wasps from Southeast Asia (Hymenoptera: Chrysidae). Proceedings of the Entomological Society of Washington 97(3): 590–595.
- Kimsey LS (2012) Review of the odd chrysidid genus *Loboscelidia* Westwood, 1874 (Hymenoptera, Chrysidae, Loboscelidiinae). ZooKeys 213: 1–40. doi: 10.3897/zookeys.213.2985.
- Kimsey LS, Bohart RM (1991) The Chrysidid Wasps of the World. Oxford University Press, New York, 652 pp.
- Komeda Y, Hisamatsu M (2005) Percentage parasitism of *Praestochrysis shangaiensis* (Hymenoptera: Chrysidae) and some new biological knowledge in Kanto District, Japan. Bulletin of Ibaraki Nature Museum 8: 23–28. [in Japanese].
- Krombein KV (1959) Two additional adventive European wasps in the United States (Hymenoptera, Sphecidae, Chrysidae). Bulletin of the Brooklyn Entomological Society 54: 95–96.
- Kurzenko NV, Lelej AS (1994) *Nipponosega yamanei* gen. et sp. nov., a new remarkable cuckoo wasp (Hymenoptera, Chrysidae, Amiseginae) from Japan. Bulletin of national Science Museum 20: 83–86.
- Kurzenko NV, Lelej AS (2007) [Fam. Chrysidae-Chrysidid wasps]. In: Lelej AS (Ed.) [Key to the Insect of Russian Far East, Vol. 4, Part 5]. Dalnauka, Vladivostok, 998–1006. [In Russian]
- Latreille PA (1797) Précis des caractères génériques des Insectes, disposés dans un ordre naturel par le Citoyen Latreille. 'An V'. Prévôt, Paris; F. Bourdeaux, Brive, 1–201. [Dating after Evenhuis 1997]
- Latreille PA (1802) Histoire naturelle générale et particulière des Crustacés et des Insectes. Ouvrage faisant suite à l'Histoire Naturelle générale et particulière, composée par Leclercq de Buffon, et rédigée par C.S. Sonnini, membre de plusieurs Sociétés savantes. Familles naturelles des genres. Tome troisième. F. Dufart, Paris, I–XII + 13–467. [Dating after Dupuis 1986].
- Latreille PA (1809) Genera Crustaceorum et Insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata. Tomus quartus et ultimus. Amand Koenig, Parisiis et Argentorati [= Paris and Strasbourg], 399 pp.
- Lelej AS, Kurzenko NV (2012) 53. Fam. Chrysidae. In: Lelej AS (Ed.) Annotated catalogue of the insects of Russian Far East. Volume I. Hymenoptera. Vladivostok, Dalnauka, 635 pp.

- Lepeletier de Saint Fargeau AL (1806) Memoire sur quelques especes nouvelles d'insectes de la Section des Hyménoptères, apeles porte-tuyaux (Chrysididae). Annales du Muséum d'Historie Naturelle 7: 115–129.
- Lichtenstein [J] (1876) Note sur le genre *Chrysis*. Petites Nouvelles Entomologiques 145: 27.
- Lin KS (1959) Description of a new *Cleptes* species from Taiwan (Hym., Cleptidae). Quarterly Journal of the Taiwan Museum 12: 205–208.
- Lin KS (1964) The Taiwanese Loboscelidiidae (Hymenoptera: Bethyloidea). Quarterly Journal of the Taiwan Museum 17(3–4): 237–245.
- Linnaeus C (1758) *Systema Naturae per Regna tria Naturae, secundum Classes, Ordines, Genera, Species, cum characteribus, differentiis, synonymis, locis. Editio Decima, Refurmata, Tomus I. Laurentii Salvii, Holmiae*, 824 pp. + IV.
- Linnaeus C (1761) *Fauna Suecia sistens Animalia Sueciae Regni: Mammalia, Aves, Amphibia, Pisces, Insecta, Vermes. Distributa per Classes et Ordines, enera et Species, cum Differentiis, Specierum, Synonymis, Auctorum, Nominibus Incolarum, Locis natalium, Descriptionibus Insectorum. Editio Altera, Auctior. Laurentius Salvius, Stockholm*, 578 pp. + 2 pl.
- Linsenmaier W (1951) Die europäischen Chrysididen (Hymenoptera). Versuch einer natürlichen Ordnung mit Diagnosen. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 24(1): 1–110.
- Linsenmaier W (1959) Revision der Familie Chrysididae (Hymenoptera) mit besonderer Berücksichtigung der europäischen Spezies. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 32(1): 1–232.
- Linsenmaier W (1968) Revision der Familie Chrysididae (Hymenoptera). Zweiter Nachtrag. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 41(1–4): 1–144.
- Linsenmaier W (1987) Revision der Familie Chrysididae (Hymenoptera). 4. Teil. Mitteilungen der Schweizerischen Entomologischen Gesellschaft 60: 133–158.
- Linsenmaier W (1994) The Chrysididae (Insecta: Hymenoptera) of the Arabian Peninsula. Fauna of Saudi Arabia 14: 145–206.
- Linsenmaier W (1997a) Altes und Neues von den Chrysididen (Hymenoptera, Chrysididae). Entomofauna 18 (19): 245–300.
- Linsenmaier W (1997b) Die Goldwespen der Schweiz. Veröffentlichungen aus dem Natur-Museum Luzern 9, 140 pp.
- Linsenmaier W (1999) Die Goldwespen Nordafrikas (Hymenoptera, Chrysididae). Entomofauna, Supplement 10, 210 pp.
- Liu JX, Yao JM, Xu ZF (2010) Two new species of genus *Loboscelidia* (Hymenoptera: Chrysididae: Loboscelidiinae) from China. Acta Zootaxonomica Sinica 35(3): 641–645 [in Chinese with English summary].
- Liu JX, Yao JM, Xu ZF (2011) A new species of the rare chrysidid subfamily Loboscelidiinae from China: the third species of *Rhadinoscelidia* Kimsey, 1988 (Hymenoptera, Chrysididae). ZooKeys 87: 11–17. doi: 10.3897/zookeys.87.1295
- Madl M, Rosa P (2012) A Catalogue of the Chrysididae (Hymenoptera: Chrysidoidea) of the Ethiopian Region excluding Malagasy Subregion. Linzer biologische Beiträge 44(1): 5–169.
- Mingo E (1994) Hymenoptera Chrysididae. Fauna Iberica. Vol. 6. Museo Nacional de Ciencias Naturales Consejo Superior de Investigaciones Científicas, Madrid, 256 pp.

- Mocsáry A (1882) Chrysidae Faunae Hungaricae. Budapest, Academia Hungarica Scientiarum, 94 pp.
- Mocsáry A (1887) see Radoszkowki (1887).
- Mocsáry A (1889) Monographia Chrysidiarum Orbis Terrarum Universi. Hungarian Academy of Science, Budapest, 643 pp.
- Mocsáry A (1890a ["1889"]) Catalogus Chrysidiarum Europae et confinium. Természetrájzi Füzetek 12(2–3): 57–71.
- Mocsáry A (1890b) Additamentum primum ad monographiam Chrysidiarum orbis terrarum universi. Természetrájzi Füzetek 13(2–3): 45–66.
- Mocsáry A (1893) Additamentum secundum ad monographiam Chrysidiarum Orbis Terrarum Universi. Természetrájzi Füzetek 15: 213–240.
- Mocsáry A (1911) Species Chrysidiarum novae. Annales Musei Nationalis Hungarici 9: 443–474.
- Mocsáry A (1912a) Species Chrysidiarum novae. III. Annales Musei Nationalis Hungarici 10: 375–414.
- Mocsáry A (1912b) Species Chrysidiarum novae. III. Annales Musei Nationalis Hungarici 10: 549–592.
- Mocsáry A (1913a) Species Chrysidiarum novae. IV. Annales Musei Nationalis Hungarici 11: 1–45.
- Mocsáry A (1913b) Chrysidae in insula Formosa a Joanne Sauter collectae. Annales Musei Nationalis Hungarici 11: 612–619.
- Mocsáry A (1913c) The Chrysidae of the Philippine Islands. Philippine Journal of Science 8 (D): 287–291.
- Mocsáry A (1914) Chrysidae plerumque exoticae novae. Annales Musei Nationalis Hungarici 12: 1–74.
- Móczár L (1964a) Ergebnisse der Revision der Goldwespenfauna des Karpatenbeckens (Hymenoptera: Chrysidae). Acta Zoologica 10: 433–450.
- Móczár L (1964b) Über die *Notozus*-Arten Ungarns (Hymenoptera, Chrysidae). Annales Musei Nationalis Hungarici 56: 439–47.
- Móczár L (1967) Femdarázsalakatúák – Chrysidoidea. Magyarország Állatvilága. Fauna Hungariae. Budapest 86(2): 1–118.
- Móczár L (1968) Drei neue *Cleptes*-Arten (Hymenoptera). Acta Zoologica Academiae Scientiarum Hungaricae 14: 167–173.
- Móczár L (1998) Revision of the *Cleptes* (*Holocleptes*) species of the World. Acta Zoologica 43(4): 323–343.
- Móczár L (2000) Revision of the *Cleptes asianus* and *townesi* groups of the World (Hymenoptera, Chrysidae, Cleptinae). Acta Zoologica Academiae Scientiarum Hungaricae 46(4): 319–331.
- Morgan D (1984) Cuckoo-Wasps Hymenoptera, Chrysidae. Handbooks for the Identification of British insects. Royal Entomological Society of London, 6(5) 37 pp.
- Niehuis O (2000) The European species of the *Chrysis ignita* group: Revision of the *Chrysis angustula* aggregate (Hymenoptera, Chrysidae). Mitteilungen aus dem Museum für Naturkunde in Berlin, Deutsche Entomologische Zeitschrift 47(2): 181–201.
- Panzer GWF (1798–1806) Faunae Insectorum Germaniae initia oder Deutschlands Insecten, Nürnberg, 49–60 (1798), 101–107 (1806–1809). [Datind after Sherborn, 1923]

- Paukkunen J, Rosa P, Soon V, Johansson N, Ødegaard F (2014) Faunistic review of the cuckoo wasps of Fennoscandia, Denmark and the Baltic countries (Hymenoptera: Chrysidae). *Zootaxa*, 3864(1) : 1–67. doi: 10.11164/zootaxa.3864.1.1
- Provancher L (1881) Faune canadienne. Les insectes - Hyménoptères. *Naturaliste Canadien* 12: 289–304.
- Radoszkovsky O (1866) Enumération des espèces de Chrysides de Russie. *Horae Societatis Entomologicae Rossicae* 3: 295–310.
- Radoszkovsky O (1881) Hymenoptères d'Angola. *Jornal de sciencias mathematicas, physicas e naturaes, Academia Real das Sciencias de Lisboa*, 8: 197–221.
- Radoszkowski O (1877) Chrysidiformes, Mutillidae et Sphegidae. *Putieshestvie v Turkestan A.P. Fedtshenko [Voyage au Turkestan d'Alexis Fedtschenko]*, (14) 2(5): 1–87. [In Russian]
- Radoszkowski O (1887) Insecta in itinere Cl. N. Przewalskii in Asia Centrali novissime lecta. *Horae Societatis Entomologicae Rossicae* 21: 41–51.
- Radoszkowski O (1889 [«1888»]) Révision des armures copulatrices des mâles de la tribu des Chrysides. *Horae Societatis Entomologicae Rossicae* 23(1–2): 3–40.
- Radoszkowski O (1891) Descriptions de Chrysides nouvelles. *Revue d'Entomologie* 10: 183–198.
- Richards OW (1935) Notes on the nomenclature of the aculeate Hymenoptera, with special reference to British Genera and Species. *Transactions of the Royal Entomological Society* 83: 143–176. doi: 10.1111/j.1365-2311.1935.tb00420.x
- Rohwer SA (1911) On some hymenopterous insects from the islands of Formosa. *Proceedings of the U.S. National Museum* 39: 477–489. doi: 10.5479/si.00963801.1794.477
- Rosa P (2003) *Cleptes (Leiocleptes) mareki* n. sp., from China (Hymenoptera Chrysidae Cleptinae). *Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano* 144(2): 407–414.
- Rosa P (2005) La collezione di Crisidi (Hymenoptera, Chrysidae) del Museo Civico di Storia Naturale di Milano. *Natura* 94(2): 1–128.
- Rosa P (2006) I Crisidi della Valle d'Aosta. *Monografie del Museo regionale di Scienze naturali*, 6, St.-Pierre, Aosta, 368 pp.
- Rosa P (2009) Catalogo dei tipi dei Crisidi (Hymenoptera, Chrysidae) del Museo Civico di Storia Naturale “G. Doria” di Genova. *Annali del Museo Civico di Storia Naturale “G. Doria”* 100: 209–272.
- Rosa P, Soon V (2012) Hymenoptera: Chrysidae. *Fauna Europaea* version 2.5. Available from: <http://www.faunaeur.org> [1 Dec. 2012]
- Rosa P, Lotfalizadeh H, Pourrafei L (2013) First checklist of the chrysidid wasps (Hymenoptera: Chrysidae) of Iran. *Zootaxa* 3700(1): 1–47. doi: 10.11164/zootaxa.3700.1.1
- Schenck ACF (1856) Beschreibung der in Nassau aufgefundenen Goldwespen (Chrysidae) nebst einer Einleitung über die Familie im Allgemeinen und einer kurzen Beschreibung der übrigen deutschen Arten. *Jahrbücher des Vereins für Naturkunde im Herzogthum Nassau* 11: 13–89.
- Scopoli JA (1763) *Entomologia Carniolica exhibens Insecta Carnioliae indigena et distributa in ordines, genera, species, varietates. Methodo Linnaeano. Typis Ioannis Thomae Trattner, Vindobonae*, 420 pp.

- Semenov-Tian-Shanskij A (1912) Chrysidarum species novae vel parum cognitae (Hymenoptera). V. Russkoe Entomologicheckoe obozrenie [Russian Entomological Review] 12(2): 177–201.
- Semenov-Tian-Shanskij A (1932) Supplementa ad Chrysidarum monographias ab A.G. Dahlbom (1854), A. Mocsáry (1889), R. du Buysson (1896) et H. Bishoff (1913) editas. I. Horae Societatis Entomologicae Rossicae 42(3): 1–48.
- Semenov-Tian-Shanskij A (1954) [Classification of the tribe Hedychrini Mocs. (Hymenoptera, Chrysidae) and description of new species]. Trudy Zoologicheskogo Instituta Akademii Nauk SSSR 15: 138–145. [In Russian]
- Semenov-Tian-Shanskij A (1967) [New species of gold wasps (Hymenoptera, Chrysidae)]. Trudy Zoologicheskogo Instituta Akademii Nauk SSSR 43: 118–184. [In Russian]
- Semenov-Tian-Shanskij A, Nikol'skaya MN (1954) [Cuckoo-wasps (Hymenoptera, Chrysidae) of Tajikistan]. Trudy Zoologicheskogo Instituta Akademii Nauk SSSR 15: 89–137. [In Russian]
- Semenov-Tian-Shansky A (1909) Chrysidarum species novae vel parum cognitae (Hymenoptera). IV. Russkoe Entomologicheckoe obozrenie [Russian Entomological Review] 9(3): 213–226.
- Semenow A (1892) Chrysidarum species novae. Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg 13: 241–265.
- Seurat LG (1901) Sur l'appareil respiratoire de la larve de la *Chrysis shangaiensis* Smith. Bulletin du Museum National d'Histoire Naturelle Paris 6: 236–238.
- Sheng ML, Gao LX, Wang Q (1998) Studies on the parasitoids of *Pachynematus itoi*: I. *Cleptes semiauratus* and *Endays liaoningensis*. Forest Pest and Disease 2: 7–8 [in Chinese]
- Shuckard WE (1837) Description of the Genera and Species of the British Chrysidae. Entomologist's Magazine 4: 156–177.
- Smith F (1864) Notes on the geographical distribution of the Aculeate Hymenoptera collected by Mr. A.R. Wallace in the Eastern Archipelago. Journal of the Proceedings of the Linnean Society of London, Zoology 7: 109–145. doi: 10.1111/j.1096-3642.1863.tb02108.x
- Smith F (1874a) Descriptions of new species of Tenthredinidae, Ichneumonidae, Chrysidae, Formicidae, & c. of Japan. Transactions of the Entomological Society of London 7(4): 373–409.
- Smith F (1874b) A revision of the Hymenopterous Genera *Cleptes*, *Parnopes*, *Pyria* and *Stilbum*, with descriptions of new species of those genera, and also of new species of the Genus *Chrysis* from North China and Australia. Transactions of the Entomological Society of London 7: 451–471.
- Spinola M (1806) Insectorum Liguria species novae aut rariores quas in agro Ligustico nuper detexit, descripsit et iconibus illustravit Maximilianus Spinola, adjecto catalogo specierum auctoribus jam enumeratarum, quae in eadem regione passim occurunt. Yves Gravier, Genuae, 160 pp.
- Spinola M (1838) Compte rendu des hyménoptères recueillis par M. Fischer pendant son voyage en Égypte, et communiqués par M. le docteur Waltl a Maximilien Spinola. Annales de la Société Entomologique de France 7: 437–457.
- Strumia F (1996) *Praestochrysis* from India and South-East Asia (Hymenoptera Chrysidae). Bollettino della Società entomologica italiana 128(1): 57–64.

- Sugihara Y (1932) The Insect World. Gifu 36, 423 pp.
- Tarbinsky YuS (2000) Осы-блестянки рода *Chrysis* [gr. *ignita*] (Hymenoptera, Chrysidae) Тянь-Шаня и сопредельных территорий. [The golden wasp genus *Chrysis* [gr. *ignita*] (Hymenoptera, Chrysidae in Tien-Shan and adjacent territories]. Tethys Entomological Research 2: 193–204.
- Tarbinsky YuS (2002a) [Taxonomic review of the family Chrysidae (Hymenoptera) from Tian Shan fauna and adjacent territories, with a key to genera, descriptions of new genera and new species. The golden wasp genus *Chrysis* L. (Hymenoptera, Chrysidae) in Tian Shan and adjacent territories. II. Species groups *succincta*, *leachii*, *cerastens* (sic), *taczanovskii*, *pallidicornis*, *smaragdula*, *elegans*, *subsinuata*, *serpentula*, *facialis*, *maculicornis*, *millenaris*.] Entomological Investigations in Kyrgyzstan 22: 11–22. [In Russian]
- Tarbinsky YuS (2002b) The golden wasp genus *Chrysis* L. (Hymenoptera, Chrysidae) in Tian Shan and adjacent territories. III. Species groups *zaravshanica*, *sogdiana*, *aestiva*, *rufitarsis*, *pulchella*, *inaequalis*. Entomological Investigations in Kyrgyzstan 22: 23–30. [In Russian]
- Tarbinsky YuS (2002c) [The golden wasp genus *Chrysis* L. (Hymenoptera, Chrysidae) in Tian Shan and adjacent territories. IV. Species groups *graelsii*, *comparata*, *splendidula*, *viridula*, *scutellaris*.] Entomological Investigations in Kyrgyzstan 22: 31–44. [In Russian]
- Terayama M, Suda H, Tano T, Murota T (2010) The chrysidine wasps of Japan: flying jewels. Gekkanshi-Mushi 472: 2–15.
- ICZN (1998) The International Commission on Zoological Nomenclature – Opinion 1906. *Euchroeus* Latreille, 1809 (Insecta, Hymenoptera): conserved; *Chrysis purpurata* Fabricius, 1787 (currently *Euchroeus purpuratus*): specific name conserved; and *Chrysis gloriosa* Fabricius, 1793: specific name suppressed. Bulletin of Zoological Nomenclature 55(3): 194–196.
- Trautmann W (1920) Die Farbenvariationen von *Stilbum cyanurum* Forster. Neue Beiträge zur systematischen Insektenkunde 1: 1–140.
- Trautmann W (1927) Die Goldwespen Europas. Uschman, Weimar, 194 pp.
- Tsuneki K (1946) Note on the nomenclature of Japanese Chrysidae (Hymenoptera) (I). Matsumushi, 1(1): 32–39 [in Japanese with English summary]
- Tsuneki K (1947) Chrysidae from North China and Inner Mongolia. Mushi 17(9): 43–60.
- Tsuneki K (1948a) Chrysidae from Shansi, North China (Hymenoptera). Mushi 18(19): 115–131.
- Tsuneki K (1948b) Note on the nomenclature of Japanese Chrysidae (Hymenoptera) (II). Matsumushi, 1(1): 47–52 [in Japanese with English summary]
- Tsuneki K (1950) Descriptions of new species and subspecies of the Chrysidae from East Asia (Hymenoptera). Mushi 21(8): 21–81.
- Tsuneki K (1952) Ethological studies on the Japanese species of *Pemphredon* (Hymenoptera, Sphecidae), with notes on their parasites, *Ellampus* spp. (Hm., Chrysidae). Journal of the Faculty of Science, Hokkaido University 11: 57–75.
- Tsuneki K (1953a) Chrysidae of Manchuria (Hymenoptera). Mushi 25(8): 53–61.
- Tsuneki K (1953b) Chrysidae of Korea (Hymenoptera). Kontyu 20(1–2): 22–28.
- Tsuneki K (1959) Contributions to the knowledge of the Cleptinae and Pseninae Faunae of Japan and Korea (Hymenoptera, Chrysidae and Sphecidae). Memoirs of the Faculty of Liberal Arts, Fukui University, Series II, Natural Science 9: 1–78.

- Tsuneki K (1961) Chrysidae collected by the Osaka City University Biological Expedition to Southeast Asia, 1957–1958. *Nature and Life in Southeast Asia* 1: 367–382.
- Tsuneki K (1962) The Aculeate Hymenoptera collected on the Island of Amami-Ohshima, the Riukius. *Life Study* 6(1): 1–9.
- Tsuneki K (1963a) *Chrysis (Hexachrysis)* of eastern Asia. *Etizenia* 3: 1–9.
- Tsuneki K (1963b) Chrysidae and Sphecidae from Thailand (Hymenoptera). *Etizenia* 4: 1–50.
- Tsuneki K (1970a) Bemerkungen und Beschreibungen über den Japanischen Heteronychinen. *Life Study* 14(2): 27–34.
- Tsuneki K (1970b) Ein Beitrag zur Goldwespen-fauna Formosas. *Etizenia* 49: 1–21.
- Tsuneki K (1970c) A guide to the Study of the Japanese Hymenoptera (24) (11) Chrysidae, I. *Life Study* (Fukui), 14(2): 45–50.
- Tsuneki K (1979) Sphecidae and Chrysidae collected by Dr. K. Baba in northern part of Japan proper and Hokkaido, with descriptions of two new species. In: *Insects of Niigata Prefecture, Japan*, 9–14.
- Tsuneki K (1982) Two new species of *Cleptes* from Thailand and Formosa (Hymenoptera, Chrysidae). *Special Publications of the Japan Hymenopterists Associations* 23: 1–2.
- Uchida T (1927) Eine uebersicht der Chrysiden Japans und mit den beschreibungen der neuen Arten und Varietaeten. *Insecta Matsumurana* 1(3): 149–157.
- Uchida T (1933) Catalogue of Japanese Insects, II. Hymenoptera Chrysidide. Entomological World, Tokyo, 8 pp.
- Wei NS, Rosa P, Xu ZF (2013) Revision of the Chinese *Cleptes* (Hymenoptera, Chrysidae) with description of new species. *ZooKey* 362: 55–96. doi: 10.3897/zookeys.362.6175
- Wei NS, Rosa P, Xu ZF (2014a) Contributions to the knowledge of the Chinese *Primeuchroeus* Linsenmaier, 1968 (Hymenoptera, Chrysidae), with a key to species. *ZooKeys* 373: 43–56. doi: 10.3897/zookeys.737.6556
- Wei NS, Rosa P, Liu JX, Xu ZF (2014b) The genus *Omalus* Panzer, 1801 (Hymenoptera, Chrysidae) from China, with descriptions of four new species. *ZooKeys* 407: 29–54. doi: 10.3897/zookeys.407.7531.
- Westwood JO (1874) *Thesaurus entomologicus Oxoniensis; or, Illustrations of new, rare, and interesting insects, for the most part contained in the collections presented to the University of Oxford by the Rev. F.W. Hope, M.A., D.C.L., F.R.S., &c. with forty plates from drawings by the author.* Clarendon Press, Oxford, 205 pp.
- Wu CF (1941) *Catalogus Insectorum Sinensium*. The Fan Memorial Institute of Biology, Peiping, 6, 336 pp. [Chrysidae p. 118]
- Xu ZF, He JH, Terayama M (2003) The genus *Nipponosega* Kurzenko et Lelej, 1994 firstly recorded from China, with a new species description (Hymenoptera, Chrysidae, Amiseginae). *Bulletin de L'Institut Royal des Sciences Naturelles de Belgique, Entomologie* 73: 195–196.
- Xu ZF, Weng LQ, He JH (2006) A new species of the genus *Loboscelidia* (Insecta, Hymenoptera) from China. *Acta Zootaxonomica Sinica* 31(1): 208–210.
- Yamada Y (1980) The importance of spatio-temporal coincidence in host-parasite interaction between the Oriental moth, *Monema flavescens* and a chrysidid wasp, *Chrysis shanghaiensis*. *International Congress of Entomology Proceedings* 16: 142.

- Yamada Y (1987a) Characteristics of the oviposition of a Parasitoid, *Chrysis shanghaiensis* (Hymenoptera: Chrysidae). Japanese Journal of applied Entomology and Zoology 22(4): 456–464.
- Yamada Y (1987b) Factors determining the rate of parasitism by a parasitoid with a low fecundity, *Chrysis shanghaiensis*. The Journal of Animal Ecology 56: 1029–1042. doi: 10.2307/4964
- Yamada Y (1988) Optimal use of patches by parasitoids with a limited fecundity. Researches on Population Ecology 30(2): 235–249. doi: 10.1007/BF02513247
- Yamada Y (1990) Role of parasitoid with a low fecundity, *Praestochrysis shanghaiensis* (Hymenoptera: Chrysidae) in the population dynamics of its host. Researches on Population Ecology 32: 365–379. doi: 10.1007/BF02512570
- Yamada Y (1991) Role of the Teeth on the Abdominal End in *Praestochrysis shanghaiensis* (Hymenoptera: Chrysidae). Japan Journal of Entomology 59: 99–103.
- Yao JM, Liu JX, Xu ZF (2010) Two new species in the genus *Loboscelidia* (Hymenoptera: Chrysidae) from China. Florida Entomologist 93(4): 526–534. doi: 10.1653/024.093.0409
- Yasumatsu K (1938) Hymenoptera collected in Tadao Kano's expeditions (1929, 1933, 1935 and 1936) to Botel Tobago Islands. II. Braconidae, Tiphiidae, Chrysidae, Trypoxylonidae, Andrenidae, Megachilidae, Nomadidae and Anthophoridae. Transactions of the Natural History Society of Formosa 28(174): 72–76.
- Zimmermann S (1937) Über die Verbreitung und Formenbildung der Gattung *Stilbum* Spin. (Chrysidae, Hymenopt.). Archiv für Naturgeschichte 6: 645–42.