First checklist of the chrysidid wasps (Hymenoptera, Chrysididae) of Mongolia, with description of new species

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Abstract
An annotated checklist of the Chrysididae from Mongolia is provided. A revision of the bibliographical data is provided, since most of the collecting localities published for “Mongolia” refer to places currently located in China. The known Mongolian cuckoo wasp fauna counts 90 species in 18 genera and two subfamilies. Four genera and 57 species are recorded for the first time, including two species here described as new for science: Cleptes mongolicus Rosa, Halada & Agnoli, sp. nov. (Dornod) and Spinolia spinosa Rosa & Halada, sp. nov. (Bayankhongor).

Keywords
Catalogue, Central Asia, new records, Palaearctic region

Introduction
Mongolia is a large landlocked country in eastern Central Asia, covering 1,564,100 km². Politically, Mongolia is divided into 21 provinces named “aimags” with the capital Ulaanbaatar (Fig. 1). It is bordered by Russia to the north and China
to the south, east, and west. Geographically and climatologically, it is an area of contrasts and extremes, between cold mountainous regions up to 4,000 m a.s.l. to the north and west and one of the largest deserts of the world in the south, the Gobi Desert. Most of the country is located on high plateaus, covered by steppes and extensive forested areas. It has an extreme continental climate with long, cold winters and short hot summers, during which most of its annual precipitation falls (Lavrenko 1979; Dathe and Proshchalykin 2016).

Mongolian cuckoo wasps are scarcely known and a few occasional records are found in the literature (Rosa 2017a). Only one article (Móczár 1967) deals with Mongolian material collected by Dr Z. Kaszab during his entomological excursions in this country (1963–1968). Other scattered findings have been published (du Buysson 1901; Semenov-Tian-Shanski 1912, 1932, 1967; Semenov-Tian-Shanski and Nikol’skaya 1954; Linsenmaier 1997a; Rosa et al. 2017a, b), while most of the remaining bibliographical data recorded for “Mongolia” actually refer to localities currently included in China (Inner Mongolia, Xinjiang, Gansu) (du Buysson 1893; Radoszkowski 1877, 1891; Mocsáry 1890; Dalla Torre 1892; Bischoff 1913; Hammer 1936; Tsuneki 1947, 1953a; Linsenmaier 1959, 1968; Semenov-Tian-Shanski 1967; Kimsey and Bohart 1991; Rosa et al. 2014, 2015). Approximately 30 species were properly recorded from Mongolia so far (Rosa 2017a) and we here add 57 new records for this country, mostly based on the materials collected by Czech entomologists (M. Halada, J. Halada, J. Straka, and M. Kadlecová) in 2003–2007 and mainly housed in the private collections of MH (České Budějovice, Czech Republic) and PR (Bernareggio, Italy). Other new records were found during the examination of the Chrysididae collection housed at the Zoological Institute in St. Petersburg (Russia,
ZIN) and based on the material collected during the expeditions of V. Roborovskij and P. Kozlov in 1895 and P. Kozlov in 1926. Finally, a few specimens were examined from the material collected in Mongolia by Soviet-Mongolian expeditions in 1967–1982. Soviet-Mongolian expedition were conducted from 1967 to 1983 and led to the collection of extensive entomological material, which became the basis for the publication of numerous articles and books (including Insects of Mongolia in eleven volumes), devoted to the study of various insects families (Proshchalykin and Kuhlmann 2015), although the Chrysididae were never examined by anyone. Large part of the cuckoo wasps collected during these entomological expeditions is still unprepared and unidentified.

Unpublished distributional records from Mongolia were recently published in the volume on Russian Chrysididae (Rosa et al. 2019), for a better understanding of the distribution of the Asian species, but exact localities were omitted because they were not of interest for that publication. We here report the precise data of species recorded for the first time in Rosa et al. 2019, which are mostly based on material housed in the Linsenmaier collection (Luzern, Switzerland).

In the present paper, based on a comprehensive study of specimens (including primary types) deposited in various collections, we report additional records of 72 species, with two species described as new and 55 species recorded from Mongolia for the first time, resulting in a total number of 90 cuckoo wasps species known from this country (Table 1).

Materials and methods

Terminology follows Lanes et al. (2020), Hymenoptera Anatomy Ontology (HAO 2020), and partly Kimsey and Bohart (1991). Abbreviations used in the descriptions are as follows:

- **F1, F2, F3, etc.** flagellomeres 1, 2, 3, etc., respectively;
- **l/w** length/width;
- **MOD** anterior ocellus diameter;
- **MS** malar space, the shortest distance between base of mandible and lower margin of compound eye;
- **OOL** the shortest distance between posterior ocellus and compound eye;
- **P** pedicel;
- **PD** puncture diameter;
- **POL** the shortest distance between posterior ocelli;
- **T1–T5** metasomal terga numbered consecutively, starting with 1 at the second abdominal segment.

Pictures of the types were taken with Nikon D700 connected to the microscope Togal SCZ and stacked with the software Combine ZP.
Table 1. Records of Mongolian cuckoo wasp species by aimags.

| No. | Species                              | Aimags                        |
|-----|--------------------------------------|-------------------------------|
| 1.  | Chrysis aestiva Dahlbom, 1854         | 7                            |
| 2.  | Chrysis angustula Schenck, 1856      | 7, 15                         |
| 3.  | Chrysis asahinai Tsuneki, 1950       | 8, 9, 12, 15, 20, 22          |
| 4.  | Chrysis belokobylskiji Rosa, 2019    | 4, 12, 15                     |
| 5.  | Chrysis brevitarsis Thomson, 1870    | 9                            |
| 6.  | Chrysis castigata Linsenmaier, 1959 | 13, 15                        |
| 7.  | Chrysis chinesis Mocsáry, 1912      | 7, 13                         |
| 8.  | Chrysis consanguinea Mocsáry, 1889   | 4, 7, 9, 13, 15, 16, 18, 21, 22 |
| 9.  | Chrysis dauuriana Linsenmaier, 1959 | 4, 7–9, 13, 18                |
| 10. | Chrysis equestris Dahlbom, 1854     | 7, 13                         |
| 11. | Chrysis fulgida Linnaeus, 1761      | 7, 13, 15                     |
| 12. | Chrysis ignita (Linnaeus, 1758)     | 9                            |
| 13. | Chrysis illecebrosa Semenov, 1967   | 12                           |
| 14. | Chrysis illigeri Wesmael, 1839      | 13, 15                        |
| 15. | Chrysis ismaeli Linsenmaier, 1957   | 12, 20, 21                    |
| 16. | Chrysis jasartii Semenov, 1910      | 12, 13, 15, 18, 21            |
| 17. | Chrysis leptomandibularis Niehuis, 2000 | 15                       |
| 18. | Chrysis mane Semenov, 1912          | 15                           |
| 19. | Chrysis matutina Semenov, 1967      | 7                            |
| 20. | Chrysis mediata Linsenmaier, 1951   | 15                           |
| 21. | Chrysis mocareyi Radoszkowski, 1889 | 3                            |
| 22. | Chrysis mysticalis Linsenmaier, 1959 | 4, 7, 9, 15, 20              |
| 23. | Chrysis nes Semenov, 1954           | 5, 15                         |
| 24. | Chrysis pavesi Rosa, 2017           | 5, 15                         |
| 25. | Chrysis priapu Rosa, 2018           | 5                            |
| 26. | Chrysis pseudobrevitarsis Linsenmaier, 1951 | 7, 15                      |
| 27. | Chrysis pupillia Semenov, 1967      | 12                           |
| 28. | Chrysis rutilans Olivier, 1791      | 15                           |
| 29. | Chrysis schencki Linsenmaier, 1968  | 7, 9                          |
| 30. | Chrysis sibirica Rosa, 2017         | 7                            |
| 31. | Chrysis solida Haupt, 1957          | 21                           |
| 32. | Chrysis splendidula unica Radoszkowski, 1891 | 7                      |
| 33. | Chrysis subcoriacea Linsenmaier, 1959 | 7                        |
| 34. | Chrysis viridula Linnaeus, 1761     | 15                           |
| 35. | Chrysauna dichroa (Dahlbom, 1854)   | 4                            |
| 36. | Chrysauna ignifrons (Brullé, 1833)  | 4                            |
| 37. | Cleptes daurienis Móczár, 1997      | 3, 8, 11                      |
| 38. | Cleptes mongolicus Rosa, Halada, & Agnoli, sp. nov. | 21                      |
| 39. | Colopopyga nesterovi Rosa, 2017     | 21                           |
| 40. | Elampus albipennis (Mocsáry, 1889)  | 7, 20                         |
| 41. | Elampus coloratus Rosa, 2017        | 22                           |
| 42. | Elampus montanus (Mocsáry, 1890)    | 20                           |
| 43. | Elampus panzeri (Fabricius, 1804)   | 4, 7                          |
| 44. | Elampus sanzi Gogorza, 1887         | 15                           |
| 45. | Elampus spinifemoris (Móczár, 1967) | 11                           |
| 46. | Euchroeus mongolicus Tsuneki, 1947  | 5, 11, 12                     |
| 47. | Euchroeus orientis Semenov, 1910    | 22                           |
| 48. | Hedychridium ardens (Coquebert, 1801) | 4, 7, 8, 11, 13, 16, 18, 21, 22 |
| 49. | Hedychridium asiaticum Linsenmaier, 1997 | 7–9, 16                     |
| 50. | Hedychridium belokobylskiji Rosa, 2017 | 15                        |
| 51. | Hedychridium cupreum (Dahlbom, 1845) | 4, 5, 8, 11, 12, 15, 20 |
| 52. | Hedychridium gabriellae Rosa, 2017   | 8, 15, 20                     |
| 53. | Hedychridium longigena Rosa, 2017   | 8, 9, 13, 15, 18, 20, 21     |
| 54. | Hedychridium propodeale Rosa, 2017  | 5                            |
| 55. | Hedychridium roseum (Rossi, 1790)   | 7, 20–22                      |
| 56. | Hedychrum chalybaeum Dahlbom, 1854  | 5, 8, 13, 15, 16, 21, 22     |
| 57. | Hedychrum gerstaeckeri Chevrier, 1869 | 13, 15, 18                  |
| 58. | Hedychrum lana du Buysson, 1891     | 3                            |
The checklist follows the genera subdivision proposed by Kimsey and Bohart (1991), with few exceptions for some genera (e.g., *Euchroeus* Latreille, 1809, *Pseudochrysis* Semenov, 1891 and *Colpopyga* Semenov, 1954). The species are listed alphabetically. We have used the following abbreviations for collectors: JH – J. Halada; JS – J. Straka; MH – M. Halada; MK – M. Kadlecová. An asterisk (*) marks the new records.

Types and other specimens are deposited in the following Institutions and private collections:

**EIHU** Entomology Institute, Hokkaido University (Japan);
**HNHM** Hungarian Natural History Museum, Zoological Department, Budapest (Hungary);
**ISEA-PAS** Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków (Poland);
**LSL** Linnean Society, London (England);
**MCNM** Museo National de Ciencias Naturales, Madrid (Spain);
**MFN** Museum für Naturkunde, Berlin (Germany);

| No. | Species | Aimags |
|-----|---------|--------|
| 59. | *Hedychrum longicolle* Abeille de Perrin, 1877 | 9, 12, 15, 21, 22 |
| 60. | *Hedychrum nobile* (Scopoli, 1763) | 4, 7, 13, 15 |
| 61. | *Hedychrum rutilans ermak* Semenov, 1967 | 7, 13, 15, 21, 22 |
| 62. | *Holopyga grossa asiatica* Trautmann, 1926 | 13 |
| 63. | *Holopyga kazabi* Móczár, 1967 | 11, 12, 20 |
| 64. | *Holopyga mirum* Linsenmaier, 1959 | 21, 22 |
| 65. | *Onalus aeneus* (Fabricius, 1787) | 15, 16 |
| 66. | *Onalus berezkovskii* (Semenov, 1932) | 16 |
| 67. | *Onalus margianus* (Semenov, 1932) | 7–9, 15, 22 |
| 68. | *Onalus mirimae* (Semenov, 1932) | 8, 20, 22 |
| 69. | *Onalus stella* (Semenov, 1932) | 7, 11, 15 |
| 70. | *Parncpes glasnovi* Semenov, 1901 | 3 |
| 71. | *Parncpes popovi* Eversmann, 1858 | 7, 9, 12, 15, 20–22 |
| 72. | *Pentachrysis minima* Eversmann, 1858 | without locality |
| 73. | *Philoctetes bogdanovii* (Radoszkowski, 1877) | 7 |
| 74. | *Philoctetes cynthiae* Rosa, 2017 | 8, 11, 16, 22 |
| 75. | *Philoctetes diaconovi* (Semenov, 1932) | 20 |
| 76. | *Philoctetes lybcae* Rosa, 2017 | 20 |
| 77. | *Philoctetes mongolicus* (du Buysson, 1901) | 7, 8, 11, 15, 16, 18, 22 |
| 78. | *Philoctetes shokalskii* (Semenov, 1932) | 8, 11, 12, 15, 16, 18–22 |
| 79. | *Pseudochrysis gengiskhan* Rosa, 2017 | 8, 9, 13, 15, 21, 22 |
| 80. | *Pseudochrysis neglecta* (Shuckard, 1837) | 15 |
| 81. | *Pseudomalus auratus nigridorsus* (Tsuneki, 1953) | 4, 9, 15, 18 |
| 82. | *Pseudomalus coriaceus* (Uchida, 1927) | 9, 13, 15, 16, 18, 21 |
| 83. | *Pseudomalus punctatius* (Uchida, 1927) | 9, 15, 18, 21 |
| 84. | *Pseudomalus pusillus* (Fabricius, 1804) | 8, 9, 11–13, 15, 18, 21 |
| 85. | *Spinolia spinosa* Rosa & Halada, sp. nov. | 8 |
| 86. | *Spinolia unicolor* (Dahlbom, 1831) | 5 |
| 87. | *Stilbum calens* (Fabricius, 1781) | 7, 9, 11, 15, 20 |
| 88. | *Trichrysis cyanea* (Linnaeus, 1758) | 8, 13, 15 |
| 89. | *Trichrysis pellucida* (du Buysson, 1887) | without locality |
| 90. | *Trichrysis sceramunda* (Mocsáry, 1912) | 13 |

Comment. Aimag designation as in Fig. 1.
Results

Taxa from Mongolia

Subfamily Cleptinae

Genus Cleptes Latreille, 1802

Cleptes Latreille, 1802: 316. Type species: Sphex semiaurata Linnaeus, 1761 [= Cleptes semiauratus (Linnaeus, 1761)], by monotypy.

Cleptes dauriensis Móczár, 1997

Cleptes (Cleptes) dauriensis Móczár, 1997: 36. Holotype ♂: Russia: Dauria, leg. F. Sahlb., “Cleptes n. sp. nitidulo Fbr. aff.”, Holotype Cleptes dauriensis ♂ Móczár n. sp. det. Móczár 1995” (Hym. Typ. No. 3845 Mus. Budapest) (HMNH). Cleptes dauriensis: Rosa 2017a: 288. Rosa et al. 2019: 310 (Mongolia, Figs 4, 5).

Material examined. Mongolia: Khovd, 1 ♂, Bodongin-Gol River, 12 km SW Altai, 22.VII.1970, leg. M. Kozlov (ZIN); Uvurkhangai, 1 ♀, 12 km E of Arvaykheer, 46°22’N, 102°49’E, 1800 m, 3.VII.2004, leg. JH (GLAC); Bayankhongor, 1 ♂, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (GLAC).

Distribution. Mongolia (Bayankhongor, Khovd, Uvurkhangai); Russia (Zabaykalskii Terr.) (Rosa 2017a).
Cleptes mongolicus Rosa, Halada & Agnoli, sp. nov.
http://zoobank.org/73389B93-F683-41CC-84AC-3E16ED9B3000
Figures 2, 3

Type material. Holotype: ♀, Mongolia: Dornod, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. M. Halada (ZIN). Paratypes: 1 ♂, same collecting locality and date (GLAC); 1 ♂, 20 km W of Choibalsan, 48°01’N, 114°14’E, 800 m, 24.VII.2007, leg. M. Halada (PRC).

Diagnosis. Cleptes mongolicus sp. nov. belongs to the C. nitidulus species group, based on the pronotum without posterior pit row and without longitudinal median sulcus or posterior median keel. It is closely related only to C. margaritae Móczár, 2000 from Tajikistan, for its general habitus and colouration. The latter belongs to the C. satoi group (Móczár 2000), for the modified pronotal structure, without posterior transversal groove, but with a posteromedian longitudinal keel. Besides the unmodified pronotum, the female of C. mongolicus sp. nov. can be easily separated from the female of C. margaritae by: a) pubescence whitish, shorter on metasoma (max 2.5 MOD) (vs. blackish, longer on metasoma, up to 3 MOD); b) punctuation on metasoma with polished T1, shallow and sparse tiny punctures on T2, double punctures on T3 (vs. scattered punctate on T1, densely and evenly punctate on T2 and T3); c) colouration: head entirely black; propodeum entirely blue; T3 and T4 laterally blue; pedicel and F1 yellow; femora apically, tibiae and tarsi yellow (vs. head blue; propodeum black with median blue spot; T3 and T4 fully black; pedicel and flagellum dark brown). The male of Cl. margaritae is currently unknown.

Description. Female. Holotype (Fig. 2A–F). Body length 4.6 mm. Forewing length 2.7 mm. POL = 2.2 MOD; OOL = 2.7 MOD. MS = 2.0 MOD. P:F1:F2:F3 = 1.0:1.0:0.7:0.7. F1 1.5 × as long as wide, F2 1.1 × as long as wide. Head. Head in frontal view 1.2 × as broad as long between lower edge of clypeus and vertex. Face and vertex with small, even, and sparse punctures (1–4 PD) (Fig. 2B). Clypeal lower margin simple, unmodified, 2 MOD width, without acute teeth at corners; lateral edges subparallel. Frontal sulcus broad and deep in the first part, from anterior ocellus to mid of face, faint in the second half, from mid-face to the clypeal margin (Fig. 2B). Mandibles tridentate. Ocellar triangle isosceles, without post-ocellar sulcus. Postero-lateral pits close to posterior ocelli deep and elongate. Pedicel as long as F1. Malar spaces elongate (2.0 MOD). Mesosoma. Pronotum unmodified; pedicel neck finely striated transversally; posterior margin of pronotum simple, without transverse row of pits or median keel. Pronotum with small punctures similar to those on vertex. Mesoscutum and mesoscutellum scarcely punctate, with tiny and scattered punctures (Fig. 2C), largely impunctate; notauli and parapsidal lines deep and complete. Mesopleuron with small, deep punctures; transversely aligned medially; with short, deep scrobal sulcus on posterior half (Fig. 2D). Metascutellum noticeably reduced by large metanotal trough and by deep and large anteromedian suture. Metapleural transversely striate. Metapostnotum (dorsal surface of metapetral-propodeal complex) short, irregularly
reticulate, with large foveae along posterior margin, before the propodeal declivity. Propodeal posterior projections short, stout, and divergent. Wing veins and cells unmodified. **Metasoma.** All metasomal terga with impunctate, brownish stripe along posterior margin (Fig. 2F); T1 mostly impunctate, with a few, sparse, tiny punctures; T2 with even, sparse, small punctures (3–5 PD), posteriorly polished; T3 with dense, irregular and double punctation; scattered to polished toward the apical margin; T4 with large, scattered punctures. **Colouration.** Head black, with violet reflections medially on clypeus; scapus dorsally violet, ventrally brownish without metallic reflections; P light brown and F1 yellow; other flagellomeres dark brown to blackish. Mandible dark brown, medially yellowish. Pronotal neck medially black; pronotum, mesonotum, mesopleuron, metanotum (excluding black anterior suture and axillary trough), metapleuron metallic red with purple reflections dorsally; propodeum dorsally blue, propodeal declivity black; body ventrally black. Metasoma entirely black; apical margin of each tergum with brownish stripe; laterally on T3 with feeble green reflections; laterally on T4 with extended blue reflections (Fig. 2E). Tegulae brown. Legs with tibiae and tarsi yellowish; coxae red to golden; profemur anteriorly metallic red excluding distal joint; metafemur posteriorly metallic; other parts brown.

**Male.** Paratypes. Body length 4.0–4.2 mm. POL = 1.6 MOD; OOL = 1.0 MOD. MS = 1.9 MOD. P:F1:F2:F3 = 1.0:1.4:0.9:0.9. F1 3.5 × as long as wide (width taken at

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**Figure 2.** *Cleptes mongolicus* sp. nov., female, holotype **A** habitus, dorsal view **B** head, frontal view **C** head and mesosoma, dorsal view **D** head and mesosoma, lateral view **E** metasoma, postero-lateral view **F** metasoma, dorso-lateral view. Scale bars: 1.0 mm.
distal apex), F2 1.5×. **Head.** Head in frontal view 1.3 × as broad as long between lower edge of clypeus and vertex. Face and vertex with small, even, and denser punctures (1–2 PD) compared to female (Fig. 3B). Frontal sulcus narrow and visible in the first part, from anterior ocellus to brow, faint in the second half, from mid-face to the clypeal margin (Fig. 3B). Lower face medially with punctures more spaced 4–5 PD. Ocellar triangle, post-ocellar sulcus, and posterolateral pits similar to female. F1 1.5 × as long as P.

**Mesosoma.** Punctuation overall similar to that of female; metascutellum larger, with narrow anteromedian mesoscutellar-metascutal suture; metapleuron polished. Other characters as in female. **Metasoma.** T1 with denser (2–5 PD), tiny punctures; T2 with even, denser (1–3 PD), small punctures (3–5 PD), posteromedially sparser to polished; T3 with dense, irregular and double punctuation; scattered to polished toward the apical margin; T4 with similar punctures; T5 almost polished, with scattered punctures. **Colouration.** Species sexually dimorphic with head and mesosoma bright green, including ventral side; propodeum blue. Mandible metallic green from base to half length. Scapus green, pedicel and flagellum black. Metasoma entirely black, with terga apically brownish and laterally with feeble blue reflections on T3 and T4 (Fig. 3E). Tegulae brown. Coxae and femora medially green; trochanters brown, femora distally and tarsi yellowish.

**Etymology.** The specific epithet is named after the country of origin.

**Distribution.** Mongolia (Dornod).
Subfamily Chrysidinae
Tribe Chrysidini
Genus *Chrysis* Linnaeus, 1761

*Chrysis* Linnaeus, 1761: 414. Type species: *Sphex ignita* Linnaeus, 1758 [= *Chrysis ignita* (Linnaeus, 1758)], by subsequent designation of Latreille 1810: 437.

*Tetrachrysis* Lichtenstein, 1876: 27. Type species: *Chrysis aeruginosa* Dahlbom, 1854, by subsequent designation of Ashmead 1902: 226. Synonymized by Linsenmaier 1959: 91.

### *Chrysis aestiva* Dahlbom, 1854

*Chrysis aestiva* Dahlbom, 1854: 286. Holotype ♀; Greece: Rhodes (Berlin?) (*aestiva* group).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 90 km NE of Tsetserleg, 48°03′N, 102°25′E, 27.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai); Asiatic-European, from Caucasus, Turkey, Greece, Iran, Palestine, European part of Russia to Mongolia (Rosa et al. 2019, present record).*

**Remarks.** This is the most eastern record for *Chrysis aestiva*.

### *Chrysis angustula* Schenck, 1856

*Chrysis angustula* Schenck, 1856: 28. Lectotype ♀ (designated by Morgan 1984: 9); Germany: former Duchy of Nassau (Frankfurt) (*ignita* group).

**Material examined.** Mongolia: Arkhangai, 5 ♀♀, 1 ♂, Chuluut Gol River, 47°48′N, 100°19′E, 23.VII.2005, leg. JH (MHC); 4 ♀♀, 1 ♂, 70 km NE of Tsetserleg, 25.VII.2005, leg. JH (MHC); *Tuv*, 1 ♀, 2 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai, Tuv); Asiatic-European, from western Europe to China and Russia (Rosa et al. 2019).*

### *Chrysis asahinai* Tsuneki, 1950

*Chrysis (Tetrachrysis) asahinai* Tsuneki, 1950: 80. Holotype ♀; China, Manchuria, 22.VIII.1938, leg. S. Asahina (OMNH) (*pulchella* group).

*Chrysis asahinai*: Móczár 1967: 189 (cat., Mongolia: 1 ♀, Estgobi aimag: Cagan Elis, 800 m, 30 km ESE von Zuun-Bajan, Exp. Dr. Z. Kasab, 1963, nr. 22, 23.VI.1963).
Material examined. Mongolia: Bayankhongor, 12 ♂♂, 130 km S of Bayankhongor, 45°03’N, 100°59’E, 1240 m, 6.VII.2004, leg. JH, MK (MHC, PRC); 1 ♀, ibid, Orog Nuur, 6–7.VII.2004, on Saxaul, leg. JS (PRC); Bulgan, 13 ♂♀♀, 4 ♂♂, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); Sukhbaatar, 1 ♂, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. JH (MHC); Tuv, 2 ♀♂, 75 km W of Ulaanbaatar, dunes, 2.VIII.2005, leg. JH (MHC); 39 ♀♂, 70 km W of Ulaanbaatar, 1070 m, dunes, 16.VIII.2007, leg. JH, MH (MHC); Umnugovi, 1 ♂, Gobi, 100 km SW of Dalanzadgad, Bayanzag, on Saxaul, 1–2.VII.2003, leg. JH (MHC).

Distribution. Mongolia (*Bayankhongor, *Bulgan, Dornogovi, *Sukhbaatar, *Tuv, *Umnugovi); China (Liaoning) (Rosa et al. 2014).

*Chrysis belokobylskiji* Rosa, 2019

Chrysis belokobylskiji Rosa, 2019: 2. Holotype ♀; Kyrgyzstan: Naryn River near Karakolka (ZIN) (examined); paratypes: 2 ♀♂, 1 ♂ [Mongolia: Nogon-kub, N. Gobi; 50 km E of Ulaanbaatar, Tuul River; 40 km SW of Uliastay] (*pulchella* group).

Material examined. Mongolia: Umnugovi, 1 ♀, Nogon-kub, N. Gobi, 1.VIII.1926, P. Kozlov (ZIN); Tuv, 1 ♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); Zavkhan, 1 ♀, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

Distribution. Mongolia (Tuv, Umnugovi, Zavkhan); China (Qinghai), Kyrgyzstan, Tajikistan (Rosa 2019).

*Chrysis brevitarsis* Thomson, 1870

Chrysis brevitarsis Thomson, 1870: 107. Holotype ♀; Sweden: Nerike [= Närke] (Lund) (examined) (*ignita* group).

Material examined. Mongolia: Bulgan, 1 ♀, 137 km NE of Aravaykheer, 47°20’N, 103°40.5’E, 1250 m, 26.VII.2004, leg. JH (MHC).

Distribution. *Mongolia (Bulgan); Asiatic-European, from western Europe to Russia (Rosa et al. 2019).

*Chrysis castigata* Linsenmaier, 1959

Chrysis (Chrysis) exsulans var. asiatica Linsenmaier, 1951: 82. Holotype ♀; Uzbekistan: Ferghana (Budapest) (examined) (*ignita* group), nom. praeocc., nec Radoszkwoski 1889.
Chrysis (Chrysis) exsulans var. castigata Linsenmaier, 1959: 155. Replacement name for C. asiatica Linsenmaier, 1951.

Material examined. Mongolia: Selenge, 2 ♂♀, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 1 ♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

Distribution. *Mongolia (Selenge, Tuv); Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan, Russia (Eastern Siberia) (Rosa et al. 2019).

Chrysis chinensis Mocsáry, 1912

Chrysis (Tetrachrysis) ignita var. chinensis Mocsáry, 1912: 589. Holotype ♀; China: Shanghai (HNHM) (examined) (ignita group).

Chrysis chinensis: Rosa et al. 2019: 109 (cat., Mongolia, without locality, see Material examined).

Material examined. Mongolia: Arkhangai, 24 ♂♂, Chuluut Gol River, 47°48’N, 100°19’E, 23.VII.2005, leg. JH (MHC); 2 ♀♀, 4 ♂♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); Tuv, 1 ♀, 1 ♂, Ulaanbaatar Bog Duul, 11.VII.1983, leg. Karl Bleyl (NMLS); 7 ♀♀, 28 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); 6 ♂♂, Kangayn Mts, 5 km N of Khunt, 20.VII.2005, leg. JH (MHC); Selenge, 11 ♀♀, 19 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC).

Distribution. Mongolia (*Arkhangai, *Selenge, *Tuv); Asiatic-European, from western Europe (Switzerland) to China (Helongjiang, Shanghai) (Linsenmaier 1959).

Remarks. This species was previously reported from Mongolia (Rosa et al. 2019) without exact locality.

Chrysis consanguinea Mocsáry, 1889

Chrysis (Gonochrysis) consanguinea Mocsáry, 1889: 299. Syntypes ♀♀; Italy: Sicily; Algeria (MHNG) (examined) (viridula group).

Material examined. Mongolia: Arkhangai, 1 ♂, Chuluut Gol River, 47°48’N, 100°19’E, 23.VII.2005, leg. JH (MHC); 3 ♀♀, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 27.VII.2005, leg. JH (MHC); Bulgan, 1 ♀, 137 km NE of Aravakyheer, 47°20’N, 103°40.5’E, 1250 m, 2.VII.2004, leg. JH (MHC); Dornod, 1 ♀, 100 km W of Choilbalsan, 820 m, 23.VII.2007, leg. JH (MHC); Khentii, 4 ♂♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 1 ♀, 2 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Sukhbaatar, 2 ♂♂, 100 km SSW of Baruu-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Tuv, 7 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC);
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1 ♂, Khangaun Mts, 5 km N of Khunt, 20.VII.2005, leg. JH (MHC); 1 ♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. JH (MHC); Ulaanbaatar, 1 ♀, 7 km E of Ulaanbaatar, Gachuurt, 47°55′N, 107°06′E, 31.VII.2002, leg. JS (MHC); Zavkhan, 1 ♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

Distribution. *Mongolia (Arkhangai, Bulgan, Dornod, Khentii, Selenge, Sukhbaatar, Tuv, Ulaanbaatar, Zavkhan); Palaearctic, from southern Europe and northern Africa to Eastern Siberia ang Mongolia (Rosa et al. 2019, present records).

Chrysis dauriana Linsenmaier, 1959

Chrysis (Chrysis) cavaleriei ssp. dauriana Linsenmaier, 1959: 112. Holotype ♀; Russia: Dauria (NMLS) (examined) (succincta group). Elevated to species rank by Rosa et al. 2017a: 40.

Chrysis (Tetrachrysis) mongolica Semenov-Tian-Shanski, 1967: 178, nec Mocsáry, 1914. Holotype ♀; Russia [not Mongolia]; Transbaikalia: Ingoda River (St. Petersburg) (examined). Rosa et al. 2017a: 39 (cat., type series), 155 (Plate 91). Synonymised by Rosa et al. 2017a: 40.

Chrysis mongoliana Bohart in Kimsey and Bohart 1991: 440. Replacement name for Chrysis mongolica Semenov-Tian-Shanski, 1967: 178, nec Mocsáry 1914.

Material examined. Mongolia: Arkhangai, 1 ♀, 90 km NE of Tsetserleg, 48°03′N, 102°25′E, 27.VII.2005, leg. JH (MHC); 1 ♀, ibid, leg. MK (MHC); Bayankhongor, 2 ♂♂, 163 km S of Bayankhongor, 46°13′N, 100°30′E, 2165 m, 10.VII.2004, leg. JH (MHC); Bulgan, 1 ♂, 170 km W of Ulaanbaatar, dunes, 1070 m, 16.VIII.2007, leg. MH (MHC); Khentii, 1 ♀, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 4 ♀♀, 2 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuva, 2 ♀♀, 4 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); 2 ♂♂, ibid, 12.VII.2003, leg. JH (MHC); 10 ♀♀, 6 ♂♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC, PRC); Zavkhan, 2 ♂♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

Distribution. Mongolia (*Arkhangai, *Bayankhongor, *Bulgan, *Khentii, *Selenge, *Zavkhan); Russia (Eastern Siberia) (Rosa et al. 2017a).

Remarks. This species was previously reported from Mongolia (Rosa et al. 2019) without exact locality.

Chrysis equestris Dahlbom, 1854

Chrysis equestris Dahlbom, 1854: 307. Holotype ♂; locality unknown [most likely Sweden] (Stockholm) (examined) (smaragdula group).

Material examined. Mongolia: Arkhangai, 1 ♀, 2 ♂♂, 90 km NE of Tsetserleg, 48°03′N, 102°25′E, 24.VII.2004, leg. JH (MHC); 1 ♀, 1 ♂, ibid, leg. MK (MHC);
Distribution. *Mongolia (Arkhangai, Selenge); Asiatic-European, from western Europe to Russia (Rosa et al. 2019).

Chrysis fulgida Linnaeus, 1761

Chrysis fulgida Linnaeus, 1761: 415. Lectotype ♀ (designated by Morgan 1984: 9); Sweden: Uppsala (LSL) (ignita group).

Material examined. MONGOLIA: (Form A): Arkhangai, 2 ♀♀, 1 ♂, 70 km NE of Tsetserleg, 25.VII.2005, leg. JH (MHC); Selenge, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); (Form B): Arkhangai, 2 ♀♀, 1 ♂, 70 km NE of Tsetserleg, 25.VII.2005, leg. JH (MHC); Tuv, 5 ♀♀, 3 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); Tuv, 1 ♀, 1 ♂, Chuluut Gol River, 47°48'N, 100°19'E, 23.VII.2005, leg. JH (MHC); Tuv, 1 ♀, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC).

Distribution. *Mongolia (Arkhangai, Selenge, Tuv); Asiatic-European, from Europe to eastern Siberia, Russian Far East and North-East China (Manchuria) (Rosa et al. 2014, 2019).

Remarks. Two distinct colour forms (Fig. 4) are recorded from Mongolia, Siberia and Primorsky Territory (Russia), and Heilongjiang (China). Form A is matching with the typical European Chrysis fulgida (Fig. 4A, C). Form B is chromatic different...
without the typical blue colouration on male and female metasoma and with non-metallic black areas on head vertex and mesosoma (Fig. 4B, D). Male T1 golden-greenish, with or without a narrow transversal green or bluish stripe or patch; T2 red, with or without a basal, narrow black stripe; female T1 golden-greenish, with green to bluish colour on T1 frontal declivity to petiolar insertion. This colour variation has also been observed in specimens from Russia (Siberia and Primorsky Territory) and China (Heilongjiang). The Chinese form was mentioned by Linsenmaier (1968) as *Chrysis aequicolor* Linsenmaier, 1968, which is anyway an unnecessary replacement name for *Chrysis fulgida* var. *concolor* Mocsáry, 1912 nec Mocsáry, 1892 (actually male and female of the same taxon). Other evident different morphological characteristics are not recognizable. However, these two forms may represent two sister species, genetically separate, but difficult to identify on the basis of morphological characteristics, as in other known cases of *Chrysis* of the *ignita* group (Paukkunen et al. 2015; Orlovskytė et al. 2016).

*Chrysis ignita* (Linnaeus, 1758)

*Sphex ignita* Linnaeus, 1758: 571. Lectotype ♀ (designated by Richards 1935); Europe (LSL) (*ignita* group).  
*Chrysis ignita*: Buyanjargal and Abasheev 2015: 31 (biol. host of *Euodynerus dantici*, central Mongolia: Khugnu-Khaan Mts, Khugnu-Tarna N.P.).

**Material examined.** None examined.  
**Remarks.** The identification of *Chrysis ignita* by Buyanjargal and Abasheev (2015) is doubtful and very likely represent another species of the *C. ignita* group or even a member of another species group (e.g., *succincta* group). In fact, the host association with *Euodynerus dantici*, as observed by the two authors, is unusual. *Euodynerus dantici* is known as a possible host for members of the *C. succincta* group (*C. germari* and *C. tristica* (sub *C. succincta succinctula*) Pauli et al. 2019, supplementary file 4). For example, *C. dauriana* Linsenmaier was erroneously identified as *C. ignita* by several authors, including Trautmann (identification label pinned with the type of *C. dauriana*).  
**Distribution.** Mongolia (Bulgan) [doubtful]; West-Palaearctic: from West Europe to central Asia (Linsenmaier 1997b).

*Chrysis illecebrosa* Semenov, 1967

*Chrysis* (*Tetrachrysis*) *illecebrosa* Semenov-Tian-Shanskij, 1967: 166. Holotype ♂; Bugas near Khami, SE from Tian Shan [China, Xinjiang] (ZIN) (examined) (*maculicornis* group).

**Material examined.** Mongolia: *Umnugovi*, 1 ♂, Deemgin-gobi, 25 km SSO of Khajlastyn-Khuduka, 20.VI.1971, leg. M. Kozlov (ZIN).  
**Distribution.** *Mongolia (Umnugovi); China (Xinjiang) (Rosa et al. 2014).
**Chrysis illigeri** Wesmael, 1839

_Chrysis illigeri_ Wesmael, 1839: 176. Syntypes ♂♀; Belgium (Bruxelles, MSNG) (examined) (succincta group).

**Material examined.** Mongolia: Selenge, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 1 ♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Selenge, Tuv); Asiatic-European, from western Europe to Mongolia (present record).

**Chrysis ismaeli** Semenov, 1967

_Chrysis (Allochrysis) ismaeli_ Semenov-Tian-Shansky, 1967: 124. Holotype ♀; Kazakhstan: Balamurun, Karatau Mountain ridge foothills, leg. V. Kozhantschikov (ZIN) (ear group).

**Material examined.** Mongolia: Dornod, 1 ♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MK (MHC); Dornogovi, 5 ♂♀, 65 km SE of Chatan-Bulag, 1020 m, 2.VIII.2007, leg. MH (PRC/MHC); Umnugovi, 1 ♀, Gobi, Dalanzadgad, 24–26.VI.2003, leg. JH (MHC); 12 ♀♂, 70 km S of Saynshand, 1100 m, 6.VIII.2007, leg. MH (PRC/MHC).

**Distribution.** *Mongolia (Dornod, Dornogovi, Umnugovi); Kazakhstan (Rosa 2018).

**Notes.** As supposed by Rosa (2018), living specimens are red and change to greenish after preparation.

**Chrysis jaxartis** Semenov, 1910

_Chrysis sybarita_ var. _jaxartis_ Semenov-Tian-Shanksy, 1910: 222. Lectotype ♂ (designated by Rosa et al. 2017a: 54). Kazakhstan: Djulek (Budapest) (examined) (graelsii group).

**Material examined.** Mongolia: Dornod, 6 ♀♀, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); 9 ♀♀, 2 ♂♂, 20 km W of Choibalsan, 800 m, 48°01’N, 114°14’E 24.VII.2007, leg. MH (MHC); Khentii, 11 ♀♀, 4 ♂♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 3 ♀♀, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 5 ♀♀, 1 ♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC); 1 ♀, same date and locality, and collector (P. Tyrner priv. coll.); Umnugovi, 1 ♂, Gobi, Dalanzadgad, 25.VI.2003, leg. JH (MHC).

**Distribution.** *Mongolia (Dornod, Khentii, Selenge, Tuv, Umnugovi); Asiatic-European, from Greece, Iran, and Turkey to Central Asia (Rosa et al. 2019).
**Chrysis leptomandibularis** Niehuis, 2000

*Chrysis leptomandibularis* Niehuis, 2000: 192. Holotype ♀; Germany: Rheinland-Pfalz, Monsheim (Frankfurt) (*ignita* group).

**Material examined.** Mongolia: Tuv, 3 ♀♀, 2 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH, det. J. van der Smissen and MH (MHC).

**Distribution.** *Mongolia (Tuv); Asiatic-European from Europe to Russia (Rosa et al. 2019).*

**Chrysis mane** Semenov, 1912

*Chrysis mane* Semenov-Tian-Shanskij, 1912: 192. Lectotype ♂ (designated by Bohart in Kimsey and Bohart 1991: 436); China: Alashan (192 (descr.), depository: ZIN).

**Material examined.** Mongolia: Tuv, 1 ♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MK (PRC).

**Distribution.** *Mongolia (Tuv); China (Gansu, Qinghai, Inner Mongolia) (Rosa et al. 2014).*

**Chrysis matutina** Semenov, 1967

*Chrysis (Tetrachrysis) matutina* Semenov-Tian-Shanskij, 1967: 179. Holotype ♀; China: Gansu (ZIN) (*ignita* group).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 27.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai); China (Gansu) (Rosa et al. 2014).*

**Chrysis mediata** Linsenmaier, 1951

*Chrysis ignita* var. *mediata* Linsenmaier, 1951: 76. Lectotype ♀ (designated by Linsenmaier 1959: 154); Switzerland: Wallis (NMLS) (examined) (*ignita* group).

**Material examined.** Mongolia: Tuv, 2 ♀♀, Ulaanbaatar Bog Duul, 11.VII.1983, leg. Karl Bleyl, det. Linsenmaier 1992 (NMLS).

**Distribution.** *Mongolia (Tuv); Palaearctic region excluding Japan (Linsenmaier 1997b).*
**Chrysis mocsaryi** Radoszkowski, 1889

*Chrysis* (*Tetrachrysis*) *Mocsaryi* Radoszkowski, 1889: 29. Holotype ♀; Mongolia: Kobden (Khovd) (ISEA-PAS) (examined) (*comparata* group). Mocsáry 1889: 426 (cat., descr., Mongolia).

*Chrysis mocsaryi*: Dalla Torre 1892: 78 (cat., Mongolia); Kimsey and Bohart 1991: 440 (cat., Mongolia: Kobden, *comparata*-*scutellaris* group). Rosa et al. 2015: 41 (cat., type series), 42 (Fig. 4).

**Material examined.** Mongolia: Holotype ♀, golden rounded label, Kansu Kobden-Owatu 12/VIII [handwritten] *Mocsáry* [handwritten by Radoszkowski] // *Chrysis Mocsaryi* Rad. (tres interep.) [?] [handwritten by Mocsáry], label with right flagellum and metasoma, Mus. Pan Krakow [hadwritten by Dylewska].

**Distribution.** Mongolia (Khovd) (Radoszkowski 1889).

**Chrysis mysticalis** Linsenmaier, 1959

*Chrysis mysticalis* Linsenmaier, 1959: 165. Holotype ♀; Spain: Zamora (Luzern) (examined) (*inaequalis* group).

**Material examined.** Mongolia: *Arkhangai*, 1 ♀, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. MK (MHC); *Bulgan*, 2 ♀♂, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); *Dornogovi*, 1 ♀, 28 km of SE Chatan-Bulag, 3.VIII.2007, leg. MH MHC); *Tuv*, 1 ♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); 2 ♀♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC); *Zavkhan*, 1 ♀, 1 ♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai, Bulgan, Dornogovi, Tuv, Zavkhan); from southern Europe to eastern Siberia (Rosa et al. 2017b).*

**Chrysis nox** Semenov, 1954

*Chrysis* (*Tetrachrysis*) *nox* Semenov in Semenov-Tian-Shanskiy and Nikol’skaya 1954: 128. Lectotype ♀ (designated by Bohart in Kimsey and Bohart 1991: 444); Tajikistan [not Mongolia]: Peter the Great Range, Yashil’-Kul’ Lake, 7.VIII.1911, leg. Golbek (ZIN) (examined) (*facialis* group). Rosa et al. 2017a: 42 (cat., type series), 158 (plate 97).

*Chrysis nox*: Kimsey and Bohart 1991: 444 (cat., Mongolia: Yihe Bogdo, Peter the Great Range, *facialis* group).

**Material examined.** Mongolia: *Govi-Altai*, 4 ♀♀, 1 ♂, Ikhe-Bogdo, Gobi Altai, 30.VI–12.VII.1926, leg. P. Kozlov // Paratypes (ZIN); 4 ♀♀, idem, 15–17.VII.1926,
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Paratypes (ZIN); 1 ♀, North slope of Ikhe-Bogdo, 30.VI–12.VII.1926, leg. P. Kozlov, Paratypes (ZIN); 1 ♀, Ihe-Bogdo, Gob. Altai, 15–17.VII.1926, leg. P. Kozlov [in Cyrillic], det. M. Nikol’skaya (NMLS); Tuv, 1 ♀, Ulaanbaatar Bog Duul, 11.VII.1983, leg. Karl Bleyl, det. Linsenmaier 1990 (NMLS).

**Distribution.** Mongolia (Govi-Altai, Tuv); Tajikistan (Rosa et al. 2017a).

*Chrysis pavesii* Rosa, 2017

*Chrysis pavesii* Rosa in Rosa et al. 2017c: 27. Holotype ♀; Russia: Western Siberia, Altai Rep., 5 km SE of Chagan-Uzun, Tudtuyaryk River, 1780 m, 11.VII.2016, leg. M. Proshchalykin & V. Loktionov (ZIN) (examined) (*bihamata* group).

**Material examined.** MONGOLIA: Govi-Altai, 1 ♂, 10 km SSE of Ich-Oba-Ula, 18.VII.1970, leg. E. Narchuk (ZIN).

**Distribution.** *Mongolia (Govi-Altai, Tuv); Russia (western Siberia) (Rosa et al. 2017c).*

*Chrysis priapus* Rosa, 2018

*Chrysis priapus* Rosa, 2018: 281. Holotype ♂; Mongolia: Govi-Altai Prov., 8 km SE of Argalant-Ula (ZIN) (examined) (*slava* group).

**Material examined.** MONGOLIA: Govi-Altai, 1 ♂, 8 km SE of Argalant-Ula, 20.VI.1980, leg. G. Medvedev (ZIN).

**Distribution.** Mongolia (Govi-Altai) (Rosa 2018).

*Chrysis pseudobrevitarsis* Linsenmaier, 1951

*Chrysis ignita* var. *pseudobrevitarsis* Linsenmaier, 1951: 79. Lectotype ♀ (designated by Linsenmaier 1959: 158); Switzerland: Wallis (NMLS) (examined) (*ignita* group).

*Chrysis (Chrysis) pseudobrevitarsis* Linsenmaier 1997b: 114 (descr., Mongolia, without locality, see in Material examined).

*Chrysis pseudobrevitarsis*: Rosa et al. 2019: 153 (cat., Mongolia).

**Material examined.** MONGOLIA: Arkhangai, 1 ♂, 70 km NE of Tsetserleg, 25.VII.2005, leg. JH (MHC); Tuv, 1 ♀, Tereltz, 8.VII.1983, leg. Karl Bleyl, det. Linsenmaier 1992 (NMLS); 2 ♀♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

**Distribution.** Mongolia (Arkhangai, Tuv); Asiatic-European, from western Europe to Mongolia (Linsenmaier 1997a).
**Chrysis pupilla Semenov, 1967**

*Chrysis (Tetrachrysis) pupilla* Semenov-Tian-Shanskij, 1967: 174. Holotype ♀; Uzbekistan: Termes (ZIN) (examined) (*varidens* group).

**Material examined.** Mongolia: Umnugovi, 1 ♀, “Yuzhno-Gobiyskiy Ajmag, sajr Undyn-Gol, 25 km S of Khan-Bogdo, 7.VII.1971”, leg. M. Kozlov (ZIN).

**Distribution.** *Mongolia (Umnugovi); Uzbekistan (Semenov-Tian-Shanskij 1967).*

**Chrysis rutilans Olivier, 1791**

*Chrysis rutilans* Olivier, 1791: 676. Type unknown; France: Angoumois (depository unknown) (*splendidula* group).

**Material examined.** Mongolia: Tuv, 1 ♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Tuv); Palaearctic, from western Europe and North Africa to China and Japan (Linsenmaier 1997b).*

**Chrysis schencki Linsenmaier, 1968**

*Chrysis (Chrysis) ignita ssp. schenckiana* Linsenmaier, 1959: 156, nom. praeocc., nec Mocsáry, 1912. Holotype ♀; Switzerland: Graubünden (Luzern) (examined) (*ignita* group).

*Chrysis (Chrysis) ignita schencki* Linsenmaier, 1968: 99. Replacement name for *C. ignita schenckiana* Linsenmaier, 1959.

**Material examined.** Mongolia: Arkhangai, 2 ♀♀, Chuluut Gol River, 47°48’N, 100°19’E, 23.VII.2005, leg. JH, det. J. Van der Smissen (MHC); Bulgan, 2 ♀♀, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH, det. J. Van der Smissen (MHC).

**Distribution.** *Mongolia (Arkhangai, Bulgan); Asiatic-European, from western Europe to Central Asia, Siberia and Japan (Rosa et al. 2019).*

**Chrysis sibirica Rosa, 2017**

*Chrysis sibirica* Rosa in Rosa et al., 2017c: 24. Holotype ♀; Russia: Tuva Rep., 31 km NEE of Erzin, Erzin River, 18.vii.2014, leg. A. Lelej, M. Proshchalykin & V. Loktionov (St. Petersburg) (*bihamata* group).

**Material examined.** Mongolia: Arkhangai, 1 ♀, Chuluut Gol River, 47°48’N, 100°19’E, 23.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai); Russia (Eastern Siberia) (Rosa et al. 2017c).*
**Chrysis solida** Haupt, 1957

*Chrysis ignita solida* Haupt, 1957: 115. Lectotype ♀ (designated by Niehuis 2000: 199); Poland: Bellinchen [= Bielinek] (MLU) (*ignita* group).

*Chrysis mediata fenniensis* Linsenmaier, 1959: Móczár 1967: 189 (cat., Mongolia: 1 ♀, Čojbalsan [= Dornod] aimag: Menengijn valley, 160 km W of Bujr nur Lake, 600 m, Exp. Dr. Z. Kaszab, 1965, nr. 416, 15.VIII.1965).

**Material examined.** None examined.

**Distribution.** Mongolia (Dornod); Asiatic-European, from western Europe to Japan (Linsenmaier 1997b).

**Chrysis splendidula unica** Radoszkowski, 1891

*Chrysis splendidula* var. *unica* Radoszkowski, 1891: 189. Syntypes ♂, ♀; Turkmenistan: Ashgabad (ISEA-PAS) (examined) (*splendidula* group).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 27.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai); Turkmenistan (Radoszkowski 1891).

**Chrysis subcoriacea** Linsenmaier, 1959

*Chrysis* (*Chrysis*) *longula* ssp. *subcoriacea* Linsenmaier, 1959: 160. Holotype ♀; Finland: Kyrkslätt [= Kirkkonummi] (Luzern) (examined) (*ignita* group).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 70 km NE of Tsetserleg, 25.VII.2005, leg. JH, det. J. Van der Smissen (MHC).

**Distribution.** *Mongolia (Arkhangai); Asiatic-European, from western Europe to Central Asia, Russia and Japan (Rosa et al. 2019).

**Chrysis viridula** Linnaeus, 1761

*Chrysis viridula* Linnaeus, 1761: 415. Type unknown; Sweden (unknown) (*viridula* group).

**Material examined.** Mongolia: Tuv, 1 ♀, 100 km E of Ulaanbaatar, 20 km NE of Tereltz, Tuul River, 15–21.VII.2003, leg. JH (PRC).

**Distribution.** *Mongolia (Tuv); Asiatic-European, from western Europe to Central Asia, Russia, and Japan (Rosa et al. 2019).
Genus *Chrysura* Dahlbom, 1845

*Chrysura* Dahlbom, 1845: 6. Type species: *Chrysis austriaca* Fabricius, 1804, by subsequent designation of Bodenstein 1939: 125.

*Chrysura dichroa* (Dahlbom, 1854)

*Chrysis dichroa* Dahlbom, 1854: 146. Lectotype ♀ (designated by Rosa and Xu 2015: 17); Hungary: Budapest (MSNT) (*dichroa* group).

**Material examined.** Mongolia: Zavkhan, 1 ♀, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Zavkhan); Asiatic-European, from western Europe to Central Asia and western Siberia (Rosa et al. 2019).*

*Chrysura ignifrons* Brullé, 1833

*Chrysis ignifrons* Brullé, 1833: 375. Holotype ♂ [not ♀]; Greece: Peloponnese (Paris) (examined) (*austriaca* group).

**Material examined.** Mongolia: Zavkhan, 1 ♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Zavkhan); Palaeartic, from southern Europe and northern Africa to Middle East and Central Asia (Rosa et al. 2019).*

Genus *Euchroeus* Latreille, 1809

*Euchroeus* Latreille, 1809: 49. Type species: *Chrysis purpurata* Fabricius, 1787 [= *Euchroeus purpuratus* (Fabricius, 1787)], by monotypy.

*Euchroeus mongolicus* Tsuneki, 1947

*Euchroeus purpuratus* f. *mongolicus* Tsuneki, 1947: 54. Holotype ♀; China: Inner Mongolia: Apaka (NIAS).

*Euchroeus* (*Euchroeus*) *mongolicus*: Linsenmaier 1959: 73 (tax., descr., Mongolia [= Inner Mongolia]), 200 (fig. 213).

*Spinolia* (*Euchroeus*) *par* Semenov, 1967: 189 (cat., Mongolia: 1 ♀, Uburchangaj aimag: Changaj Mt., 8 km W of Somon Chajrchandulaan, 2000 m, Exp. Dr. Z. Kaszab, 1964, nr. 217, 28.VI.1964; 1 ♀, Southgobi aimag: 60 km E of Somon Bulgan, 1120 m, Exp. Dr. Z. Kaszab 1964, nr. 262, 4.VII.1964).
Brugmoia quadrata f. mongolica: Kimsey and Bohart 1991: 296 (cat., China [not Mongolia]: Apaka).

Euchroeus mongolicus: Rosa et al. 2014: 68 (cat.), 111 (Plate 59); Rosa et al. 2019: 326 (Mongolia, figs 83, 84).

Material examined. Mongolia: Govi-Altai, 25 ♀, 1 ♂, 70 km E of Altay city, Guuling, 14.VII.2005, leg. JH (MHC, PRC).

Distribution. Mongolia (*Govi-Altai, Umnugovi, Uvurkhangai); China (Inner Mongolia, Shanxi) (Rosa et al. 2014).

Euchroeus orientis Semenov, 1910

Pseudochrysis (Euchroeus) purpurata subsp. orientis Semenov-Tian-Shansky, 1910: 214. Lectotype ♂, designated by Kimsey in Kimsey & Bohart 1991: 296; China: Bugas near Khami, SE of Tian-Shan [China, Xinjiang], 3–5.IX.1895, leg. V. Roborovskij & P. Kozlov (ZIN) (examined).

Spinolia (Euchroeus) orientis: Móczár 1967: 189 (cat., Mongolia: 1 ♂, Suchebaator [= Sukhbaatar] aimag: Ongon elis, 10 km S of Somon Chongor, 900 m, Exp. Dr. Z. Kaszab, 1965, nr. 356, 3.–4.VIII.1965; 1 ♂, 44 km SSW of Baruun urt, 1050 m, Exp. Dr. Z. Kaszab, 1965, nr. 349, 2.–3.VIII.1965).

Euchroeus (Euchroeus) purpuratus orientis: Linsenmaier 1968: 46 (descr., Mongolia, observed in the collections of HNHM and MHNH, without precise localities).

Material examined. None examined.

Distribution. Mongolia (Sukhbaatar); China (Xinjiang) (Rosa et al. 2014).

Genus Pentachrysis Lichtenstein, 1876

Pentachrysis Lichtenstein, 1876: 227. Type species: Chrysis amoena Eversmann 1858 [= Pentachrysis amoena (Eversmann, 1858)], by subsequent designation of Ashmead 1902: 226

Pentachrysis amoena (Eversmann, 1858)

Chrysis amoena Eversmann, 1858: 562. Holotype ♀; Russian SFSR: ‘campis transuralensibus’ (ISEA-PAS) (examined).

Pentachrysis amoena: Kimsey and Bohart 1991: 521 (Mongolia, without specific locality); Rosa et al. 2019: 197 (cat., Mongolia).

Material examined. None examined.
**Distribution.** Mongolia (without locality); Asiatic-European, from eastern Europe to Mongolia (Kimsey and Bohart 1991).

**Genus Pseudochrysis Semenov, 1891**

*Pseudochrysis* Semenov, 1891: 444. Type species: *Chrysura humboldti* Dahlbom, 1845: 6 [= *Pseudochrysis humboldti* (Dahlbom, 1845)], by subsequent designation of Semenov 1892: 485.

*Pseudospinolia* Linsenmaier, 1951: 65 (as subgenus of *Euchroeus* Latreille, 1809). Type species: *Chrysis uniformis* Dahlbom, 1854: 149, by original designation. Synonymized by Rosa et al. 2017b

*Pseudochrysis gengiskhan* Rosa, 2017

*Pseudochrysis gengiskhan* Rosa in Rosa et al. 2017c: 9. Holotype ♀; Mongolia: Övörkhangay [Bulgan], 137 km NE of Aravaykheer, 47°20’N, 103°40.5’E, 1250 m, 26.vii.2004, leg. J. Halada (ZIN) (examined). Rosa et al. 2019: 198 (cat., Mongolia), 328 (fig. 91).

**Material examined.** Mongolia: *Bayankhongor*, 1 ♀, 1 ♂, 129 km NW of Bayankhongor, 47°13’N, 99°55’E, 2590 m, 16.VII.2004, leg. JH (MHC); *Bulgan*, 4 ♀♂, Mongolia, 137 km NE of Aravaykheer, 47°20’N, 103°40.5’E, 1250 m, 26.VII.2004, leg. JH (PRC/ZIN); 1 ♂, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); *Dornod*, 2 ♂♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); 3 ♂♂, 20 km W of Choibalsan, 48°01’N, 114°14’E, 800 m, 24.VII.2007, leg. MH (MHC); 2 ♂♂, 50 km SW of Choibalsan, 960 m, 25.VII.2007, leg. JH (MHC); *Selenge*, 2 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII. 2003, leg. JH (MHC); *Sukhbaatar*, 1 ♂, 200 km SSE of Baruu-Uurt, Moltsoy Els, 1250 m, 27.VII.2007, Allotype, leg. MK (ZIN); 3 ♂♂, ibid, 27.VII.2007, leg. MH (MHC); 2 ♀♀, 7 ♂♂, 100 km SSW of Baruu-Uurt, 1100 m, 30.VII.2007, leg. MH (MHC); *Tuv*, 4 ♂♂, Khangayn Mts, 5 km N of Khunt, 20.VII.2005, leg. JH (MHC); 4 ♂♂, 75 km W of Ulaanbaatar, dunes, 2.VIII.2005, leg. JH (MHC); 13 ♀♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. JH (MHC); 8 ♀♀, ibid, leg. MH (MHC).

**Distribution.** Mongolia (*Bayankhongor, *Dornod, *Selenge, Sukhbaatar, *Tuv, Bulgan); Russia (Siberia) (Rosa et al. 2017c).

*Pseudochrysis neglecta* (Shuckard, 1837)

*Chrysis neglecta* Shuckard, 1837: 169. Lectotype ♀ (designated by Morgan 1984: 9); England (LSL).
Material examined. Mongolia: *Tuv*, 1 ♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC).

Distribution. *Mongolia (Tuv); Holarctic: from west Europe to Turkey, Siberia, Manchuria and Russian Far East (Rosa et al. 2019); North America (Bohart and Kimsey 1982).

Genus Spinolia Dahlbom, 1854

*Spinolia* Dahlbom, 1854: 363. Type species: *Spinolia magnifica* Dahlbom, 1854 [= *Spinolia lamprosoma* (Förster, 1853)], by monotypy.

*Spinolia spinosa* Rosa & Halada, sp. nov.

http://zoobank.org/A105F4B1-87F4-4005-B1A0-09844A7247B0

Figures 5A, D, 6A, D

Type material. Holotype. ♀, Mongolia: *Bayankhongor*, Edringiyn-Nuru Ridge, 100 km SSW of Bayan-Under, 5.IX.1970, leg. V. Zaitzev (ZIN).

Diagnosis. *Spinolia spinosa* sp. nov. is closely related to Central Asian species of the *unicolor* group, which includes *S. chalcites* (Mocsáry, 1890), *S. rusalka* (Semenov, 1901), *S. hedychroides* (Bingham, 1903) and other small species so far considered synonyms of *S. chalcites* (Kimsey and Bohart 1991). *S. spinosa* sp. nov. female can be easily separated from all these species by: lateral pronotal area and propleuron ventrally V-shaped carinate, displaying two teeth in lateral view (Fig. 5D) (vs. unmodified in other species); mesopleuron with large and deep scrobal sulcus subtended by large projecting subrectangular carina (Fig. 5D) (vs. U-shaped carina); sparse, deep and large punctures on mesosoma (Fig. 6D), and sparse and deep punctures on metasoma (vs. punctation with dense, shallow and tiny punctures on mesosoma, denser and shallower on metasoma); antennae yellowish, distinctly elongate (Fig. 5A) (vs. black to dark brown, with short to very short flagellomeres); head, in frontal view, transversely subrectangular (Fig. 6A) and not triangular (Fig. 6B); with bulging eyes, similarly to *S. unicolor*. It is additionally separated from *S. unicolor* by punctuation, elongate and yellowish antennae and bronze body colour (entirely blue body in *S. unicolor*, with shortened, blackish flagellomeres).

Description. Female. Body length 6.0 mm. Fore wing length 3.8 mm. OOL = 2.3 MOD; POL = 1.9 MOD; MS = 0.7 MOD; relative length of P:F1:F2:F3 = 1.0:1.4:1.0:0.8; subantennal space: 1.4 MOD. Head. Vertex with deep and contiguous punctures, as large as 0.25 MOD; vertex moderately depressed and impunctate in front of anterior ocellus and impunctate laterad of posterior ocelli; median anterior depression developed to upper scapal basin; TFC faint; frons continuous, without two flattened or concave, striate areas; scapal basin almost flat, laterally densely micro-punctate, medially with contiguous punctures forming transverse wrinkles (Fig. 6A); lower part of scapal basin medially impunctate and sulcate; apex of clypeus discoloured, W-shaped and bent under, medially the folded part measures 0.6 MOD. Malar space very
short, distinctly less than 1 MOD. Antennae elongate, with flagellomeres as long as 1.5 × their width. Mouth parts elongate (as long as 0.8 × head length) and evidently protruding from oral fossa. **Mesosoma.** Pronotal groove barely visible; anterolateral corner of the pronotum projected to form an acute humeral angle (Fig. 5A); lateral pronotal area ventrally V-shaped carinate forming an acute tooth (Fig. 5D); propleuron ventrally carinate in a large V-shaped tooth (Fig. 5D). Mesosoma punctation dorsally with large, spaced punctures; interspaces medially polished, laterally micro-punctate; notauli incomplete, visible and deep only basally towards the transscutal fissure; parapsidal furrows fully visible; mesopleuron with a large subrectangular area subtended the mesepimeron + mesepisternum; posterior propodeal projections narrow, acute and downward directed. Wing venation unmodified, with long Rs bending slightly away from costal margin, leaving marginal cell broadly open. **Metasoma.** Punctuation on T1 with tiny, sparse punctures (separated by 1–4 PD) (Fig. 6D), laterally micro-punctate on interspaces; T2 with larger and deeper punctures, anterodorsally denser (0.1–2 PD), laterally micro-punctate on interspaces; T3 with coarse to contiguous small punctures;
T3 pit row barely sunken, with small, round pits, equally spaced; posterior pit row area almost polished, with a few, sparse, tiny punctures; T3 with two lateral angles and fully bordered by hyaline margin. Metasomal invaginated T5, T6, and S5 with several dorsal and lateral lobes. S2 black spots oval, transversally placed and separated 0.5 MOD each other. **Colouration.** Body coppery-bronze, darker to black on median area of mesoscutum; ventrally golden to copper; tegulae golden to non-metallic yellowish on outer margin; tarsi dark brown. Mandible brown, lighter medially. Scape and pedicel coppery, antennomeres yellowish-orange, darker on distal segments. Legs pale coloured, with slight metallic reflections, with non-metallic proximal and distal joints; tarsi yellowish. Forewings hyaline, slightly amber, with light brown veins. **Vestiture.** Whitish, short and sparse setae on head and mesosoma (up to 1.5 MOD long); face with short whitish setae (less than 1.0 MOD); metasoma with short (less than 1.0 MOD) whitish, sparse setae on T3 and ventrally on S2 and S3 and femora.

**Male.** Unknown.

**Etymology.** The specific epithet *spinosa* (feminine) is derived from the Latin adjective *spinosus* (thorny) for the long and acute teeth ventrally displayed on pronotum and propleuron and clearly visible in lateral view (Fig. 5D).

**Distribution.** Mongolia (Bayankhongor).
**Spinolia unicolor (Dahlbom, 1831)**

*Chrysis unicolor* Dahlbom, 1831: 32. Syntypes ♂♂; Sweden: Scania: Lomma and Käflinge [= Kävlinge] (ZMUL) (examined).

*Spinolia unicolor*: Kimsey and Bohart 1991: 552 (cat., Mongolia, without locality).

**Material examined.** Mongolia: *Govi-Altai*, 1 ♂, 70 km E of Altay city, Guulin, 14.VII.2005, leg. JH (MHC).

**Distribution.** Mongolia (*Govi-Altai*); Asiatic-European: from eastern Europe to Mongolia (Linsenmaier 1959, Kimsey and Bohart 1991).

**Genus Stilbum Spinola, 1806**

*Stilbum* Spinola, 1806: 9. Type species: *Chrysis calens* Fabricius, 1781, by subsequent designation of Latreille 1810: 437.

**Stilbum calens (Fabricius, 1781)**

*Chrysis calens* Fabricius, 1781: 455. Holotype ♀; Russia: Siberia (NHMUK).

*Stilbum calens zimmermanni* Linsenmaier, 1959: Linsenmaier 1997b: 132 (China, Inner Mongolia [not Mongolia]).

**Material examined.** Mongolia: *Arkhangai*, 9 ♀♀, 25 km NE of Tsetserleg, 47°38’N, 101°45’E, 23.VII.2004, leg. JH (MHC); *Bulgan*, 1 ♂, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); *Dornogovi*, 1 ♂, 28 km SE of Chatan-Bulag, steppe, 3.VIII.2007, leg. MK (PRC); *Tuv*, 2 ♀♀, 1 ♂, Khangayn Mts, 5 km N of Khunt, 20.VII.2005, leg. JH (MHC); 1 ♂, 75 km W of Ulaanbaatar, dunes, 2.VIII.2005, leg. JH (MHC); *Uvurkhangai*, 3 ♀♀, 12 km E of Aravakheer, 46°22’N, 102°49’E, 1800 m, 3.VII.2004, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai, Bulgan, Dornogovi, Tuv, Uvurkhangai)*; widely distributed in the Palaearctic Region (Tsuneki 1948, Linsenmaier 1959), Russia (Siberia), China (Liaoning, Beijing, Inner Mongolia, Shanxi) (Rosa et al. 2019). Linsenmaier (1997b) mentioned Mongolia in the distribution range of *Stilbum calens*, yet the specimen examined by the Swiss author was collected in China, Inner Mongolia: 1 ♂, Hutjertu Gol [currently Khujirt Gol River, near Bailingmiaozen monastery, N of Baotou, Inner Mongolia, China] 1927, Sven Hedins Exp. Ctr. Asien Dr. Hummel, det. Linsenmaier 1963 (NMLS).

**Genus Trichrysis Lichtenstein, 1876**

*Trichrysis* Lichtenstein, 1876: 27. Type species: *Sphex cyanea* Linnaeus, 1758 [= *Trichrysis cyanea* (Linnaeus, 1758)], by monotypy.
Trichrysis cyanea (Linnaeus, 1758)

Sphex cyanea Linnaeus, 1758: 572. Lectotype ♂ (designated by Morgan 1984: 10); Europe (LSL).

Material examined. Mongolia: Bayankhongor, 1 ♀, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (MHC); Selenge, 1 ♀, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 1 ♀, 100 km E of Ulaanbaatar, 20 km NE Tereltz, Tuul River, 15–21.VII.2003, leg. JH (MHC); 2 ♀♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

Distribution. *Mongolia (Bayankhongor, Selenge, Tuva); Palaearctic, from western Europe and northern Africa to Central Asia, China and Japan (Rosa et al. 2019).

Trichrysis pellucida (du Buysson, 1887)

Chrysis pellucida du Buysson, 1887: 183. Lectotype ♀ (designated by Rosa et al. 2016: 123); China (MNHN) (examined).

Chrysis (Trichrysis) buyssoni Mocsáry, 1889: 323. Unnecessary replacement name for Chrysis pellucida du Buysson, 1887.

Chrysis (Trichrysis) mongolica Mocsáry, 1914: 24. Lectotype ♀ (designated by Bohart in Kimsey and Bohart 1991: 571); Mongolia (HMNH).

Material examined. Mongolia: 1 ♀, mongolica Mocs. typ. det. Mocsáry, red label, Chrysis L. pellucida Buys. Linsenmaier det. 59, Lectotype Chrysis mongolica Mocs. ♀ RM Bohart, id nr. 135554 HNHM Hym. coll. Paralectotypes: 4 ♀♀, Mongolia, mongolica Mocs. typ. det. Mocsáry, red label, Chrysis L. pellucida Buys. Linsenmaier det. 59, Paralectotype Chrysis mongolica Mocs. ♀ RM Bohart, id nr. 135555–135558 HNHM Hym. coll.

Distribution. Mongolia (without locality); East-Palaearctic: Russia (Far East), China (Liaoning, Inner Mongolia, Hebei, Beijing, Hunan) (Rosa et al. 2016, 2019).

Trichrysis secernenda (Mocsáry, 1912)

Chrysis (Trichrysis) secernenda Mocsáry, 1912: 376. Lectotype ♂ (designated by Bohart in Bohart and French 1986: 342); Uzbekistan: Gouldsha (HNHM) (examined).

Material examined. Mongolia: Selenge, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC).

Distribution. *Mongolia (Selenge); Afghanistan, Uzbekistan, China (Xinjiang, Ningxia) (Rosa et al. 2016).
Tribe Elampini

**Genus Colpopyga Semenov, 1954**

*Colpopyga* Semenov, 1954: 137. Type species: *Hedychrum flavipes* Eversmann, 1858 [= *Colpopyga flavipes* (Eversmann, 1858)], by original designation.

**Colpopyga nesterovi** Rosa, 2017

*Colpopyga nesterovi* Rosa, 2017b: 301. Holotype ♀; Kazakhstan: Aktobe Prov., Mugezhary Mt., Emba River valley, 17.vi.1985, leg. M. Nesterov (ZIN) (examined).

**Material examined.** Mongolia: Dornod, 2 ♀♀, 1 ♂, 20 km W of Choilbalsan, 800 m, 48°01’N, 114°14’E, 24.VII.2007, leg. MH (MHC).

**Distribution.** *Mongolia* (Dornod); Kazakhstan (Rosa 2017b).

**Genus Elampus Spinola, 1806**

*Elampus* Spinola, 1806: 10. Type species: *Chrysis panzeri* Fabricius, 1804 [= *Elampus panzeri* (Fabricius, 1804)], by subsequent designation of Latreille 1810: 437.

*Elampus* Agassiz, 1846: 136. Unjustified emendation of *Elampus* Spinola, 1806 (part.).

*Notozus* Förster, 1853: 351. Type species: *Notozus frivaldszkii* Förster, 1853 [= *Elampus spina* (Lepeletier, 1806)], by subsequent designation of Ashmead 1902: 228.

**Elampus albipennis** (Mocsáry, 1889)

*Elampus* (Notozus) albipennis Mocsáry, 1889: 80. Lectotype ♂ (designated by Móczár 1964: 447); Russia: Astrakhan (HMNH) (examined).

**Material examined.** Mongolia: Arkhangai, 93 ♀♀, 30 ♂♂, Chuluut Gol River, 47°48’N, 100°19’E, 23.VII.2005, leg. JH (MHC); Dornogovi, 1 ♂, Orgon, 11.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia* (Arkhangai, Dornogovi); Asiatic-European, from eastern Europe, Saudi Arabia, UAE to Central Asia and eastern Siberia (Rosa et al. 2019).

**Elampus coloratus** Rosa, 2017

*Elampus coloratus* Rosa in Rosa et al. 2017d: 2. Holotype ♂; Russia: Tyva Rep., 20 km SSW of Erzin, Tore-Khol’ Lake (ZIN) (examined).
Material examined. Mongolia: Sukhbaatar, 1 ♂, Lun-Ula, 30 km WSW of Darigan-ga, 1.VII.1971, leg. I. Kerzhner (ZIN).

Distribution. Mongolia (Sukhbaatar); Russia (Tyva Rep.) (Rosa et al. 2017d).

*Elampus montanus* (Mocsáry, 1890)

*Ellampus (Notozus) montanus* Mocsáry, 1890: 49. Holotype ♂; Turkey: Buyuk Agri Dagi (Mount Ararat) (ISEA-PAS) (examined).

Material examined. Mongolia: Dornogovi, 6 ♂♂, Orgon, 11.VII.2005, leg. JH (MHC).

Distribution. *Mongolia (Dornogovi); Turkey (Mocsáry 1890) and Central Asia (unpubl. data).*

*Elampus panzeri* (Fabricius, 1804)

*Chrysis scutellaris* Panzer, 1798: fig. 51, pl. 11. Type unknown; Germany: Nürnberg (depository unknown), nom. praecoc., nec Fabricius, 1794.

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

Material examined. Mongolia: Arkhangai, 1 ♂, 25 km NE of Tsetserleg, 47°38’N, 101°45’E, 23.VII.2004, leg MK (MHC); Zavkhan, 1 ♀, 2 ♂♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

Distribution. *Mongolia (Arkhangai, Zavkhan); Asiatic-European, from western Europe to eastern Siberia, Russian Far East, and China (Heilongjiang) (Rosa et al. 2019).*

*Elampus sanzii* Gogorza, 1887

*Elampus sanzii* Gogorza, 1887: 33. Holotype ♂; Spain: Madrid (MCNM).

*Notozus sanzii* Móczár 1967: 183 (cat., Mongolia: Central aimag, Zuun-Chara, 850 m, Exp. Dr. Z. Kaszab, 1964, Nr. 281; 8.VII.1964).

Material examined. None examined.

Distribution. Mongolia (Tuv); Asiatic-European, from Iberian Peninsula to Mongolia and eastern Siberia (Rosa et al. 2019).

*Elampus spinifemoris* (Móczár, 1967)

*Notozus spinifemoris* Móczár, 1967: 185. Holotype ♀; Mongolia: Uvurkhangai aimag: Arc Bogd ul, ca. 20 km S of von Somon Chovd, 1760 m, Exp. Dr. Z. Kaszab,
1964, 22.VI.1964 (HNHM) (examined). Rosa et al. 2017e: 113 (cat., typ., Mongolia: Arc Bogd ul, fig. 87).

**Material examined.** Mongolia: Uvurkhangai, 1 ♀, Uburchangaj aimag, Arc Bogd ul, cca 20 km S of von somon Chovd, 1760 m Exp. Dr. Z. Kaszab, 1964, Nr. 170, 22.VI.1964, *Notozus* sp. nov. ♀ det. Móczár 965, ♀ *Omalus* Pz. *Notozus panzeri* F. Linsenmaier det. 1964, Holotype ♀ *Notozus spiniferomuris* L. Móczár 1966, Hym. Typ. No. 87 Mus. Budapest, id nr. 134892 HNHM Hym. coll. (HNHM).

**Distribution.** Mongolia (Uvurkhangai) (Móczár 1967).

**Genus Hedychridium Latreille, 1802**

*Hedychridium* Abeille de Perrin, 1878: 3. Type species: *Hedychrum minutum* Lepeletier, 1806 [= *Hedychridium ardens* (Coquebert, 1801)], by subsequent designation of Ashmead 1902: 227.

**Hedychridium ardens** (Coquebert, 1801)

*Chrysis ardens* Coquebert, 1801: 59. Holotype ♀; France: Bordeaux (MNHN?).

*Hedychridium ardens* Móczár 1967: 189 (cat., Mongolia: Uvurkhangai aimag: Baga Bogd ul, between Somon Bogd and Somon Baruun Hajan-ulaan, 1900 m, Exp. Dr. Z. Kaszab, 1964, nr. 176, 23.VI.1964).

**Material examined.** Mongolia: Arkhangai, 1 ♀, 90 km NE of Tserserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); Bayankhongor, 9 ♀♂, 8 ♀♂, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (MHC); Dornod, 2 ♀♂, 3 ♀♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); 5 ♀♂, 2 ♀♂, 20 km W of Choibalsan, 800 m, 48°01’N, 114°14’E, 24.VII.2007, leg. MH (MHC); Khentii, 1 ♀, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 2 ♀♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Sukhbaatar, 1 ♀, 1 ♂, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Ulaanbaatar, 7 ♀♂, 40 km SW of Ulaistay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** Mongolia (*Arkhangai, *Bayankhongor, *Dornod, *Khentii, *Selenge, *Sukhbaatar, *Ulaanbaatar, Uvurkhangai, *Zavkhan); Asiatic-European, from Europe and Middle East to Russia (Far East) (Kimsey and Bohart 1991; Kurzenko and Lelej 2007).
**Hedychridium asianum** Linsenmaier, 1997

*Hedychridium integrum* ssp. *asiaticum* Linsenmaier, 1997a: 254. Holotype ♂, Mongolia: Ulan Bator, 1900 m (UKC).

**Material examined.** Mongolia: *Arkhangai*, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); *Bayankhongor*, 1 ♂, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (MHC); *Bulgan*, 3 ♂♂, 137 km NE of Aravaykheer, 47°20’N, 103°45.5’E, 1250 m, 2.VII.2004, leg. JS (MHC); 2 ♀♀, 2 ♂♂, 143 km NE of Aravaykheer, 47°24’N, 103°39’E, 1300 m, 26.VII.2004, leg. MH (MHC); *Ulaanbaatar*, 1 ♂, Ulaanbaatar, 16.VII.1989, 1900 m, leg. Peter Salk, det. Linsenmaier, 1997 (NMLS).

**Distribution.** Mongolia (*Arkhangai, *Bayankhongor, *Bulgan, Ulaanbaatar); China (Gansu) (Rosa et al. 2014).

**Remarks.** *Hedychridium asianum* was described as a subspecies of *H. integrum*. As recently pointed out by Paukkunen et al. (2014), *H. integrum* is a synonym of *H. ardens* and *H. integrum* sensu Linsenmaier (1959) is *H. cupreum*.

**Hedychridium belokobylskii** Rosa, 2017

*Hedychridium belokobylskii* Rosa in Rosa et al. 2017d: 11. Holotype ♀; Russia: Eastern Siberia, Tuva Rep., 12 km SW of Samagli, Dyttyg-Khem River, 19.VII.2014, leg. A. Lelej, M. Proshchalykin, V. Loktionov (ZIN) (examined).

**Material examined.** Mongolia: *Tuv*, 1 ♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MK (PRC).

**Distribution.** *Mongolia (Tuv); Russia (Eastern Siberia) (Rosa et al. 2019).*

**Hedychridium cupreum** (Dahlbom, 1845)

*Hedychrum cupreum* Dahlbom, 1845: 3. Lectotype ♀ (designated by Paukkunen et al. 2014: 23); Sweden: Lund (NHMW) (examined).

**Material examined.** Mongolia: *Bayanhkongor*, 2 ♀♀, 16 km SW of Bayanhkongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (MHC); *Dornogovi*, 1 ♂, 65 km SE of Chatan-Bulag, 1020 m, 2.VIII.2007, leg. MH (MHC); *Govi-Altai*, 4 ♀♀, 70 km E of Altay City, Guulin, 14.VII.2005, leg. JH (MHC); *Tuv*, 2 ♀♀, 1 ♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); 1 ♀, Khangai Mts, 5 km N of Khunt, 20.VII.2005, leg. JH (MHC); *Umnguovi*, 3 ♀♀, Gobi, 100 km SW of Dalanzadgad, Bayanzag, 1–2.VII.2003, leg. JH (MHC); *Uvurkhangai*, 1 ♂,
12 km E of Aravaykheer, 46°22'N, 102°49'E, 1800 m, 3.VII.2004, leg. JH (MHC); Zavkhan, 2 ♀♂, 1 ♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Bayankhongor, Dornogovi, Govi-Altai, Tuv, Umnugovi, Uvurkhangai, Zavkhan); Asiatic-European, from north-western Europe to Mongolia and China (Rosa et al. 2014).

**Remarks.** Specimens from Mongolia display an unusual red colouration.

**Hedychridium gabriellae Rosa, 2017**

*Hedychridium gabriellae* Rosa in Rosa et al. 2017d: 19. Holotype ♀; Russia: Eastern Siberia, Tuva Rep., 20 km of SSW Erzin, Tore-Khol' Lake, 30.VI–3.VII.2013, leg. V. Loktionov & M. Proshchalykin (ZIN) (examined).

**Material examined.** MONGOLIA: *Bayankhongor*, 18 ♂♂, 22 ♀♀, 75 km S of Bayankhongor, 45°20'N, 100°48.5'E, 1330 m, 8.VII.2004, leg. JH, JS (MHC); *Dornogovi*, 5 ♀♀, 5 ♂♂, 65 km SE of Chatan-Bulag, 1020 m, 2.VIII.2007, leg. MH (MHC); *Tuva*, 1 ♂, 70 km W of Ulaanbaatar, 1070 m, dunes, 16.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Bayankhongor, Dornogovi, Tuva); Russia (Eastern Siberia) (Rosa et al. 2019).

**Hedychridium longigena Rosa, 2017**

*Hedychridium longigena* Rosa in Rosa et al. 2017d: 21. Holotype ♀; Russia: Irkutsk Prov., 8 km N of Irkutsk, Angara River, sandy slopes, 10.VII.2001, collector unknown (ZIN) (examined).

**Material examined.** MONGOLIA: *Bayankhongor*, 1 ♀, 1 ♂, 56 km NW of Bayankhongor, 46°33'N, 100°12'E, 2200 m, 12.VII.2004, leg. JS (MHC); *Bulgan*, 2 ♀♀, 137 km NE of Aravaykheer, 47°20'N, 103°45.5'E, 1250 m, 2.VII.2004, leg. MK (MHC); 3 ♀♀, ibid, 26.VII.2004, JH (MHC); *Dornod*, 1 ♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); *Dornogovi*, 1 ♂, 65 km SE of Chatan-Bulag, 1020 m, 2.VIII.2007, leg. MH (MHC); *Khentii*, 2 ♀♀, 2 ♂♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); *Selenge*, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); *Tuva*, 10 ♀♀, 9 ♂♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MK (PRC); 4 ♂♂, 70 km W of Ulaanbaatar, 1070 m, dunes, 16.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Bayankhongor, Bulgan, Dornod, Dornogovi, Khentii, Selenge, Tuva); Russia (Eastern Siberia) (Rosa et al. 2019).
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**Hedychridium propodeale Rosa, 2017**

*Hedychridium propodeale* Rosa in Rosa et al. 2017d: 16. Holotype ♀; Russia: Eastern Siberia, Tuva Rep., 20 km SSW of Erzin, Tore-Khol’ Lake, 3.VII.2013, leg. V. Loktionov & M. Proshchalykin (ZIN) (examined).

**Material examined.** Mongolia: Govi-Altai, 1 ♀, Mongolia W, 70 km E of Altay city, Guulin, 14.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Govi-Altai); Russia (Eastern Siberia) (Rosa et al. 2019).*

**Hedychridium roseum** (Rossi, 1790)

*Chrysia carnea var. rosea* Rossi, 1790: 75. Syntypes; Italy (Berlin?).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.7.2004, leg. JH (MHC); Dornod, 21 ♀♀, 4 ♂♂, 100 km W of Choilbalsan, 820 m, 23.VII.2007, leg. MH (MHC); 19 ♀♀, 1 ♂, 20 km W of Choilbalsan, 800 m, 48°01’N, 114°14’E, 24.7.2007, leg. MH (MHC); Dornogovi, 4 ♂♂, 2 km SE of Khuvsrgol, 5.VIII.2007, leg. MH (MHC); Sukhbaatar, 1 ♀, 1 ♂, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); 4 ♂♂.

**Distribution.** *Mongolia (Arkhangai, Dornod, Dornogovi, Sukhbaatar); Asiatic-European, from western Europe to Russia (Far East) (Rosa et al. 2019).*

**Remarks.** The record from Korea (Tsuneki 1953b and Korean checklists) must be referred to *Hedychridium tsunekii* Linsenmaier, 1959. In fact, Linsenmaier (1959) described as *Hedychridium tsunekii* the Korean specimens collected and identified by Tsuneki (1953) as *H. roseum*.

**Genus Hedychrum Latreille, 1802**

*Hedychrum* Latreille, 1802: 317. Type species: *Chrysia lucidula* Fabricius, 1775 [= *Hedychrum nobile* (Scopoli, 1763)], by monotypy.

**Hedychrum chalybaeum** Dahlbom, 1854

*Hedychrum chalybaeum* Dahlbom, 1854: 64. Syntypes ♂♂; Europe: ‘Europa media et meridionali’, Russia, Prussia, Silesia (MfN, ZMUL) (examined). Móczár 1967: 188 (cat., Mongolia: 1 ♀, Sukhbaatar aimag: 44 km SSW of Baruu urt, 1050 m, Exp. Dr. Z. Kaszab, 1965, nr. 349, 2.--3.VIII.1965; 1 ♀, Chadatin-bulan, 60 km N of Somon Bajanterem, 950 m, Exp. Dr. Z. Kaszab, 1965, nr. 340, 31.VII.1965).
Material examined. **Mongolia**: Bayankhongor, 1 ♂, 2 km S of Bayankhongor, 46°12′N, 100°43′E, 1800 m, 10.VII.2004, leg. JH (PRC); 20 ♀♀, 2 ♂♂, 56 km NW of Bayankhongor, 46°33′N, 100°12′E, 2200 m, 12.VII.2004, leg. JH (PRC); Dornod, 16 ♀♀, 9 ♂♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); 16 ♀♀, 6 ♂♂, 20 km W of Choibalsan, 800 m, 48°01′N, 114°14′E 24 VII.2007, leg. MH (MHC); 1 ♂, 15 km W of Choibalsan, Kerulen River, 770 m, 24.VII.2007, leg. MK (PRC); 1 ♂, 50 km SW of Choibalsan, 960 m, 25.VII.2007, leg. JH (MHC); 1 ♀, 50 km SW of Choibalsan, 960 m, 25.VII.2007, leg. MH (MHC); Govi-Altai, 2 ♀♀, 70 km E of Altay city, Guamlin, 14.VII.2005, leg. JH (MHC); Selenge, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (PRC); Sukhbaatar, 6 ♀♀, 2 ♂♂, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Tuv, 1 ♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); Ulaanbaatar, 1 ♂, Ulaanbaatar, Tuul River valley, 12.VII.2003, leg. JH (PRC); 1 ♀, 7 km E of Ulaanbaatar, Gachuurt, 47°55′N, 107°06′E, 31.VII.2002, 1310 m, leg. JS (PRC).

**Distribution.** Mongolia (Bayankhongor, *Dornod, *Govi-Altai, *Selenge, Sukhbaatar, Tuv, *Ulaanbaatar); widely distributed in the Palaearctic Region (Linsenmaier 1959; Kurzenko and Lelej 2007), China (Heilongjiang, Inner Mongolia, Gansu) (Rosa et al. 2014).

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**Hedychrum gerstaeckeri** Chevrier, 1869

*Hedychrum gerstaeckeri* Chevrier, 1869: 47. Syntypes ♀♀, ♂♂, [not holotype]; Switzerland (Geneva) (examined).

Material examined. **Mongolia**: Khentii, 3 ♀♀, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 1 ♀, 5 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 4 ♀♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Khentii, Selenge, Tuv, *Ulaanbaatar); widely distributed in the Palaeartic Region, from western Europe to Russian Far East, Japan, China and Taiwan (Rosa et al. 2014, 2019).

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**Hedychrum lama** du Buysson, 1891

*Hedychrum lama* du Buysson, 1891: 31. Lectotype ♀ (designated by Kimsey in Kimsey and Bohart 1991: 215); Mongolia: Kansu-Kobden Owatu (MNHN).

Material examined. **Mongolia**: Khovd, 1 ♂, Mongolie O. Radoszkowsky, Kansu-Kobden Owatu, 12.8, Mongolie Coll. R. du Buysson 1900, Type, Museum Paris.

**Distribution.** Mongolia (Khovd) (du Buysson 1891).
**Hedychrum longicolle** Abeille de Perrin, 1877

*Hedychrum longicolle* Abeille de Perrin, 1877: 65. Lectotype ♀ (designated by Kimsey 1986: 108); France: Marseille, Toulon (Geneva, Paris) (examined).

**Material examined.** **Mongolia:** Bulgan, 1 ♂, 170 km W of Ulaanbaatar, dunes, 1070 m, 16.VIII.2007, leg. MH (MHC); Dornod, 1 ♂, 50 km SW of Choibalsan, 960 m, 25.VII.2007, leg. JH (MHC); Sukhbaatar, 1 ♂, 200 km SSE of Baruun-Urt, Moltsoy Els, 1250 m, 27.VII.2007, leg. MH (MHC); 2 ♂♂, 6 ♀♀, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Tuv, 1 ♂, 75 km W Ulaanbaatar, dunes, 2.VIII.2005, leg. JH (MHC); Umnugovi, 1 ♀, Gobi Gurvansaikhan National Park, 44°00’N, 101°50’E, 10.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Bulgan, Dornod, Sukhbaatar, Tuv, Umnugovi); Palaearctic, from southern Europe and northern Africa, to western Asia, Siberia, and China (Rosa et al. 2019).*

**Hedychrum nobile** (Scopoli, 1763)

*Sphex nobile* Scopoli, 1763: 297. Holotype ♀; Italy [not Austria] (lost).

**Material examined.** **Mongolia:** Arkhangai, 1 ♀, 25 km NE of Tsetserleg, 47°38’N, 101°45’E, 23.VII.2004, leg. JH (MHC); 4 ♂♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); 4 ♀♀, 9 ♂♂, ibid, 27.VII.2005, leg. JH (MHC); Selenge, 2 ♀♀, 12 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 2 ♀♀, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC); Zavkhan, 3 ♂♂, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai, Selenge, Tuv, Zavkhan); Asiatic-European, from western Europe to Siberia (Rosa et al. 2019).*

**Hedychrum rutilans ermak** Semenov, 1967

*Hedychrum intermedium ermak* Semenov-Tian-Shanski, 1967: 142. Holotype ♂; Russia: Siberia, Shira Lake [Khakass Rep.], 24.VII.1897, Yu. Wagner (ZIN) (examined). Móczár 1967: 188 (cat., Mongolia: Sukhbaatar aimag: Ongon elis, 10 km S of Somon Chongor, 900 m, Exp. Dr. Z. Kaszab, 1965, nr. 357, 3.–4.VIII.1965).

**Material examined.** **Mongolia:** Arkhangai, 1 ♀, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); 1 ♀, 2 ♂♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 27.VII.2005, leg. JH (MHC); Dornod, 2 ♂♂, 20 km W of Choibalsan, 48°01’N, 114°14’E, 800 m, 24.VII.2007, leg. MH (MHC); Selenge, 1 ♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); Tuv, 1 ♀, 50 km
N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MK (PRC); 7 ♀♀, 3 ♂♂, ibid, 8–13.VIII.2007, leg. MH (MHC).

**Distribution.** Mongolia (*Arkhangai, *Dornod, *Selenge, Sukhbaatar, *Tuv); Russia (Siberia, Far East) (Rosa et al. 2019).

**Genus Holopyga Dahlbom, 1845**

_Holopyga_ Dahlbom, 1845: 4. Type species: _Holopyga amoenula_ Dahlbom, 1845, by subsequent designation of Ashmead 1902: 227.

**Holopyga generosa asiatica** Trautmann, 1926

_Holopyga gloriosa var. asiatica_ Trautmann, 1926: 5. Holotype ♀; Turkey: İzmir prov.: Smyrna (MFN) (examined).

**Material examined.** Mongolia: Selenge, 3 ♀♀, 5 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC).

**Distribution.** *Mongolia (Selenge); Asiatic-European, from southern Europe to China (Rosa et al. 2019).

**Holopyga kaszabi** Móczár, 1967

_Holopyga kaszabi_ Móczár, 1967: 187. Holotype ♂; Mongolia: Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963 (HNHM) (examined). Rosa et al. 2017: 108 (cat., type series, Mongolia).

**Material examined.** Mongolia: Dornogovi, 1 ♂, Ostgobi aimag 40 km NW of Chara-Eireg, 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, Holotype ♂ _Holopyga kaszabi_ n. sp. det. Móczár 1966, Hym. Typ. No. 89, id nr. 134927 HNHM Hym. coll. (HNHM); 1 ♀, Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, Allotype ♀ _Holopyga kaszabi_ n. sp. det. Móczár 1966, Hym. Typ. No. 96, id nr. 134933 HNHM Hym. Coll. (HNHM). 1 ♂: Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, _Holopyga_ sp. n.? <handwritten by Móczár>, ♂ Allotype _Holopyga_ Dhlb. _diversicolor_ Lins. Linsenmaier 1966, Paratype ♂ _Holopyga kaszabi_ n. sp. det. Móczár 1966, Hym. Typ. No. 90 (HNHM); 1 ♂, Mongolia, Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, Paratype ♂ _Holopyga kaszabi_ n. sp. det. Móczár 1966, Hym. Typ. No. 91, id nr. 134929 HNHM Hym. coll. (HNHM); 1 ♂: Mongolia, Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, Paratype ♂ _Holopyga kaszabi_ n. sp. det. Móczár 1966, Hym. Typ. No. 93, id nr. 134930 HNHM Hym. coll. (HNHM); 1
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♂, Mongolia, Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.1963, Paratype ♂ Holopyga kaszabi n. sp. det. Móczár 1966, Hym. Typ. No. 94, id nr. 134931 HNHM Hym. coll. (HNHM); 1 ♂: Mongolia, Ostgobi aimag 40 km NW of Chara-Eireg 1150 m Exp. Dr. Z. Kaszab, 1963, Nr. 62, 30.VI.63, Holopyga gloriosa ? intermedia ? det. L. Móczár, Type Holopyga Dhlb. diversicolor Lins. Linsenmaier 1966, Paratype ♂ Holopyga kaszabi n. sp. det. Móczár 1966, Hym. Typ. No. 95 / id nr. 134932 HNHM Hym. coll. (HNHM); 1 ♂, Mongolia, Catgobi aimag 40 Km NW of Chara-Eireg 1150 m, Exp. Dr. Z. Kaszab, 1963, Nr.62, 30.VI.1963, Paratype (NMLS); 1 ♂, Mongolia, Catgobi aimag 40 Km NW of Chara-Eireg, 1150 m, Exp. Dr. Z. Kaszab, 1963 / Nr.62, 30.VI.1963, Paratype (NMLS); Umnugovi, 1 ♂, Gobi, Dalanzadgad, 25.6.2003, leg. JH (MHC); Uvurkhangai, 1 ♂, 139 km SW of Aravaykheer, 45°17’N, 101°41’E, 1430 m, 4.VII.2004, leg. JS (MHC).

**Distribution.** Mongolia (Dornogovi, *Umnugovi, *Uvurkhangai) (Móczár 1967).

*Holopyga minuma* Linsenmaier, 1959

Holopyga minuma Linsenmaier, 1959a: 31. Holotype ♂; Turkey: Niğde prov.: Niğde (NMLS) (examined).

**Material examined.** Mongolia: Dornod, 22 ♀♀, 14 ♂♂, 100 km W of Choilbalsan, 820 m, 23.VII.2007, leg. MH (MHC); 25 ♀♀, 6 ♂♂, 20 km W of Choilbalsan, 800 m, 48°01’N, 114°14’E 24.VII.2007, leg. MH (MHC); Sukhbaatar, 1 ♂, 200 km SSE of Baruun-Urt, Molsoy Els, 1250 m, 27.VII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Dornod, Sukhbaatar); Asiatic-European, from central Europe to eastern Siberia (Rosa et al. 2019).

Genus *Omalus* Panzer, 1801

Omalus Panzer, 1801: 13. Type species: Chrysis aenea Fabricius, 1787, by monotypy.

**Omalus aeneus** (Fabricius, 1787)

Chrysis aenea Fabricius, 1787: 284. Holotype ♂; Germany: Hala Saxonom [= Halle] (Copenhagen) (examined).

**Material examined.** Mongolia: Tuv, 1 ♀, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); Ulaanbaatar, 1 ♀, Ulaanbaatar, Tuul River valley, 12.VII.2003, leg. JH (MHC).

**Distribution.** *Mongolia (Tuv, Ulaanbaatar); Holarctic and Oriental: from Europe and North Africa to Japan and Taiwan (Wei et al. 2014). Probably accidentally introduced to North America (Kimsey and Bohart 1991).
**Omalus berezovskii (Semenov, 1932)**

Ellampus (Dictenulus) berezovskii Semenov-Tian-Shanski, 1932: 12. Holotype ♀; China: Sichuan (ZIN) (examined).

**Material examined.** Mongolia: Ulaanbaatar, 1 ♂, Ulaanbaatar, Tuul River valley, 12.VII.2003, leg. JH (MHC).

**Distribution.** *Mongolia (Ulaanbaatar); East-Palaearctic: Russia (Eastern Siberia, Far East), China (Ningxia, Sichuan) (Rosa et al. 2019).*

**Omalus margianus (Semenov, 1932)**

Ellampus (Dictenulus) margianus Semenov-Tian-Shanski, 1932: 15. Lectotype ♀ (designated by Kimsey 1986: 107); Turkmenistan: Imam-baba (ZIN) (examined).

**Material examined.** Mongolia: Arkhangai, 1 ♀, 90 km NE of Tsetserleg, 48°03'N, 102°25'E, 27.VII.2005, leg. JH (MHC); Bayankhongor, 1 ♀, 75 km S of Bayankhongor, 45°20'N, 100°48.5'E, 1330 m, 8.VII.2004, leg. JS (MHC); Bulgan, 2 ♂♂, 137 km NE of Aravaykheer, 47°20'N, 103°45.5'E, 1250 m, 2.VII.2004, leg. JH (MHC); 1 ♀, 1 ♂, 143 km NE of Aravaykheer, 47°24'N, 103°39'E, 1300 m, 26.VII.2004, leg. MH (MHC); Mongol Els Nat. Res., dunes, 47°24'N, 103°39'E, 31.VII.2005, leg. JH (MHC); Sukhbaatar, 2 ♀♀, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Tuv, 1 ♂, 80 km W of Ulaanbaatar, 1230 m, dunes, 17.VIII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Arkhangai, Bayankhongor, Bulgan, Sukhbaatar, Tuv); Central Asia (Kimsey and Bohart 1991).*

**Omalus miramae (Semenov, 1932)**

Ellampus (Dictenulus) miramae Semenov-Tian-Shanski, 1932: 13. Lectotype ♀ (designated by Rosa et al. 2017a: 76); Turkmenistan: Pereval (ZIN) (examined).

**Material examined.** Mongolia: Bayankhongor, 1 ♂, 75 km S of Bayankhongor, 45°20'N, 100°48.5'E, 1330 m, 8.VII.2004, leg. JH (MHC); Dornogovi, 2 ♀♀, Or- gon, 11.VII.2005, leg. JH (MHC); Sukhbaatar, 2 ♀♀, 200 km SSE of Baruun-Urt, Moltsoy Els, 1250 m, 27.VII.2007, leg. MH (MHC).

**Distribution.** *Mongolia (Bayankhongor, Dornogovi, Sukhbaatar); Central Asia (Kimsey and Bohart 1991).*
**Omalus stella** (Semenov, 1932)

Ellampus (*Ellampus*) *stella* Semenov-Tian-Shanskij and Nikol’skaya, 1954: 93. Lectotype ♀ (designated by Kimsey 1986: 107); Tajikistan: Stalinabad (currently Dushambe) (ZIN) (examined).

**Material examined.** Mongolia: Arkhangai, 1 ♀, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); Tuv, 3 ♂♂, 75 km W of Ulaanbaatar, dunes, 2.VIII.2005, leg. JH (MHC); Uvurkhangai, 1 ♀, 159 km of SW Aravaykheer, 45°11’N, 101°26’E, 1250 m, 5.VII.2004, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai, Tuv, Uvurkhangai); Central Asia (Kimsey and Bohart 1991).*

**Genus Philoctetes** Abeille de Perrin, 1879

*Philoctetes* Abeille de Perrin, 1879: 27. Type species: *Holopyga cicatrix* Abeille de Perrin, 1879 [= *Philoctetes micans* (Klug, 1835)], by subsequent designation of Ashmead 1902: 228.

*Ellampus* Agassiz, 1846: 136. Unjustified emendation of *Elampus* Spinola, 1806 (part.).

**Philoctetes bogdanovii** (Radoszkowski, 1877)

*Holopyga bogdanovii* Radoszkowski, 1877: 5. Holotype ♂; Uzbekistan: Zarafshan (ZMMU) (examined).

**Material examined.** Mongolia: Arkhangai, 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 27.7.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Arkhangai); Asiatic-European, from southern Europe, western Asia, Iran, and Turkey to Mongolia (Rosa et al. 2013; present record).*

**Philoctetes cynthiae** Rosa, 2017

*Philoctetes cynthiae* Rosa in Rosa et al. 2017c: 35. Holotype ♀; Russia: Tyva Rep., 13 km SW of Samagaltai, Dyttyg-Khem River, 9.VII.2013, leg. V. Loktionov & M. Proshchalykin (ZIN) (examined).

**Material examined.** Mongolia: Bayankhongor, 1 ♀, 1 ♂, 75 km S of Bayankhongor, 45°20’N, 100°48.5’E, 1330 m, 8.VII.2004, leg. JH (MHC); 1 ♀, 56 km NW of Bayankhongor, 46°33’N, 100°12’E, 2200 m, 12.VII.2004, leg. JS (MHC); 3 ♀♀,
7 ♂♂, 86 km NW of Bayankhongor, 46°50'N, 100°04'E, 2070 m, 14.VII.2004, leg. JH, MK (MHC); Sukhbaatar, 1 ♀, SE Mongolia, 200 km SSE of Baruun-Urt, Moltsoy Els, 1250 m, 27.VII.2007, leg. MK, paratype (PRC); 1 ♂, ibid, leg. MH (MHC); Ulaanbaatar, 2 ♂♂, Ulaanbaatar, Tuul River valley, 12.VII.2003, leg. JH (MHC); Uvurkhangai, 4 ♂♂, 12 km E of Aravakyheer, 46°22'N, 102°49'E, 1800 m, 3.VII.2004, leg. JH (MHC);

**Distribution.** Mongolia (*Bayankhongor, Sukhbaatar, *Ulaanbaatar, *Uvurkhangai); Russia (Tyva Rep.) (Rosa et al. 2017c).

**Philoctetes diakonovi (Semenov, 1932)**

*Ellampus* (*Ellampus*) *diakonovi* Semenov-Tian-Shanskiy, 1932: 34. Holotype ♀; Kazakhstan: “Turkestan septentr.: Bajgakum (ZIN) (examined).

**Material examined.** Mongolia: Dornogovi, 1 ♀, 1 ♂, Orgon, 11.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Dornogovi); Central Asia (Kimsey and Bohart 1991).*

**Philoctetes lyubae Rosa, 2017**

*Philoctetes lyubae* Rosa in Rosa et al. 2017c: 39. Holotype ♀; Russia: Tuva Rep., 20 km SSW of Erzin, Tore-Khol' Lake, 3.VII.2013, leg. V. Loktionov & M. Proshchalykin (ZIN) (examined).

**Material examined.** Mongolia: Dornogovi, 1 ♂, Atayn Mts, Gichigniv Nuruu, 10 km SW of Sain-Shand, 12.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Dornogovi); Russia (East Siberia) (Rosa et al. 2017c).*

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

*Ellampus horvathi* var. *mongolicus* du Buysson, 1901: 98. Lectotype ♂ (designated by Móczár 1967: 186); N Mongolia (NHMW) (examined). Rosa et al. 2020: 87 (cat., type series), 88 (fig. 55).

*Ellampus horvathi* (!) var. *mongolicus*: Bischoff 1913: 8 (cat., North Mongolia).

*Omalus* (*Notozus*) *mongolicus*: Linsenmaier 1959: 23 (descr. Mongolia).

*Omalus mongolicus*: Móczár 1967: 186 (cat., Mongolia: 1 ♂, Uvurkhangai aimag: Arc Bogd ul, ca. 20 km S of Somon Chovd, 1760 m, Exp. Dr. Z. Kaszab, 1964, nr. 170, 22.VI.1964; 1 ♂, Ulan-Baator, Bogdo ul, 1500 m, Exp. Dr. Z. Kaszab, 1963, nr. 4, 16.VI.1963).

*Philoctetes horvathi* var. *mongolicus*: Kimsey and Bohart 1991: 256 (cat., North Mongolia).

*Philoctetes mongolicus*: Rosa et al. 2014: 33 (cat., distr.); 2015: 436 (cat., descr., tax., Mongolia: Ulaanbataar, Baruun-Urt Moltsoy Els).
**Material examined.** Mongolia: *Arkhangai*, 1 ♂, 25 km NE of Tsetserleg, 47°38’N, 101°45’E, 23.VII.2004, leg. JH (MHC); *Bayankhongor*, 2 ♂♂, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JH (MHC); 1 ♂, 56 km NW of Bayankhongor, 46°33’N, 100°12’E, 2200 m, 12.VII.2004, leg. JH (MHC); 1 ♂, 86 km NW of Bayankhongor, 46°50’N, 100°04’E, 2070 m, 14.VII.2004, leg. JH (MHC); *Khentii*, 2 ♀♀, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); *Selenge*, 1 ♀, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); *Sukhbaatar*, 1 ♀, SE Mongolia, 200 km SSE of Baruu-Urr, Moltsoy Els, 1250 m, 27.VII.2007, MK (PRC); *Tuv*, 1 ♀, 50 km N of Ulaanbatar, E of Mandal, 1180 m, 8–13.VII.2007, leg. MK (PRC); 1 ♀, 1 ♂, ibid, leg. MH (MHC); *Uvurkhangai*, 1 ♂, N. Mongolei Leder 92, *Ellampus Horvathi* Mocs. var. *mongolicus* Buyss. var. nov. R. du Buysson det. 1901 ♂, Lectotype v. *mongolicus* Buysson det. L. Móczár <red label> (NHMW). Paralectotypes: 1 ♂ N. Mongolei Leder 92, *Ellampus Horvathi* Mocs. var. *mongolicus* Buyss. var. nov. R. du Buysson det. 1901 ♂, *Paralleloctetes* v. *mongolicus* Buysson det. L. Móczár <red label> (NHMW); 1 ♀, N. Mongolei Leder 92, *Ellampus Horvathi* Mocs. var. *mongolicus* Buyss. var. nov. R. du Buysson det. 1901 ♀, *Omalus horvathi* Mocs. det. L. Móczár (NHMW).

**Distribution.** Mongolia (*Arkhangai, *Bayankhongor, *Khentii, *Sukhbaatar,*Tuv, Ulaanbaatar, Uvurkhangai); widely distributed from Mongolia to Central Asia and southern Russia to Volga (Trautmann 1927), China (Shanxi) (Rosa et al. 2014).

**Philoctetes shokalskii** (Semenov, 1932)

*Ellampus* (*Dictenulus*) *shokalskii* Semenov-Tian-Shanskij, 1932: 24. Lectotype ♀ (designated by Kimsey 1986: 107); Mongolia: “Mongolia borealis: prope oppid. [um] Urga [Ulaanbaatar], 1–4.VI.1909, leg. P. Kozlov (ZIN) (examined). Rosa et al. 2017a: 78 (cat., type series), 218 (Plate 218). Rosa et al. 2017e: 119 (Mongolia: Chentej aimak 10 km W von Somon Delgerchaan, 1250 m Exp. Dr. Z. Kaszab, 1965 // Nr. 476. 24.VIII.1965).

*Omalus shokalskii*: Móczár, 1967: 186 (cat., Mongolia: 1 ♂, Ostgobi aimag: 40 km NW of Chara-Eireg, 1150 m, Exp. Dr. Z. Kaszab, 1963, nr. 62, 30.VI.1963; 1 ♂, Ostgobi aimag: 20 km SO of Čojren, 1200 m, Exp. Dr. Z. Kaszab, 1963, nr. 70, 1.VII.1963; 1 ♂, Sukhbaatar aimag: 44 km SSW of Baruu urt, 1050 m, Exp. Dr. Z. Kaszab, 1965, nr. 353, 3.VIII.1965; 1 ♀, Chentej aimag: 10 km W of Somon Delgerchaan, 1250 m Exp. Dr. Z. Kaszab, 1965, nr. 476, 24.VIII.1965, allotype).

**Philoctetes shokalskii**: Kimsey and Bohart 1991: 257 (cat., Mongolia: Urga).

**Material examined.** Mongolia: *Bayankhongor*, 5 ♀♂, 11 ♂♂, 86 km NW of Bayankhongor, 46°50’N, 100°04’E, 2070 m, 14.VII.2004, leg. JS, MK, JH (MHC); *Dornod*, 1 ♀, 50 km SW of Choilbalsan, 960 m, 25.VII.2007, leg. JH (MHC); *Govi-Altai*, 1 ♀, 1 ♂, 70 km of Altay city, Guulin, 14.VII.2005, leg. JH (MHC); *Govi-Sümber*, 2 ♂♂, 20 km SE of Choyr, 1480 m, 7.VIII.2007, leg. MK (PRC); 1 ♀, 1 ♂, ibid, leg. MH (MHC);
Sukhbaatar, 4♂♀, 200 km SSE of Baruun-Urt, Moltsoy Els, 1250 m, 27.VII.2007, leg. MK (PRC); 1♂, 210 km SSE of Baruun-Urt, 29.VII.2007, steppe, leg. MK (PRC); 12♂♀, 100 km SSW of Baruun-Urt, 1100 m, 30.VII.2007, leg. MH (MHC); Tuv, 1♀, Teregtin, 1350 m, Exp. Dr. Z. Kaszab, 1963, Nr.73, 2.VII.1963, det. Linsenmaier 1966 (NMLS); Ulaanbaatar, ♀ [not ♂], env. Urga [Ulaanbaatar], 1–4.VI.1909, leg. P. Kozlov, Ellamp. shokalskii m. [mihi] Typ. ♂. A. Semenov-Tian-Shansky det. V.19, Lectotype Ellampus shokalskii Sem. design. LS Kimsey <red label> (ZIN); 1♀, same data, paralectotype (ZIN); Umnugovi, 1♀, Gobi Gurvansaikhan National Park, 40 km W of Dalanzadgad, 2000 m, 28–30.VI. 2003, leg. JH (MHC); Uvurkhangai, 9♂♀, 12 km E of Aravaykheer, 46°22’N, 102°49’E, 1800 m, 3.VII.2004, leg. JH (MHC).

**Distribution.** Mongolia (*Bayankhongor, *Dornod, Dornogovi, *Govi-Sümber, Khentii, Sukhbaatar,*Tuv, Ulaanbaatar, *Umnugovi, Uvurkhangai) (Kimsey 1986).

**Genus Pseudomalus Ashmead, 1902**

*Pseudomalus* Ashmead, 1902: 229. Type species: *Omalus semicircularis* Aaron, 1885 [= *Pseudomalus janus* (Haldeman, 1844)], by original designation.

*Pseudomalus auratus nigridorsus* (Tsuneki, 1953)

*Ellampus auratus* f. *nigridorsus* Tsuneki, 1953a: 54. Syntypes ♂, ♀; Japan, Korea, Manchuria (NIAS).

**Material examined.** Mongolia: Bulgan, 1♀, 137 km NE of Aravaykheer, 47°20’N, 103°45.5’E, 1250 m, 2.VII.2004, leg. JS (MHC); Bulgan, 1♀, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); Khentii, 1♀, 100 km NE of On-dorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Tuv, 2♀♀, 18♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); Zavkhan, 2♀♀, 40 km SW of Uliastay, dunes, 18.VII.2005, leg. JH (MHC).

**Distribution.** *Mongolia (Bulgan, Khentii, Tuv, Zavkhan); Russia (Eastern Siberia, Far East), China, Korea, Japan (Rosa et al. 2019).

*Pseudomalus corensis* (Uchida, 1927)

*Philoctetes punctatus* var. *corensis* Uchida, 1927: 153. Holotype ♂; Korea: Seiryori (de-scr.) (NIAS).

*Omalus joannisi* du Buysson, 1908: Móczár 1967: 185. (cat., Mongolia: Central aim-ag: Zuun-Chara, 850 m, Exp. Dr. Z. Kaszab, 1964, nr. 281; 8.VII.1964) (mis.).

**Material examined.** Mongolia: Bulgan, 1♀, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); Dornod, 1♀, 100 km W of Choilbalsan,
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820 m, 23.VII.2007, leg. MH (MHC); 2 ♂♂, 20 km W of Choilbalsan, 800 m, 48°01'N, 114°14'E, 24.VII.2007, leg. MH (MHC/PRC); Khentii, 1 ♀, 1 ♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); Selenge, 7 ♀♂, 5 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC/PRC); Tuv, 7 ♀♂, 3 ♂♂, 50 km N of Ulaanbaatar, E of Mandal, 1180 m, 8–13.VIII.2007, leg. MH (MHC, PRC); Ulaanbaatar, 3 ♀♂, Ulaanbaatar, Tuul River valley, 12.VII.2003, leg. JH (MHC).

**Distribution.** Mongolia (*Bulgan, *Dornod, *Khentii, *Selenge, Tuv, *Ulaanbaatar); Russia (Eastern Siberia, Far East); Japan (Hokkaido) (Rosa et al. 2019).

**Remarks.** The specimen illustrated in the volume of Russian cuckoo wasps (Rosa et al. 2019: fig. 18) is apparently misidentified and currently belonging to an unidentified species. Examination of type material by Uchida is needed for further studies.

**Pseudomalus punctatus** (Uchida, 1927)

*Philoctetes punctatus* Uchida, 1927: 152. Syntypes ♂, ♀; Japan: Hokkaido and Honshu (NIAS?).

*Omalus punctatus*: Móczár, 1967: 185 (cat., Mongolia: 1 ♀, 1 ♂, Čojbalsan [= Dornod] aimag: Chamardavaa ul, 80 km SO of Somon Chalchingol, 600 m, Exp. Dr. Z. Kaszab, 1965, nr. 401, 13.VIII.1963).

**Material examined.** Mongolia: *Bulgan, 1 ♀, Mongol Els Nat. Res., dunes, 47°24’N, 103°39’E, 31.VII.2005, leg. JH (MHC); Khentii, 14 ♀♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. JH, MH (MHC); Tuv, 18 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC).

**Distribution.** Mongolia (*Bulgan, Dornod, *Khentii, *Tuv); Russia (Eastern Siberia, Far East); Korea, Japan (Rosa et al. 2019).

**Pseudomalus pusillus** (Fabricius, 1804)

*Chrysis pusilla* Fabricius, 1804: 176. Lectotype ♀ (designated by Rosa et al. 2020: 66); Austria (NHMW) (examined).

*Omalus pusillus*: Móczár, 1967: 195 (cat., Mongolia: 1 ♀, Čojbalsan [= Dornod] aimag: 50 km SO of Čojbalsan [= Choibalsan], 700 m, Exp. Dr. Z. Kaszab, 1965, nr. 421, 16.VIII.1965; 1 ♂, Čojbalsan [= Dornod] aimag: 44 km NW of Čojbalsan [= Choibalsan], 750 m, Exp. Dr. Z. Kaszab, 1965, nr. 425, 17.VIII.1965).

**Material examined.** Mongolia: *Bayankhongor, 2 ♀♂, 16 km SW of Bayankhongor, 46°13’N, 100°30’E, 2165 m, 10.VII.2004, leg. JS (MHC); Bulgan, 2 ♀♂, 137 km NE of Aravaykheer, 47°20’N, 103°45.5’E, 1250 m, 2.VII.2004, leg. JS (MHC); Dornod, 4 ♀♂, 5 ♂♂, 100 km W of Choibalsan, 820 m, 23.VII.2007, leg. MH (MHC); 4 ♀♂, 20 km W of Choibalsan, 800 m, 48°01’N, 114°14’E 24.VII.2007,
leg. MH (MHC); 2 ♂♂, 50 km SW of Choilbalsan, 960 m, 25.VII.2007, leg. JH (MHC); *Khentii, 3 ♀♀, 5 ♂♂, 100 km NE of Ondorkhaan, Kerulen River, 970 m, 22.VII.2007, leg. MH (MHC); *Selenge, 2 ♂♂, 90 km N of Ulaanbaatar, Segnez River, 1450 m, 6–8.VII.2003, leg. JH (MHC); *Tuval, 2 ♂♂, 50 km E of Ulaanbaatar, Tuul River, 22.VI.2003, leg. JH (MHC); *Umnugovi, 3 ♀♀, 12 ♂♂, Gobi Gurvansaikhan National Park, 40 km W of Dalanzadgad, 2000 m, 28–30.VI.2003, leg. JH (MHC); *Uvurkhangai, 4 ♀♀, 13 ♂♂, 12 km E of Aravaykheer, 46°22’N, 102°49’E, 1800 m, 3.VII.2004, leg. JH (MHC).

**Distribution.** Mongolia (*Bayankhongor, *Bulgan, Dornod, *Khentii, *Selenge, *Tuv, *Umnugovi, *Uvurkhangai); Palaearctic, from western Europe and northern Africa to Russian Far East (Kurzenko and Lelej 2007).

**Tribe Parnopini**

**Genus Parnopes Latreille, 1797**

*Parnopes* Latreille, 1797: 126. Type species: *Chrysis carnea* Fabricius, 1775 [= *Parnopes grandior* (Pallas, 1771)], by monotypy.

**Parnopes glasunowi** Semenow, 1901

*Parnopes glasunowi* Semenow, 1901: 25. Holotype ♂; Tajikistan: “Turkestan occid. [entalis]: Jagnob: Rovat, 12.VII.1892, leg. D. Glasunow” (ZIN) (examined).

**Material examined.** Mongolia: *Khovd*, 1 ♂, ur. Elkhon, 20 km SE of Altai, Bodoncha, 27.V.1970, leg. E. Narchuk (ZIN).

**Distribution.** *Mongolia (Khovd); Central Asia, Russia (south of European part) (Rosa et al. 2019).**

**Parnopes popovii** Eversmann, 1858

*Parnopes popovii* Eversmann, 1858: 567. Holotype ♀; Russia: Siberia “campis orientalis” (ISEA-PAS) (examined). Kimsey and Bohart 1991: 586 (cat., Mongolia, without locality).

**Material examined.** Mongolia: *Arkhangai*, 1 ♂, 25 km NE of Tsetserleg, 47°38’N, 101°45’E, 23.VII.2004, leg. JH (MHC); 1 ♂, 90 km NE of Tsetserleg, 48°03’N, 102°25’E, 24.VII.2004, leg. JH (MHC); 1 ♀, ibid, 27.VII.2005, leg. JH (MHC); *Bulgan*, 1 ♂, 143 km NE of Aravaykheer, 47°24’N, 103°39’E, 26.VII.2004, 1300 m, sandy dunes, JS (PRC); 4 ♀♀, 3 ♂♂, Mongol Els Nat. Res., 47°24’N, 103°39’E,
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Distribution. Mongolia (*Arkhangai, *Bulgan, *Dornod, *Dornogovi, *Sukhbaatar, *Tuv, *Umnugovi); China (Heilongjiang, Shanghai, Shandong), Korea, Russia (Rosa et al. 2014).

Species to be excluded from Mongolian fauna

The following 19 taxa were described or listed for Mongolia by Radoszkowski (1887, 1891), Mocsáry (1890), Dalla Torre (1892), du Buysson (1893), Bischoff (1913), Linsenmaier (1959), and Kimsey and Bohart (1991), yet the type localities are situated in Inner Mongolia (China) or Central Asian countries. These species are expected in Mongolia due to the close vicinity of the collecting localities, with the only exception of *Chrysis fouqueti* (du Buysson, 1909), which belongs to the Oriental fauna.

**Elampus mocsari** Radoszkowski, 1887

*Elampus mocsari* (!) Radoszkowski, 1887: 45. Holotype ♀; Mongolia [= China]: Qinghai: Zaïdam (ISEA-PAS) (examined).

**Elampus (Notozus) mocsaryi** Radoszkowski, 1887: 14 (cat., Mongolia [= China]).

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

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

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

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

**Elampus spinipes** (Mocsáry, 1890)

**Elampus (Notozus) spinipes** Mocsáry, 1890: 49. Holotype ♀; Mongolia [= China, Inner Mongolia]: Mongolia meridionalis (Ta-Wan) (ISEA-PAS) (examined).

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

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

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

**Omalus (Notozus) spinipes** Linsenmaier 1959: 16 (key), 24 (descr., Mongolia [= Inner Mongolia]).
**Hedychridium ardens mongolicum** Tsuneki, 1947

- **Hedychridium ardens f. mongolicum** Tsuneki, 1947: 47. Holotype ♀; China: Inner Mongolia: Apaka (NIAS).
- **Hedychridium ardens f. mongolicum**: Kimsey and Bohart 1991: 188 (cat., Mongolia [= China, Inner Mongolia]: Apaka).

**Hedychrurum simile** Mocsáry, 1889

- **Hedychrum cyaneum** Mocsáry in Radoszkowski 1889: 10, nec Brullé, 1846. Lectotype ♀ (designated by French, in Bohart and French 1986: 341); China “Ta-schian-sy” (HNHM) (examined).
- **Hedychrurum simile** Mocsáry, 1889: 157. Replacement name for **Hedychrum cyaneum** Radoszkowski, 1889, nec Brullé, 1846.
- **Hedychrurum simile f. mongolicus** Tsuneki, 1947: 54. Syntypes ♀♂; China: Inner Mongolia: Apaka (NIAS).
- **Hedychrurum simile**: Linsenmaier 1959: 39 (descr., key, Mongolia [= China, Inner Mongolia]); Kimsey and Bohart 1991: 220. Mongolia (cat., without locality, related to the record of *H. simile mongolicus* from Inner Mongolia by Tsuneki 1947).

**Philoctetes hypocrita** (du Buysson, 1893)

- **Ellampus hypocrita** du Buysson, 1893: 246. Syntypes ♀♂; Mongolia [= China, Inner Mongolia], Kansu-Jelisyn-Kuse (ISEA-PAS); Persia (MNHN) (examined). Bischoff 1913: 8 (cat., Mongolia [= China, Inner Mongolia])
- **Omalus hypocritus**: Kimsey and Bohart 1991: 248. Incorrect subsequent spelling.
- **Pseudomalus hypocrita**: Rosa et al. 2015: 77.
- **Philoctetes hypocrita**: Farhad et al. 2018: 199. Lectotype designation: ♂; China: Kansu Jelisyn Kuse (ISEA-PAS).

**Pseudomalus tshingiz** (Semenov, 1954)

- **Ellampus tshingiz** Semenov in Semenov-Tian-Shanskji and Nikol’skaya, 1954: 93. Holotype ♂; China: Sandzhu [Xinjiang], Gushan Gobi (depository: ZIN) (examined). Rosa et al. 2017a: 80 (cat., type series), 221 (plate 223).
- **Pseudomalus tshingiz**: Kimsey and Bohart 1991: 270 (cat., Mongolia [= China]: Sachow Gobi [= Oasis Sachzhou, Gashunskoe Gobi [= Dunhuang, Gansu]).

**Chrysis aegle** Semenov, 1967

- **Chrysis (Gonodontochrysis) aegle** Semenov-Tian-Shanskij, 1967: 160. Holotype ♀; China: Alashan, Maladzhin (ZIN) (examined).
Chrysis aegle: Kimsey and Bohart 1991: 379 (cat., Mongolia [= China, Inner Mongolia]: Alashan, Maladzhin).

Chrysis analis altaica Mocsáry, 1912

Chrysis (Tetrachrysis) analis var. altaica Mocsáry, 1912: 586. Holotype ♀; Kazakhstan: Altai: Semipalatinsk (HNHM) (examined).
Chrysis altaica: Kimsey and Bohart 1991: 381 (cat., Mongolia [= Kazakhstan]: Altai Mts).

Chrysis fouqueti (du Buysson, 1909)

Tetrachrysis fouqueti du Buysson, 1909: 210. Holotype ♀; Viet Nam: Tonkin (MNHN).
Chrysis fouqueti: Kimsey and Bohart 1991: 412 (cat., Mongolia for the erroneous synonymy of Chrysis csikiana Mocsáry, 1912).

Chrysis csikiana Mocsáry, 1912

Chrysis (Tetrachrysis) Csikiana Mocsáry, 1912: 406. Lectotype ♂ (designated by Bohart in Bohart and French 1986: 341); Kazakhstan: Semipalatinsk (HMNH) (examined).
Chrysis csikiana: Kimsey and Bohart 1991: 412 (cat., Mongolia [= Kazakhstan]: Altai Mts).

Chrysis jelisyni Radoszkowski, 1891

Chrysis jelisyni Radoszkowski, 1891: 186. Syntypes ♀♀; Mongolia [= China]: Kansu, Jelissyn-Kuce (ISEA-PAS, MfN) (examined).
Chrysis (Tetrachrysis) jelisyni: Bischoff 1913: 54 (cat., Mongolia [= China]: Totau (locality not found)).
Chrysis jelisyni: Kimsey and Bohart 1991: 34 (cat., Mongolia [= China]: Kansu).

Chrysis keriensis Radoszkowski, 1887

Chrysis (Tetrachrysis) keriensis Radoszkowski, 1887: 47. Holotype ♂ [not ♀]; China: Xinjiang, Keria-Daria (ISEA-PAS) (examined).
Chrysis (Tetrachrysis) keriensis: Mocsáry 1889: 516 (tax., descr., Mongolia [= China]); Bischoff 1913: 54 (cat., Mongolia [= China]).
Chrysis keriensis: Dalla Torre 1892: 73 (cat., Mongolia [= China]); Kimsey and Bohart 1991: 427 (cat., Mongolia [= China]: Keria Daria).

Chrysis kozlovi Semenov, 1967

Chrysis (Gonodontochrysis) kozlovi Semenov-Tian-Shanskij, 1967: 160. Holotype ♂; China: Alashan, Uzosto canyon, 14.5.1908, leg. P. Kozlov (ZIN) (examined).
*Chrysis kozlovi*: Kimsey and Bohart 1991: 429 (cat., Mongolia [= China, Inner Mongolia]: Alashan, Uzosto Canyon).

**Chrysis mongoliana** Bohart, 1991

*Chrysis* (*Tetrachrysis*) *mongolica* Semenov-Tian-Shanski, 1967: 178, nec Mocsáry, 1914. Holotype ♀; Russia: Transbaikalia: Ingoda River (ZIN) (examined).

*Chrysis mongoliana* Bohart in Kimsey and Bohart 1991: 440. Replacement name for *Chrysis* (*Tetrachrysis*) *mongolica* Semenov-Tian-Shanski, 1967, nec Mocsáry, 1914 (cat., Mongolia: Transbaikalia: Ingoda river).

**Chrysis potanini** Radoszkowski, 1891

*Chrysis potanini* Radoszkowski, 1891: 186. Holotype ♂; Mongolia [= China]: Tufyn (ISEA-PAS) (examined).

*Chrysis* (*Tetrachrysis*) *potanini*: Bischoff 1913: 57 (cat., Mongolia [= China]).

*Chrysis potanini*: Kimsey and Bohart 1991: 450 (cat., Mongolia [= China]: Tufyn).

**Chrysis przewalskii** Radoszkowski, 1887

*Chrysis Przewalskii* Radoszkowski, 1887: 46. Holotype ♂; Mongolia [= China]: Zaïdam (ISEA-PAS) (examined).

*Chrysis* (*Tetrachrysis*) *przewalskii*: Mocsáry 1889: 504 (tax., descr., Mongolia [= China]); Bischoff 1913: 57 (cat., Mongolia [= China]).

*Chrysis przewalskii*: Dalla Torre 1892: 86 (cat., Mongolia [= China]); Kimsey and Bohart 1991: 452 (cat., Mongolia [= China]: Zaïdam, Keria Mts).

**Chrysis spinidens** Mocsáry, 1887

*Chrysis* (*Tetrachrysis*) *spinidens* Mocsáry in Radoszkowski, 1887: 48. Holotype ♂; Mongolia [= China]: Zaïdam (ISEA-PAS) (examined). Mocsáry 1889: 516 (cat., descr., Mongolia [= China]); Bischoff 1913: 59 (cat., Mongolia [= China]).

*Chrysis spinidens*: Dalla Torre 1892: 97 (cat., Mongolia [= China]); Kimsey and Bohart 1991: 464 (cat., Mongolia: Zaïdam).

**Chrysura alticola** (Semenov-Tian-Shanski, 1912)

*Chrysis petri alticola* Semenov-Tian-Shanski, 1912: 190. Lectotype ♀ (designated by Rosa et al. 2017a: 45); Kyrgyzstan: Peter the Great Range, Gardan-Kaftar Pass (ZIN) (examined).

*Chrysura alticola*: Kimsey and Bohart 1991: 486 (cat., Mongolia [= Kyrgyzstan]).
Conclusions

Approximately 1500 chrysidid specimens were examined for the compilation of this first checklist of the Mongolian Chrysididae. Fifty-seven resulted newly recorded, but still a large number of specimens are laying unidentified in museum and private collections. Nineteen species were excluded from the fauna of Mongolia, because collecting localities are currently included in China territories; however, these species are expected for Mongolia. Based on the available data, distributional records for 90 Mongolian species are listed, representing 18 genera grouped in two subfamilies. In terms of species richness, Cleptinae are represented only by two species so far, and the subfamily Chrysidinae is the most speciose (88 species, 98%). Among Chrysidinae, Chrysidini is the most speciose tribe (47 species, 53.4%), followed by Elampini (39 species, 44.3%), and finally Parnopini (2 species, 2.2%).

Currently eight species (9% of known taxa) are provisionally considered endemic: Cleptes mongolicus Rosa, Halada & Agnoli, sp. nov., Chrysis mocsaryi Radoszkowski, 1889, Ch. priapus Rosa, 2018, Spinolia spinosa Rosa & Halada, sp. nov., Elampus spinifemoris (Móczár, 1967), Hedychrum lama du Buysson, 1891, Holopyga kaszabi Móczár, 1967, and Philoctetes shokalskii (Semenov, 1932).

From a chorological point of view, one species has a Holarctic distribution (Pseudochrysis neglecta), ten have Palaearctic distributions, one has a Holarctic and Oriental distribution (Omalus aeneus), one a Palaearctic and Oriental distribution (Hedychridium gerstaecheri), 28 species have an Asiatic-European distribution, 21 have an East Palaearctic distribution, and 19 have a Central Asian distribution.

Another result of the present study is a better knowledge of the distributional limits of some species, and Mongolia represents the easternmost record for seven species: Chrysis aestiva, Ch. illigeri, Ch. jaxartis, Ch. leptomandibularis, Chrysura ignifrons, Elampus albipennis and Philoctetes bogdanovii.

The most widespread Mongolian species is the endemic Philoctetes shokalskii recorded in ten aimags. Chrysis consanguinea and Hedychridium ardens were recorded in nine aimags. This is not surprising because C. consanguinea resulted in being one of the most common species from Western to Eastern Siberia also (Rosa et al. 2017c, d), whereas H. ardens is one of the most common Euro-Siberian species ranging from Central Europe to China (Rosa et al. 2014). Pseudomalus pusillus was recorded in eight aimags, whereas H. cupreum, H. chalybaeum and Philoctetes mongolicus were recorded in seven aimags; they are Asiatic-European species, sometimes locally abundant. Hedychridium longigena and Parnopes popovii were recorded in seven aimags, yet they are East-Palaearctic species.

Although most of the Mongolian aimags are under-represented in the existing data due to inadequacy of surveys, based on the currently available data we can state that the highest number of recorded species was collected in Tuv (42 species), Arkhangai (27 species), and Selenge and Dornod (20 species) aimags (Table 2). The family Chrysididae has not yet been documented from Bayan-Ulgii, Darkhan-Uul,
Dundgovi, Khuvsgul, Orkhon, and Uvs although it is probable that this cosmopolitan family is present in these aimags and it is only a matter of time before the fauna is sampled and recorded.

Overall, the Mongolian fauna is still too poorly known for a complete analysis of species richness and composition. The faunal richness of Mongolia is doubtless much higher than we currently know, in comparison with the chrysidid fauna of the adjacent countries and considering the geographic position of Mongolian aimags and their different biotopes. For example, at least another 75 species recorded for Siberia (Rosa et al. 2017d) are expected for Mongolia, as well as other five genera known from bordering and central Asian countries (Chrysidini: *Chrysidea* Bischoff, 1913, *Spintharina* Semenov, 1892; Elampini: *Chrysellampus* Semenov, 1932, *Haba* Semenov, 1954; Parnopini: *Cephaloparnops* Bischoff, 1910). Copious undescribed members of the genus *Prochridium* Linsenmaier, 1968 were collected in Mongolia. The descriptions of Mongolian *Prochridium*, and a revision of this genus, are in preparation. Only a single record of an undescribed *Prochridium* was previously known in literature for Central Asia (Turkmenistan) (Linsenmaier 1994).

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