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NEW DATA ON BEES OF THE TRIBE ANTHIDIINI (APOIDEA: MEGACHILIDAE) FROM MONGOLIA WITH DESCRIPTION OF A NEW SPECIES OF *PSEUDOANTHIDIUM* FRIESE, 1898

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Summary. The results of a study of Mongolian bees of the tribe Anthidiini are presented. Twelve species are currently known from this country, six of them (*Anthidium florentinum*, *A. montanum*, *A. trochantericum*, *Bathanthidium sibiricum*, *Icteranthidium croceum*, *Stelis ornatula*) are newly recorded from Mongolia. A new species *Pseudoanthidium anastasiae* Ivlev, **sp. n.** is described from the Uvurkhangai Aimag. New synonymies have been proposed for *Anthidium trochantericum* Morawitz, 1893, = *A. qingtaoi* Niu & Zhu, 2020, **syn. n.**; *Stelis ornatula* (Klug, 1807), = *S. semenovi* Popov, 1933, **syn. n.**, = *S. semenovi* var. *nigra* Popov, 1933, **syn. n.** The synonymy of *Stelis ornatula* ssp. *montana* Popov, 1933 and *S. ornatula* ssp. *gussakovskiji* Popov, 1933 with *S. ornatula* (Klug, 1807) has been confirmed. The lectotypes for *Stelis ornatula* ssp. *gussakovskiji* Popov, 1933, *S. ornatula* ssp. *montana* Popov, 1933 and *S. semenovi* var. *nigra* Popov, 1933 are designated. The Mongolian fauna of Anthidiini is characterized by relatively low species diversity and mostly consists of widespread Palaearctic species.

Key words: Anthidiini, new species, synonymy, fauna, new records. Mongolia.

К. С. Ивлев, Ю. В. Астафурова. Новые данные о пчелах трибы Anthidiini (Apoidea: Megachilidae) Монголии с описанием нового вида *Pseudoanthidium* Friese, 1898 // Дальневосточный энтомолог. 2026. N 550. С. 9-22.

Резюме. Представлены результаты исследования фауны пчел-антидиин Монголии. В фауне этой страны в настоящее время известно двенадцать видов, шесть из которых: *Anthidium florentinum*, *A. montanum*, *A. trochantericum*, *Bathanthidium sibiricum*, *Icteranthidium croceum* и *Stelis ornatula*, указываются впервые. Описан новый вид *Pseudoanthidium anastasiae* Ivlev, **sp. n.** из аймака Уверхангай. Установлена новая синонимия для *Anthidium trochantericum* Morawitz, 1893 = *A. qingtaoi* Niu & Zhu, 2020, **syn. n.**; *Stelis ornatula* (Klug, 1807) = *S. semenovi* Popov, 1933, **syn. n.**, = *S. semenovi* var. *nigra* Popov, 1933, **syn. n.** Подтверждена синонимия *Stelis ornatula* ssp. *montana* Popov,

1933 и *S. ornatula* ssp. *gussakovskiji* Popov, 1933 с *S. ornatula* (Klug, 1807). Обозначены лектотипы для *Stelis ornatula* ssp. *gussakovskiji* Popov, 1933, *S. ornatula* ssp. *montana* Popov, 1933 и *S. semenovi* var. *nigra* Popov, 1933. Фауна Anthidiini Монголии характеризуется относительно низким видовым разнообразием с преобладанием широко распространенных в Палеарктике видов.

INTRODUCTION

Mongolia is a large, landlocked country in East and Central Asia, encompassing 1564100 sq. km. It is divided into 21 provinces called “aimags”. Bordered by Russia to the north and China to the south, east, and west, Mongolia features diverse landscapes and climate zones, ranging from frigid mountains (reaching 4000 meters) to the Gobi Desert. Much of the country lies on high plateaus, characterized by deserts, steppes and forests. The climate is sharply continental, with long, severe winters and brief, hot summers featuring concentrated rainfall.

The tribe Anthidiini represents one of the most diverse and geographically widespread groups of bees within the family Megachilidae. These bees exhibit notable and unique adaptations related to pollen collection and nest construction. Across the Palaearctic region – a zone noted for its variable climates and landscapes – Anthidiini are represented by more than 200 species (Niu *et al.*, 2012, 2019a,b; 2020a,b; Kasperek, 2015, 2022a,b, 2024). However, knowledge of this group remains incomplete, biased by a lack of comprehensive study across many areas. Further research and improved systematic organization of the Palaearctic Anthidiini fauna are clearly needed.

The results presented in this paper are based on 148 specimens collected during expeditions led by P.K. Kozlov in Mongolia and Central Asia (1908–1926) and the Soviet-Mongolian Complex Biological Expeditions (1967–1982).

The first Russian expeditions to Mongolia were led by Nikolay Mikhailovich Przhevalsky in 1870–1873. Later, Grigory Nikolaevich Potanin organized four major expeditions to Mongolia (partly to China): Mongolian Expedition (1876–1878), Mongolian-Tuvan Expedition (1884–1886), Sino-Tibetan (Gansu) Expedition (1884–1886), and the expedition to the Greater Khingan Ridge (1899). Pyotr Kuzmich Kozlov, a student of Nikolay Przhevalsky who had participated in his mentor’s expeditions, continued Potanin’s work. Following Przhevalsky’s death, Kozlov led his own ventures into Mongolia and Central Asia, the most notable of which was the Mongolian-Sichuan Expedition (1907–1909). This expedition journeyed through Mongolia toward the territories of China (Sichuan) and Tibet.

The Soviet-Mongolian Complex Biological Expeditions (1967–1982) yielded extensive insect collections, resulting in numerous publications, including the 11 volumes “Insects of Mongolia” which covered various insect families. Besides the Soviet expeditions, Hungarian entomologist Zoltan Kaszab organized and led six comprehensive expeditions to Mongolia from 1963 to 1968. Also, successful Mongolian-German Biological Expeditions started in 1962 and 1964 and were organized by the Academies of Sciences of the GDR.

A large part of the bee specimens collected during expeditions P.K. Kozlov and the Soviet-Mongolian Complex Biological Expeditions was studied and published in numerous works, including special publications focused on the Mongolian fauna of bees: Pesenko, 1977, 1984a,b (Halictidae); Kuhlmann & Proshchalykin, 2013; Proshchalykin & Kuhlmann, 2015 (*Colletes*); Astafurova & Proshchalykin, 2015 (*Sphcodes*); Dathe & Proshchalykin, 2016 (*Hylaeus*); Astafurova & Proshchalykin, 2021 (*Epeolus*). However, the material of the tribe Anthidiini remained unstudied until our research. There are only two special works dedicated to the Mongolian fauna of the family Megachilidae: Tkaleč, 1995 (*Osmiini*) and Pasteels, 1969 (Anthidiini) based on materials collected during the Mongolian-German Biological Expeditions. The Anthidiini fauna of Mongolia remains poorly studied and there are only six papers

on bees (Morawitz, 1880; Alfken, 1936; Popov, 1948, 1964; Pasteels, 1969; Kasperek, 2022a) where six species of Anthidiini were recorded from this country: *Anthidium manicatum* (Linnaeus, 1758), *A. punctatum* Latreille, 1809, *A. septemspinatum* Lepeletier, 1841, *Icteranthis aurantiacum* Pasteels, 1969 [a possible junior synonym of *I. croceum* (Morawitz, 1877)], *Stelis aculeata* Morawitz, 1880, and *Trachusa byssina* (Panzer, 1798). Three species, *Icteranthis fedtschenkoi* (Morawitz, 1875), *Stelis scutellaris* Morawitz, 1894, and *S. melanura* Cockerell, 1924, were mistakenly indicated by Proshchalykin (2013: 154) and Proshchalykin & Fateryga (2017: 303, 303) for Mongolia in the distribution section.

MATERIAL AND METHODS

The studied specimens are deposited in the Collection of Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZISP). Morphological terminology follows that of Michener (2007), synonymy follows that of Niu et al. (2012, 2019a,b, 2020a,b) and Kasperek (2015, 2022a). Abbreviations F, T, and S are used for flagellomere, metasomal tergum, and metasomal sternum, respectively. New distribution records are marked with an asterisk (*). Photographs were made using a combination of a stereomicroscope Olympus SZX10 and a digital camera (Olympus OM-D E-M1). Illustrations were obtained by montaging from an image series that covers different focal planes into a single in-focus image with the Helicon Focus 8.0. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

AN ANNOTATED LIST OF THE SPECIES

Genus *Anthidium* Fabricius, 1804

Anthidium (Anthidium) florentinum (Fabricius, 1775)

Apis florentina Fabricius, 1775: 384, ♂ (type locality: Southern Europe).
Anthidium subspinatum Klug, 1832: 22, ♀ (type locality: Lebanon).
Anthidium caucasicum Radoszkowski, 1862: 596, ♀ (type locality: Russia, Dagestan).
Anthidium vigilans Smith, 1878: 5, no gender (type locality: China, no exactly locality).
Anthidium helianthinum Wu, 2004: 544, ♀ (type locality: China, Xinjiang).

MATERIAL EXAMINED. **Mongolia.** *Khovd*: 25 km N Bulgan, Ulstayn-Gol River, 2 ♀, 30.VI 1980, I.M. Kerzhner.

ADDITIONAL MATERIAL EXAMINED. **China.** *Inner Mongolia*: Dingyuaning [Bayan Hot], northern Alashan, 8–12, 20–31.V, 1–21, 23.VI, 1, 3–30.VII, 3–30.VIII 1908, 59 ♂, 45 ♀, P.K. Kozlov; *Qinghai*: “Tszosto” [River, near the Gumansu Monastery], Alashan Mts., Gobi, 26.V 1908, 1 ♂, P.K. Kozlov.

DISTRIBUTION. *Mongolia (Khovd); North Africa, Europe (except north), Cyprus, Syria, Israel, Turkey, Transcaucasia, Russia (to Far East), Iran, Pakistan, Central Asia, China (Jiangsu, Inner Mongolia, Xinjiang, Gansu, Sichuan, *Qinghai) (Niu et al., 2020a; Kasperek, 2022a).

REMARKS. Based on the reports of the Mongolia-Sichuan Expedition (1907–1909) by Kozlov (2015) we established that the label information “Tszosto” [Тшосто] refers to environs of the Gumansu Monastery in the Qinghai Province (China).

Anthidium (Anthidium) manicatum (Linnaeus, 1758)

Apis manicata Linnaeus, 1758: 577, ♂ (type locality: Sweden).
Apis pervigil Harris, 1776: 162, no gender (type locality: England).
Apis modesta Christ, 1791: 141, no gender (type locality: Germany).
Apis amoenita Christ, 1791: 141, no gender (type locality: Germany).
Apis uncatata Schrank, 1802: 379, no gender (type locality: Germany).

MATERIAL EXAMINED. **Mongolia.** *Tuv*: 13 km E of Bayan-Gol, 7.VIII 1973, 1 ♂, E.P. Narchuk.

DISTRIBUTION. Mongolia (*Tuv); North Africa, Europe, Lebanon, Israel, Turkey, Transcaucasia, Russia (to Far East), Iran, Central Asia, China. The species was introduced to North America, South America and New Zealand (Niu et al., 2020a; Kasperek, 2022a).

REMARKS. The species was recorded from Mongolia (without exactly location) by Kasperek (2022a: 109).

***Anthidium (Anthidium) montanum* Morawitz, 1865**

Anthidium montanum Morawitz, 1865: 448, ♀, ♂. Lectotype (designated by Ivlev et al., 2025: 22): ♂, Switzerland, Le Cubly Mts.; ZISP, examined.

Anthidium montanum var. *flavomaculatum* Friese, 1897: 440, ♀, ♂ (type locality: Austria and Switzerland).

MATERIAL EXAMINED. **Mongolia.** *Bayan-Ulgii*: Hoton-Nuur Lake, 16–17.VII 1978, 2 ♂, M.A. Kozlov.

DISTRIBUTION. *Mongolia (Bayan-Ulgii); Europe, Russia (Crimea), ?Kyrgyzstan, ?Tajikistan, China (Qinghai, Xinjiang, Sichuan, Xizang) (Proshchalykin & Fateryga, 2017; Niu et al., 2020a; Kasperek, 2022a).

REMARKS. Our understanding of this species is based on examination of type specimens. We do not consider the subspecies status of *Anthidium montanum reichardti* Gussakovskij, 1930 proposed by Mavromoustakis (1965: 407) as it may be a separate species.

***Anthidium (Anthidium) punctatum* Latreille, 1809**

Anthidium punctatum Latreille, 1809: 43, 217: ♀, ♂ (type locality: France).

Anthidium senile Eversmann, 1852: 80, ♀, ♂ (type locality: Russia, Ural).

Anthidium greyi Radoszkowski, 1862: 597, ♂ (type locality: Russia, Siberia).

Anthidium nigrinum Morawitz, 1875: 128, ♀ (type locality: Uzbekistan).

Anthidium nitidulum Morawitz, 1893: 45, ♀. Holotype: ♀, Tajikistan, Panjakent; ZISP, examined.

?*Anthidium laeve* Pasteels, 1969: 231, ♀ (type locality: Mongolia).

MATERIAL EXAMINED. **Mongolia.** *Khuvsgul*: Buren-Khan, Delger-Muren River, 28–29.VI 1968, 1 ♀, M.A. Kozlov; *Tuv*: 13 km E of Bayan-Gol, 7.VIII.1973, 1 ♂, E.P. Narchuk; *Govi-Sumber*: 60 km NW of Choira, Sumbair, 12.VIII.1973, 1 ♀, E.S. Sugonyaev; *Sukhbaatar*: Dzotol-Khan-Ula Mts., *Chamaenerion* sp., 21.VII.1976, 3 ♂, 6 ♀, M.A. Kozlov.

DISTRIBUTION. Mongolia (*Govi-Sumber, Khentii, *Khuvsgul, *Sukhbaatar, *Tuv, Ulaanbaatar); North Africa, Europe, Syria, Israel, Turkey, Azerbaijan, Russia (to Far East), Iran, Central Asia, North China (Niu et al., 2020a; Kasperek, 2022a).

REMARKS. The species was previously recorded from Mongolia by Alfken (1936: “Hutertugol”) and Popov (1948: 91; Khentii, Ulaanbaatar). The report from Mongolia by Popov (1948: 91; Ust-Kiran) refers to Russia (Buryatia).

Another similar species, *Anthidium laeve* Pasteels, 1969 was described from Mongolia, and later specialists have not revised this taxon. The description of the *A. laeve* holotype was mostly based on the body coloration and punctation. According to Pasteels (1969: 232), *A. laeve* has the ivory genal spot, the clypeus medially impunctate, the T2 with yellow band and the marginal depression irregularly punctate. The studied females of *A. punctatum* from Mongolia have the bright yellow genal spot. The clypeus of *A. punctatum* is usually entirely confluent punctate, but some studied females of *A. punctatum* from Uzbekistan, and Turkmenistan, and the holotype of *A. nitidulum* from Tajikistan (figured by Ivlev et al., 2025: 26)

have the clypeus medially impunctate. The T2 yellow pattern and punctation of the marginal depression are also variable in studied females: T2 with uninterrupted band or with a pair of transverse spots; marginal depression irregularly or densely punctate. Thus, based on the original description of *A. laeve* and analysis of *A. punctatum* variability, we assume that *A. laeve* is most likely a synonym of *A. punctatum*, but the holotype should be examined for a final decision.

***Anthidium (Anthidium) septemspinusum* Lepeletier, 1841**

Anthidium septemspinusum Lepeletier, 1841: 359, ♂ (type locality: France).
Anthidium nigripes Eversmann, 1852: 81, ♀, ♂ (type locality: Russia, Ural).
Anthidium nigriceps Smith, 1854: 203, ♀ (type locality: Poland).
Anthidium japonicum Smith, 1879: 86, ♀ (type locality: Japan).
Anthidium septemspinusum var. *flavoguttatum* Friese, 1917: 55, ♂ (type locality: Switzerland).
Anthidium dinurum Cockerell, 1924: 525, ♂ (type locality: Russia, Far East).

MATERIAL EXAMINED. **Mongolia.** *Tuv*: Songino, floodplain and settled slopes, 3–4.IX 1969, 1 ♂, I.M. Kerzhner; *Uvs*: middle course of the Khalkha River and Tuin Gol River, VII 1926, 1 ♂, A.N. Kirichenko; *Khentii*: upper reaches of the Kharaa-Gol River and Sugu-Nur Lake, 31.VII.–2, 7.VIII.1924, 2 ♂, 1 ♀, P.K. Kozlov.

ADDITIONAL MATERIAL EXAMINED. **China.** *Qinghai*: Sininkhe River valley, Eastern Nanshan Mts., 26.VII 1908, 1 ♂, P.K. Kozlov; *Gansu*: Lanzhoufu [= Lanzhou], Eastern Nanshan Mts., 26–28.VII 1908, 1 ♀, P.K. Kozlov.

DISTRIBUTION. Mongolia (**Khentii*, *Khovd*, **Tuv*, **Uvs*); Europe (except North), Russia (to Far East), Turkey, Afghanistan, Kazakhstan, China, Korean Peninsula, Japan (Honshu) (Proshchalykin & Fateryga, 2017; Niu et al., 2020a; Kasperek, 2022a).

REMARKS. The species was previously recorded from Mongolia by Pasteels (1969: 231; *Khovd*).

***Anthidium (Proanthidium) trochantericum* Morawitz, 1893**

Anthidium trochantericum Morawitz, 1893: 41, ♂. Holotype: ♂, Tajikistan, Jagnob River, Kamar; ZISP, examined.
Anthidium luteiventre Friese, 1917: 57, ♂ (type locality: China, Sichuan).
Anthidium (Proanthidium) qingtaoi Niu & Zhu in Niu et al., 2020: 59, ♀, ♂ (type locality: China, Xizang), **syn. n.**

MATERIAL EXAMINED. **Mongolia.** *Bayankhongor*: Ih Bogdo Ridge [Ih Bogdyn Nuru], 15 km SE of Orog-Nuur Lake, 1700 m, 1 ♀, 17.VI.1967, V.F. Zaytsev; idem, 1 ♀, 17–18.VIII.1967, I.M. Kerzhner; *Ulaanbaatar*: 10 km SE of Songinoha-Yrkhan-Uul Mts., 1 ♀, 9–10.VIII.1978, M.A. Kozlov.

ADDITIONAL MATERIAL EXAMINED. **China.** *Inner Mongolia*: Dingyuaning [Bayan Hot], northern Alashan, 24–31.V, 10–11.VI, 1.VII 1908, 3 ♂, 3 ♀, P.K. Kozlov; idem, Ordos plateau in the Gobi desert, 5.VI 1908, 1 ♀, P.K. Kozlov; idem, Alashan Ridge, gift of the Smolensk museum, 1908, 1 ♀; *Gansu*: “Guyuanzhou”, Eastern Nanshan Mts., 17–18.VII 1908, 1 ♀, P.K. Kozlov; *Qinghai*: “Tszosto”, river valley [near the Gumansu Monastery], 1908, 1 ♀, collector unknown.

DISTRIBUTION. *Mongolia (*Bayankhongor*, *Ulaanbaatar*); China (*Hebei*, *Inner Mongolia*, **Gansu*, *Xinjiang*) (Niu et al., 2020a).

REMARKS. Based on the analysis of the original description of *Anthidium qingtaoi* Niu et Zhu, 2020 we consider *A. trochantericum* conspecific with *A. qingtaoi*, **syn. n.** For the label information “Tszosto” refers to the Remark of *Anthidium florentinum*, above.

Genus *Bathanthidium* Mavromoustakis, 1953

Bathanthidium (Stenanthidiellum) sibiricum (Eversmann, 1852)

Anthidium sibiricum Eversmann, 1852: 79, ♀ (type locality: Russia, Ural).

MATERIAL EXAMINED. **Mongolia.** *Bayan-Ulgii*: 20 km NE of Bayan-Ula Mts., 8.VII 1976, 1 ♂, I.M. Kerzhner.

DISTRIBUTION. *Mongolia (Bayan-Ulgii); Russia (from the Urals to Far East), Korean Peninsula, Central and Eastern China (Niu *et al.*, 2012, 2019a).

Genus *Icteranthidium* Michener, 1948

Icteranthidium croceum (Morawitz, 1877)

Anthidium croceum Morawitz, 1877: 57, ♀ (type locality: Azerbaijan). Lectotype (designated by Warncke 1980: 172): ♀, Azerbaijan, Shamakhi; ZISP, examined.

?*Icteranthidium aurontiacum* Pasteels, 1969: 232, ♀ (type locality: Mongolia).

MATERIAL EXAMINED. **Mongolia.** *Bayankhongor*: Ekhin-Gol Station, 25.VI–13.VII 1985, 1 ♀, A.V. Gorokhov; *Dundgovi*: 40 km SE of Sainshand, 15.VIII 1975, 1 ♀, M.A. Kozlov; idem, 16.VIII 1975, 1 ♀, E.P. Narchuk; 45 km NW of Dalangjargalan, steppe, 11.VIII 1976, 2 ♀; *Khuvsgul*: bulak Jargalant, Central Gobi, 22.VII 1926, 2 ♂, 2 ♀, P.K. Kozlov; *Umnugovi*: Ulan-Bulyk, Dundu-Saikhan Mts., 3–6.VII 1909, 3 ♂, P.K. Kozlov; idem, Tahilga-Ula Mts., 35 km NNE of Dalan-Daagadag, 10.VIII 1971, 1 ♂, M.A. Kozlov; idem, Dolotyn-Huduk [well], 18.VIII 1975, 1 ♂, E.P. Narchuk; *Uvs*: northern shore of Khargas-Nuur Lake, 3.VII 1978, 1 ♂, M.A. Kozlov.

DISTRIBUTION. *Mongolia (Bayankhongor, Dundgovi, Khuvsgul, Umnugovi, Uvs); Turkey, Azerbaijan, Kazakhstan, China (Inner Mongolia) (Niu *et al.*, 2020b; Kasperek, 2022a).

REMARKS. Another similar species, *Icteranthidium aurontiacum* Pasteels, 1969, was described from Mongolia and later has not been revised by other researchers. The distinguishing features of the *I. aurontiacum* in the original description (Pasteels, 1969: 233) were based on bright orange coloration of the metasoma, yellow coloration of the scopa, lack of the medial process on posterior margin of T2 and T3, smooth and impunctate areas on tergal marginal depressions. The holotype and studied females of *I. croceum* from Mongolia correspond to the description of the holotype of *I. aurontiacum*. Thus, we assume that *I. aurontiacum* is a possible synonym of *I. croceum*, but the holotype should be examined for a final decision.

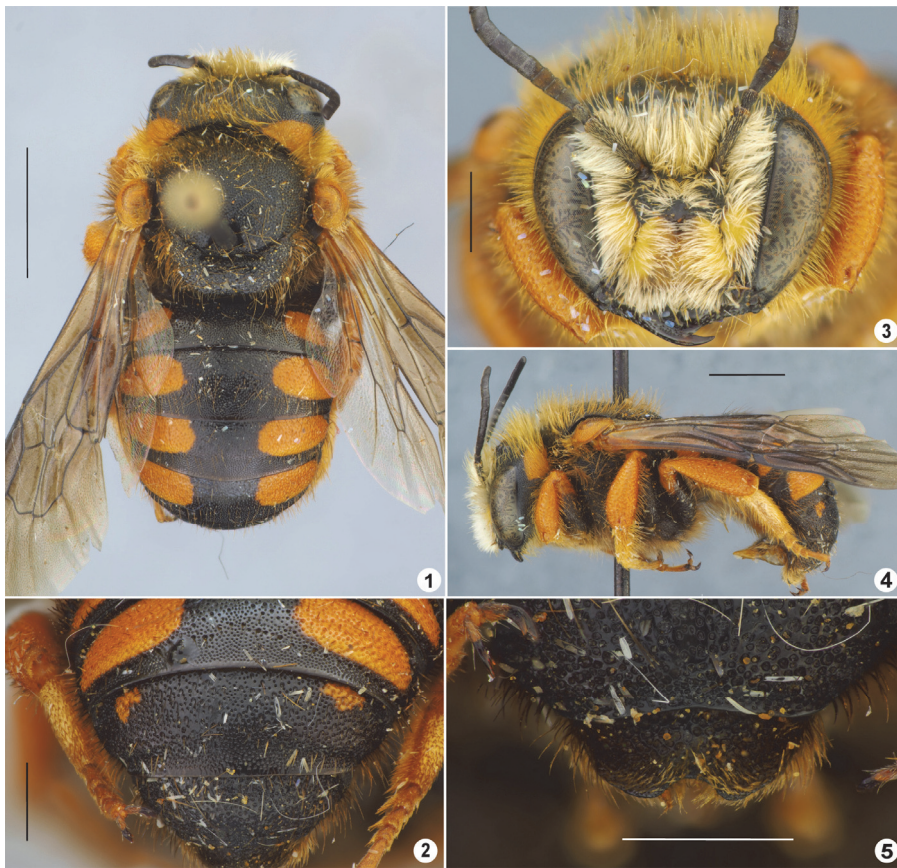
Genus *Pseudoanthidium* Friese, 1898

Pseudoanthidium (Pseudoanthidium) anastasiae Ivlev, sp. n.

<https://zoobank.org/NomenclaturalActs/60236D47-380C-49C3-8AB5-A5BED12F9AE6>

Figs 1–12

TYPE MATERIAL. Holotype: ♂, **Mongolia.** Холт, сев. Гоби, Монголия, [Uvurkhangai, historical area Holt, northern part of Gobi Desert, foot of the Khangai range, interfluvium Aigul-Gol River and Ongiin-Gol River], 14.VII 1926, Козлов [P.K. Kozlov leg.] // Holotype, *Pseudoanthidium anastasiae* sp. n., det. Ivlev 2025 ♂; ZISP.



Figs 1–5. *Pseudoanthidium anastasiae* Ivlev, sp. n., holotype, male: 1 – habitus, dorsal view; 2 – head, frontal view; 3 – habitus, lateral view; 4 – T4–T6, dorsal view; 5 – T5, dorsal view. Scale bars: (1, 2, 3) 1.0 mm; (4) 2.0 mm.

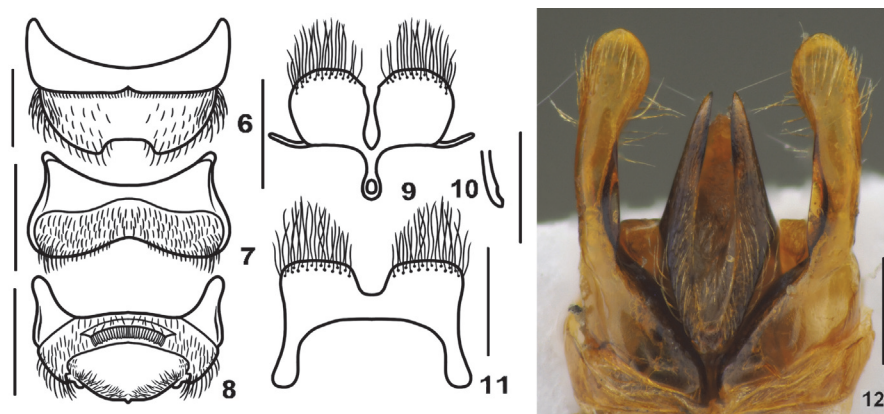
DESCRIPTION. MALE. Body length 11 mm. Forewing length 9 mm (without tegula), hindwing length 7.5 mm.

Head: Black, clypeus (medially brownish) and paraocular areas yellow (with black spot on lower 1/3 surfaces), with pair of orange triangular spot from upper gena to vertex (Fig. 3). Head transversely rounded, ca. 1.2 times wider than long. Vertex elevated, well visible in frontal view. Frons and vertex areolate punctate with impunctate area near lateral ocelli. F1 1.1 times longer than pedicel. Clypeus flat; areolate punctate, basally with medial impunctate area; apical margin toothed. Mandibles with 3 teeth; first tooth much larger than second, third smallest. Clypeus, paraocular areas, and lower half of frons with dense white pubescence; gena and vertex with sparser and golden hairs. Scapus with long white hairs; pedicel covered in semi-erect white hairs; flagellomeres bare.

Mesosoma: Black (Figs 1, 4); tegula, tibiae, distal end of femora, and tarsi orange; wing brownish fumigate. Scutum ca. 1.2 times as wide as long, densely punctate with punctures

separated by less than a puncture diameter. Tegula shiny and densely punctate. Scutellum and axillae with rounded postero-lateral margins; surface coarser punctate than on scutum, with shiny interspace. 1st submarginal cell in forewing as long as 2nd submarginal cell; 2r-m crossveins located behind 2m-cu. Scutum, axillae, scutellum with copper hairs; lateral parts of thorax with brownish hairs. Trochanters and coxae with long plumose brownish hairs; basitarsi with denser inner brush of copper hairs and with fringe of long copper hairs at border of outer and inner surfaces; remaining tarsal segments with short hairs. – *Metasoma*: Black; T2–5 with pair of large orange lateral spot, T6 with pair of small orange spot (Fig. 2). T1–4 on disc irregularly punctate, punctures separated by 1–3 puncture diameters; on T5 denser punctate by mixed coarse and tiny punctures; marginal depressions densely and finely punctate; last terga laterally without any teeth. Posterior margin of T7 medially rectangular emarginate (Figs 5, 6). S7 (Fig. 11) on posterior margin deeply and rounded emarginate medially; apodeme broadly lobed. Posterior margin of S8 (Figs 9, 10) deeply emarginate medially, forming two lobes; anterior margin medially with club-shaped process slightly curved ventrally; apex of process with concave dorsal surface. Apex of gonostylus rounded (Fig. 12). Discs of T1–5 with semi-erect copper hairs. T6 and T7 laterally with mixed semi-erect copper and brown hairs. S1 along posterior margin of with long white hairs; S2 and S3 with semi-erect copper hairs. Lateral margin of S4 and S5 with tufts long brown hairs (Fig. 7). Posterior margin of S7 and S8 with long golden hairs.

FEMALE. Unknown.



Figs 6–12. *Pseudoanthidium anastasiae* Ivlev, sp. n., holotype, male: 6 – T7, dorsal view; 7 – S4, dorsal view; 8 – S5 and S6, dorsal view; 9 – S8, dorsal view; 10 – medial process of S8, lateral view; 11 – S7, dorsal view; 12 – genitalia, dorsal view. Scale bars: (6) 1.0 mm; (7–11) 1.75 mm; (12) 0.5 mm.

DIAGNOSIS. The new species belongs to the *P. melanurum* group owing to the similar structure of T7, S8 and genitalia (composition and diagnosis of the group according to Kasparek, 2024). Due to the presence of orange spots on the head and metasoma, the new species is similar to North African *P. royoii* (Dusmet, 1915); from which it easily separates by the rounded posterior margin of T6 (vs with pair of medial teeth); black T7 (vs orange); the posterior margin of T7 weakly emarginate medially (vs deeply emarginate); apex of the gonostylus rounded (vs emarginate on inner margin). The structure of T7 and S6 is closest to that of West Palaearctic *P. melanurum* (Klug, 1832). The new species is similar to the female of *P. fulviventre* (Friese,

1917) because of the presence of orange spots on the head and the metasoma, black spot on the lower 1/3 surfaces of paraocular area and orange spots on the T5. The male of *P. fulvi-ventre*, as well as the female of *P. anastasiae*, **sp. n.**, are unknown, but there are some features that we assume present in both sexes and which distinguish these two species: the axillae and scutellum black in *P. anastasiae*, **sp. n.** (vs orange); the vertex, mesosoma, and tergal discs with long copper hairs (vs only with short and golden hairs).

Differences between males of *P. anastasiae*, **sp. n.** and *P. melanurum* are outlined in Table 1.

DISTRIBUTION. Mongolia (Uvurkhangai).

ETYMOLOGY. The new species dedicated to authors' fiancée Anastasia in honor of the wedding.

Table 1. Differences between males of *P. anastasiae* sp. n. and *P. melanurum*

Features	<i>P. anastasiae</i> sp. n.	<i>P. melanurum</i>
Coloration of spots on head and terga	orange	yellow
Pubescence on vertex	long golden hairs	short white hairs
Apical margin of clypeus	emarginate medially	concave
Coloration of scutellum	black	with yellow spots
Posterior margin of scutellum	rounded	emarginate medially
Posterior margin of T7	rectangular emarginate medially	rounded emarginate medially
Structure of S8	posterior margin deeply emarginate medially (forming two distinct lobes); anterior margin with medial clavate process	posterior margin weakly triangular emarginate medially; anterior margin with a pair of small tubercles

Genus *Stelis* Panzer, 1806

Stelis (Stelis) aculeata Morawitz, 1880

Stelis aculeata Morawitz, 1880: 374, ♂ (type locality: Mongolia). Lectotype (designated by Ivlev *et al.*, 2025: 38): ♂, Mongolia, Govi Altai, Aj Bogd Ringe; ZISP, examined.

MATERIAL EXAMINED. **Mongolia.** *Khovd*: 25 km S of Altai, Bodonchin-Gol River, 22–23.VI 1980, 1 ♀, I.M. Kerzhner.

DISTRIBUTION. Mongolia (Govi-Altai, *Khovd), Turkey, Russia (Crimea, Western Siberia), Uzbekistan, Kazakhstan, China (Inner Mongolia) (Kasperek, 2015; Proshchalykin & Fateryga, 2017).

REMARKS. The species was previously known in Mongolia only from the type locality.

Stelis (Stelis) ornatula (Klug, 1807)

Gyrodroma ornatula Klug, 1807: 55, no gender (type locality: Germany).

Stelis ornatula ssp. *gussakovskiji* Popov, 1933: 390, ♀, ♂. Lectotype (designated here): ♂, golden circle // Хива [Uzbekistan, Xorazm Reg., Khiva, 41°22'N 60°21'E], 11–V.[1]927, В. Гуссаковский [V.V. Gussakovskiy] // *Stelis ornatula gussakovskiji*, subsp. n. ♂, Holotyp., Popov det. // Lectotype *Stelis ornatula* ssp. *gussakovskiji* Popov, design. M. Schwartz <red label> // Lectotype *Stelis ornatula* ssp. *gussakovskiji* Popov, 1933 design. Ivlev, Astafurova, 2026 <red label>; ZISP, examined.

Stelis ornatula ssp. *montana* Popov, 1933: 392, ♀, ♂. Lectotype (designated here): ♂, golden circle // p. Бомын (Ичегын), св Цайдамь, Гоби [China, Qinghai, NE Tsaidam, Gobi desert, Ichegyn River, 36°28'N 97°33'E], Роб.[оровский], Козлов к [V.I. Roborovsky, P.K. Kozlov], VI.[18]95 // *Stelis minuta* 1908 Friese det. // *Stelis ornatula montana* subsp. n. ♂, Holotyp., Popov det. // Lectotype *Stelis ornatula* ssp. *montana* Popov, 1933, design. Ivlev, Astafurova, 2026 <red label>; ZISP, examined.

Stelis semenovi Popov, 1933: 393, ♀, **syn. n.** Holotype: ♀, China, Qinghai, Yamata River [near the Gumansu Monastery]; ZISP, examined.

Stelis semenovi var. *nigra* Popov, 1933: 393, ♀, **syn. n.** Lectotype (designated here): ♀, golden circle // Ямата, Алашан.[ский] хр.[ебет] Гоби, [China, Qinghai, Yamata River near the Gumansu Monastery, 37°02'33"N 101°49'21"E] Козлов [P.K. Kozlov], 5–6.V.[1]908 // *Stelis semenovi* n. sp. f. *nigra* nov. ♀, Paratyp., Popov det. // Lectotype *Stelis semenovi* var. *nigra* Popov, 1933, design. Ivlev, Astafurova, 2026 <red label>; ZISP, examined.

MATERIAL EXAMINED. Mongolia. *Zavkhan*: samon Songino, 12.VI 1980, 1 ♂, I.M. Kerzhner; *Tuv*: northern slope of Bogd-Khan-Uul Mts., near Ulaanbaatar, 19.VI 1967, 1 ♀, V.F. Zaytsev.

DISTRIBUTION. *Mongolia (Tuv, Zavkhan); North Africa, Europe, Turkey, Georgia, Iran, Russia (to Far East), Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, China (Qinghai) (Popov, 1933; Warncke, 1988, 1992; Proshchalykin & Fateryga, 2017).

REMARKS. Additionally, specimens of *Stelis ornatula* from Russia (European part, Siberia), Central Asia and China deposited in the ZISP collection (63 specimens) were studied. The booth sexes exhibit significant variation in body size (from 7 mm to 15 mm in males and from 12 mm to 16 mm in females) and the female shows variation in the degree of the body punctation and shape of tergal spots. There is a correlation between body size and the degree of punctation: the larger the body size, the denser the punctation. Either tergal spots are absent or their form is variable from weakly expressed and rounded to large and oval. The material examined indicates that this is not a case of geographical variability.

Popov (1933) described *Stelis semenovi* (with var. *nigra*) and two subspecies of *S. ornatula* (ssp. *montana* and ssp. *gussakovskiji*) from Central Asia and Northern China. Examination of type material of these taxa shows that they are conspecific with *S. ornatula* and all distinguishing features noted by Popov are within the range of intraspecific variability. Therefore, new synonymies are proposed for *S. ornatula* with *S. semenovi* Popov, 1933, **syn. n.**, and *S. semenovi* var. *nigra* Popov, 1933, **syn. n.** and the synonymy of *S. ornatula* ssp. *montana* Popov, 1933 and *S. ornatula* ssp. *gussakovskiji* Popov, 1933 with *S. ornatula* proposed by Kasperek (2015: 92) is confirmed.

Popov (1933: 391, 392, 394) designated two holotype specimens (male and female) of *S. ornatula* ssp. *montana* (both labeled as “holotype”), two holotype specimens (male and female) of *S. ornatula* ssp. *gussakovskiji* (both labeled as “holotype”) and two paratype specimens (females) of *S. semenovi* var. *nigra* (both labeled as “paratype”). The male type specimens of *S. ornatula* ssp. *montana*, *S. ornatula* ssp. *gussakovskiji*, and one of female type specimen of *S. semenovi* var. *nigra* are designated here as lectotypes.

Based on the reports of the Mongolia-Sichuan Expedition (1907–1909) by Kozlov (2015) we established that the label information “Yamata” [Ямата, Алашан. хр. Гоби] of the type specimens of *Stelis semenovi* and *S. semenovi* var. *nigra* refers to the location near the Gumansu Monastery (China: Qinghai).

Genus *Trachusa* Panzer, 1804

Trachusa (Trachusa) byssina (Panzer, 1798)

Apis byssina Panzer, 1798: 21, ♀ (type locality: Germany).

Diphysis pyrenaica Lepeletier, 1841: 308, ♀ (type locality: ?France).

MATERIAL EXAMINED. No material examined.

DISTRIBUTION. Mongolia (Khentii); Europe, Turkey, Georgia, Armenia, Azerbaijan, Russia, Kazakhstan (Popov, 1964; Fateryga et al., 2020).

REMARKS. The species was record from Mongolia by Popov (1964: 409; Khentii).

DISCUSSION

In total, 12 species from 6 genera of the tribe Anthidiini are recorded from Mongolia: *Anthidium* (6 species), *Bathanthidium* (1), *Icteranthidium* (1), *Pseudoanthidium* (1), *Trachusa* (1), and *Stelis* (2). For comparison, more than 90 species are known from Central Asia (unpublished data), 19 species from Siberia (Proshchalykin, 2013; Byvaltsev et al., 2026), and 52 from the Palearctic part of China (Niu et al., 2019a,b, 2020a,b; unpublished data). It should be noted that the number of Anthidiini specimens was less than 5% of the total number bee specimens in the Mongolian material we studied.

So, the fauna of Anthidiini in Mongolia is relatively poor and mostly consists of species with wide Palearctic ranges (*Anthidium florentinum*, *A. manicatum*, *A. montanum*, *A. punctatum*, *A. septemspinatum*, *Stelis ornata*, *Trachusa byssina*). Three species are elements of Irano-Turanian fauna (*Anthidium trochantericum*, *Icteranthidium croceum*, and *Stelis aculeata*). Only one species is widespread in the East Palearctic (*Bathanthidium sibiricum*). The new species, *Pseudoanthidium anastasiae*, sp. n., is currently known only from the type locality.

However, the study of materials based on targeted collections of bees in various natural landscapes of Mongolia is necessary for a more reliable understanding of this bee fauna. It is quite certain that new records for regional faunas and species that are new to science will be found during further studies.

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