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AMMOPHILA TURKESTANA KOHL, 1906 (HYMENOPTERA: SPHECIDAE), A VALID SPECIES

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Summary. *Ammophila apicalis* var. *turkestana* Kohl, 1906 is raised to full species status, with designation of the lectotype. *A. turkestana* Kohl, **stat. n.** is redescribed, illustrated, and newly recorded from Kyrgyzstan, Uzbekistan and Tajikistan.
Key words: digger wasps, Apoidea, Sphecidae, taxonomy, new records, Central Asia.

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Резюме. *Ammophila apicalis* var. *turkestana* Kohl, 1906 возведен в статус вида с обозначением лектотипа. Приведено переописание и иллюстрации *A. turkestana* Kohl, **stat. n.**, который впервые обнаружен в Кыргызстане, Узбекистане и Таджикистане.

INTRODUCTION

The widespread species *Ammophila terminata* F. Smith, 1856 is currently represented by several subspecies that are morphologically distinct. At the same time, specimens of the nominotypical subspecies occur in the same localities as *A. terminata turkestana* Kohl, 1906, which indicates that the latter taxon is an independent species. Indeed, it clearly differs morphologically from all its congeners.

MATERIAL AND METHODS

Abbreviations for collections from which specimens were borrowed or are deposited in are as follows: NHMW – Naturhistorisches Museum, Vienna, Austria; SZMN – Siberian Zoological Museum of Institute of Systematics and Ecology of Animals, Russian Academy of Sciences, Siberian Branch, Novosibirsk, Russia; ZISP – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

The results of this paper are based on the specimens deposited in ZISP and SZMN.

Historical geographic names were modernized to the current use and provided with the geographical coordinates. Square brackets are used when information is added to specimen label information (e.g., geographical coordinates). New records are asterisked (*).

Morphological terminology generally follows Bohart & Menke (1976). The abbreviations T1, T2, T3, etc., are used to denote the first, second, third, etc., metasomal terga, and S1, S2, S3, etc., to denote the first, second, third, etc., metasomal sterna.

The specimens were studied with a МСП–2 microscope. Photographs of morphological details were taken with a system comprising the МСП–2 microscope, a Nikon D7000 camera, and an opto-mechanical adapter АМ–У23–БК1,5. Photographs of habitus were taken with a system comprising a Nikon D7000 camera, an AF–S VR Micro-Nikkor 105mm f/2.8G IF–ED lens and a SIGMA EM–140 DG Ring Light Flash. Composite images were made using the software CombineZM by Alan Hadley.

The maps were generated using an online tool for producing publication-quality point maps SimpleMappr by David P. Shorthouse (2010).

TAXONOMY

***Ammophila turkestana* Kohl, 1906, stat. n.**
Figs 1–7

Ammophila apicalis var. *turkestana* Kohl, 1906: 333, sex not stated. Lectotype, present designation: ♀ "Гран[ица] Кизил кумов и Голод[ной] ст[епи] у СырД[арьи] *Г.Якобсон*. 12.v.[19]03 // *Amm. apicalis var. turkestanica* Kohl. det. Kohl" (ZISP) [= border of Kyzylkum desert and Golodnaya Steppe (Mirzachoʻl) on Syr Darya River in Kazakhstan (approximately 41°11'N, 67°54'E)].

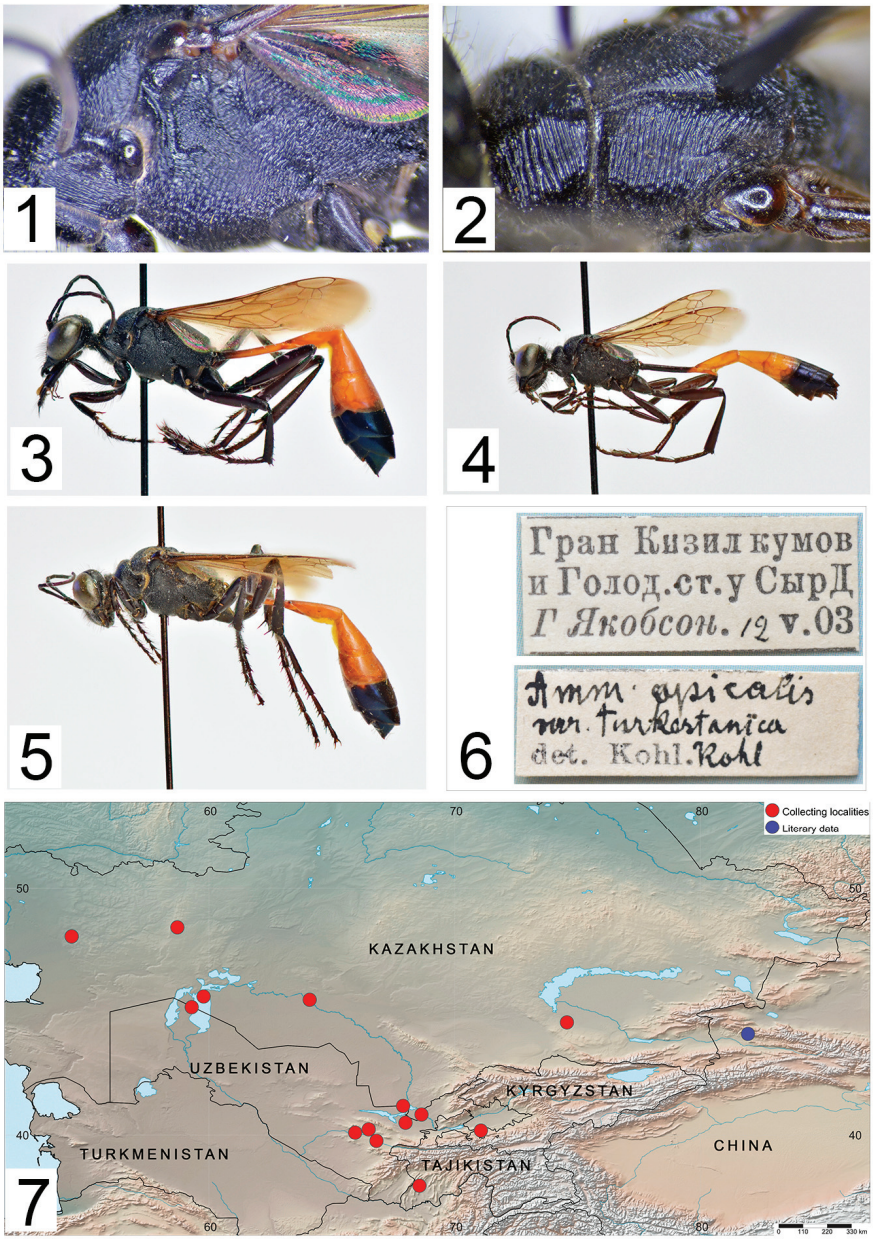
Ammophila apicalis var. *turkestanica* Kohl, 1906: 254, nom. praeocc., nec *Ammophila turcestanica* Dalla Torre, 1897: 411. Synonymized under *Ammophila terminata turkestana* Kohl by Bohart & Menke, 1976: 154.

Ammophila terminata turkestana: Bohart & Menke, 1976: 154; Kazenas, 1978: 37, 2001: 18; Dollfuss, 2013a: 392, 402, 495; Dollfuss, 2013b: 585; Danilov, 2020: 317; Pulawski, 2022: 48.

STATUS OF TYPE MATERIAL. Kohl (1906) did not mention the number of specimens examined nor the specific localities in his original description of *Ammophila apicalis* var. *turkestana*. He must have seen at least two, as in the key (p. 254) he lists Caucasus and Turkestan as countries of origin. Seemingly, the female in ZISP is the only surviving specimen, as none are present in NHMW (Dollfuss, 2013a). Here we designate it as the lectotype of *A. turkestana* (Figs 5–6).

TYPE MATERIAL EXAMINED. Lectotype: ♀ – **Kazakhstan**: *Turkistan Prov.*: Shardara District, the border of the Kyzylkum desert and the Golodnaya Steppe (Mirzachoʻl) on Syr Darya River [approximately 41°11'N, 67°54'E], 12.V 1903, G. Jacobson (ZISP); designated here.

OTHER MATERIAL EXAMINED. **Kazakhstan**: *Kyzylorda Prov.*: Karmakshy District, Josaly (formely Karmakshy) [45°29'N, 64°06'E], 24.V 1928, 2 ♀, 2 ♂, V. Popov (ZISP); Aral District, Barsa-Kelmes [45°37'N, 59°47'E], 12.V 1983, 1 ♀, D. Pirulin (ZISP); *Aktobe Prov.*: Shalkar District, Berchogur, [48°25'N, 58°43'E], 1 ♂, 9.VI 1925, Ushinskiy (ZISP); Kyzylkoga District, near Mukur [48°03'N, 54°25'E], 30–31.V 1908, 4 ♀, 1 ♂, D. Borodin, B. Uvarov (ZISP); *Almaty Prov.*: 15 km SE of Aksuek [44°34'N, 74°34'E], 4–9.VI.2009, 2 ♀, Yu. Danilov (SZMN); **Kyrgyzstan**: *Batken Prov.*: Batken District, near Ak-Turpak [40°11'N, 71°04'E], 12.V 2005, 1 ♀, D. Milko (SZMN); **Uzbekistan**: *Karakalpakstan*: Moʻynoq District, Vozrozhdeniya Island [45°11'N, 59°18'E], 20.VI 1933, 1 ♀, collector unknown (ZISP); *Navoiy Prov.*: Xatirchi District, Changyr near Karacha [40°06'N, 65°57'E], 23.V 1930 1 ♀, L. Zimin (ZISP); *Samarqand Prov.*: Zeravshan River [approximately 39°46'N, 66°49'E], 1892, 1 ♀, D. Glasunov (ZISP); Qoʻshrabot District, Aktau Mountains [40°14'N,



Figs 1–7. *Ammophila turkestana* Kohl. 1 – mesosoma, lateral view; 2 – mesosoma, dorsal view; 3 – habitus, female, lateral view; 4 – habitus, male, lateral view; 5 – lectotype, specimen, female; 6 – lectotype, labels; 7 – collecting localities.

66°30'E], 3.V 1965, 1 ♂, I. Kerzhner (ZISP); *Sirdaryo Prov.*: Sirdaryo [40°50'N, 68°39'E], 13.V 1903, 1 ♀, G. Jacobson (ZISP); *Jizzakh Prov.*: Golodnaya Steppe (Mirzacho'l) [40°30'N, 68°00'E], 9–12.V 1903, 2 ♀, N. Ivanov (ZISP); **Tajikistan**: Rudaki District, Gandjina near Agaravak [37°57'N, 68°34'E], 24.VI 1962, 1 ♀, O. Kryzhanovskiy (ZISP).

DIAGNOSIS. *Ammophila turkestana* has the metasomal apex with blue reflexes, the propodeal enclosure all glabrous, and no supra-antennal lamellate projection. Both sexes resemble *A. gussakovskii* Dollfuss, 2013 and *A. terminata* F. Smith, 1856 in having the glabrous propodeal enclosure and in having the pronotal collar and scutum finely transversely striate, but differ by the absence of appressed silvery setae of mesosoma.

The male closely resembles *A. antoninae* Danilov, 2018 in having the glabrous propodeal enclosure, the poorly represented appressed silvery setae on the body, and in having the pronotal collar and scutum finely transversely striate, but differs by the simple penis valve and the absence of clypeal lateral angles (penis valve is characteristically shaped, and the clypeus has well-defined lateral angles in *A. antoninae*).

REDESCRIPTION. *Head*. Erect setae black. Mandible and palpi black. *Mesosoma*. Pronotum slightly emarginate. Pronotum and scutum shiny, distinctly transversely striate (Fig. 2). Scutellum longitudinally rugose. Mesopleuron and metapleuron moderately shiny, rugose (Fig. 1). Propodeal enclosure glabrous, shiny, obliquely striate. Propodeum shiny, rugose, in some specimens with inconspicuous spot of appressed silvery setae posteriorly. Tegula black and translucent posteriorly. Erect setae black. *Wings* hyaline; veins dark brown; costal vein black. *Legs* black. Claws without teeth.

Male (Fig. 4). Body length 14–16 mm. *Head*. Clypeus not elongate. Clypeus, subantennal sclerite, and paraocular area with appressed silvery setae. *Metasoma.* T1–T2, S2, T3 and S3 in basal half red; petiole black; T4–T7 and S4–S7 black with blue reflexes.

Female (Fig. 3). Body length 17–21 mm. *Head*. Clypeus, subantennal sclerite, and paraocular area without appressed silvery setae. *Metasoma.* T1–T3, S2–T3 and petiole red; petiole in some specimens black basally; T4–T6 and S4-S6 black with blue reflexes.

DISTRIBUTION. China (Xingjiang) (Dollfuss, 2013a), Kazakhstan, *Kyrgyzstan, *Uzbekistan, *Tajikistan (Fig. 7).

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