



## New and little-known digger wasps (Hymenoptera: Ampulicidae, Sphecidae, Crabronidae) from Russia

MIKHAIL V. MOKROUSOV<sup>1</sup> & MAXIM YU. PROSHCHALYKIN<sup>2\*</sup>

<sup>1</sup>*Institute of Biology and Biomedicine at Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod 603950, Russia.*

 [sphecid@inbox.ru](mailto:sphecid@inbox.ru);  <https://orcid.org/0000-0001-6510-1791>

<sup>2</sup>*Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of Russian Academy of Sciences, Vladivostok-22, 690022, Russia.*

 [proshchalikin@biosoil.ru](mailto:proshchalikin@biosoil.ru);  <https://orcid.org/0000-0001-7870-8226>

\*Corresponding author

### Abstract

New additions to the knowledge of digger wasps (Ampulicidae, Sphecidae, Crabronidae) in Russia are provided. *Tachysphex loktionovi* Mokrousov & Proshchalykin, **sp. nov.** is described from Tyva Republic. Five species of digger wasps are reported from Russia for the first time: *Hoplammophila clypeata* (Mocsáry, 1883) (Sphecidae), *Tachysphex desertorum* F. Morawitz, 1894, *T. mongolicus* Kohl, 1898, *Tachytes argenteus* Gussakovskij, 1933, and *Trypoxylon albipes* F. Smith, 1856 (Crabronidae). Misidentified *Tachysphex speciosissimus* Morice, 1897 (= *T. gussakovskii* Pulawski, 1971) is excluded from the fauna of Russia. Hitherto unknown male of *Tachysphex mongolicus* Kohl, 1898, **stat. resurr.** is described and regarded as a valid taxon. New synonymy is proposed for *T. mongolicus* Kohl, 1898 = *T. abditus* Kohl, 1898, **syn. nov.** Diagnosis for male of *Dolichurus haemorrhous* A. Costa, 1886 is updated. New regional records for seven species are recorded. The known fauna of Russia currently numbers three families, 87 genera and 694 species of digger wasps. In addition *Tachytes argenteus* Gussakovskij, 1933 is reported for the first time from Uzbekistan and Cyprus, and *Trypoxylon beaumonti* Antropov, 1991 is newly recorded from Ukraine.

**Key words:** Apoidea, Spheciformes, new species, new records, taxonomy, fauna, Palaearctic region

### Introduction

Digger wasps (Spheciformes) and bees (Apiformes) form a single phylogenetic branch of the aculeate Hymenoptera. Currently, it is generally accepted to divide digger wasps into four families—Heterogynaidae, Ampulicidae, Sphecidae and Crabronidae (Pulawski 2021). At the same time, latest phylogenetic analysis (Sann *et al.* 2018) confirms the polyphyletic status of the family “Crabronidae”, which comprises nine major monophyletic lineages considered as separate families.

The World fauna of Spheciformes includes more than 10,000 species from 278 genera, and about 2300 species and 100 genera are known from Palaearctic region. The taxonomy of some genera, such as *Miscophus* Jurine, 1807, *Nysson* Latreille, 1802, *Eremiasphecium* Kohl, 1897, etc., is poorly studied and there are many undescribed species in these genera.

Knowledge of the digger wasps of Russia is still far from comprehensive but is gradually improving. After the publication of the “Annotated Catalogue of the Hymenoptera of Russia” with 685 species in 87 genera and three families (Ampulicidae, Sphecidae, Crabronidae s. l.) of digger wasps (Lelej & Belokobylskij 2017), and additional study (Jacobs & Liebig 2018; Mokrousov *et al.* 2019, 2020a, b; Akulov *et al.* 2020; Danilov *et al.* 2021) clarified regional distribution and increased the numbers of species in Russia to 694. In the present paper, new additions to the knowledge of the digger wasps in Russia are provided, including the description of a new species and various new national and regional records.