



Additional records of osmiine bees (Hymenoptera: Megachilidae: Osmiini) from Siberia

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Abstract

In addition to a previously published study about Siberian osmiine bees, we here further report records of 19 rarely collected and little known species. Twenty-seven species of osmiine bees are currently known from Siberia. *Hoplitis beijingensis* Wu, 1987, *H. kaszabi* Tkalcù, 2000, and *H. inconspicua* Tkalcù, 1995 are recorded for the first time for Russia and *Hoplitis maritima* (Romankova, 1985), *Osmia inermis* (Zetterstedt, 1838), and *O. disjuncta* Tkalcù, 1995 are new to Siberia. Two species, *Hoplitis fulva* (Eversmann, 1852) and *H. papaveris* (Latreille, 1799), are excluded from the list of Siberian bees. The male of *Hoplitis daurica* (Radoszkowski, 1887) is described for the first time, the taxonomic status of *Osmia ephippiata* Smith, 1879 is discussed and a lectotype is designated for *Hoplitis scita* (Eversmann, 1852).

Key words: Asian part of Russia, fauna, Palaeartic region, taxonomy

Introduction

The present paper is part of a series of publications dealing with the bees of the territory of Siberia (Proshchalykin 2013a, b; Proshchalykin & Kuhlmann 2015; Astafurova & Proshchalykin 2015; Proshchalykin & Dathe 2016; Proshchalykin & Schwarz 2017; Sidorov & Proshchalykin 2017; Byvaltsev *et al.* 2018). Since the end of the 19th century, Siberia was defined as the territory that stretches from the Ural Mountains in the west to the Pacific Ocean in the east. Former entomologists differentiated between *Siberia occidentalis* (West Siberia) and *Siberia orientalis* (East Siberia, Far East). Although these terms are still in use, Russian Far East is no longer considered to be a part of Siberia. At the present time, Siberia includes 14 administrative regions (Fig. 1) covering an area of 9.7 million km², which corresponds to 57% of the territory of the Russian Federation (Yurkovskaya *et al.* 2008). Currently, 485 bee species from 50 genera and 6 families are known from this region (Antropov *et al.* 2017).

The osmiine bees (Megachilidae: Osmiini), which comprise 15 genera and roughly 1200 species worldwide, occur in North America, Africa and Eurasia (Michener 2007; Ungricht *et al.* 2008; Müller 2018; but see Gonzalez & Griswold 2011). They are especially diverse in mediterranean and xeric climates of southern Africa, southwestern North America and the Palaeartic region. With 10 genera and about 700 species, the Palaeartic osmiine bee fauna is particularly diverse.

The osmiine bees are famous for their often spectacular and very diverse nest building behaviours, as well as for their close relationships with flowering plants (Friese 1923; Malyshev 1937; Westrich 1989; Cane *et al.* 2007; Müller 2018 and references therein). Several *Osmia* species in Europe (e.g., *O. cornuta*), Asia (e.g., *O. cornifrons*) and North America (e.g., *O. lignaria*) are commercially used to pollinate the flowers of fruit trees (Bosch & Kemp 2002). The outstanding diversity with respect to both species number and biology renders the Osmiini an excellent model group for the study of the evolution of nesting biology (Radchenko 1996) and flower preferences in bees.

Hoplitis scita (Eversmann, 1852, *O. hamata* Eversmann, 1852 [= *Hoplitis tuberculata* (Nylander, 1848)], and