



Bees of the genus *Colletes* Latreille 1802 of the Asian part of Russia, with keys to species (Hymenoptera: Apoidea: Colletidae)

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Abstract

For the Asian part of Russia 27 species of the bee genus *Colletes* are recorded. *Colletes ravulus* Noskiewicz 1936 is recorded for the first time from Russia. *Colletes fodiens* (Fourcroy 1785), *C. similis* Schenck 1853, and *C. marginatus* Smith 1846 are newly recorded from the Asian part of Russia. *Colletes kirgisica* Radoszkowski 1867 **syn. nov.** (= *Colletes fodiens kirgisicus* Radoszkowski 1867) and *Colletes fodiens hispanicus* Noskiewicz 1936 **syn. nov.** are recognized as synonyms of *Colletes fodiens* (Fourcroy 1785). The female of *C. ravulus* is here described for the first time. Additionally *C. edentuloides* Kuhlmann **sp. nov.** is described from neighbouring Mongolia as it hitherto has been thought to be the female of *C. ravulus*. Illustrated keys to males and females of all species known from the Asian part of Russia are provided.

Key words: taxonomy, new species, fauna, Siberia, Russian Far East, Palearctic region

Introduction

The bee genus *Colletes* Latreille 1802 (type species: *Apis succincta* Linnaeus 1758, by monotypy) is characterized by the outwardly arcuate posterior part of the second recurrent vein, the bilobate glossa and by the base of the propodeum, that has a short subhorizontal to vertical basal zone, usually limited posteriorly by a carina or sharp change in slope or sculpture, and divided by longitudinal carina (Michener 1989). *Colletes* currently includes 469 described species with an estimated total of about 700 species (Kuhlmann unpubl.), from all continents except Antarctica, Australia, Madagascar and Southeast Asia (Michener 2007). About 205 species are known from the Palearctic region with their centre of diversity in Middle Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) (Kuhlmann 2005) but little has been known about the *Colletes* fauna of Russia.

Russia is a country that stretches over a vast expanse of Eurasia between the Baltic Sea in the west and the Pacific Ocean in the East. The Asian part of Russia comprises 27 administrative units covering 13.1 million km² (about 77% of the total area of Russia). Asian Russia can be divided into four major regions: Ural, Western Siberia, Eastern Siberia and Far East (Fig. 1). In the north the Asian part of Russia is delimited by the Arctic Ocean and in the east by the Pacific Ocean. In the extreme southeast Russia borders North Korea and in the south China, Mongolia and Kazakhstan.

The Asian part of Russia encompasses a number of distinct climatic zones, which generally extend across the territory in latitudinal zones. Along the Arctic coast a polar climate prevails, extending inland into the Far East on upper mountain slopes. South of this zone exists a broad belt of subarctic climate that comprises almost all of Siberia and Far Eastern Russia. A more humid-temperate continental climate includes a narrow strip of the southern West Siberian Lowland. Similar conditions are also found in the extreme southeastern portion of Far Eastern Russia, including Vladivostok. A broad belt of drier steppe climate with cold winters and hot summers includes the southern part of Western Siberia. It continues eastward in insolated mountain basins along the extreme fringes of Siberia and the Russian Far East (Fig. 2).