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## Bees of the genus *Sphecodes* Latreille 1804 of Siberia, with a key to species (Hymenoptera: Apoidea: Halictidae)

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### Abstract

Twenty-one species of the bee genus *Sphecodes* Latreille are recorded from Siberia. *Sphecodes schwarzi* Astafurova & Proshchalykin, **sp. nov.** is described from Tyva Republic and Mongolia (Dornod Aimag). Five species: *Sphecodes alternatus* Smith, 1853, *S. reticulatus* Thomson, 1870, *S. rufiventris* (Panzer, 1798), *S. pinguiculus* Pérez, 1903, and *S. spinulosus* Hagens, 1875 are newly recorded from the Asian part of Russia and seven species: *S. ferruginatus* Hagens, 1882, *S. hyalinatus* Hagens, 1882, *S. longulus* Hagens, 1882, *S. miniatus* Hagens, 1882, *S. nippon* Meyer, 1922, *S. puncticeps* Thomson, 1870, and *S. scabricollis* Wesmael, 1835 are recorded for the first time from Siberia. *Sphecodes angarensis* Cockerell, 1937 is newly synonymized under *S. gibbus* (Linnaeus, 1758). Illustrated keys for males and females of all species from Siberia and neighbouring Mongolia are provided.

**Key words:** taxonomy, new species, cleptoparasitic bees, fauna, Palaearctic region

### Introduction

This work is a continuation of our study on the bees of the genus *Sphecodes* Latreille of Russia and neighbouring countries that started in 2012 (Proshchalykin & Astafurova 2012; Astafurova & Proshchalykin 2014, 2015; Astafurova *et al.* 2014). The present study aims to summarize the current knowledge of the species of *Sphecodes* of Siberia as a basis for further investigations of the largely unexplored, yet highly diverse faunas of China and Central Asia.

Until the 19<sup>th</sup> century, Siberia was recognized in Russia as a territory extending from the Ural Mountains in the west to the Pacific Ocean in the east. At that time, entomologists frequently indicated the type locality as “Siberia occidentalis” (Western Siberia) or “Siberia orientalis” (Eastern Siberia, Far East). Even today many entomologists divide Siberia in this way. Currently, Siberia includes 14 administrative regions of the Russian Federation (Fig. 1) with 9.7 millions sq. km (57% of Russian Federation territory) (Yurkovskaya *et al.* 2008).

Four species of *Sphecodes* were described from Siberia by Smith (1879), Meyer (1922), Blüthgen (1924a), and Cockerell (1937), but none of them are considered valid (see section on taxonomy for details). To date, only eight species of *Sphecodes* have been recorded from Siberia (Meyer 1920, 1922, 1925; Blüthgen 1923, 1924a, b; Wnukowsky, 1930, Cockerell 1937; Warncke 1992; Levchenko & Tomkovich 2014; Ascher & Pickering 2015). Based on a comprehensive study of specimens in various collections, we list here 21 species, including a new species described herein and twelve recorded for the first time (Table 1). *Sphecodes angarensis* Cockerell, 1937 is newly synonymized under *S. gibbus* (Linnaeus, 1758). The *Sphecodes* fauna of Siberia is dominated by widespread Trans-Palaearctic species (I—fourteen species, 66% of the fauna). The rest of the fauna consists of Western Palaearctic faunal elements (II—five species, 24%) and Eastern-Palaearctic species (III—two species, 10%) (Table 2). Illustrated keys to the species known from Siberia and neighbouring Mongolia are presented to facilitate further research on this bee genus.