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The bees of the genus *Sphecodes* Latreille 1804 of the Russian Far East, with key to species (Hymenoptera: Apoidea: Halictidae)

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Abstract

Eighteen species of the bee genus *Sphecodes* are recorded from the Russian Far East. *Sphecodes orientalis* Astafurova & Proshchalykin, **sp. nov.** is described from Primorskiy Territory, Jewish Autonomous Province, Khabarovsk Territory and Sakhalin. Five species: *S. laticaudatus* Tsuneki 1983, *S. nippon* Meyer 1922, *S. okuyetsu* Tsuneki 1983, *S. simillimus* Smith 1873, and *S. tanoi* Tsuneki 1983 are recorded for the first time from Russia. Six species: *S. albilabris* (Fabricius 1793), *S. cristatus* Hagens 1882, *S. longulus* Hagens 1882, *S. miniatus* Hagens 1882, *S. monilicornis* (Kirby 1802), and *S. puncticeps* Thomson 1870 are newly recorded from the Russian Far East. New synonymy has been established for *S. crasus* Thomson 1870 (= *S. dyozankeanus* Tsuneki 1983, **syn. nov.**; = *S. ohdeyamanus* Tsuneki 1984, **syn. nov.**); *S. ferruginatus* Hagens 1882 (= *S. koikensis* Tsuneki 1983, **syn. nov.**; = *S. hanedai* Tsuneki 1983, **syn. nov.**); *S. geoffrellus* (Kirby 1802) (= *S. silvicola* Tsuneki 1983, **syn. nov.**); *S. tanoi* Tsuneki 1983 (= *S. coptis* Tsuneki 1983, **syn. nov.**); *S. longulus* Hagens 1882 (= *S. amakusensis* Yasumatsu et Hirashima 1951, **syn. nov.**); *S. scabricollis* Wesmael 1835 (= *S. sibiricus* Cockerell, 1924, **syn. nov.**). Illustrated key to males and females of all species known from the Russian Far East are provided.

Key words: taxonomy, new species, cleptoparasitic, fauna, Eastern Palaearctic

Introduction

Bees of the genus *Sphecodes* Latreille 1804 are noteworthy for its their coarse sculpturing, the thorax usually being coarsely pitted and the dorsal surface of the propodeum, often marked by a few, coarse, irregular longitudinal rugae delimiting shining spaces. The head is usually much wider than long and the clypeus is two or usually three or more times as wide as long. T5 of the female nearly always has an apical marginal fringe, sometimes interrupted medially, behind the prepygidial fimbria. The genus *Sphecodes* currently includes 318 described species and widespread on all continents except Australia, where it is known only from the northeast. *Sphecodes* is distributed in the Holarctic Region north to the subarctic. To the south the genus extends through the Antilles and continental tropics south to southern Chile and Argentina (at least to the province of Neuquén). In the Eastern Hemisphere, *Sphecodes* is distributed in the Afrotropical Region, Southeast Asia, and the Indo-Australian Region (Michener 2007; Ascher & Pickering 2014). About 50 species are known from the Palaearctic Region (Warncke 1992; Bogusch & Straka 2012) including Japan, where many species have been described by Tsuneki (1983, 1984, 1986), but little has been known about the *Sphecodes* fauna of Russia (Pesenko 2007).

Russia or the Russian Federation extends over a vast expanse of Eurasia from the Baltic Sea to the Pacific Ocean. The Russian Far East includes 8 administrative regions of the Russian Federation (Fig. 1) with 3.1 millions sq. m² (18 % of Russian Federation territory) (The National Atlas of Russia 2008). Among the bees from Asian part of Russia, *Sphecodes* is one of the least-known genera. Only eight *Sphecodes* species have been recorded from the Russian Far East (Primorskiy Territory and Kamchatka) so far (Cockerell 1924; Alfken 1929; Blüthgen 1935; Proshchalykin & Kupianskaya 2005; Quest 2009; Proshchalykin & Quest 2009; Proshchalykin 2012). Based on a

- Head strongly transverse, 1.15–1.20 times wider than long (Fig. 90). Scutum densely punctate, with punctures mostly a puncture or less diameter apart (Figs 98, 101). Scutellum densely punctate, with confluent punctures. T2 with a few punctures on basal half 14
- 14. Scutum very densely punctate, with confluent punctures (areolate) (Fig. 101). Terga usual wholly black, rare T1 dark red. Gonostylus as in Figs 31, 32. Body length 7.5–8.5 mm *S. laticaudatus* Tsuneki
- Scutum sparsely punctate, medially with punctures about a puncture diameter apart (Fig. 98). T1–T3 usual red, rarely terga entirely black.—Gonostylus as in Figs 27, 28. Body length 6.0–9.0 mm *S. ferruginatus* Hagens
- 15. Scutellum sparsely punctate, with punctures (at least in middle) more a puncture diameter apart. T2 finely, but distinctly punctate (Fig. 108). Gonostylus trapezoidal (Figs 35, 36).—Felt-like areas on flagellomeres cover more 3/4 underside of flagellomere (Fig. 9), sometimes cover all underside. Scutum sparsely punctate, medially with punctures mostly 1–4 diameters apart (Fig. 102). Body length 4.0–6.0 mm *S. miniatus* Hagens
- Scutellum densely punctate, mostly with confluent punctures. T2 with a few punctures on basal half (Fig. 107). Gonostylus not trapezoidal 16
- 16. Gonostylus long, as in Figs 41, 42.—Head transverse, 1.1 times wider than long. Felt-like areas on flagellomeres cover 3/4–4/5 underside of flagellomere (Fig. 12). Scutum with relatively dense punctures generally about 1 puncture diameter apart but medially often up to 2 diameters apart. Body length 5.5–7.0 mm *S. okuyetsu* Tsuneki
- Gonostylus short, another form 17
- 17. Felt-like areas on flagellomeres (from F4) cover about 1/3–1/2 underside of flagellomere, rare up 3/4 on last flagellomeres (Fig. 6). T1–T3 red or rare dark red. Body length 5.0–7.0 mm *S. hyalinatus* Hagens
- Felt-like areas on flagellomeres (from F4) cover more than 3/4 underside of flagellomere, on distal flagellomeres often covering the entire underside (Fig. 20). Terga wholly black or apical margins of terga with dark red. Body length 6.0–7.0 mm *S. tanoi* Tsuneki

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