



## New and little known bees of the genus *Colletes* Latreille 1802 (Hymenoptera: Colletidae) from Central Asia

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### Abstract

In addition to a previously published study about Central Asian *Colletes* bees we here further report on nine rarely collected and little known species. Now 85 species of *Colletes* are known from this region with three of them recorded for the first time: *C. asiaticus* Kuhlmann 1999, *C. iranicus* Noskiewicz 1962 and *C. succinctus* (Linnaeus 1758). *Colletes pseudomirabilis* sp. nov. is described from Turkmenistan.

**Key words:** taxonomy, new species, fauna, Palaearctic region.

### Introduction

The available information on *Colletes* bees of Central Asia (Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan) have recently been summarized (Kuhlmann & Proshchalykin 2013a; Proshchalykin & Kuhlmann 2013) based on a comprehensive study of specimens in various collections. Thus, it came as a surprise when additional unstudied material was discovered in the collection of the Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (ZISP), including a number of rarely collected and remarkable species. To complete the study on Central Asian *Colletes* we here report additional records of nine little known species with one species described as new and three recorded from Central Asia for the first time bringing the total number of species known from this region to 85 (Kazakhstan—53, Uzbekistan—30, Kyrgyzstan—34, Turkmenistan—40, Tajikistan—51).

### Materials and methods

Terminology for the description of species is based on Michener (2007) for general morphology. Puncture density is expressed as the relationship between puncture diameter ( $d$ ) and the space between them ( $i$ ), such as  $i = 1.5d$  or  $i < d$ . The following abbreviations were used for morphological structures: T—metasomal tergum, S—metasomal sternum, Bl—body length. Body length was measured from the vertex to the apex of the body. The definition of species groups in *Colletes* follows Noskiewicz (1936) and Kuhlmann *et al.* (2009).

Acronyms for collections from which specimens were borrowed or are deposited are as follows:

RCMK—research collection of M. Kuhlmann, London, UK;

ZISP—Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (S. Belokobylskij, Yu. Astafurova);

Hard brackets are used when information is added to specimen label information (e.g. geographical coordinates). Due to frequent misidentifications of *Colletes* species particularly in older publications general distribution data is entirely based on specimens checked by the first author. New distribution records are marked with an asterisk (\*).

as both share the principle shape of S7, gonostylus, slightly emarginate T7 and the densely, finely but distinctly punctate terga. The male of *C. pseudomirabilis* can easily be recognized by the characteristic shape of S7 (Fig. 1d) in combination with the pilosity and punctuation of T1–2 (Fig. 1b).

Description.

**Female.** Unknown.

Male. BL = 9.0 mm. Head. Head slightly wider than long. Integument black except part of mandible dark reddish-brown. Face densely covered with long, white, erect hairs. Malar area medially about 2/3 as long as width of mandible base, finely striate. Antenna black, ventrally yellowish-brown. Mesosoma. Integument black. Mesoscutal disc between punctures smooth and shiny; disc very sparsely punctate ( $i > 5d$ ) with small punctures. Scutellum anteriorly impunctate but with dense punctuation apically, surface smooth and shiny. Mesoscutum, scutellum, metanotum, mesepisternum and propodeum covered with long, white erect hairs (Fig. 1a). Wings. Hyaline; wing venation yellowish-brown. Legs. Integument dark reddish-brown. Vestiture white. Metasoma. Integument black except depressed apical tergal margins yellowish translucent (Fig. 1b). T1 on its anterior 2/3 densely covered with white short, appressed hairs and entire T1 sparsely beset with much longer erect hairs; T2 with broad basal hair band; discs of T2–4 covered with very fine and short erect greyish hairs that are hardly visible but make the discs appear slightly greyish while the sculpture of the terga is still visible; apical tergal hair bands broad (Fig. 1b). T1 apically distinctly depressed, following terga less so. T1 with very dense and fine punctuation ( $i < 0.5d$ ), between punctures smooth and shiny; punctuation on following terga successively finer and indistinct (Fig. 1b); T7 apically slightly emarginate. Terminalia. Genitalia and S7 as illustrated (Figs. 1c–d).

**Type material** (1 specimen). Holotype, male, Turkmenistan: Badkhyzkii Nature Reserve, Eroilanduz Lake [61°50'E 35°40'N], 8.V.1990, S. Belokobylskij (ZISP).

**Etymology.** The species name highlights the morphological similarity with *C. mirabilis*.

**General distribution.** Only known for the type locality in Turkmenistan.

**Floral hosts.** Unknown.

## Acknowledgements

We thank S.A. Belokobylskij and Yu.V. Astafurova (ZISP) for loans of material. Yu.N. Danilov (Institute of Systematics and Ecology of Animals, Russian Academy of Sciences, Novosibirsk, Russia) kindly forwarded *Colletes* specimens from Russia to London. A.S. Lelej (Institute of Biology and Soil Science, Russian Academy of Sciences, Vladivostok, Russia) made valuable comments on the manuscript. The work of MYP was supported by President grant for government support of young Russian scientist of the Russian Federation (grant number MK–411.2013.4) and President grant for government support of the Leading Scientific Schools of the Russian Federation (grant number HIII–150.2014.4), the Russian Funds for Basic Research (grant numbers 14–04–00649, 14–34–50002), and the Far Eastern Branch of the Russian Academy of Sciences (grant numbers 12–III–A–06–074, 12–I–II–30–03, 12–I–OBH–02, 12–III–A–06–069, 14–III–B–06–019).

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