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A new species of *Triepeolus* (Hymenoptera: Apidae), with comments on *T. utahensis* (Cockerell) and *T. melanarius* Rightmyer

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Abstract

Triepeolus matildae Rightmyer, **sp. nov.**, from Mexico (Baja California) and USA (California) is described and both genders are differentiated from the closely related species *T. utahensis* (Cockerell) using morphological characters. The synonymy of *T. utahensis* and *T. heterurus* was established in Rightmyer (2008); however, the younger name was used in that treatment, an error that is corrected herein. Males of both *T. matildae* and *T. utahensis* are additionally differentiated from *T. melanarius* Rightmyer, which is morphologically similar in that gender only. DNA barcoding evidence supporting the recognition of the new species is additionally presented.

Key words: Bee, Anthophila, Epeolini, Nomadinae

Introduction

The purpose of this paper is to describe a new species of the cleptoparasitic bee genus *Triepeolus* Robertson that is morphologically similar to *Triepeolus utahensis* (Cockerell). The latter species was synonymized under its junior synonym, *Triepeolus heterurus* Cockerell & Sandhouse, in Rightmyer (2008); herein, we draw attention to this error and correctly order the synonymy of the two species epithets with *T. heterurus* under the older name *T. utahensis*. The new species, *Triepeolus matildae*, **sp. nov.**, was considered to be a variety of *T. utahensis* in Rightmyer (2008: 70), based on only four females from Los Angeles County, California, USA, and Ensenada, Baja California, Mexico. In the past three years an additional four females and two males of *T. matildae* were collected at several localities in San Diego County, California, USA, by KJH. Specimens of *T. utahensis* were collected at overlapping times and, in one case, at the same locality and collecting event as *T. matildae*. The DNA barcoding data and distinctive morphological characteristics of the new species lend support for the recognition of *T. matildae* as a species separate from *T. utahensis*.

Material and methods

This paper is part of ongoing research on the taxonomy of *Triepeolus* and follows the same format, materials, and methods as Rightmyer (2008), except that specimen repository codes are used herein following Evenhuis (2014). Special terminology used in the descriptions is explained in Rightmyer (2008: 7–10, Fig 1). Photomicrographs included in this treatment were taken with a Canon EOS Rebel T3i camera and Leica M125 microscope, and were processed using Zerene Stacker.

Genomic DNA data were obtained from four specimens of *Triepeolus matildae*, five specimens of *T. utahensis*, and five specimens of *T. melanarius*, all of which were collected in southern San Diego County, CA, by KJH and identified prior to DNA sampling. Vouchers of *T. matildae* are deposited in the AMNH, SDMC, and UCRC (see

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