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Two new species of *Halictophagus* (Strepsiptera, Halictophagidae) from the Dominican Republic

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Abstract

Halictophagus trigonodontos Cook, n. sp. and *Halictophagus dominicus* Cook, n. sp. are described from the Dominican Republic. The stout and heavily-sclerotized mandibles of *H. trigonodontos* are unusual for the genus. The genus *Halictophagus* and the subfamily Halictophaginae have previously been characterized as having non-sclerotized mandibles. However, *H. trigonodontos* and *H. dominicus* have sclerotized mandibles, as do other previously described *Halictophagus* species. The subfamily Halictophaginae, including genera *Halictophagus* and *Stenocranophilus*, can still be separated from Coriophaginae by not having a head capsule with sulci and sutures as is found in Coriophaginae.

Key words: taxonomy, Halictophaginae, *Coriophagus*

Introduction

Halictophagus Curtis, 1831 is the second most speciose genus in Strepsiptera, after *Stylops* Kirby, 1802. There are 97 valid *Halictophagus* species among the 593 described strepsipterans. *Halictophagus* species are found on all continents except Antarctica and include parasitoids of species in the families Aphrophoridae, Cicadellidae, Cercopidae, Delphacidae, Derbidae, Dictyopharidae, Eurybrachyidae, Flatidae, Jassidae, Lophopidae, Membracidae, and Tropiduchidae (Tribull and Cook 2011). In the New World, there are 25 species with distributions ranging from Saskatchewan, Canada for *Halictophagus bidentatus* Bohart, 1941 and *Halictophagus mackayi* (Bohart, 1937) in the North to Nuble, Chile for *Halictophagus chilensis* Hofmann, 1965 in the South. The two species described herein are the only Caribbean species other than *Halictophagus insularum* (Pierce, 1908) which has been reported from Granada (Pierce 1908).

The family Halictophagidae is divided into five subfamilies, Blattodeaphaginae, Coriophaginae, Dipterophaginae, Halictophaginae, and Tridactylophaginae. These subfamilies coincide with differences in host utilization and morphology. Blattodeaphaginae is only known from females, all of which parasitize cockroaches. Dipterophaginae is the only halictophagid subfamily with six-segmented antennae and are parasites of Diptera, the only strepsipteran group to parasitize that order. All other halictophagids with known males have seven-segmented antennae but only Tridactylophaginae is limited to one flabellum, arising from segment three. Members of Coriophaginae and Halictophaginae have multiple flabella. All known hosts of species in Tridactylophaginae are in the orthopteran family Tridactylidae. Morphologically, the characters that separate Coriophaginae and Halictophaginae are minor. Kathirithamby (1992) used the character of having sclerotized mandibles and being generally large to identify Coriophaginae as opposed to having non-sclerotized mandibles and being smaller to identify Halictophaginae. Previously, Kathirithamby (1989) used the same characters found in her 1992 key and also included the characters of Coriophaginae having a head capsule with recognizable regions and Halictophaginae having a simple head capsule. Kinzelbach (1978) used larger size ($> 2.5\text{mm}$) and having a head capsule with sulci and sutures to identify Coriophaginae as compared to Halictophaginae being a smaller size ($< 2.5\text{mm}$) and having a simple head capsule. Coriophaginae utilize Heteroptera in the families Coreidae and Pentatomidae as hosts, while Halictophaginae use several families of Auchenorrhyncha. The subfamily