

Investigation of taxonomically important morphological features of endoparasitic bat flies of the subfamily Ascodipterinae (Diptera: Streblidae) by scanning electron microscopy

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Abstract

Endoparasitic dealate females of *Ascodipteron* and an undescribed genus of Ascodipterinae are examined by scanning electron microscopy. The unique morphology of the head and mouth parts and terminal segments are displayed and discussed. Prior reports have focused only on details observable with light microscopy. The taxonomic position of members of the subfamily Ascodipterinae relative to the Old World families of Streblidae and Nycteribiidae is briefly discussed in light of previously published molecular information.

Key words: *Ascodipteron*, bat flies, Streblidae, Nycteribiidae, SEM

Introduction

Diptera of the family Streblidae are parasitic on bats and all species are viviparous. Ectoparasite collections from bats in China and Vietnam were provided to the authors for study. Among them were species belonging to the streblid subfamily Ascodipterinae. Female members of the Ascodipterinae are endoparasitic on bats and species occur in tropical and subtropical regions of Africa, the Middle East, and through Southeast Asia to Queensland, Australia (Adensamer 1896; Banks 1911; Muir 1912; Jobling 1939; Maa 1965, 1971; Theodor 1968, 1973; Advani & Vazirani 1981). The life cycle of these viviparous parasites was described first by Muir (1912). Males are rarely encountered and have been described for only two of the 18 recognized species. Males collected rarely on bat hosts are possibly attempting to locate females for mating; however, their mating behavior has never been documented.