

The placement of *Engiscaptomyza*, *Grimshawomyia*, and *Titanochaeta*, three clades of endemic Hawaiian Drosophilidae (Diptera)

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Abstract

Based on a combination of molecular and morphological characters, two endemic Hawaiian genera, *Titanochaeta* Knab and *Grimshawomyia* Hardy, are transferred to subgenera within the genus *Scaptomyza* Hardy as is the *Drosophila* subgenus *Engiscaptomyza* Kaneshiro. Replacement names for three preoccupied species, *Scaptomyza* (*Titanochaeta*) *neoevexa* O'Grady et al., **nom. nov.** (for *Titanochaeta evaza* Hardy), *S.* (*Titanochaeta*) *neokauaiensis* O'Grady et al., **nom. nov.** (for *Titanochaeta kauaiensis* Hardy), and *S.* (*Titanochaeta*) *neosilvicola* O'Grady et al., **nom. nov.** (for *Titanochaeta silvicola* Hardy), are proposed. This brings the total number of described species in the genus *Scaptomyza* to 272, of which 141 are endemic to the Hawaiian Archipelago. In comparison, the genus *Drosophila* contains 368 species endemic to the Hawaiian Islands. Keys for the identification of the Hawaiian subgenera of *Scaptomyza* and species of *Engiscaptomyza*, *Titanochaeta*, and *Grimshawomyia* are also included.

Key words: Drosophilidae, Hawaiian Islands, *Titanochaeta*, *Grimshawomyia*, *Scaptomyza*, *Engiscaptomyza*, Hawaiian *Drosophila*

Introduction

The Hawaiian Drosophilidae is an impressive radiation of an estimated 1,000 species (Kaneshiro 1997) which have traditionally been placed in a total of nine genera (Hardy 1965). Based on a variety of morphological characters, Throckmorton (1966) recognized two major lineages: "drosophiloids" and "scaptomyzoids." Each lineage was initially composed of a number of genera, subgenera, and species groups. For example, the drosophiloid lineage contained all members of the genus *Drosophila* Fallén, 1823 endemic to