



A new genus and new species of metalmark moths (Lepidoptera: Choreutidae) from Costa Rica

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Abstract

Alasea, new genus, is described and illustrated. As currently defined, *Alasea* is monotypic with the single species *A. corniculata*, **n. sp.**, from Heredia, Limón, and Puntarenas provinces in Costa Rica. The new genus is assigned to the subfamily Choreutinae based on morphological and molecular data. As in other choreutines, *Alasea* has a bluntly pointed forewing and hindwing (in Brenthiinae the wings are obtuse); the basal segment of the labial palpus is parallel-sided (in Brenthiinae it is narrowed basally); and the basal flagellomeres of the antenna are heavily scaled (in Brenthiinae such scaling is never present). The immature stages and the biology of *A. corniculata* are unknown. Additionally, the terminology and homology of genitalic characters used in descriptions of Choreutidae are reviewed, and suggestions for more consistent usage are provided.

Key words: *Alasea corniculata*, biodiversity, Brenthiinae, Choreutinae, microlepidoptera, Neotropical

Introduction

Metalmark moths (Choreutidae) are a little known microlepidopteran family with about 406 described species in 19 genera (Rota 2003). Although choreutids are found in all biogeographic regions, they are most diverse in the New and Old World tropics, and as suggested by extensive sampling within Costa Rica, much of that diversity is still unknown. About 40% of Costa Rican choreutid species represented in collections worldwide are undescribed (Rota 2003).

Over the past two decades, two large-scale projects have been conducted in Costa Rica focusing on documenting the biodiversity of this small Central American country: Dan Janzen's caterpillar-rearing project in the Area de Conservación Guanacaste (Janzen and Hallwachs 2008) and the Arthropods of La Selva Project (ALAS) (Colwell and Longino 2008). While the former is ongoing, the latter project involved an inventory of various insect groups at the La Selva Biological Station reserve and the adjacent Braulio Carrillo National Park from 1991 to 2005. As a result of these projects, many new taxa have been discovered and described (e.g., Brown and Nishida 2003, Erwin 2004), and our understanding of arthropod diversity has grown significantly.

In this paper I describe a new monotypic genus from Costa Rica. Specimens were first collected during the ALAS project, and these were assigned provisionally to *Caloreas* Heppner. However, further examination of their adult morphology and molecular markers shows that this species requires placement in a new genus. Problems involving the homology of certain genitalic characters within Choreutidae are discussed in the section that follows. There is some confusion as to which terms should be applied to what structures due to the use of different terms for the same structure by different (and sometimes even the same) authors. Based on definitions of Klots (1970), I provide a brief review of widely used terms and suggest which terms may be most appropriate for the structures in question in Choreutidae.