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## Description of the natural history and immature stages of *Postplatyptilia caribica* Gielis in Puerto Rico (Lepidoptera: Pterophoridae)

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### Abstract

Observations of the life history of a plume moth, *Postplatyptilia caribica* Gielis are presented along with an adult diagnosis and descriptions of the final instar larva and pupa. The species was previously known only from two female specimens. Illustrations are provided for the adults and immatures, including both male and female genitalia. Morphological characters of the adults and immatures are discussed and compared with other members of the tribe Platyptiliini. Identification of adults and immatures is especially important because one of the larval hostplants, *Gesneria pauciflora* Urb., is a threatened endemic species of Puerto Rico. The plant family Gesneriaceae is a new addition to the known plant families used by Pterophoridae.

**Key words:** *Amblyptilia*, Caribbean, chaetotaxy, endemic species, *Gesneria pauciflora*, Gesneriaceae, *Lantanophaga*, larvae, morphology, Pterophoroidea, pupae

### Resumen

Se presentan observaciones de la historia de vida de la palomilla *Postplatyptilia caribica* Gielis, junto a un diagnóstico de la fase adulta y una descripción de la última fase instar larval y pupa. La especie era conocida anteriormente a partir de dos ejemplares de hembra únicamente. Se proporcionan ilustraciones para la fase adulta y estadios inmaduros, incluyendo la genitalia de macho y hembra. Los caracteres morfológicos de los adultos e inmaduros son discutidos y comparados con otros miembros de la tribu Platyptiliini. La identificación de adultos e inmaduros es de suma importancia, ya que la planta hospedera de la larva, *Gesneria pauciflora* Urb., es una especie endémica y amenazada de Puerto Rico. La familia Gesneriaceae es un nuevo registro de plantas hospederas hasta ahora conocidas y utilizadas por Pterophoridae.

### Introduction

Pterophoridae, commonly known as plume moths, are recognized by the T-shaped resting posture of adults and the lobed or divided wings of most genera. Worldwide there are over 1,136 species in 89 genera (Gielis, 2003) with more than 200 additional species described in recent reviews (Gielis 2006, 2011). Knowledge of the Puerto Rican fauna is incomplete, with only 21 species recorded (Table 1) thus far. Of these, five were first reported by Möschler (1890), including four new species descriptions. Another five species were recently described (Bigot and Etienne 2009; Gielis 1999, 2006). In addition to literature records, photographs available online (MPG 2014) indicate additional species present. However, most of these need confirmation with genitalia dissection for accurate determination.

Larval host associations are known for 15 of the 21 Pterophoridae from Puerto Rico. Worldwide, about 39% of the known pterophorid host plant species belong to the family Asteraceae and 22% to various families within the order Lamiales, with a total of 70 hostplant families recorded (Matthews and Lott 2005). Within the order Lamiales, the family Gesneriaceae represents a new addition to the known plant families used by Pterophoridae.

of *Postplatyptilia huigraica*. We thank Liza García and José Fumero for their help in field, and Orlando Acevedo for *G. pauciflora* habitat and flower pictures. Thanks are also due to Montana Atwater and Christian Salcedo, and E. Meléndez-Ackerman for logistic assistance in examining material and for constructive comments on this manuscript. We likewise appreciate the helpful comments of two anonymous reviewers.

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