Zootaxa 4028 (4): 511–526
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.4028.4.3
http://zoobank.org/urn:lsid:zoobank.org:pub:1802EBC9-4A41-4AA4-A0ED-75A6040917EA

Three new genera and three new species of Lasiopteridi (Diptera: Cecidomyiidae) on Rubiaceae from Guadeloupe, French West Indies, and a key to genera of Neotropical Lasiopteridi unplaced to tribe

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Abstract

Three new genera of Lasiopteridi (Diptera: Cecidomyiidae), *Faramitella* Gagné, new genus, *Anapeza* Gagné, new genus, and *Pellacara* Gagné, new genus, each with one new species, are described. The new species are from leaf galls on Rubiaceae collected in Guadeloupe, F.W.I.: *Faramitella planicauda* Gagné, new species, was reared from *Faramea occidentalis* (L.) A. Rich.; *Anapeza tumida* Gagné, new species, and *Pellacara postica*, new species, were both reared from *Psychotria mapourioides* DC. The three new genera belong to Lasiopteridi but are unassigned to tribe. A key to the adult stage of these and 23 other Neotropical genera of unplaced Lasiopteridi whose adults are known is provided.

Key words: Lasiopteridi, *Faramea*, *Psychotria*, gall midges, Neotropical

Introduction

The majority of the known cecidomyiine fauna of the Neotropical Region bears little resemblance to that of the Holarctic Region, which is the basis for much of the tribal classification of the subfamily now in use (Gagné 1994). It is also true that much less is known of the Neotropical versus the northern Hemisphere gall midges (Gagné 2007). Partly because of these reasons, 24 previously described genera of Neotropical Lasiopteridi and the three new genera described here cannot be assigned to any available tribe (Gagné & Jaschhof 2014). It is further apparent that most of those genera are not closely related. Some display features rarely found in the Holarctic plant-feeding Lasiopteridi, such as short ovipositors and discrete female cerci. Some genera show various reductions, such as shorter palpi, smaller eyes, a short R_5 wing vein, and fewer setae on the abdominal sclerites, including the loss of trichoid sensilla. Pupae and larvae are variously modified also. Pupal characters, mainly the head armament used to exit galls, are presumably adaptive and greatly variable even in close species (Russo 2008; Gagné and Moser 2013), but larval characters as they become better known may prove more dependable for showing generic relationships.

The three new monotypic genera are dissimilar from one another and distinct also from *Apodiplosis* Tavares (1922), the only other genus of Lasiopteridi known to occur on Neotropical Rubiaceae. To place the new genera in some context, a key to adults is presented to the 26 genera of unplaced Lasiopteridi for which adults are known.

The three new species described here are all from leaf galls of Rubiaceae. One is from *Faramea occidentalis* (L.) A. Rich. and the other two from *Psychotria mapourioides* DC. The two plant hosts are fairly widely distributed understory shrubs. *Faramea occidentalis* is known from the Greater and Lesser Antilles, Mexico, Central America, Trinidad and Tobago, and northern South America, and *P. mapourioides* is known in the Lesser Antilles from Montserrat south to St. Vincent and in northern South America (Howard 1989).

Accepted by C. Borkent: 15 Sept. 2015; published: 12 Oct. 2015