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A new species of *Atopophlebia* Flowers (Ephemeroptera: Leptophlebiidae) from western Ecuador with ecological and biogeographic notes on the genus

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Abstract

Atopophlebia pitculya is described from adults and nymphs from western Ecuador. Nymphs were found in leaf packs in small streams that can be intermittent in the dry season. This species along with *Atopophlebia fortunensis* are found associated with the accreted terranes of Central America, the Western Andes of Colombia, and the coastal mountains in north-western Ecuador.

Key words: *Atopophlebia*, Ephemeroptera, Leptophlebiidae, Ecuador, Romeral Fault

Resumen

Se describe *Atopophlebia pitculya* de adultos y ninfas del oeste de Ecuador. Se encontraron las ninfas en paquetes de hojas en quebradas pequeñas que pueden ser intermitente durante el verano (temporada seca). Esta especie y *Atopophlebia fortunensis* están asociadas con los terranes acrecentados de América Central, los Andes occidentales de Colombia, y las montañas costeras del noroeste de Ecuador.

Introduction

Although the Ephemeroptera (Insecta) of South America have become much better known in recent years, some areas of the continent are still poorly explored and are ripe for discovery of new species. The Pacific lowlands of Ecuador (Litoral) between the western range of the Andes and the ocean is one such area. A new *Thraulodes* Ulmer from this region was found in an urban setting along a highly impacted river (Flowers 2009). During an on-going survey of the *aquatic insects* of the Litoral, a striking new species of *Atopophlebia* Flowers was collected at several localities. In one locality subimagos were collected at blacklight and several were reared to the imago.

Atopophlebia to date has been found along the Andes from Costa Rica to northern Argentina. Flowers (1980) described the genus and species *A. fortunensis* from Panamá on the basis of the male imago. Later Flowers (1987) described the female and nymph of *A. fortunensis*, and the species *A. obrienorum* and *A. yarinacocha* from Amazonian Ecuador and Peru, respectively; and Dominguez and Molineri (1996) described *A. flowersi* from the Andes of Bolivia and northwestern Argentina. Of the five known species, three are now known from the nymphal stage.

Materials and methods

Nymphs were collected with a D-frame net from riffles and from leaf packs by washing and sieving. Subimagos were collected at blacklight and kept in large plastic bottles through the following day when most emerged to imago. Specimens are deposited in the following institutions: FAMU, Florida A&M University, Tallahassee, Florida, USA; IFML, Instituto Fundación Miguel Lillo, Tucumán, Argentina; PUCE, Museo de Invertebrados, Pontificia Universidad Católica de Ecuador, Quito, Ecuador.