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Ephemeroptera from the Venezuelan Guyanas' Uplands: Families Leptophlebiidae, Euthyplociidae and Oligoneuriidae

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Abstract

As a continuation of a series of papers to improve the knowledge of the Ephemeroptera fauna of the Venezuelan Guayana's Uplands, an update of the families Leptophlebiidae, Euthyplociidae and Oligoneuriidae in the region is presented. As a result, *Paramaka incognita* sp. nov. is described, the female of *Askola emmerichi* is described for the first time, and the genera *Askola*, *Hydrosmilodon* and *Leentvaaria*, the subgenus *Miroculus (Atroari)* and the species *Miroculus (M.) marauiaae* are recorded for the first time for Venezuela.

Key words: *Askola*, *Hagenulopsis*, *Paramaka*, *Simothraulopsis*, *Fittkauneuria*

Resumen

Como una continuación de una serie de publicaciones destinadas a mejorar el conocimiento de la fauna de Ephemeroptera de las tierras altas del escudo Guayanés venezolano se presentan nuevos datos de las familias Leptophlebiidae, Euthyplociidae y Oligoneuriidae para esa región. Como resultado, se describe *Paramaka incognita* n. sp., se describe por primera vez la hembra imago de *Askola emmerichi* y los géneros *Askola* y *Hydrosmilodon*, el subgénero *Miroculus (Atroari)* y la especie *Miroculus (M.) marauiaae* son registrados por primera vez para Venezuela.

Introduction

The first important contribution to the knowledge of the order Ephemeroptera in Venezuela was done by Traver, in 1943. Since then, only isolated contributions to the mayfly fauna of Venezuela have been published (for details see Segnini *et al.* 2003, and Chacon *et al.*, 2009). Recently, an important collecting effort in the Guyana's Uplands (Gran Sabana region, Bolívar state) was carried out. As a result, new taxa and records of the families Baetidae (Nieto *et al.*, 2011), Caenidae, Leptohiphidae and Coryphoridae (Molineri *et al.*, 2011) have been published, improving greatly the knowledge of the group in this interesting region, describing three new species, and recording for the first time one family, seven genera and 13 species. Previous to these two publications, only eight species, 9 genera and six families were recorded for the region (Chacón *et al.*, 2009). Among the material collected, there were also several taxa belonging to the families Leptophlebiidae, Euthyplociidae and Oligoneuriidae. The new information available for these families is provided here, to complement the information of this order in the region.

New species described:

Caenidae: *Caenis teipunensis*

Leptohyphidae: *Macunahyphes pemonensis*

Leptophlebiidae: *Paramaka incognita*

Besides these species, Derka *et al.* (2009) described *Massartella hirsuta*, and Nieto & Derka (2011, 2012) described *Parakari auyanensis*, *P. churiensis* and *Spiritiops tepuensis* from the same region. In this way, from the original five species recorded from Bolívar State in 2009, the number of species there rose to more than 30. This clearly indicates that Venezuela has an important diversity yet to be discovered.

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