



Three new species of *Baetodes* Needham & Murphy (Ephemeroptera: Baetidae) from Colombia

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Abstract

Three new species of *Baetodes* Needham & Murphy are described based on nymphs collected in the Nariño department, in the southern region of Colombia. The main morphological characteristics that can be used to distinguish them from other species of genus are presented. *Baetodes awa* **sp. nov.**: labrum with subapical row of six setae of subequal length, glossa with two pectinate bladlike setae of the same length, abdominal tubercles present but very small; *Baetodes diasae* **sp. nov.**: labrum with subapical row of 3+13 setae of subequal length, glossa with two pectinate bladlike setae, one gill on each coxa with a small basal projection. *Baetodes pseudospinae* **sp. nov.**: glossa with one pectinate bladlike seta, two tubercles on pronotum and mesonotum, prominent tubercle on metanotum, larger than that of first abdominal segment. Besides the descriptions of the new species a key for the identification of the Colombian species of *Baetodes* is presented for the first time

Key words: mayflies, new species, Nariño, taxonomy, identification

Introduction

The genus *Baetodes* was described by Needham & Murphy (1924) based on material from South America; the original description was based on nymphs from Brazil. To date this genus is composed by 41 species, distributed from Arizona to Argentina (Nieto 2004; Salles & Pollegato 2008). In South America 26 species were described from Argentina, Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela (Domínguez *et al.* 2006; Salles & Pollegato 2008). Of these twenty two species were described based on nymphs, two on adults and two based on both stages, this genus is one of the most species-rich genera of Baetidae in America (Domínguez *et al.* 2006).

In Colombia three species have been reported, *Baetodes levis* Mayo, *Baetodes spinae* Mayo and *Baetodes solus* Mayo, for the Cauca, Cundinamarca, Valle del Cauca and Putumayo departments (Zuñiga *et al.* 2004; Dias *et al.* 2009).

In this paper three new species of *Baetodes* are described and illustrated based on nymphs collected in the Nariño, southern region of Colombia

Material and methods

The descriptions were made in the free program DELTA (DEscription Language for TAXonomy) (Dallwitz 1980). The material examined is deposited in the following institutions: Entomological Museum of the Universidad del Valle, Cali, Colombia (MEUV). Zoological Collection of the Universidad de Nariño, Pasto, Colombia (PSO). Entomological Collection of the Biology Program of the Universidad de Caldas, Manizales, Colombia (CEBUC), Invertebrate Collection of the Centro Universitário Norte do Espírito Santo, Universidade Federal do Espírito Santo, São Mateus, Brasil (CEUNES).