

**First record of *Hydrosmilodon primanus* (Eaton)  
(Ephemeroptera, Leptophlebiidae) from South America**

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**Abstract:** In this paper the first record of *Hydrosmilodon primanus* (Eaton, 1892) from South America is presented. The record of the species is based on nymphs collected in San Sebastián de Mariquita city, Tolima department, Colombia.

**Keywords:** *Hermanella*, mayfly, Colombia.

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**Resumen:** En este trabajo se presenta por primera vez el registro de la especie *Hydrosmilodon primanus* (Eaton, 1892) para Sur América. El registro de la especie es basado en ninfas colectadas en el municipio de San Sebastián de Mariquita, departamento del Tolima, Colombia.

**Palabras clave:** *Hermanella*, efímera, Colombia.

## Introduction

The *Hermanella* complex of the Leptophlebiidae is a group of distinctive mayflies distributed primarily in the neotropics and also extending into the Nearctic region (Domínguez & Flowers 1989). Nymphs are distinguished by possess large maxillary palpi attached at the posterior portion of maxilla, with long and fine setae on the third segment in parallel rows; an expanded labrum nearly as wide as the head capsule; also prominent anterolateral areas of the clypeus, rectangular shape of the mandibles, often with sharp anterolateral angle; and broad and rectangular superlinguae. Moreover, the abdominal postero-lateral spines are present on segments 8 and 9, rarely also 7. Genera described in this group are *Hermanella* (Needham & Murphy, 1924), *Leentvaaria* (Demoulin, 1966), *Traverella* (Edmunds, 1948), *Hylister* (Domínguez & Flowers, 1989), *Needhamella* (Domínguez & Flowers, 1989), *Hydrosmilodon* (Flowers & Domínguez, 1992), *Paramaka* (Savage & Domínguez, 1992), and *Hydrosmastodon* (Polegatto & Batista, 2007).

The genus *Hydrosmilodon* Domínguez & Flowers, 1992 (Ephemeroptera: Leptophlebiidae) was described based on the adult of the type species *Thraulius primanus* Eaton, 1892 found in Mexico. They also described the new species *Hydrosmilodon saltensis* Flowers & Domínguez, 1992, based on the male imago and mature nymph found in Argentina. In the same paper, these authors recorded *H. primanus* from Panama, Costa Rica, and Honduras (Flowers & Domínguez 1992), broadening the range of the species. Currently, two species of the genus are documented from South America: *Hydrosmilodon gilliesae* Thomas & Boutonnet, 2004 and *Hydrosmilodon saltensis*. The first record of the genus from Colombia was during studies in Catugado and Totunendo rivers in the Chocó department, where the species were not determined (Casas-Cordoba et al. 2006).

## Materials and Methods

Specimens were collected in the stream “El Chondo” 5° 11’ 31” N and 74° 53’ 59” W, located in San Sebastián de Mariquita (Tolima),

in the Cordillera Central of Colombia. Species were identified using the key of Domínguez et al. (2006) and the original description made by Flowers & Domínguez (1992). The individuals collected are deposited in the Entomological Collections of the Biology Program of the Universidad de Caldas (CEBUC) in Manizales, Colombia.

## Results and Discussion

In this study, *H. primanus* initially recorded from Central America (Panama, Honduras and Costa Rica) (Flowers & Domínguez 1992) is recorded for the first time from South America based on 10 nymphs collected in El Chondo stream, Tolima department, Colombia (Figure 1). The altitude found in El Chondo is similar to the registered in some streams in Costa Rica (479 m.a.s.l. and 470 m.a.s.l., respectively). The nymphs collected in both sites were found in rocky substrate.

During identification of *Hydrosmilodon* nymphs, it could be noted that they can be confused with nymphs of two genera of the *Hermanella* group (*Leentvaaria* Demoulin, 1966 and *Hydrosmastodon* Polegatto & Batista, 2007). These genera possess slender gills and well developed maxillary tooth (Polegatto & Batista, 2007). However, the genus *Hydrosmilodon* can be separated from these two genera, mainly by the size of apical denticle of the tarsal claw and the anterior margin of labrum distinctly emarginated.

Nymphs of *H. primanus* found in Colombia possess mandibles with setae confined to base, basal segment of labial palpi with well-defined dark markings and the anterior margin of labrum distinctly emarginated. These characters are the same used for Flower & Domínguez (1992) for the identification and determination of the specie.

With this paper we present the first report of this species in South America and the broadening the distribution of the genera in Colombia.

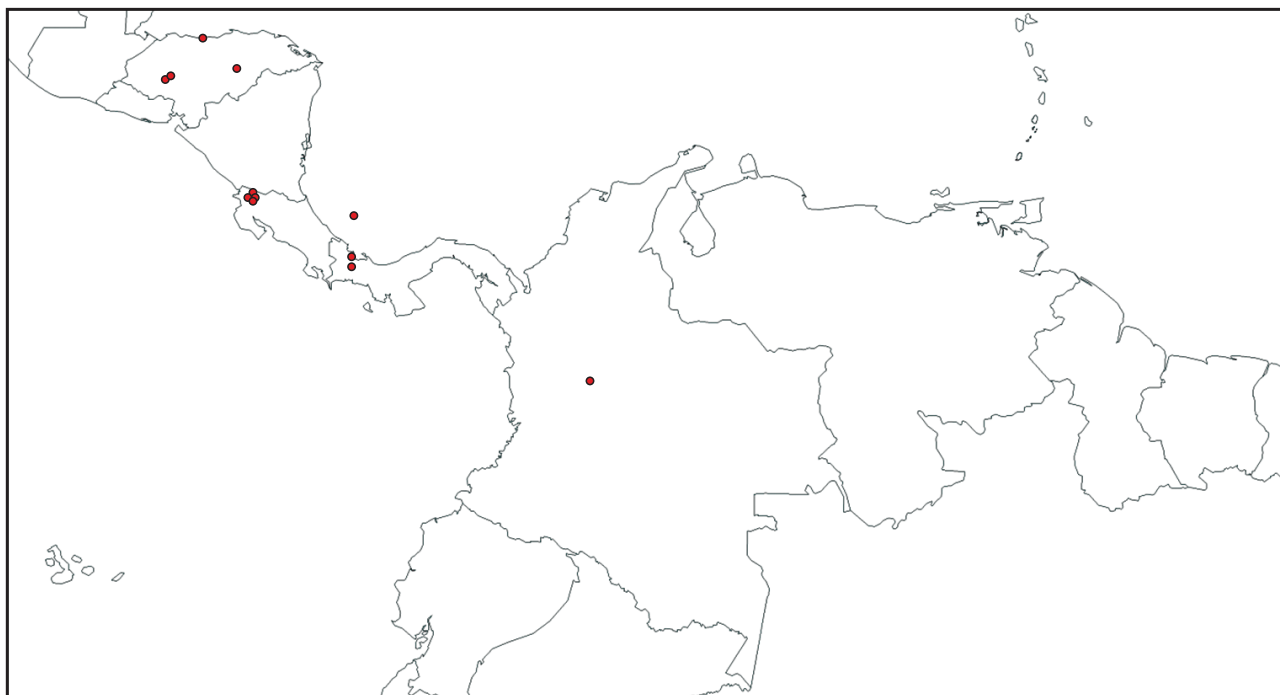


Figure 1. Distribution of *Hydrosmilodon primanus* on America.

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