



### First record of the genus *Lumahyphes* Molineri, 2004 (Ephemeroptera: Leptoxyphidae) from Brazil with description of a new species

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**Abstract.** The genus *Lumahyphes* Molineri, 2004 (Ephemeroptera: Leptoxyphidae) currently is comprised of three species. *Lumahyphes cocal* sp. nov. is described based on material from the state of Roraima in northern Brazil. The new species differs from the other described species by having the following combination of characteristics: greyish wing membrane; terga base color whitish and terga I–III & VIII–X washed completely with gray; dorsal structure of penes rounded; spines of penes S-shaped in lateral view; and apex of spines directed anteriorly.

**Key words:** taxonomy, Macroinvertebrate, South America

#### Introduction

Recently, during a field trip to Roraima, Brazil, some unusual adult mayflies were collected. After returning to the laboratory and consulting literature (Molineri & Zúñiga 2004, Domínguez *et al.* 2006), these adults were identified to the genus *Lumahyphes* Molineri, 2004 (Ephemeroptera: Leptoxyphidae).

The male imagos of *Lumahyphes* are distinguished by the presence of vein CuP on fore wings with basal portion paralleling CuA, both directed towards wing base; hind wings present in males and each with a large costal projection; membranous filaments on mesoscutellum present and relatively long; styliger plate with median projections; three-segmented forceps, with segment I being relatively long; penes almost completely fused, with a pair of long spines originating near the apex; penes with sclerotized lateral margins and basal ring; and two pairs of distal membranous lobes present on apex of penes (Domínguez *et al.* 2006). *Lumahyphes* currently is comprised of three species: *Lumahyphes guacra* Molineri, 2004, recorded from Bolivia and Argentina; *L. pijcha* Molineri, 2004, recorded from Colombia and Bolivia; and *L. yagua* Molineri & Zúñiga, 2004, recorded from Colombia and Peru (Domínguez *et al.* 2006).

Our specimens represent the first record of *Lumahyphes* from Brazil, and they apparently belong to a new species. The aim of the present paper, therefore, is to describe this new species based on the male imagos from the state of Roraima, northern Brazil.

#### Material and methods

The subimagos were captured with light traps and then kept for about twelve hours in empty microtubules, until they moulted to the imago stage, and then they were fixed in 80% ethanol. Specimens were examined with dissecting and compound light microscopes, and identifications were based on careful comparisons to Molineri & Zúñiga (2004) and Domínguez *et al.* (2006). Pictures were taken using a Leica stereomicroscope (MZ205) with a DFC500 digital camera; a series of partially focused images were processed with the program Leica Application Suite to produce final images with enhanced quality. Terms used in the description of the adult thorax are from Kluge (1994), and terms associated with genitalia are from Domínguez *et al.* (2006). The slides of genitalia were prepared with Euparal®, and wings were mounted dry.

The material examined is housed in the Zoological Collection of the Universidade Federal de Roraima (UFRR), Boa Vista, Brazil, in the Zoological Collection Norte Capixaba of the Universidade Federal do Espírito Santo (CZNC), São