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### The nymph of *Anacroneuria payagua* Froehlich (Plecoptera: Perlidae) from Brazil

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#### Abstract

The unknown nymph of *Anacroneuria payagua* Froehlich is described based on the association with reared adult females from streams located in Mato Grosso do Sul State, Brazil. *Anacroneuria guaikuru* Froehlich also occurred in these streams.

**Key words:** Plecoptera, Perlidae, *Anacroneuria*, nymph, Brazil

#### Introduction

*Anacroneuria* is the largest genus of Neotropical stoneflies and in many areas the only Plecoptera present (Froehlich 2002). In Brazil, 71 species have been recorded (Froehlich 2012) and species are widely distributed throughout the country. However, the nymphs of only three species have been formally described, representing a mere 4% of the known species (Avelino Capistrano *et al.* 2011). The three species are *A. otafroehlichii* Righi-Cavallaro & Lecci (2010), *A. debilis* Pictet (Avelino Capistrano *et al.* 2011) and *A. ofaye* Froehlich (Novaes *et al.* 2012). Only the genus *Anacroneuria* with ten species are recorded from the Brazilian state of Mato Grosso do Sul, bordering Bolivia and Paraguay (Righi-Cavallaro & Lecci 2010). One of these species, *A. payagua* was originally described by Froehlich (2007) from the municipalities of Bodoquena and Bonito, both located in the Bodoquena Mountains. In this study, *A. payagua* is recorded for the first time from Córrego Azul, also in the Bodoquena Mountains. The unknown nymph of *A. payagua* is described based on reared associated adults.

#### Study area

Adults of *Anacroneuria* were reared from Salobrinha Stream and collected from the same stream and the Salobra River. Salobrinha Stream, a tributary of the Upper Miranda River Basin, is located on the Bodoquena Plateau. This stream originates at an altitude of ca. 600 m near the western border of plateau and flows for 22 km, traversing through a narrow and deep valley. Adult and nymphal collections were made approximately at 250 m. At an altitude of 170 m the stream joins the Salobra River, a tributary of the Miranda River within the Paraguay River Basin. The Bodoquena Plateau is composed of Precambrian carbonate rocks, with much karst topography including sinkholes and sub-surface flow (Boggiani 1999). Due to the karst nature of the region, Salobrinha Stream has intermittent surface flow for about ½ of its length; composed mainly of alternating riffles and pools. The water is very clear, usually becoming turbid after heavy rains. The vegetation of the area is semi-deciduous forest with typical riparian species that occur in the narrow valley floor (Damasceno, Jr. *et al.* 2000).