



<http://dx.doi.org/10.11646/zootaxa.4028.2.9>

<http://zoobank.org/urn:lsid:zoobank.org:pub:1E8566D8-2E16-4BA1-A3D4-871F116910F1>

A new species of *Parakari* (Ephemeroptera: Baetidae) from Guiana Highlands

TOMÁŠ DERKA^{1,5}, CAROLINA NIETO² & MAREK SVITOK^{3,4}

¹Department of Ecology, Faculty of Natural Sciences, Comenius University, Mlynská dolina, Ilkovičova 6, SK–84215 Bratislava, Slovakia. E-mail: derka@fns.uniba.sk

²CONICET-Instituto de Biodiversidad Neotropical, Facultad de Ciencias Naturales e IML, Miguel Lillo 251. Tucumán, Argentina, UNASUR (4000). E-mail: macarolina_nieto@yahoo.com.ar

³Department of Biology and General Ecology, Faculty of Ecology and Environmental Sciences, Technical University in Zvolen, T. G. Masaryka 2117/24, SK–96053 Zvolen, Slovakia. E-mail: svitok@tuzvo.sk

⁴Eawag, Swiss Federal Institute of Aquatic Science and Technology, Department of Aquatic Ecology, Centre of Ecology, Evolution and Biogeochemistry, Seestrasse 79, 6047 Kastanienbaum, Switzerland

⁵Corresponding author. E-mail: derka@fns.uniba.sk

Abstract. The genus *Parakari* was described from Guiana Highlands in southeastern Venezuela by Nieto & Derka in 2011 for two species inhabiting streams draining isolated, flat-topped table mountains called tepuis. A description of a third representative, *Parakari roraimensis* sp. n., is given here based on material collected from a coldwater stream at the foothills of Roraima-tepui (SE Venezuela). Detailed morphological descriptions of mature nymph and female adult are given. A differential diagnosis and a key to nymphs of the three *Parakari* species are provided.

Key words: mayflies, Pantepui, tepui, taxonomy, Venezuela

The genus *Parakari* was described from Guiana Highlands in southeastern Venezuela by Nieto & Derka (2011). The original description included two species collected in coldwater streams at summits and foothills of isolated flat-topped table mountains called tepuis. *P. churiensis* was collected at Churi-tepui while type-material of *P. auyanensis* came from Auyán-tepui. About one hundred of these tepuis with flat summits are isolated from surrounding tropical lowlands or uplands by vertical escarpments up to 1,000 m high that make them virtually inaccessible. The ecological community of the tepui summits is considered a distinct and discontinuous biogeographical province called Pantepui (Mayr & Phelps 1967). The Pantepui ranges from 1,500 to 3,000 m a.s.l. covering an area of about 5,000 km² (Berry *et al.* 1995). The province is known for its extraordinary diversity and high level of endemism, frequently at the scale of a single tepui or massif (Berry & Riina 2005; McDiarmid & Donnelly 2005; Aubrecht *et al.* 2012; Derka *et al.* 2012).

The genus *Parakari* can be distinguished from the other genera in the family Baetidae by the absence of hind wings, a constriction on segment II of the forceps and by the elongated segment III of the forceps in male imago. At the nymphal stage, gill I is absent; the subapical denticles of the tarsal claws are larger than the other; the maxillae bear four denticles, the first and the fourth denticle with an apically pointed projection; segment II of the maxillary palpi has a concavity and a hole apically; the labium has rectangular paraglossae with three robust and pectinate setae; and segment II of the labial palpi has a well developed distomedial projection.

Here we describe a new species of *Parakari*, found in spring streams at the Roraima-tepui foothills.

Material and methods

Nymphs were collected from all submerged substrates or microhabitats (gravel, stones and woody debris) by using a hydrobiological net. Adults were collected by using an entomological hand net. Some subimagines were captured and reared. Nymphs and adults were associated by the coloration patterns. Material was conserved in 96 % ethyl alcohol. For morphological study, mature larvae and adults were selected and dissected. Dissected parts of the specimens (3 nymphs and 2 female imagoes) were mounted on microscope slides with Canada balsam. Line drawings were made using a camera lucida attached to a microscope Leica DM 1000. Photographs of the female imagoes were taken with a