



<http://dx.doi.org/10.11646/zootaxa.3779.5.9>

<http://zoobank.org/urn:lsid:zoobank.org:pub:0A42DCB0-AAF2-4203-8B9C-A3FD69CDA370>

Two new species and a new record of *Anacroneuria* (Plecoptera: Perlidae) from Central Brazil

PITÁGORAS DA CONCEIÇÃO BISPO^{1,3}, LUCAS DE SOUZA MACHADO COSTA^{1,2}
& MARCOS CARNEIRO NOVAES^{1,2}

¹Departamento de Ciências Biológicas, Universidade Estadual Paulista (UNESP), Assis, SP, Brazil

²Departamento de Biologia, Universidade de São Paulo (USP), Ribeirão Preto, SP, Brazil

E-mails: pcbispo@gmail.com; lucasmcosta@yahoo.com.br; marcosdenovaes@hotmail.com

³Corresponding author. E-mail: pcbispo@gmail.com

Abstract

We studied specimens of *Anacroneuria* (Plecoptera: Perlidae) collected from the region of Goiás City, Goiás State, Brazil. Two new species of *Anacroneuria*, *A. meloi* Bispo & Novaes and *A. corae* Bispo & Novaes are described and *A. debilis* (Pictet) is recorded for the first time from Goiás State.

Key words: aquatic insects, streams, biodiversity, Neotropical

Resumo

Nós estudamos espécimes de *Anacroneuria* (Plecoptera: Perlidae) coletados na região da Cidade de Goiás, Estado de Goiás. Duas novas espécies de *Anacroneuria*, *A. meloi* Bispo & Novaes e *A. corae* Bispo & Novaes são descritas e *Anacroneuria debilis* (Pictet) é registrada pela primeira vez no Estado de Goiás.

Palavras chave: insetos aquáticos, riachos, biodiversidade, Neotropical

Introduction

Anacroneuria dourada Jewett and *A. galba* Jewett (Jewett 1960) were the first two species of Plecoptera described from Central Brazil (Goiás State). However, their descriptions were inadequate and the types apparently lost. More recently, two species of *Tupiperla* (Gripopterygidae) (Froehlich, 1998; Bispo & Froehlich, 2007), three of *Kempnyia* (Perlidae) (Bispo & Froehlich, 2004a) and three other species of *Anacroneuria* (Perlidae) (Bispo & Froehlich, 2004b) were recorded from Goiás State; six of these were described as new species. Additionally, unidentified species of the genera *Gripopteryx* (Gripopterygidae) and *Macrogynoplax* (Perlidae) represented only by immatures or by females were noted (Bispo *et al.*, 2002). In this paper, specimens of three species of *Anacroneuria* from Goiás State were studied, two of represent new species and are described below. Comments regarding the third species, *A. debilis* (Pictet, 1841) is also given.

Material and methods

The specimens studied were collected by A. S. Melo, V. G. Ferro, C. B. Pizza and F. Silveira at Fazenda Ferreirinha (altitude 504 msl, 15°39'39"S, 50°12'04"W), Goiás City (Cidade de Goiás) Municipality, Goiás State, Central Brazil. The specimens studied are deposited in the Entomological Collection of the Laboratório de Biologia Aquática (UNESP, Assis). For identification, the genitalia of males were cleared using KOH. The specimens were

Remarks. The penial armature of *A. corae* is similar to *A. toriba* Froehlich (Froehlich, 2002; 2010). However, *A. corae* is smaller and has a wing with less pigmented spot forming a window. Additionally, the female subgenital plate is 4-lobed (bilobed in *A. toriba*) and has a less elongated egg.

Etymology. The patronym honors Cora Coralina, pseudonym of Ana Lins dos Guimarães Peixoto Bretas (1889–1985), who was an important poet born in Goiás City (Goiás State), region where the specimens were collected.

Acknowledgements

The authors thank A.S. Melo for donation of specimens; PROTAX-CNPq (Taxonomy Training Program, National Council for Scientific and Technological Development, number 562203/2010-9) for fellowship to MCN and for financial support; PCB thanks CNPq (numbers 301652/2008-2 and 307577/2011-2) and LSMC thanks CAPES for the fellowships. The Laboratory of Aquatic Biology of UNESP (Assis) has received continuous financial support of FAPESP (State of São Paulo Research Foundation, numbers 04/09711-8; 09/53233-7; 2012/21196-8) and CNPq (numbers 473246/2004-0; 477349/2007-2).

References

- Baldin, C., Bispo, P.C. & Novaes, M.C. (2013) New species and records of *Anacroneuria* (Plecoptera: Perlidae) from Rio de Janeiro State, Brazil. *Zootaxa*, 3694 (4), 391–397.
<http://dx.doi.org/10.11646/zootaxa.3694.4.7>
- Bispo, P.C., Froehlich, C.G. & Oliveira, L.G. (2002) Stonefly (Plecoptera) fauna in a mountainous area of Central Brazil: composition and adult phenology. *Revista Brasileira de Zoologia*, 19, 317–323.
<http://dx.doi.org/10.1590/s0101-81752002000500025>
- Bispo, P.C. & Froehlich, C.G. (2004a) *Anacroneuria* (Plecoptera: Perlidae) from Serra da Mesa, Northern Goiás State, Brazil, with descriptions of new species. *Aquatic Insects*, 26, 191–197.
<http://dx.doi.org/10.1080/01650420412331327277>
- Bispo, P.C. & Froehlich, C.G. (2004b) Perlidae (Plecoptera) from Intervalles State Park, São Paulo State, Southeastern Brazil, with descriptions of new species. *Aquatic Insects*, 26 (2), 97–113.
<http://dx.doi.org/10.1080/01650420412331325837>
- Bispo, P.C. & Froehlich, C.G. (2007) Stoneflies (Plecoptera) from northern Goiás State, central Brazil: new record of *Kempnyia oliveirai* (Perlidae) and a new species of *Tupiperla* (Gripopterygidae). *Aquatic Insects*, 29, 213–217.
<http://dx.doi.org/10.1080/01650420701411184>
- Froehlich, C.G. (1988) Brazilian Plecoptera 5. Old and new species of *Kempnyia* (Perlidae). *Aquatic Insects*, 10 (3), 153–170.
<http://dx.doi.org/10.1080/01650428809361324>
- Froehlich, C.G. (2002) *Anacroneuria* mainly from southern Brazil and northeastern Argentina (Plecoptera: Perlidae). *Proceedings of the Biological Society of Washington*, 115 (1), 75–107.
- Froehlich, C.G. (2010) Catalogue of Neotropical Plecoptera. *Illiesia*, 6, 118–205.
- Jewett, S. (1960) The Machris Brazilian Expedition. Entomology: Two new species of *Anacroneuria* (Plecoptera) from Goiás, Brazil. *Contributions in Science. Los Angeles County Museum*, 36, 1–4.
- Novaes, M.C. & Bispo, P. da C. (2014) A new species and notes on Perlidae (Plecoptera) from Paraná and Santa Catarina States, southern Brazil. *Zootaxa*, 3765 (5), 458–468.
<http://dx.doi.org/10.11646/zootaxa.3765.5.4>
- Pictet, F.J. (1841) *Histoire Naturelle Générale et Particulière des Insectes Névroptères. Famille des Perlides. 1. Partie.* J. Kessmann et A. Cherbuliez Genève, 423 pp.
- Zwick, P. (1972) Die Plecopteren Pictets und Burmeisters, mit Angaben über weitere Arten (Insecta). *Revue Suisse de Zoologie*, 78, 1123–1194.
- Zwick, P. (1973) Die Plecopteren-Arten Enderleins (Insecta): Revision der Typen. *Annales Zoologici Warszawa*, 30, 471–507.