

A new tailspot tetra of the genus *Bryconops* (Teleostei: Iguanodectidae) from the lower rio Tapajós basin, Brazil

Cárlison Silva-Oliveira*, André L. C. Canto** and Frank R. V. Ribeiro**

A new *Bryconops* is described from lower rio Tapajós. The new species differs from all congeners by the following combination of features: posterior extension of maxilla not reaching junction of second and third infraorbital bones, 1 or 2 tri- or pentacuspoid teeth on each maxillary bone, 38–41 perforated scales in the lateral line, 24–27 branched anal-fin rays, and a broad dark stripe placed midlaterally on caudal peduncle.

Um novo *Bryconops* é descrito do baixo rio Tapajós. A espécie nova difere de todas suas congêneres pela seguinte combinação de caracteres: margem posterior da maxila não alcançando a junção do segundo e terceiro ossos infra-orbitais, 1 ou 2 dentes tri- ou pentacuspídeos em ambos os ossos maxilares, 38–41 escamas perfuradas na linha lateral, 24–27 raios ramificados na nadadeira anal e uma larga faixa escura posicionada mediolateralmente no pedúnculo caudal.

Introduction

Bryconops is a genus of small-sized tetras currently composed of 23 valid species distributed throughout most of the cis-Andean freshwater drainages of South America (Guedes et al., 2016; Wingert et al., 2018; Silva-Oliveira et al., 2018). Chernoff & Machado-Allison (1999: 359) diagnosed *Bryconops* by three putative synapomorphies: (1) ventral edge of maxilla curving sharply posteriorly, almost 90°, extending to or beyond the quadrate socket of the angulo-articular; (2) antorbital with well-developed infraorbital latero-sensory canal;

and (3) latero-supraorbital sensory canal extending posteriorly onto nuchal scales.

Those authors distinguished two subgenera, *Bryconops* and *Cretochanes*, based on the number of maxillary teeth (none or rarely one in *Bryconops* vs. 1–3 in *Cretochanes*), posterior extension of the maxilla (not reaching junction of second and third infraorbital bones in *Bryconops* vs. reaching junction in *Cretochanes*), and border between second and third infraorbitals (leaving small naked triangle in *Bryconops* vs. squared-off, without naked area in *Cretochanes*). Within *Cretochanes*, Chernoff & Machado-Allison (1999, 2005) also

* Instituto Nacional de Pesquisas da Amazônia, Programa de Pós-Graduação em Biologia de Água Doce e Pesca Interior, Coleção de Peixes. Av. André Araújo, 2936, Caixa Postal 2223, 69060-001 Manaus, AM, Brazil. E-mail: carlison3@gmail.com (corresponding author)

** Instituto de Ciências e Tecnologia das Águas, Universidade Federal do Oeste do Pará, Avenida Mendonça Furtado, 2946, 68040-470 Santarém, PA, Brazil. E-mails: cantoandre@gmail.com (ALCC), fraynner@yahoo.com.br (FRVR)

Literature cited

- Chernoff, B. & A. Machado-Allison. 1999. *Bryconops colaroja* and *B. colanegra*, two new species from the Cuyuní and Caroní drainages of South America (Teleostei: Characiformes). *Ichthyological Exploration of Freshwaters*, 10: 355–370.
- Chernoff, B. & A. Machado-Allison. 2005. *Bryconops magoi* and *Bryconops collettei* (Characiformes: Characidae), two new freshwater fish species from Venezuela, with comments on *B. caudomaculatus* (Günther). *Zootaxa*, 1094: 1–23.
- Chernoff, B., A. Machado-Allison, F. Provenzano, P. Willink & P. Petry. 2002. *Bryconops imitator*, a new species from the Río Caura basin of Venezuela (Teleostei: Characiformes). *Ichthyological Exploration of Freshwaters*, 13: 193–202.
- Eigenmann, C. H. 1912. The fresh-water fishes of British Guiana, including a study of the ecological groupings of species, and the relation of the fauna of the plateau to that of the lowlands. *Memoirs of the Carnegie Museum*, 5: xxii + 578 pp.
- Fink, W. L. & S. H. Weitzman. 1974. The so-called Cheirodontin fishes of Central America with description of two new species (Pisces: Characidae). *Smithsonian Contributions to Zoology*, 172: 1–46.
- Géry, J. 1977. *Characoids of the World*. T.F.H., Neptune City, 672 pp.
- IUCN Standards and Petitions Subcommittee. 2017. Guidelines for using the IUCN red list categories and criteria. Version 13. IUCN, Cambridge, UK & Gland, Switzerland, 108 pp. Downloadable from <http://www.iucnredlist.org/documents/RedList-Guidelines.pdf> (accessed 10 July 2018).
- Guedes, T. L. O., E. F. Oliveira & P. H. F. Lucinda. 2016. A new species of *Bryconops* (Ostariophysi: Characiformes: Characidae) from the upper rio Tocantins drainage, Brazil. *Neotropical Ichthyology*, 14: e150176
- Knöppel, H. A., W. Junk & J. Géry. 1968. *Bryconops (Creatochanes) inpai*, a new characoid fish from the central Amazon region, with a review of the genus *Bryconops*. *Amazoniana*, 1: 231–246.
- Machado-Allison, A., P. A. Buckup, B. Chernoff & R. Royero. 1993. Las especies del genero *Bryconops* Kner, 1858 en Venezuela (Teleostei, Characiformes). *Acta Biologica Venezuelica*, 14: 1–20.
- Machado-Allison, A., B. Chernoff & P. A. Buckup. 1996. *Bryconops humeralis* y *B. vibex*, dos nuevas especies del genero *Bryconops* Kner (1858) para Venezuela. *Acta Biologica Venezuelica*, 16: 43–58.
- Pocewicz, A. & E. Garcia. 2016. Deforestation facilitates widespread stream habitat and flow alteration in the Brazilian Amazon. *Biological Conservation*, 203: 252–259.
- Sabaj, M. H. 2016. Standard symbolic codes for institutional resource collections in herpetology and ichthyology: an online reference. Version 6.5 (16 August 2016). American Society of Ichthyologists and Herpetologists, Washington, DC. Available from <http://www.asih.org> (accessed 17 Jul 2018).
- Silva-Oliveira, C., A. L. C. Canto & F. R. V. Ribeiro. 2015. *Bryconops munduruku* (Characiformes: Characidae), a new species of fish from the lower Tapajós River basin, Brazil. *Zootaxa*, 3994: 133–141.
- Silva-Oliveira, C., A. L. C. Canto & F. R. V. Ribeiro. 2016. Stream ichthyofauna of the Tapajós National Forest, Pará, Brazil. *Zookeys*, 580: 125–144.
- Silva-Oliveira, C., F. C. T. Lima & J. D. Bogotá-Gregory. 2018. A new species of *Bryconops* Kner (Characiformes: Iguanodectidae) from the Rio Maicuru, lower Amazon basin, Brazil. *Zootaxa*, 4514: 372–382.
- Taylor, W. R. & G. C. Van Dyke. 1985. Revised procedures for staining and clearing small fishes and other vertebrates for bone and cartilage study. *Cybiurn*, 9: 107–119.
- Wingert, J. M., J. Chuctaya & L. R. Malabarba. 2018. A new species of *Bryconops* (Characiformes: Iguanodectidae) from the Rio Tapajós basin, Brazil. *Zootaxa*, 4418: 379–387.

Received 31 March 2018
 Revised 23 June 2018
 Accepted 11 April 2019

The whole contribution can be purchased as PDF file.

Availability

Generally all our publications are available as PDF files; full publications as a general rule after the printed version is out of print. If you have questions concerning particular contributions please contact us by e-mail:

pdf@pfeil-verlag.de.

The PDF files are protected by copyright.

The PDF file may be printed for personal use.

The reproduction and dissemination of the content or part of it is permitted.

It is not allowed to transfer the digital personal certificate or the password to other persons.

Prices

Books: Prices are to be found in the catalog.

Articles in journals and single contributions or chapters in books:

10 EURO basic price per order (including the first 10 pages),
and

0.50 EURO per page, beginning with the 11th page.

Page numbers are found in the contents of the publications.

Orders

Use our order form for PDF files or send your order informal per e-mail (pdf@pfeil-verlag.de). The only accepted payment is by credit card. While using the order form for PDF files, your data will be transmitted by secure link (ssl). You also may send the informations informally by e-mail, fax, phone or mail.

Handling

As soon as possible, depending on our business hours and your order, you will receive your PDF file together with the certificate and password by e-mail.

Larger PDF files can be downloaded from our webpage, if necessary.

Your invoice will be sent out by e-mail after we charged your credit card.

To open the encrypted PDF files you have to install your personal certificate after your first order. All PDF files with the same certificate can be opened from that time on.

Dieser Beitrag kann als PDF-Datei erworben werden.

Verfügbarkeit von PDF-Dateien

Prinzipiell sind von allen unseren Publikationen PDF-Dateien erhältlich. Komplette Publikationen in der Regel erst nachdem die gedruckte Version vergriffen ist. Anfragen bezüglich bestimmter Beiträge richten Sie bitte per E-Mail an pdf@pfeil-verlag.de.

Die PDF-Dateien sind urheberrechtlich geschützt.

Ein Ausdruck der PDF-Dateien ist nur für den persönlichen Gebrauch erlaubt.

Die Vervielfältigung von Ausdrucken, erneutes Digitalisieren sowie die Weitergabe von Texten und Abbildungen sind nicht gestattet.

Das persönliche Zertifikat und das Passwort dürfen nicht an Dritte weitergegeben werden.

Preise

Bücher: Die Preise sind dem Katalog zu entnehmen. Zeitschriftenbeiträge und einzelne Kapitel aus Sammelbänden bzw. Büchern:

10 EURO Grundbetrag pro Bestellung (einschließlich der ersten 10 Seiten),
und

0,50 EURO pro Seite ab der 11. Seite.

Den Umfang der Beiträge entnehmen Sie bitte den Inhaltsverzeichnissen.

Bestellungen

Bestellungen sind mit dem PDF-Bestellformular oder formlos per E-Mail (pdf@pfeil-verlag.de) an uns zu richten. Die Bezahlung ist ausschließlich per Kreditkarte möglich. Bei Verwendung unseres Bestellformulars werden die Kreditkartendaten über eine gesicherte Verbindung (ssl) übermittelt. Sie können die Daten aber auch formlos per E-Mail, Fax, Post oder telefonisch übermitteln.

Abwicklung

So bald wie möglich, aber abhängig von unseren Bürozeiten und der gewünschten Bestellung, schicken wir Ihnen die PDF-Datei(en) zusammen mit Ihrem persönlichen Zertifikat und dem zugehörigem Passwort per E-Mail. Größere Dateien bieten wir Ihnen gegebenenfalls zum Herunterladen an.

Der fällige Betrag wird von Ihrer Kreditkarte abgebucht und Sie erhalten die Rechnung ebenfalls per E-Mail.

Um die verschlüsselten PDF-Dateien öffnen zu können, muss bei der ersten Bestellung das passwortgeschützte persönliches Zertifikat installiert werden, welches anschließend auf dem Rechner verbleibt. Alle mit diesem Zertifikat verschlüsselten Dateien können anschließend auf diesem Rechner geöffnet werden.