



<http://dx.doi.org/10.11646/zootaxa.3914.1.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:475FE496-2D30-4B92-935F-13902F1BB464>

New species of *Xiphocentron* Brauer 1870 (Trichoptera: Xiphocentronidae) from Northeastern Brazil

ALBANE VILARINO¹ & ADOLFO R. CALOR²

Universidade Federal da Bahia, Instituto de Biologia, Departamento de Zoologia, PPG Diversidade Animal, Laboratório de Entomologia Aquática - LEAq. Rua Barão de Jeremoabo, 147, campus Ondina, Ondina, CEP 40170-115, Salvador, Bahia, Brazil.

E-mail: ¹albanevilarino@gmail.com; ²acalor@gmail.com

Abstract

Two new species of *Xiphocentron* (Trichoptera: Xiphocentronidae) from Northeastern Brazil are diagnosed, described, and illustrated. *Xiphocentron* (*Antillotrichia*) *kamakan* n. sp. has inferior appendages each with a shape discontinuity (twist) between the first and second articles of inferior appendage, similar to that found in *X. (Antillotrichia) rhamnes* Schmid 1982, *X. (Antillotrichia) serestus* Schmid 1982, and *X. (Antillotrichia) mnesteus* Schmid 1982; however, it can be distinguished from these species by each inferior appendage having two darkly sclerotized spinulose regions ventrally on the basomesal and midmesal margins. *Xiphocentron* (*Antillotrichia*) *maiteae* n. sp. can be differentiated from all other congeners by having the basoventral margin of each inferior appendage strongly produced posterad. A key to males of Brazilian species of *Xiphocentron* is provided.

Key words: aquatic insects, biodiversity, caddisflies, Neotropical, taxonomy

Introduction

Xiphocentronidae was erected by Ross (1949) but synonymized with Psychomyiidae by Edwards (1961) based on larval similarities, being considered at that time as a subfamily Xiphocentroninae of Psychomyiidae. Schmid (1982) reviewed the taxon and resurrected the family status based on species from the Afrotropical, Oriental, and Neotropical regions. In addition to the type genus *Xiphocentron*, two described genera (*Melanotrichia* Ulmer, *Abaria* Mosely) and four new genera (*Proxiphocentron*, *Cnodocentron*, *Machairocentron*, *Drepanocentron*) were included by Schmid (1982) in the family.

Schmid (1982) cited the characters for the family as follows: general structure of genitalia very elongate; tergum IX reduced; preanal appendages robust and very elongate; segment X secondarily open dorsally, closed ventrally, forming a cradle over the aedeagus; the phallic apparatus consisting of a short phallosome and a very slender and elongate cylindrical aedeagus with no endotheca. The adults of the family are generally diurnal and are rarely attracted to light, which partially explains their scarcity in collections (Flint 1968; Schmid 1982).

Currently, the family has seven genera and 174 extant species distributed in Afrotropical, Holarctic, Oriental, and Neotropical regions (Holzenthal *et al.* 2011; Pes *et al.* 2013). The Neotropical genera of Xiphocentronidae (*Xiphocentron*, *Machairocentron*, *Cnodocentron*) can be easily distinguished by the presence on the mesoscutum of a quadrangular anteromesal area delineated by sutures without setal warts (Flint 1996). The Neotropical fauna comprises 55 species in those three genera: *Cnodocentron* (6 species), *Machairocentron* (6 species), and *Xiphocentron* (43 species).

Xiphocentron, which is restricted to the New World, is the largest genus of the family comprising 42 extant species (Pes *et al.* 2013; Morse 2014) and one fossil species (Wichard *et al.* 2006). The genus is usually recognized by the absence of characters that define the other genera. The inferior appendages are not very slender and elongated and do not have a bifid lobe (such as *Machairocentron* has); also, they do not have a band of long setae (such as *Cnodocentron* has) but instead have clusters of short spines on these appendages (Schmid 1982; Flint 1996). Schmid (1982) classified the genus into the following five subgenera: *X. (Glyphocentron)* (2 species), *X.*

References

- Blahnik, R.J., Holzenthal, R.W. & Prather, A.L. (2007) The lactic acid method for clearing Trichoptera genitalia. In: Bueno-Soria, J., Barba-Alvarez, R. & Armitage, B.J. (Eds.), *Proceedings of the 12th International Symposium on Trichoptera*. The Caddis Press, Columbus, Ohio, pp. 9–14.
- Brauer, F. (1870) Über *Xiphocentron*, eine neue Hydropsychidengattung. *Verhandlungen der Kaiserlich-königlichen Zoologischen-Botanischen Gesellschaft in Wien*, 20, 66.
- Calor, A.R. & Mariano, R. (2012) UV light pan traps for collecting aquatic insects. *EntomoBrasilis (Vassouras)*, 5 (2), 164–166.
- Edwards, S.W. (1961) The immature stages of *Xiphocentron mexico* (Trichoptera). *Texas Journal of Science*, 13, 51–56.
- Flint, O.S. Jr. (1968) The Trichoptera (caddisflies) of the Lesser Antilles. *Proceedings of the United States National Museum*, 125 (3665), 1–86.
- Flint, O.S. Jr. (1996) The Trichoptera collected on the expeditions to Parque Manu, Madre de Dios, Peru. In: Wilson, D.E. & Sandoval, A. (Eds.), *Manu: The biodiversity of southeastern Peru*. Washington, DC, Smithsonian Institution Press, pp. 369–430.
- Flint, O.S. Jr., Holzenthal, R.W. & Harris, S.C. (1999a) *Catalog of the Neotropical Caddisflies (Insecta: Trichoptera)*. Ohio Biological Survey, Columbus, Ohio, USA, 239 pp.
- Flint, O.S. Jr., Holzenthal, R.W. & Harris, S.C. (1999b) Nomenclatural and systematic changes in the Neotropical caddisflies (Insecta: Trichoptera). *Insecta Mundi*, 13, 73–84.
- Holzenthal, R.W. & Andersen, T. (2004) The caddisfly genus *Triaenodes* in the Neotropics (Trichoptera: Leptoceridae). *Zootaxa*, 511, 1–80.
- Holzenthal, R.W., Morse, J.C. & Kjer, K.M. (2011) Order Trichoptera Kirby, 1813. In: Zhang, Z.-Q. (Ed.), *Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness*. *Zootaxa*, 3148, 209–211.
- Marlier, G. (1964) Sur trois trichoptères nouveaux recueillis en Amérique du Sud par le Professeur J. Illies. *Bulletin Institut Royal des Sciences naturelles de Belgique*, 40, 1–15.
- Morse, J.C. (2014) Trichoptera World Checklist. Available from <http://www.clemson.edu/cafls/departments/esps/database/trichopt/index.htm> (accessed 24 November 2014)
- Müller, F. (1921) Briefe und noch nicht veröffentlichte Abhandlungen aus dem Nachlass 1854-1897. In: Möller, A. (Ed.), *Fritz Müller: Werke, Briefe und Leben*. G. Fischer, Jena, Germany, pp. 383–642.
- Muñoz-Quesada, F. & Holzenthal, R.W. (1997) A new species of *Xiphocentron* (*Antillotrichia*) from Costa Rica with semiterrestrial immature stage (Trichoptera: Xiphocentronidae). In: Holzenthal, R.W. & Flint, O.S., Jr. (Eds.), *Proceedings of the 8th International Symposium on Trichoptera*. Ohio Biological Survey, Columbus, Ohio, pp. 355–363.
- Pes, A.M., Hamada, N., Nessimian J.L. & Soares, C.C. (2013) Two new species of Xiphocentronidae (Trichoptera) and their bionomics in Central Amazonia, Brazil. *Zootaxa*, 3636 (4), 561–574. <http://dx.doi.org/10.11646/zootaxa.3636.4.4>
- Ross, H.H. (1949) Xiphocentronidae, a new family of Trichoptera. *Entomological News*, 60, 1–7.
- Schmid, F. (1982) La famille des Xiphocentronidae (Trichoptera: Annulipalpia). *Mémoires de la Société Entomologique du Canada*, 121, 1–127.
- Wichard, W., Solórzano Kraemer, M.M. & Luer, C. (2006) First caddisfly species from Mexican amber (Insecta: Trichoptera). *Zootaxa*, 1378, 37–48.