Zootaxa 3059: 47–58 (2011)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Bicornucandona gen. nov., sp. nov. (Crustacea, Ostracoda) from Finegan Springs (Texas, U.S.A.)

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Abstract

A new freshwater ostracod genus, *Bicornucandona* **gen. nov.** and its type species (*Bicornucandona fineganensis* **sp. nov.**) are described from Finegan Springs, Texas, U.S.A. The new genus differs from the related genera in the presence of two horn-like structures on the dorsal margin of the left valve in both sexes. This is also the diagnostic character of the type species. Differences in the structure of the hemipenes and prehensile palps of the male, and the shapes of some other soft body parts also separate this genus from the related species. Taxonomic status of the new genus and species are compared and discussed with both living and fossil relatives.

Key words: Freshwater, spring, taxonomy, distribution, diversity

Introduction

According to Karanovic (2005), there are about 27 recent genera in the subfamily of Candoninae. Although most genera are limited to one or two continents (Karanovic 2006), the species tend to be widely distributed in a variety of aquatic (mostly freshwater) habitats. After re-examining the collection of North American Candoninae from the Smithsonian Museum, Karanovic (2006) reduced the number of species from 66 to 40 within six genera (*Candona* Baird 1845, *Typhlocypris* Vejdovský 1882, (*Pseudocandona* of other authors, see e.g. Gidó 2010), *Eucandona* Daday 1900, *Nannocandona* Ekman 1914, *Paracandona* Hartwig 1899, *Fabaeformiscandona* Krstić 1972), with most (19) species belonging to the genus *Candona*. Of the 40 species, 26 are endemic to North America and 16 are reported from other continents (Karanovic 2006). Considering the paucity of studies on freshwater ostracods of North America, we believe that the number of taxa (particularly at genus and species levels) given above is underestimated. The aim of this study is to describe a new genus (*Bicornucandona* **gen. nov.**) and a new species (*Bicornucandona fineganensis* **gen. nov.**, **sp. nov.**) of limnic Ostracoda from North America.

Material and methods

Site description: Finegan Springs (29º54'067″N – 100º59'924″W), located in the Devils River State Natural Area (Texas Parks and Wildlife Department), is ca. 1 km upstream of Blue Springs (29º53'630″N – 100º59'672″W) located on Dolan Falls Preserve (The Nature Conservancy) and approximately 2 km upstream of Dolan Falls on the upper Devils River (Fig. 1). Finegan Springs is composed of several springs issuing along the base of a limestone bluff and flowing over bedrock directly into Devils River. Blue Spring is composed of a few springs issuing from small cave-like orifices forming a rheocrene type of spring flowing approximately 5 m over bedrock and cobble before emptying into a large marginal backwater pool called Blue Hole which is adjacent to the main river channel of the Devils River. These springs issue from the Edwards-Trinity Aquifer along the western edge of the Edwards

Accepted by R. Matzke-Karasz: 19 Sep. 2011; published: 14 Oct. 2011