Zootaxa 3681 (5): 501–523
www.mapress.com/zootaxa/

Article

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

http://dx.doi.org/10.11646/zootaxa.3681.5.1
http://zoobank.org/urn:lsid:zoobank.org:pub:28BC003C-9F92-4ADE-983D-EC2DEAB94C15

Tanymastigites lusitanica sp. nov. (Crustacea: Branchiopoda: Anostraca) from Portugal, first representative of the genus in Europe

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Abstract

Tanymastigites lusitanica **sp. nov.**, a new species of fairy shrimp, is described from puddles in unpaved roads in the Alentejo region, Portugal. The males of *Tanymastigites lusitanica* **sp. nov.** are readily separated from the rest of the species of the genus by the morphology of antennae, antennal appendages and penes. *T. lusitanica* **sp. nov.** is closely related to *T. perrieri* but differs from it by the presence of a proximal ventrolateral short ridge in the distal segment of the antenna, and by the absence of a big thorn-like outgrowth in the distal lateral "lip" of the basal part of the penis. *T. lusitanica* **sp. nov.** presents a simple lateral branch in the antennal appendage of males, instead of the bifurcated lateral branch present in *T. brteki*, *T. cyrenaica* and *T. mzabica*. The finding of this new species represents the first citation of this genus in Europe. An identification key is provided to separate the males of the different species of the genus.

Key words: fairy shrimp, Anostraca, Tanymastigidae, *Tanymastigites*, new species, Iberian Peninsula, identification key

Introduction

The family Tanymastigidae Brtek was created recently to accommodate the results obtained from morphological and molecular data (Dumont & Negrea, 2002; Weekers *et al.*, 2002), although Brtek (1972) had already proposed the subfamily Tanymastiginae to differentiate the genera *Tanymastix* Simon and *Tanymastigites* Brtek within the family Branchipodidae Milne-Edwards, on the basis of male genitalia and clypeus morphology. Currently, the two existing genera contain four species each, which are distributed exclusively in the Palaearctic (Brtek & Mura, 2000). The genus *Tanymastigites* was known, until now, from Northern Africa and the Arabian Peninsula. *Tanymastigites perrieri* (Daday), described from Tilrhemt, Algeria, has a large distribution in the arid and subdesertic areas of Morocco (e.g., Thiéry, 1986a; Roux & Thiéry, 1988; Kadi Hamman *et al.*, 2011), and it is also known from several sites in Algeria (e.g., Daday, 1910; Gauthier, 1928a; Beladjal *et al.*, 1995a, b) and Tunisia (Gauthier, 1928a). *T. mzabica* (Gauthier) is an Algerian endemic species known from only two localities in the Sahara (Gauthier, 1928b; Beladjal *et al.*, 1995b). *T. cyrenaica* Brtek, the type species of the genus, is known from two distant localities, one in Lybia (Brtek, 1972), and the other in Saudi Arabia (Thiéry, 1996). Finally, *T. brteki* Thiéry, a Moroccan endemic species, was described from several localities in the Middle Atlas (Thiéry, 1986b). A fifth species, *T. jbiletica* Thiéry & Brtek, was initially described from Morocco, but was later synonymized with *T. perrieri* by Belk & Brtek (1997).

In February 2002, during a survey study on large branchiopoda from the temporary ponds in the Parque Natural do Vale do Guadiana, a natural park in the Alentejo (Southeastern Portugal), specimens of a new species of *Tanymastigites* were found in a flooded tire track on the unpaved road that leads to the Azinhal temporary pool (37º45'N, 7º48'W), next to the Mértola–Beja road. Until November 2003, we found individuals of this new taxon at three more sites from the same area, all of them rain pools on unpaved roads near and around temporary pools or ponds which were being sampled within the framework of the above mentioned survey study: Atafona (37º46'N, 7º53'W), Horta do Tio Luís (37º45'N, 7º52'W) and Vale Fresco (37º47'N, 7º48'W), all of them not far from the Mértola–Beja road.

Accepted by M. Alonso: 16 May 2013; published: 25 Jun. 2013