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Erpobdellid leeches (Annelida, Clitellata, Hirudinida) from Tunisia: New records with the description of a new *Trocheta* species

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Abstract

Up to now in Tunisia, freshwater Hirudinida are represented by two mainly haematophagous families: Hirudinidae and Glossiphoniidae, and a predatory one: the family Erpobdellidae. The present study provides new information on the diversity and taxonomy of erpobdellid leeches. Identification was based, in addition to morphological data, on the length of sperm ducts and the lengths of ovisacs in relation to the neurosomite (ns) and on the shape and size of the male atrium. Five taxons are found. Two subspecies are reported for the first time in the country: *Dina punctata punctata* Johansson, 1927 and *Dina punctata maroccana* Nesemann and Neubert, 1994. Tunisian populations of two species, *Erpobdella testacea* (Savigny, 1820) and *Trocheta africana* Nesemann and Neubert, 1994, are described, with records of new localities. The new *Trocheta tunisiana* n. sp. is discovered and described in detail. *Trocheta* species live in springs in elevated areas while *Erpobdella* seem to prefer low altitude reservoirs. A comprehensive comparison of the three genera is presented. The disparity between the actual systematics and phylogeny is discussed. This study gives also a detailed distribution of the five species in the north of Tunisia with notes on ecological preference of the genus *Dina*. Finally a key for the determination of freshwater erpobdellid species from Tunisia is proposed.

Key words: Hirudinida, Erpobdellidae, new records, new species, taxonomy, Tunisia

Introduction

Erpobdellid leeches are predators of aquatic invertebrates having abandoned the blood feeding habits of their ancestors (Siddall and Burreson 1998). Among this group, some species have long been investigated as a model organism for both ecological studies of invertebrate species interactions (Seaby *et al.* 1995; Zerbst-Boroffka 1999) and as indicator species for freshwater toxicology (Wicklum and Davies 1996; McNicol *et al.* 1997; Zaranko *et al.* 1997). Species of the Erpobdellidae family are most common in North America and Europe, whereas salifid leeches (e.g. species of *Salifa* and *Barbronia*) are more common in Africa and Asia (Soos 1969; El Shimey 1996). The hirudinean fauna, particularly the Erpobdellidae family of the west Mediterranean area and especially of the Maghreb, is still relatively unknown. In fact, little has been published on the erpobdelliforms of this area. Blanchard (1908) published notes on *Dina quadristriata* from Tunisia, which have been assigned later to *Trocheta africana* (Ben Ahmed and Tekaya 2009). Nesemann and Neubert (1994) described two new African taxa, *Trocheta africana* from Tunisia and *Dina punctata maroccana* from Morocco. Recently, Ben Ahmed *et al.* (2008) recorded *Erpobdella testacea* for the first time in Tunisia and thus in Africa.

The present study reports our extensive surveys of erpobdellid leeches from localities in northern Tunisia, resulting in the description of one new species, new records for *Dina punctata punctata* Johansson, 1927 and *Dina punctata maroccana* Nesemann and Neubert, 1994, and description of Tunisian populations of *Erpobdella testacea* (Savigny, 1820) and *Trocheta africana* Nesemann and Neubert, 1994.