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# Preliminary report on the living non-marine Ostracoda (Crustacea) from Tunisia with the description of a new *Psychrodromus* species

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## Abstract

Since 1928, Henri Gauthier has been the only zoologist to describe the extant non-marine ostracod fauna of Tunisia. In 2010, new samples of living non-marine ostracods were collected from central and southern Tunisia. A complete list of the 41 non-marine ostracods of Tunisia is presented, including the species of Gauthier's work, published Holocene records, and new results from our field study. Historical faunal variations (El Melah Lagoon, Lac de Tunis, Sebkhas El-Guettiate and Dreîaa, and Lac Ichkeul) are briefly discussed and related to recent environmental changes. In 2006, El Melah Lagoon contained a freshwater, brackish, and a marine ostracod assemblage. In the future, this lagoon will probably dry up and become a sebkha. Lac de Tunis has developed from a marine bay over a lagoon connected to the Mediterranean Sea to a brackish/freshwater environment. Sebkhas El-Guettiate and Dreîaa have developed from marine bays to dry salt flats. Lac Ichkeul is eutrophied and has become brackish since the time of Gauthier. We also describe a new species, *Psychrodromus tunisicus* **n. sp.**, and present a determination key for the genus. The finding of a species of the genus *Psychrodromus* is the first report of this genus in North Africa.

**Key words:** Ostracoda, Tunisia, sebkhas, environmental change, *Psychrodromus tunisicus*

## Introduction

There are relatively few zoological publications on the living non-marine ostracod fauna of North-West Africa. In the years 1924–1926, Henri Gauthier visited Tunisia several times while he worked at the University of Algiers to collect the fauna of inland waters (Ciliata, Turbellaria, Rotatoria, Nematoda, Mollusca, Tardigrada, Acari, Crustacea, Insecta). Gauthier and his wife travelled by horses, motorcycle, train and finally by truck to visit and sample more than twenty localities (Fig. 1; Gauthier 1928a). In 1928, he published three papers containing remarks on the systematics of some of the collected ostracods (Gauthier 1928b, c; Gauthier & Brehm 1928). Masi (1932a, b) and Ramdami (1982) collected new material and described living non-marine ostracods from Morocco. Klie (1943) described ostracod species from Morocco and Mauritania. Danielopol (1980) mentioned a new *Darwinula* sp. B from the interstitial waters of Oued el Lebga in the northwest of Tunisia (Fig. 1). This species was later transferred to the genus *Vestalenula* (Rossetti & Martens 1998).

Starting in the 1980s, ostracods were used in paleoenvironmental studies along the Tunisian coast of the following lakes: Lac de Tunis (Carbonel *et al*. 1981; Carbonel & Pujos 1982); Lac de Ghar-El-Melh and Sebkha Ariana (sebkha = temporary salt lake) (Mansouri *et al.* 1985); Lac Ichkeul (Stevenson & Battarbee 1991; Stevenson *et al*. 1993, Birks *et al*. 2001a, b); Megene Chitane and Lac de Korba (Birks *et al*. 2001a, b); El Melah Lagoon (Ruiz *et al*. 2006); El Hisha Lagoon, Sebkhas El-Guettiate and Dreîaa (Zaibi 2011 and Zaibi *et al.* 2011, 2012a, b). For details see the discussion.

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