



<http://dx.doi.org/10.11646/zootaxa.3937.3.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:73B69F58-99BC-4A9B-A714-8CE9FD5AEFCA>

## ***Gomphocythere besni* n. sp. (Crustacea, Ostracoda) from a man-made pool (Adiyaman, Turkey)**

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### **Abstract**

We describe a new species (*Gomphocythere besni* n. sp.) from the Tavaş man-made pool in Besni town (Adiyaman, Turkey). The species has several differences from its congeners in furcal structures (forked organ, seta of caudal ramus), numbers of setae on maxillula and maxillular palp, particular ornamentation with up to eight fossae in each mesh of the reticulation and in the presence of two types of lateral pore-canal (single pore opening with a sensillum and sieve plates) on the carapace. The finding of the new species extends the known geographical distribution of the living forms of the genus further to the North. The new species was found from relatively cool (16.6 °C) and medium oxygenated waters (7.36 mg/L) in a mixture of sand and gravel substrate. Details about its ecology and taxonomic status are also compared and discussed with other species of the same genus.

**Key words:** taxonomy, ecology, geographical distribution, new species, morphotypes

### **Introduction**

Park and Martens (2001) reported 14 living species of the genus *Gomphocythere* Sars, 1924 in Africa and parts of the Middle East. The authors, pointing to the taxonomic problems between *Gomphodella* and *Cytheridella*, stressed that the distribution of the genus should be much wider in southern hemisphere. Later, Park *et al.* (2002) listed 17 species and analyzed the cladistic relationships of 16 species of the genus. Afterwards, according to the subjective checklist of the Recent, free-living, non-marine ostracods of Martens & Savatnalinton (2011), there are 24 species in the genus *Gomphocythere*. Twenty-two of these species have been described from the Afrotropical Region and two of them (*G. problematica* (Brehm, 1932), and *G. duffi* (Hornibrook, 1955)) are known from the Australasian Region. Most recently, Karanovic (2012) included 21 species in her systematic key, excluding three species (*G. simplex* Rome, 1962; *G. curta* Rome, 1962; *G. problematica*). Based on these reports (e.g., Martens & Savatnalinton 2011; Karanovic 2012), the genus seems to be almost restricted to the African region. The northern most records of the genus are the living species *G. ortali* Martens, 1993 from Israel's River Dan (Martens 1993) and the Holocene fossil species *G. geareyi* Boomer, 2010 from Domuztepe, Kahramanmaraş in south-east Turkey (Boomer & Gearey 2010).

In this study we describe both the carapace and the soft parts of the new species *Gomphocythere besni* n. sp.

### **Material and methods**

Tavaş pool, a man-made rectangular concrete pool (ca. 10 m x 20 m) (37°33'373"N – 37°48'596"E) is located at about 637 m a.s.l. in Besni town, Adiyaman province (Fig. 1). The pool's water source is a nearby cave, which was

## Acknowledgements

We would like to thank Renate Matzke-Karasz (Germany) for her constructive review and comments on the earlier version of this manuscript and the reviewers Koen Martens (Belgium) and Ian Boomer (UK). We also thank to Mahmut KANAÇ and Ozan YILMAZ (Abant İzzet Baysal University, Turkey) for their help during collection of the samples, Telmo Nunes (Centro de Biologia Ambiental, University of Lisbon, Portugal) for making the SEM photos, and Vera Lopes (Departamento de Geologia, University of Lisbon, Portugal) for preparing the figure and the plates. Ian Boomer (University of Birmingham, U. K.) kindly sent us SEM photos of *Gomphocythere geareyi*, which helped us in the species comparison. Dan L. Danielopol (Karl Franzens Univ. Graz, Austria) kindly offered the geometric morphometric data used here, for the three closely related *Gomphocythere* species. This study is supported by Scientific Project Research Agency of Abant İzzet Baysal University (Project no: 2012.03.01.534). This is a part of PhD dissertation of M.Y.

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