TWO NEW RECORDS OF HARPACTICOID COPEPODS FOR TURKISH INLAND WATERS (COPEPODA, HARPACTICOIDA) PHYLLOGNATHOPUS VIGUIERI (MAUPAS, 1892) AND LEPTOCARIS BREVICORNIS (VAN DOUWE, 1904)

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ABSTRACT

The harpacticoid copepods, Phyllognathopus viguieri (Maupas, 1892) and Leptocaris brevicornis (Van Douwe, 1904) are reported for the first time from, respectively, the lakes Golbasi and Golkent. This is the first record of these two species for inland waters of Turkey. Males and females of Phyllognathopus viguieri and Leptocaris brevicornis were consistently found during two sampling periods. In addition, 13 other species of copepods species were found in the two lakes.

RÉSUMÉ

Les copépodes harpacticoïdes, Phyllognathopus viguieri (Maupas, 1892) et Leptocaris brevicornis (Van Douwe, 1904) sont signalés pour la première fois des lacs Golbasi et Golkent, respectivement. C’est la première citation de ces deux espèces dans les eaux intérieures de Turquie. Des mâles et des femelles de Phyllognathopus viguieri et Leptocaris brevicornis ont été trouvés régulièrement au cours de deux périodes d’échantillonnages. De plus, 13 autres espèces de copépodes ont été identifiées dans les deux lacs.

INTRODUCTION

The genus Phyllognathopus Mrazek, 1893, is considered one of the most primitive genera of the order Harpacticoida, because of its large mandibular palp, peculiar maxillary gland, and the separation of the first thoracic somite from the head. The members of the genus are exclusively benthic freshwater animals, their preferred habitats consisting of benthic zones in fresh waters, but they can also be found in tree holes, leaf axils of some tropical plants, moist moss, and ground

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pools, as well as, opportunistically, in other (small or very small) bodies of water (Barclay, 1969; Karanovic & Ranga Reddy, 2004).

By the time Lang (1944) published his ‘Monographie der Harpacticiden’, three genera were recognized in the family Darcythompsoniidae: *Leptocaris* T. Scott, 1899, *Horsiella* Gurney, 1920, and *Darcythompsonia* T. Scott, 1906. In the early 1960s, both Kunz (1961: 276) and Lang (1965: 95), based on descriptions of several species regarded as transitions between *Leptocaris* and *Horsiella*, considered these two genera as synonyms, and united the species included in the genus *Leptocaris* (cf. Gomez, 2000).

Species of *Leptocaris* are common in inland water bodies, especially in brackish waters along the coast; the genus has, however, also been reported from both saline and purely fresh waters, and even from regions distant from the sea (Borutsky, 1964).

*Phyllognathopus viguieri* (Maupas, 1892) and *Leptocaris brevicornis* (van Douwe, 1904) have been recorded from many countries. However, from Turkey these species have not been reported until now. As their cosmopolitan distribution leads us to suspect that more than one species may be involved under the names of *P. viguieri* and *L. brevicornis*, some drawings and descriptions were made of both species, in order to provide a basis for future comparison. In addition, these species can now be added to the known Copepoda fauna of Turkey.

**MATERIAL AND METHODS**

Zooplankton was collected by vertical hauls of a standard net (60 µm mesh size), on 12 April and 23 May 2005, as well as on 3 April and 15 May 2006, during routine survey cruises in two lakes. These lakes were Golbasi Lake (36°30′N 36°29′E) and Golkent Lake (36°53′N 36°05′E). The net was hauled vertically from the bottom to the surface (average depth of lake 2 m).

These lakes are located in the eastern Mediterranean region of Turkey. Golbasi Lake is 50 km north of the city of Antakya. It is a natural lake with a surface area of 12 km² and an altitude of 18 m. Golkent Lake is located 100 km north of Antakya. It is a man-made lake with a surface area of 11 km² and situated close to the sea.

After sampling, the zooplankton was fixed and preserved in 4% formaldehyde. Specimens were examined in a distilled water and glycerol mixture. Drawings and measurements were made using an Olympus microscope with drawing-tube attachment.

The samples are kept at the Plankton Laboratory, Aquaculture and Fisheries Faculty, Mustafa Kemal University. The species were identified with the aid of Borutsky (1964), Dussart (1969), Georgescu (1970), and Kiefer & Fryer (1978).