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Oligochaeta (Annelida) of the profundal of Lake Hazar (Turkey), with description of *Potamothrix alatus hazaricus* n. ssp.

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Abstract

Lake Hazar is an alkaline oligotrophic lake of tectonic origin, located in the Eastern Anatolia region in Turkey, 1248 m a.s.l. Its surface area is 80 km^2, the average depth 93 m and maximum depth 205 m. The lake and its surroundings are under protection as a region of historical value. During the present study (2007–2012), samples were taken from 15 stations located at a depth of 2–200 m. Oligochaeta comprised 69% of the total invertebrate abundance. The profundal oligochaete fauna was found to consist of only three tubificid taxa, all of the subfamily Tubificinae. *Potamothrix alatus hazaricus* Timm & Arslan, **n. ssp.** was dominating anywhere down to maximum depths while *Psammoryctides barbatus* (Grube) and *Ilyodrilus*(?) sp. occurred seldom. All three are new records for Lake Hazar. *Potamothrix alatus hazaricus* shares the "winged" body shape in its genital region with the nominal, brackish-water subspecies *P. a. alatus* Finogenova, 1972, and the lateral position of the spermathecal pores and the shape of the ventral chaetae with the freshwater subspecies *P. a. paravanicus* Poddubnaja & Pataridze, 1989 known from Transcaucasian lakes. The mitochondrial COI barcoding gene suggests long separation between the two taxa, but the nuclear ITS region shows no variation. The generic position of *Ilyodrilus* (?) sp. remains obscure since its internal genitalia could not be studied.

Key words: Oligochaeta, Tubificidae, *Potamothrix*, new taxon, oligotrophic lakes, Ponto-Caspian Basin, ITS region

Introduction

Owing to its geomorphological structure, Turkey has been recognized as one of the most important countries in the Palearctic in terms of its aquatic ecosystems, water sources, important bird areas and wetlands. There are about 900 natural lakes and ponds in Turkey covering about 5150 km^2 area with a high level of endemism and species diversity due to habitat diversity and lack of major disturbances (e.g. glaciation) in the Anatolian basin (Magnin & Yarar 1997). Many of the lakes have internationally important wetland status due to high diversity of waterfowl and fish. Lake Hazar (Figure 1), formed tectonically by the Eastern Anatolia Fault, is one of the most important natural lakes, one of the largest and deepest in eastern Turkey, located at about 39.2 °E and 38.2 °N, 1248 m above sea level. Its surface area is 80 km^2, the average depth 93 m and maximum depth 205 m; the catchment area excluding the lake surface covers 73 km^2. The lake's geologic formation is tectonic, with the East Anatolian Fault Zone passing through its bottom. The bedrocks are generally of igneous, shale, limestone, and metamorphic origin (Yaman *et al.* 2011). The lake was earlier drained by the Maden Stream into the Tigris River, of the Persian Gulf drainage system, but after construction of the Hazar Hydroelectric Central in 1957, this outflow dried up (DSİ 1971). Ten running water bodies are discharging into Lake Hazar: the Behremaz and Kürk Streams; the Matar, Melem, Salık, Değirmen, Mogal, Baharın, Sevsak and Zıkkım Brooks. A few of these have a permanent flow while most of them are intermittent (Şen *et al.* 2002, Aksoy *et al.* 2007, Fig. 1).

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