

## Recent changes in the fish fauna of Lake Bafa, Aegean region of Turkey

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**Abstract:** The current status of fishes found in Lake Bafa in the Aegean region of Turkey is described. The conspicuous augmentation of salinity in the last decade has resulted in the extinction of stenohaline freshwater species (*Acanthobrama mirabilis*, *Chondrostoma nasus*, *Barbus pectoralis*, *Proterorhinus marmoratus* and *Silurus glanis*) and has promoted the establishment of euryhaline fishes. Two species of marine origin, *Gobius niger* and *Syngnathus abaster*, are new additions to the ichthyofauna of Lake Bafa.

**Kurzfassung:** Es wird der Status der Fischfauna im Bafasee in der türkischen Ägäis beschrieben. Die deutliche Zunahme der Salinität des Sees in den letzten zehn Jahren führte zum Verschwinden stenohaliner Arten wie *Acanthobrama mirabilis*, *Chondrostoma nasus*, *Barbus pectoralis*, *Proterorhinus marmoratus* und *Silurus glanis*, und führte gleichzeitig zur Ansiedlung euryhaliner Arten. Zwei ursprünglich marine Arten, *Gobius niger* und *Syngnathus abaster*, haben den Bafasee neu besiedelt.

**Key words:** Lake Bafa, ichthyofauna, extinct species, Turkey, Middle East.

### Introduction

Lake Bafa is an alluvial lake situated at the south-eastern tip of the Büyük Menderes Delta in the Aegean Region of Turkey (37°28'N and 37°32'N longitudes; 27°22'E and 27°32'E latitudes), approximately covering an area of 65–70 km<sup>2</sup> (TURGUTCAN 1957). The lake is enclosed by mountain ranges covered with forest and maquis, except in the west where the land opens to the Menderes plain. The lake was formerly a bay called Latmos until 50–300 AD, but was separated from the Aegean Sea by the alluvial deposits carried by the Büyük Menderes River (KASPAREK 1988). Lake Bafa is principally fed by Menderes River water during periods of heavy flow; in addition, there are a few small streams and springs descending from Beşparmak mountains which feed the lake. However, a levee constructed in 1985 at the western margin of Lake Bafa separated it from the Menderes River (BALIK & USTAOĞLU 1989) and a drastical change in the lake occurred: this alteration in the surroundings not only ruptured the connection between the lake and its north-west end (sometimes referred to as Serçin Lake) but also resulted in a decrease in water depth and a consequent increase in salinity.

Pioneering studies on Lake Bafa were carried out by TURGUTCAN (1957) and ARTÜZ (1958), who both gave concise evaluations of the fishery activities of the lake. Several years later, GELDIAY et al. (1977) listed nine crustacean species, six of which had not previously been recorded. Studies on the biology of commercial fishes, *Acanthobrama mirabilis*, *Chon-*