Reproductive biology of the endemic and threatened Menderes Nase, *Chondrostoma meandrense* Elvira, 1987, in Western Anatolia

(Osteichthyes: Cyprinidae)

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Abstract. Maturity age, spawning time and fecundity of the Menderes Nase, *Chondrostoma meandrense* Elvira, 1987 were determined at Kemer Reservoir, an artificial waterbody in Western Anatolia, between January and December 2006. Males and females become mature on average at 10.6 and 11.9 cm FL and at age class 1. Spawning occurs between March and May. The number of eggs ranges from 6,800 to 13,800 and the average egg diameter is 1.14±0.53 mm (range: 0.75-1.79 mm). The female gonadosomatic index peaked in March.

Key words. *Chondrostoma meandrense,* reproduction, Kemer Reservoir, Turkey, Middle East.

Introduction

There are at least eleven cyprinids of the genus *Chondrostoma* Agassiz in Turkish freshwaters, five of which are endemic to Turkey (*Chondrostoma angorense* Elvira, *C. cyri* Kessler, *C. holmwoodii* (Boulenger), *C. kinzelbachi* Krupp, *C. meandrense* Elvira) (ELVIRA 1987, 1997, BOGUSTKAYA 1997, GELDIAY & BALIK 2007). The Menderes Nase, *Chondrostoma meandrense* is endemic to the Büyük Menderes watershed and has been reported from only six places in the river basin (ELVIRA 1987, 1997, DURAND et al. 2003, ÖZCAN 2008). It was formerly a common fish in the Büyük Menderes River, but is now only rarely found (ÖZCAN 2008). IUCN classifies it as "vulnerable" (CRIVELLI 2006, ÖZCAN 2008). The main threats are pollution, competition with alien fish species (*Lepomis gibbosus* (Linnaeus), *Carassius gibelio* (Bloch)) (ÖZCAN 2007a, b) and the destruction of shallow water habitats through the construction of dams (ÖZCAN 2008). As there is practically no information on the biology of this species, the aim of this study was to document data on reproduction to provide a basis for conservation measures.

Material and methods

The study was carried out in the Kemer Reservoir on the Akçay Stream, which is one of the important branches of the Büyük Menderes River. 307 specimens were captured between January and December 2006. Sampling was performed using gill-nets of various mesh-sizes (18-45 mm) and cast nets (12-22 mm). In the laboratory, the fork length and weight were measured to the nearest 1.0 mm and 0.01 g, respectively. Age was determined from scales, which were taken between the lateral line and dorsal fin (BAGENAL & TESCH 1978) and the scale reading was done twice, each time by a different person.

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