

Age, growth and fecundity of the Turkish Brook Lamprey, *Eudontomyzon lanceolata* (Kux & Steiner, 1972), in north-eastern Turkey

(Petromyzontiformes: Petromyzontidae)

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Abstract. The age, growth and fecundity of the Turkish Brook Lamprey, *Eudontomyzon lanceolata* (Kux & Steiner, 1972), was studied at İyidere stream in the Black Sea region of Turkey. The total length values varied between 2.0 and 17.3 cm (average 11.38 cm), and the total weight values between 0.02 and 9.4 g (average 2.57 g). The sex ratio (female:male) was 1:1.16. Larvae start their metamorphosis after they reach 2 years, and metamorphosis extends over 3 years. It begins at the end of summer. Metamorphosis was observed in individuals longer than 13 cm, but even some larger individuals showed larval characteristics. Females in 4th year sampled between March and May had ovaries full of eggs. The absolute fecundity was found to be on average 1898.5 eggs/female. No individuals who had already laid eggs were found.

Key words. Fecundity, egg size, Petromyzontidae, Black Sea region, Turkey, Middle East.

Introduction

The Turkish Brook Lamprey (*Eudontomyzon lanceolata* (Kux & Steiner, 1972)) is an endemic freshwater species only living in the İyidere stream system, from sea-level up to 50 m altitude, in the eastern Black Sea region of Turkey (KAZANCI & SALEWESKI 1995, GELDIAY & BALIK 1996, KUX & STEINER 1972, TURAN et al. 2003). It prefers those parts of the stream which are close to shore, have a slow current, and are rich in organic material, and it is neither a parasitic nor a predatory species. There is no commercial hunting of the species in the region. Studies of this species are rare and for the most part focus on defining the species. Many of the bio-ecological properties of the species remain unknown. This research determines some of its ecological properties, such as age, growth, length-weight correlation, egg diameter, egg output, and natural mortality rate.

Material and methods

Between 2005 and 2006, a total of 174 Turkish Brook Lamprey samples were collected by the electroshock method in the İyidere stream in the eastern Black Sea region of Turkey (Rize province), at a distance of 11 km from the river mouth (Figs 1-2). İyidere stream is 48 km long, has a current of 4.51-24.81 m³/s and a water temperature of 5.4-22.4°C, a pH of 5.78-8.49, and its dissolved oxygen values range between 8.30 and 12.60 mg/l (VEREP et al. 2005).

Between June and August, the melting snow increases the stream's current, and since the water