

Ocular lens diameter and weight as age indicators in two teleost fishes collected from the Red Sea of Yemen

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Abstract. In the Synodontid fish *Saurida undosquamis* and the Sillagid *Sillago sihama* the diameter of the eye lens can be used for identifying first-year animals, while the eye lens weight proved unreliable for age determination.

Kurzfassung. Bei den beiden im Roten Meer vorkommenden Fischarten *Saurida undosquamis* und *Sillago sihama* kann der Augendurchmesser zur Identifizierung einjähriger Tiere herangezogen werden, während das Gewicht der Augenlinse keine Beziehung zum Alter erkennen läßt.

Key words. Eye, age determination, *Saurida*, *Sillago*, Middle East.

Introduction

Both eye lens diameter and eye lens weight have been used for the age determination of a variety of animals. Eye lens weight was also used for studying the effect of nutrition on the process of age determination in vertebrates (TESKA & PINDER 1986). In Teleost fishes, studies using these eye lens parameters as age indicators include CARLTON & JACKSON (1968), BURKETT & JACKSON (1971), CRIVILLI (1980), SALEEM et al. (1990), DOUGLAS (1987), AL-HASSAN et al. (1992), AL-HASSAN & AL-SAYAB (1994), CONIDES & AL-HASSAN (2000) and JAWAD et al. (2001). The aim of this study is to determine the validity of the eye lens diameter and weight as age indicators in the Red Sea fishes *Saurida undosquamis* and *Sillago sihama*.

Material and methods

Specimens of *Saurida undosquamis* (n = 350) and *Sillago sihama* (n = 400) were obtained from Houdaida province on the Yemeni coast of the Red Sea. The eye lens diameter and weight were measured to the nearest millimetre and gram following AL-HASSAN et al. (1992). The scale method was used to determine the age of both species following AL-HASSAN & AL-SAYAB (1994). Four to five scales were taken from the left side of the fish between the lateral line and the anterior base of the dorsal fins. Three scales per fish were read twice independently, using an ordinary dissecting microscope for verification. One way analysis of variance was applied to test the difference between the total length of the fish and its age.