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Leptoderma macrophthalmum n.sp., a new species of smooth-head (Otocephala: Alepocephalidae) from the Mid Atlantic Ridge

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Abstract

A new species of Alepocephalidae, *Leptoderma macrophthalmum* **n.sp**., is described from one specimen caught in 2004 at about 2100 m depth at the Mid Atlantic Ridge, north of the Azores. Morphological and molecular evidence indicate a relationship closest to the Pacific species *Leptoderma lubricum*.

Key words: Alepocephalidae, *Leptoderma*, Mid Atlantic Ridge

Introduction

The smooth-heads, family Alepocephalidae, comprise 96 valid species of epibenthic deep-sea fishes, distributed among 22 genera (Eschmeyer & Fricke 2011). The genus *Leptoderma* is currently considered to contain four valid species, all of which lack scales and typically have a tapering, eel-like body. While three of the species, *Leptoderma retropinna* Fowler, 1943, *L. affinis* Alcock, 1899, and *L. lubricum* Abe, Marumo & Kawaguchi, 1965 are known from the Indian and Pacific oceans, *L. macrops* Vaillant, 1886 is an Atlantic species. A fifth nominal species, *L. springeri* Mead & Böhlke, 1953 has been synonymised with *L. macrops* (Krefft 1973, Markle & Quéro 1984, Markle & Sazonov 1990).

L. lubricum differs conspicuously from the three other species by having a distinct gap between the posterior ends of the dorsal and anal fins and the beginning of procurrent caudal finrays. A *Leptoderma* sp. with this characteristic has been reported from the Atlantic by Markle & Quero (1984) and Sazonov & Markle (1990). During the cruise of the Norwegian research vessel "G.O.Sars" on the Mid-Atlantic Ridge in the summer of 2004 for the project MAR-ECO (http://www.mar-eco.no/) a specimen of *Leptoderma* with a dorsal and anal fin configuration similar to that of *L. lubricum* was caught. Morphological and genetic examination revealed that it differed sufficiently from *L. lubricum* as well as from other known species of *Leptoderma* to be considered a new species. In this paper we present evidence for this and describe the new species.

Material and methods

The specimen was caught with a bottom otter trawl during the MAR-ECO cruise with the R/V "G.O. Sars" in 2004. A description of the gear can be found in Wenneck et al. (2008). The specimen was captured at an unknown location in the water column, but most probably at the bottom at about 2100 m depth, and labelled with the field number MAR-ECO 2577. It was stored frozen at sea until transferred to the Bergen Museum where it was preserved in 70% ethanol and given the catalogue number ZMUB 19686. The ethanol caused some shrinkage in the transversal plane of the fish.

Measurements and meristic characters follow those of Hubbs & Lagler (1967), and are shown in Fig. 1. The measurements were done several months after the specimen had been preserved, but weight was obtained from the fresh specimen shortly after it was caught. Comparisons were made with the following specimens of the four other

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