



## *Polysteganus mascarenensis*, a new sparid fish species from Mascarene Islands, Indian Ocean

YUKIO IWATSUKI<sup>1,3</sup> & PHILLIP C. HEEMSTRA<sup>2</sup>

<sup>1</sup>Laboratory of Fisheries Sciences, Department of Marine Biology and Environmental Sciences, University of Miyazaki, 1-1 Gakuen-kibanadai-nishi, Miyazaki 889-2192, Japan. E-mail: yuk@cc.miyazaki-u.ac.jp

<sup>2</sup>The South African Institute for Aquatic Biodiversity, Private Bag 1015, Grahamstown 6140, South Africa.  
E-mail: p.heemstra@saiab.ac.za

<sup>3</sup>Corresponding author

### Abstract

A new sparid species, *Polysteganus mascarenensis* n. sp. (Perciformes; Sparidae) is described on the basis of three type specimens (578–600 mm SL) from the Mascarene Islands, Indian Ocean. The species differs from the four known congeners of *Polysteganus* in having the following combination of characters: body moderately slender (depth 39% SL), scale rows between 10th dorsal-fin spine base and lateral line 6 ½, fewer lateral line scales 51–54, snout broad, its length 2.2–2.3 times orbit diameter in adults, inter-orbital area of adults with a bony bulge before and above eye (hyperostosis of frontal bones), forming a low median ridge; mouth large, jaws robust, especially upper jaw, caudal fin emarginate (nearly truncate if widely spread), head, body, and all fins generally reddish orange, no dark blotch or rows of small spots along scale rows on the body. The status and identification of congeneric nominal species are discussed, and a key to the species of *Polysteganus* is provided.

**Key words:** taxonomy, Sparidae, Perciformes, Indian Ocean

### Introduction

In Smith's (1938) revision of South African sparid fishes, he differentiated Indian Ocean species of *Dentex* from Atlantic species of *Dentex* by the former having interorbital scales extending forward of a vertical at the front edge of the eye, and placed them in the subgenus *Polysteganus* Klunzinger 1870. Subsequently, Smith (1949) elevated *Polysteganus* to a valid genus. Four valid species are currently known: *P. baissaci* Smith 1978, *P. coeruleopunctatus* (Klunzinger 1870), *P. praeorbitalis* (Günther 1859), and *P. undulosus* (Regan 1908).

During the course of a trawl survey of the fishes of the Mascarene Islands (Madagascar, Mauritius, and Réunion), Indian Ocean, jointly conducted by the South African Institute for Aquatic Biodiversity (SAIAB) and the Institute of Marine Research, Norway (IMR) in 2007, three large (58–60 cm SL), unfamiliar red sparid fishes were photographed and collected. Our examination of these specimens and subsequent research revealed them to be an undescribed species of *Polysteganus* that is apparently endemic to the Indian Ocean. We describe them here as a new species and compare it with other nominal species of *Polysteganus*. A key to the valid species of the genus is also provided.

### Material and methods

Counts and measurements follow Iwatsuki *et al.* (2007) and Iwatsuki & Heemstra (2010). The dorsalmost ray in the pectoral fin is faintly segmented, but regarded as a ray in the pectoral fin counts. The least “snout length” is measured from the tip of the upper lip with the mouth closed to the anterior edge of the dermal eye opening and the ratio of “snout length/orbit diameter” was calculated for comparison. Standard length is abbreviated as SL. X-ray