



Redescriptions of *Polysteganus coeruleopunctatus* (Klunzinger 1870) and *P. lineopunctatus* (Boulenger 1903), with two new species from Western Indian Ocean

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Abstract

Five valid species in the genus *Polysteganus* (Pisces; Sparidae) from the Western Indian Ocean are currently known: *P. baissaci* Smith 1978, *P. coeruleopunctatus* (Klunzinger 1870), *P. mascarenensis* Iwatsuki & Heemstra, 2011, *P. praeorbitalis* (Günther 1859), and *P. undulosus* (Regan 1908). Although *P. lineopunctatus* (Boulenger 1903) has long been synonymized under *P. coeruleopunctatus*, both species are redescribed as valid. Two new species of *Polysteganus* were discovered in the course of this review. *Polysteganus flavodorsalis* n. sp. is described on the basis of six type specimens (143–265 mm SL) from Nazareth Bank, Mascarene Plateau, Indian Ocean, and *P. cerasinus* n. sp. is described based on the holotype (134 mm SL) from Saya de Malha Bank. Provisional distribution patterns of the eight valid species of *Polysteganus* in the Western Indian Ocean are discussed. A key to the species of *Polysteganus* is provided.

Key words: *Polysteganus coeruleopunctatus*, *P. lineopunctatus*, *P. flavodorsalis* n. sp., *P. cerasinus* n. sp., taxonomy, Sparidae, Perciformes, Western Indian Ocean

Introduction

Sparids occur in temperate and tropical waters of all oceans and are usually most common along the shore from shallow water (including estuaries), to deeper water as demersal inhabitants of the continental shelf and slope. Sparids are important as food fishes, and several are fine sporting fishes targeted by anglers. Many species have been found to be hermaphroditic (Smith 1949, 1961; Akazaki 1962; Bauchot & Smith 1984; Smith & Smith 1986; Carpenter 2001; Heemstra & Heemstra 2004; Hanel & Tsigenopoulos 2011).

The Sparidae comprises around 35 genera in 6 subfamilies (based on the morphology of canines, incisors and molars), with about 130 species worldwide, excluding the Centranchthidae. Some authors include centranchthids in the Sparidae (Akazaki 1962; Orrell & Carpenter 2004; Carpenter 2001; Nelson 2006; Iwatsuki & Carpenter 2006, 2009; Iwatsuki *et al.* 2007; Iwatsuki & Heemstra 2010, 2011a, 2011b; Iwatsuki 2013; Iwatsuki & Maclaine 2013; Tanaka & Iwatsuki 2013; Amir *et al.* 2014; Iwatsuki *et al.* 2015) and recent genetic papers show the Sparidae to be a monophyletic group which includes centranchthids (Orrell & Carpenter 2004; Chiba *et al.* 2009), with about 152 species worldwide.

Dentex praeorbitalis Günther 1859 and *D. undulosus* Regan 1908, both from South Africa, were described and placed in *Dentex* along with the western Atlantic species, *Dentex macrophthalmus* (Bloch 1791). Klunzinger (1870) described *Dentex* (*Polysteganus*) *coeruleopunctatus* from the Red Sea, as a subgeneric species of *Polysteganus*. Subsequently J.L.B. Smith (1938), in his revision of the South African species, differentiated them from the Atlantic *Dentex* species which have interorbital scales extending forward to a vertical at the front edge of the eye, and elevated them to the subgenus *Polysteganus* Klunzinger 1870. Subsequently, Smith (1949, 1961) recognized *Polysteganus* as a valid genus for Indian Ocean species.