Zootaxa 2312: 49–59 (2009)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Descriptions of two new genera and species of ptereleotrine fishes from Australia and Japan (Teleostei: Gobioidei) with discussion of possible relationships

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Abstract

Two new gobioid genera are described. *Navigobius* nov. gen. is described from three specimens of a species from Kagoshima, Japan known from depths of 45–85 m. The genus is similar to *Ptereleotris* and *Nemateleotris*, but differs in having the interorbital canal separate between the eyes. *Pterocerdale* nov. gen. is described from a single specimen from a mangrove creek in Australia. The genus has many features in common with *Parioglossus*, but is unique within the Ptereleotrinae in having 12 precaudal vertebrae, the lower lip without a free margin (except posteriorly) and bony projections on the dentary. The genus has a number of features in common with Microdesminae.

Key words: Pisces, Microdesmidae, Ptereleotrinae, Microdesminae

Introduction

The subfamily ptereleotrinae previously contained five genera and 48 species, with most species found in the Indo-Pacific regions (Hoese *et al*., 2006). Three additional species have been described since then. The genera have been partly revised in a series of publications: *Aioliops* Rennis & Hoese (Rennis & Hoese, 1987), *Nemateleotris* Fowler (Randall & Allen, 1973), *Oxymetopon* Bleeker (Klausewitz & Conde, 1981), *Parioglossus* Regan (Rennis & Hoese, 1985; Dingerkus & Séret, 1992; Keith *et al*., 2004; McDowall, 2001; Susuki & Senou, 1994; Williams & Lecchini, 2004; Zhong, 1994); *Ptereleotris* Gill (Randall & Hoese, 1985; Randall & Susuki, 2008; Bussing, 2001; Gasparini *et al*., 2001).

The relationships of the ptereleotrinae have been disputed for some years. Hoese (1984) recognized the group as a subfamily of the Microdesmidae, based on the pelvic-girdle structure. Molecular evidence also supported this relationship (Akihito *et al*., 2000). The pelvic character is now known to be variable, and some other studies do not support relationship of the two groups. Consequently other workers have placed the group within the gobiids or as a separate family (Harrison, 1989; Thacker, 2000, 2003). However Thacker (2009) included the two groups in the same clade, with the Schindleriidae and New World Gobiosomini grouping with the microdesmines. It is of note that one of the new genera described here has the ventral margin of the lower lip fused to the skin anteriorly and the upper gill opening attachment on upper pectoral base much like the conditions in microdesmines. Consequently we retain the two groups here as subfamilies, but note that one genus described here has a number of similarities to *Parioglossus* and microdesmines and it is possible that microdesmines are more closely related to some ptereleotrines (i.e. nested within the ptereleotrines), rather than forming a sister group of schlinderiids plus New World gobiosomins. The classification proposed by Thacker (2009) has placed both groups within the Gobiidae and made other major changes to the previous classification based on studies of four mitochondrial genes. We regard that as a new hypothesis of relationships, but retain the existing classification until further testing of the hypothesis has been carried out. Further studies may reduce the groups discussed here to tribes or some other level. At present there is no

Accepted by R. Pethiyagoda: 5 Nov. 2009; published: 16 Dec. 2009