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**A revision of the goby genus *Gnatholepis* Bleeker
(Teleostei, Gobiidae, Gobionellinae),
with description of a new species**

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Abstract

Species of the tropical gobiid genus *Gnatholepis* have been misidentified and confused for many years. A gobionelline, *Gnatholepis* is the only strictly marine genus of that subfamily. *Gnatholepis* was reviewed from a morphological viewpoint, as recent publications distinguishing species (morphologically and genetically) have not always been in agreement. The genus is considered to include nine described species, with two distinctive sister-taxa (*G. argus* and *G. gymnocara*) and seven less easily distinguished taxa: one species-group formed by *G. anjerensis*, *G. knighti*, *G. ophthalmotaenia* and *G. yoshinoi* and another species-group of *G. cauerensis*, *G. pascuensis* and *G. thompsoni*. Of these, the *G. cauerensis* species-group is the most complex, with several subspecies-names available. There is also a distinctive taxon from the Red Sea that represents a new species, described herein.

Keywords: *Gnatholepis*, Indo-Pacific, Atlantic, Gobiidae, Gobionellinae, new species

Introduction

The tropical marine gobiid genus *Gnatholepis* has been misidentified and confused for many years, despite an abundance of material available for study in museum collections (e.g. see Hoese 1986; Myers 1999; Randall & Greenfield 2001). There are 18 nominal taxa that belong to the genus. *Gnatholepis* is unusual in that it is the only fully marine genus of the subfamily Gobionellinae, species of which are mostly estuarine to fresh water dwelling (Larson 2001; Thacker 2004a). Members of the genus *Gnatholepis* are habitat-specific gobies, being found on sand or silty sand, always near corals.

The genus was originally created by Bleeker (1874), as a subgenus of *Stenogobius*, with *Gobius anjerensis* Bleeker, 1851, as the type species. *Gobius anjerensis* was described from a Kuhl and van Hasselt illustration of 48 mm specimen (now lost). The illustration shows no colour pattern but it does resemble a *Gnatholepis* (see Bleeker 1983), but there is little information that can be obtained from the illustration or the original description to confirm exactly which species of *Gnatholepis* the type species actually is. Randall and Greenfield (2001) recognised the taxonomic problems that could arise from this, and designated a neotype for *Gobius anjerensis* (BPBM 26651).

Species presently considered to be *Gnatholepis* were originally described in either the genus *Gobius* or in *Gnatholepis* (Table 1), although a variety of species with scales on the cheeks and opercles has been placed in the genus in the past, such as *Arcygobius baliurus*, *Exyrias puntang*, *Hemigobius mingi* and *Macrodontogobius wilburi* (Murdy & Hoese 1984; Murdy 1985; Larson 1999; Larson & Wright 2003).