

Aioliops, a New Genus of Ptereleotrine Fish (Pisces: Gobioidae) from the Tropical Indo-Pacific with Descriptions of Four New Species

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ABSTRACT. *Aioliops* is a new genus of ptereleotrine fish that is found on coral reefs from Australia to Indonesia and as far north as the Philippines. Four species compose the genus and all are described as new: *A. brachypterus*, *A. megastigma*, *A. novaeguineae* and *A. tetrophthalmus*. These species are readily identifiable by a dark stripe along the dorsolateral surface of the body and a large dark spot on the caudal fin. Osteology of the new genus along with morphology and colour variations of the species are described, and the relationship of *Aioliops* to allied genera is discussed.

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The ptereleotrine gobioids are a group of small, Indo-Pacific fishes that are associated with a variety of habitats, including coral reefs, sand channels and mangrove zones, and are found at depths up to 98 m. These fishes may be seen in large groups, in pairs, or singly, and a few have become popular aquarium species because of their striking colours.

Species of *Aioliops* represent some of the smaller fishes in the subfamily, with the largest mature adults attaining lengths of 24 mm. Unlike *Parioglossus*, which lives primarily in mangrove zones or shallow reef flats and which the new genus superficially resembles, *Aioliops* is found near drop-offs on coral reefs at depths up to 25 m. Fishes of both genera, however, are more likely to be seen in groups rather than singly or in pairs.

Aioliops brachypterus has been collected from the Philippines; *A. megastigma* from Indonesia and the Philippines; *A. novaeguineae* from Papua New Guinea, Irian Jaya and questionably from the Timor Sea; and *A. tetrophthalmus* from tropical eastern Australia. The genus appears to have a limited distribution compared to other related genera, and yet it is not uncommon. Its distribution probably reflects difficulties in capturing individuals as most attempts are thwarted when the fish dart off in different directions. With the use of rotenone, however, groups of 10-30 fish may be collected, although it is just as likely to capture only

one or two as the schools often move away when approached. The genus was first collected in 1970, and most of the material has been collected by only five workers.

Classification of the suborder, Gobioidae, based on osteological characters, can be traced back to Regan (1911). Since then, Gosline (1955) placed the microdesmids among the gobioids; Miller (1973) summarized the numerous studies on gobioid classification and proposed another classification; Birdsong (1975) criticized Miller's classification but refrained from proposing an alternate one; Springer (1983) elaborated on the skeletal characters noted by Birdsong and discussed the monophyly of the suborder; and Hoese (1984) recognized 6 families of the suborder and listed characteristic features of each. We follow Hoese (1984) in provisionally placing *Aioliops* in the family Microdesmidae, based on the long posterior pelvic process and single pterygiophore preceding the first hemal spine.

The new genus, *Aioliops*, has been created on the basis of osteological as well as other morphological characters which are not all shared with other ptereleotrines. These characters include: caudal vertebrae having open neural arches with slightly elevated posterior portions and no lateral foramen (except *A. brachypterus* which has closed neural arches