

Phylogenetic Systematics of the Family Peristediidae (Teleostei: Actinopterygii)

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The family Peristediidae, comprising about 36 species of armored sea robins in five genera, inhabit the bottoms of the tropical and temperate waters of the world oceans in depths of about 50 to 800 m. The aim of this study is to infer relationships among the species in the family based on morphological characters and to revise the genus-level classification on the basis of the inferred pattern of phylogeny. Twenty-four peristediid and 16 outgroup taxa, i.e., 13 triglid and three hoplichthyid species, were used for the phylogenetic analysis. Monophyly of the Peristediidae is highly corroborated and two major clades are recognized in the family. The first clade includes *Gargariscus*, *Heminodus*, *Satyrichthys*, and *Paraheminodus*, and the second includes only *Peristedion*. It became clear that the genus *Satyrichthys* is a non-monophyletic group. In conclusion, six monophyletic genera are recognized in the Peristediidae: *Gargariscus*, *Heminodus*, *Paraheminodus*, *Peristedion*, *Satyrichthys*, and *Scalicus*. Accordingly, I propose seven new combinations with *Scalicus* as follows: *Scalicus engyceros*, *S. gilberti*, *S. hians*, *S. investigatoris*, *S. orientalis*, *S. quadratorostratus*, and *S. serrulatus*.

Key Words: Teleostei, Scorpaeniformes, Peristediidae, phylogenetic systematics.

Introduction

Armored sea robins, the family Peristediidae (sensu Nelson 2006), comprise about 36 benthic species that are currently classified in four or five genera (Miller 1974; Kawai *et al.* 2004a, 2004b; Nelson 2006). Fishes of this family inhabit tropical and temperate waters of the world oceans in depths ranging from about 50 to 800 m. The family is characterized by having the body encased in bony plates as well as by possession of a rostral projection, the lower two pectoral fin rays free, and barbels on the lower jaw (Nelson 2006).

Systematics of the Peristediidae have been studied by many ichthyologists. Most of them have considered that the Peristediidae are closely related to the Triglidae (e.g., Gill 1888; Matsubara 1943; Greenwood *et al.* 1966; Washington *et al.* 1984). Recognition of genera has been subject to disagreement. Nelson (1976, 1984), Eschmeyer (1998), and Yamada (2002) listed four genera in this family, viz., *Peristedion* Lacépède, 1801, *Satyrichthys* Kaup, 1873, *Gargariscus* Smith, 1917, and *Heminodus* Smith, 1917, while treating *Paraheminodus* Kamohara, 1957 as a junior synonym of *Satyrichthys* without comment. On the contrary, Miller (1974), del Cerro