



Cardinalfish of the genus *Apogonichthyoides* Smith, 1949 (Apogonidae) with a description of a new species from the West-Pacific region

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Abstract

Apogonichthyoides is resurrected from *Apogon* (*Ostorhinchus*) as a valid genus with 19 species. Members of this genus are mostly tannish brown to brownish-black in body color. The head and body usually have brownish to blackish spots (sometimes stripe-like), a darkish cheek line and usually two body bars. An ocellus may be present below the lateral line on the body or absent. One or more caudal-peduncular bars and/or a basicaudal spot are often present. Insertion patterns of supraneurals and pterygiophores are given for 11 species. *Apogonichthyoides umbratilis*, a new species, has 14 pectoral rays and five bars (three faint) on the body and caudal peduncle. Color pattern of the new species suggest relationships with *Apogonichthyoides gardineri*, *A. timorensis* and *A. opercularis*. Descriptions and illustrations of the latter two species are provided for comparison. *Apogonichthyoides gardineri*, a rare, deep-water species is characterized by 14 pectoral rays, two bars on the body and one wide bar near the base of the caudal peduncle. Specimens of *Apogonichthyoides timorensis* usually have 15–16 pectoral rays and two or three bars on the body and caudal peduncle. Specimens of *Apogonichthyoides opercularis* have nine soft anal rays and 10 soft dorsal rays. A key to eight species included in the *timorensis* species group is provided. A lectotype and paralectotypes are designated for the syntype series of *Apogon opercularis*. New name combinations follow: *Apogonichthyoides atripes*, *A. brevicaudatus*, *A. cantoris*, *A. chrysurus*, *A. euspilotus*, *A. gardineri*, *A. heptastygma*, *A. niger*, *A. opercularis*, *A. pharaonis*, *A. pseudotaeniatus*, *A. regani*, *A. sialis* and *A. timorensis*. Previous usage includes: *Apogonichthyoides enigmaticus*, *A. nigripinnis*, *A. taeniatus* and *A. uninotatus*

Key words: *Apogonichthyoides*, *Apogonichthyoides umbratilis*, *A. cantoris*, *A. opercularis*, *A. timorensis*, new species, key to species

Introduction

Cardinalfishes, family Apogonidae, are important, mainly nocturnally active inhabitants of tropical, subtropical and warm temperate reefs, soft-bottom communities, estuaries and lowland freshwater. Eschmeyer and Fong (2009) reported 333 valid species from the listings in Catalog of Fishes for the family. We estimate the number of species will rise past 350 based on known undescribed taxa. Either estimate of recognized species places apogonids as the seventh most speciose family among perciform fishes. Eschmeyer and Fong (2009) record at least 45 new descriptions of apogonids over the past decade. Apogonids are the fourth most common family for new marine fish descriptions of perciform fishes (or second in the gobiiform fishes after the Gobiidae, see Thacker and Roje, 2009). Fraser (1972) provided a comprehensive family classification in which 19 genera and 15 subgenera were recognized. At the time, the genus *Apogon* Lacépède, 1801 was considered as the largest among family with 13 subgenera, more than 250 nominal and at least 100 valid species. A welcome trend in research in recent years is leading to identification within this large polyphyletic group (Bergman, 2004; Greenfield *et al.*, 2005; Mabuchi *et al.*, 2005; Randall, 2005; Fraser, 2008; Thacker and Roje, 2009) of paraphyletic or monophyletic genera from former subgenera: *Apogon*, *Jaydia* Smith 1961, *Nectamia*, Jordan 1917, *Pristiapogon* Klunzinger, 1870, *Pristicon*, Fraser 1972, *Zoramia*