Epinephelus geoffroyi (Klunzinger, 1870) (Pisces: Serranidae), a valid species of grouper endemic to the Red Sea and Gulf of Aden

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Abstract

The grouper Epinephelus geoffroyi (Klunzinger), type locality Red Sea, previously regarded as a synonym of E. chlorostigma (Valenciennes) is recognized as a valid species. It is differentiated from E. chlorostigma by having 25–29 (modally 27) gill rakers vs. 23–26 (modally 24), a more angular anal fin, the dark spots on the abdomen more widely separated, and lacking a clear white margin posteriorly on the caudal fin. The missing holotype of E. geoffroyi was found at the Staatliches Museum für Naturkunde Stuttgart (SMNS 233, 191 mm). Epinephelus chlorostigma is wide-ranging from the Gulf of Aden and east coast of Africa to Samoa; it is reported from the depth range of 32–280 m. Epinephelus geoffroyi is presently known only from the Red Sea and Gulf of Aden at depths of 3–32 m. Illustrations are provided for three other species of groupers with numerous small dark spots, E. areolatus (Forsskål), E. gabriellae Randall & Heemstra, and E. polylepis Randall & Heemstra, that are, or might be, sympatric with E. geoffroyi.

Key words: Percoidei, Epinephelus, E. chlorostigma, Indo-Pacific, taxonomy

Introduction

Geoffroy-Saint-Hilaire (1809: 317, pl. 30, fig. 1) identified a finely dark-spotted serranid fish from the Red Sea as Serranus tauvina (Forsskål). His drawing is reproduced here as Fig. 1A. Valenciennes in Cuvier and Valenciennes (1828: 350) and Günther (1859: 149) reidentified it as Serranus areolatus (Forsskål), also a profusely dark-spotted species. Klunzinger (1870: footnote of p. 675) and Klunzinger (1884: 3) realized that Geoffroy St. Hilaire’s fish is not Serranus tauvina and renamed it Serranus geoffroyi.

Kossmann and Räuber (1877: 6) briefly described seven specimens of a Red Sea grouper, 280 to 340 mm in length, as Serranus celebicus Bleeker, var. multipunctatus (Fig. 1B). They noted that the specimens have numerous dark spots less than 4 mm in size.

Boulenger (1895: 203) reviewed the relevant literature on Red Sea groupers and reidentified the species of the above three publications as Epinephelus chlorostigma (Valenciennes in Cuvier and Valenciennes, 1828), type locality Seychelles. He readily identified E. areolatus as a distinct species. A photograph of a Red Sea specimen of Epinephelus areolatus (Forsskål, 1775) is provided as Fig. 2A for comparison. At a given size it has larger dark spots on the body than E. chlorostigma. He added Serranus assabensis Giglioli, 1888, type locality Assab, Ethiopia (Eritrea) as another junior synonym. He was followed by Randall and Ben-Tuvia (1983: 394, fig. 78) in a review of the groupers of the Red Sea and by Randall and Heemstra (1991: 117) in a revision of Indo-Pacific groupers. The latter authors illustrated a 320-mm specimen from Mozambique as a black and white drawing, and one of 327-mm from Sudan, Red Sea as a color photograph (reproduced here as Fig. 2B).