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## *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).