

SERRANIDAE

groupers

Epinephelus coioides

(Hamilton, 1822)



Photo : David Darom

Relevant synonyms: *Bola coioides*, *Serranus nebulosus*
 Misidentification: *Epinephelus tauvina*
 Meristic formula: D, XI + 13-16; A, III + 8; P, 18-20; V, I + 5; LL,
 58-65; GR, 23-28

SHORT DESCRIPTION

Body moderately elongated, only slightly compressed. Dorsal fin continuous. The interspinous membrane of dorsal fin moderately incised. The posterior margin of dorsal, caudal, anal and pectoral fins is round. Large head with large mouth. Jaw extends back past the vertical or posterior edge of eye. Subequal teeth in 2-3 rows. Serrated preoperculum, subangular shaped. Three flat spines near the upper-posterior corner of operculum.

color: body covered with orange to reddish-brown spots on pale greyish background with several irregular shaped darker bars. Large specimens have numerous but smaller spots.

common size: 30-50 cm (max. 120 cm).

DISTINGUISHING CHARACTERISTICS

Other Mediterranean **serranids**: lack of orange to reddish-brown spots. The closely related *E. malabaricus*, another lessepsian migrant, has also numerous black and white spots and blotches and usually 19 pectoral rays (usually 20 in *E. coioides*).

Other families: lack of three flat spines on the upper posterior corner of the operculum.

BIOLOGY / ECOLOGY

Feeds mainly on fishes, crustaceans and cephalopods. Protogynous hermaphrodite species. Females reach maturity at the age of 2-3 years (55-75 cm). Sex change occurs at the size of 55-75 cm. Eggs and larvae are pelagic. Optimal survival at temperature 30°C and salinity of 3‰.

habitat: benthic. Rocky and continental slope to depth of 100 m. Reported also to enter estuaries.

DISTRIBUTION

Worldwide: wide Indo Pacific. Red Sea, eastern African coast south to Durban to Ryukyo Islands, northern Australia to New Caledonia.

Mediterranean: recorded first, misidentified as *Epinephelus tauvina*, in Israel (Ben-Tuvia and Lourie, 1969). A young specimen was caught in 1998 near Trieste, North Adriatic Sea (likely cause: ballast transport) (Parenti and Bressi, 2001). In 2014, one specimen was caught in Antalya (Turkey) (Gökoğlu and Özvarol., 2015).

MODE OF INTRODUCTION

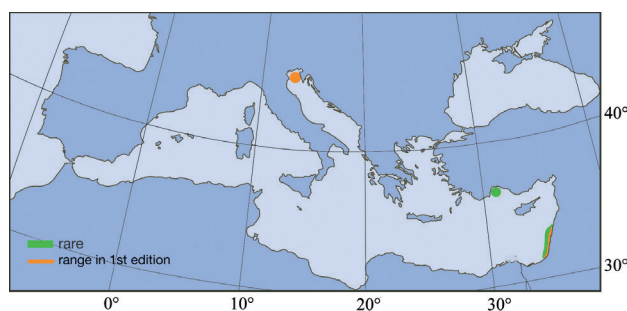
Via the Suez Canal. Shipping and mariculture are also possible vectors.

ESTABLISHMENT SUCCESS

Several specimens have been collected in the Mediterranean.

IMPORTANCE TO HUMANS

Rare in the Mediterranean. *Epinephelus coioides* was tested in several countries as potential species for mariculture (Mathews *et al.*, 1986).



1st Med. record
Israel, 1969.

KEY REFERENCES

- Ben-Tuvia A. and Lourie A. 1969. A Red Sea grouper *Epinephelus tauvina* caught on the Mediterranean coast of Israel. *Israel Journal of Zoology*, 18: 245-247.
- Gökoğlu M. and Özvarol Y. 2015. *Epinephelus coioides* (Actinopterygii: Perciformes: Serranidae)— a new Lessepsian migrant in the Mediterranean coast of Turkey. *Acta Ichthyologica et Piscatoria*, 45(3): 307-309.
- Heemstra P.C. and Golani D. 1993. Clarification of the Indo- Pacific groupers (Pisces: Serranidae) in the Mediterranean Sea. *Israel Journal of Zoology*, 39: 381-390.
- Heemstra P.C. and Randall J.E. 1993. FAO species catalogue. Vol.16. Groupers of the world (Family Serranidae, Subfamily Epinephelinae). An annotated and illustrated catalogue of the groupers, rockcod, hind, coral grouper and lyretail species known to date. *FAO Fisheries Synopsis. Number 125. Food and Agriculture Organization of the United Nations, Rome*, 382 pp.+ 31 pl.
- Parenti P. and Bressi N. 2001. First record of the orange-spotted grouper, *Epinephelus coioides* (Perciformes - Serranidae) in the Northern Adriatic Sea. *Cybium*, 25(3): 281-284.