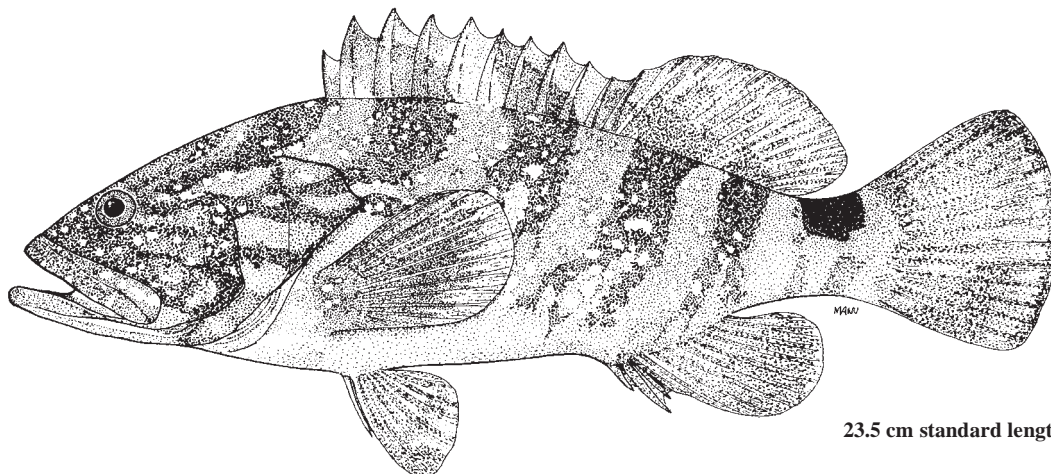


Epinephelus daemeli (Günther, 1876)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Saddletail grouper; Fr - Mérrou troussequin; Sp - Mero montado.



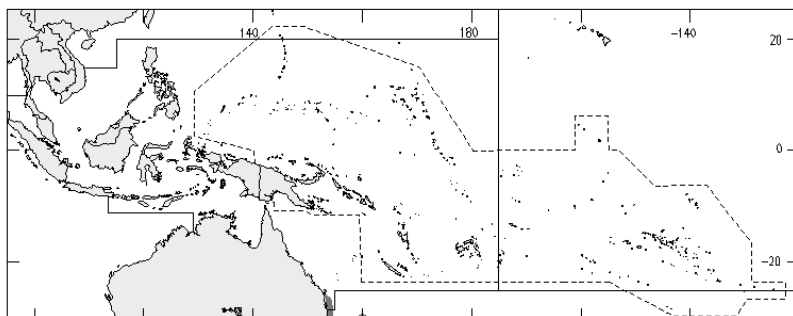
23.5 cm standard length

Diagnostic characters: Body depth 2.9 to 3.3 times in standard length (for specimens 11 to 45 cm standard length); head length 2.3 to 2.5 times in standard length. Interorbital area flat to slightly convex; dorsal head profile almost straight; **preopercle rounded, finely serrate; opercular spines inconspicuous; upper edge of operculum distinctly convex.** Maxilla reaches well past eye; **canines at front of jaws well developed, particularly the inner depressible teeth at symphysis of upper jaw; midlateral part of lower jaw with 2 rows of large teeth.** Rear nostrils of adults 2 to 4 times larger than anterior nostrils. First gill arch with 25 to 28 gill rakers, of which 9 to 12 on upper limb and 15 to 19 lower limb; longest gill raker shorter than longest gill filaments. **Dorsal fin with XI spines and 14 soft rays**, third to last spines subequal and shorter than longest dorsal-fin rays, the interspinous membranes incised; anal fin with III spines and 8 soft rays; caudal fin rounded; pectoral fins fleshy, with 17 to 19 rays, the fin length 1.6 to 2.1 times in head length; pelvic fins not reaching anus, their length 2.1 to 2.5 times in head length. Lateral body scales smooth (except for area covered by pectoral fins), with auxiliary scales; **lateral-line scales 63 to 71; lateral scale series 111 to 126.** **Colour:** variable, can change quickly from uniformly dark brown or black to a pale greyish or brown with 4 irregular, oblique, dark bands; first band from anterior dorsal-fin spines to upper edge of operculum; bands darkest dorsally, where they contain small, irregular pale spots; ventrally, the bands break up into irregular dark markings; a fifth dark band from nape to eye and a black saddle blotch on peduncle; median and pelvic fins with narrow white margins on some fish. Large adults often uniformly dark brown or black (especially in estuaries), the underside of head pale and a few pale spots on cheeks. Small juveniles with dark spots on edges of dark body bars and extend onto median fins.

Size: Maximum length at least 122 cm; maximum weight 64 kg.

Habitat, biology, and fisheries: Rocky reefs from near shore to depths of at least 50 m. An aggressive territorial species that may occupy a particular cave for life. Sex change (from female to male) occurs at a length of 100 to 110 cm. Juveniles feed on crabs and fishes. An esteemed food fish, avidly sought by anglers and spearfishermen.

Distribution: Temperate and subtropical waters of south-western Pacific: Australia (from southern Queensland to South Australia), Lord Howe Island, Norfolk Island, Kermadec Islands, and New Zealand (North Island and Poor Knights Islands).

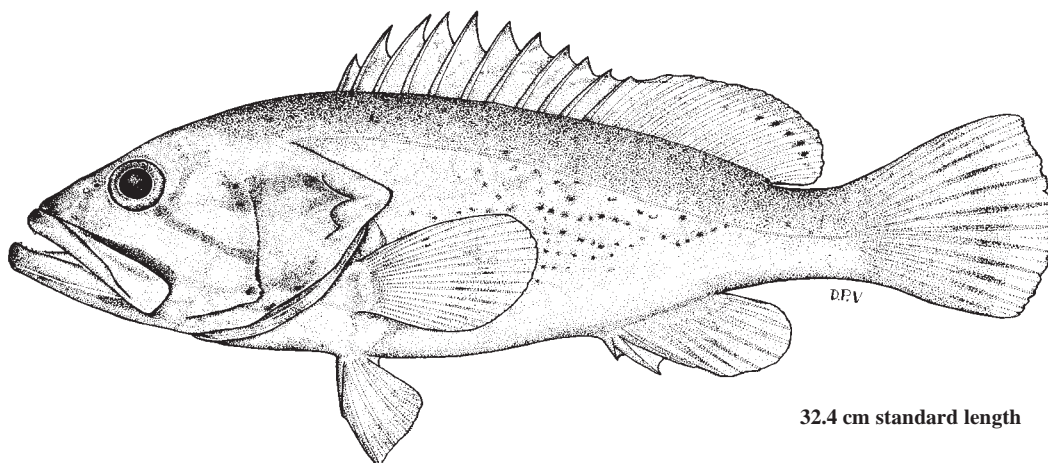


Epinephelus epistictus (Temminck and Schlegel, 1842)

(Plate III, 20)

Frequent synonyms / misidentifications: *Epinephelus praeopercularis* Boulenger, 1887 / *Epinephelus magniscuttis* non Postel, Fourmanoir, and Guézé, 1963; *E. heniochus* non Fowler, 1904.

FAO names: En - Dotted grouper; Fr - Mèrou pâle; Sp - Mero palido.

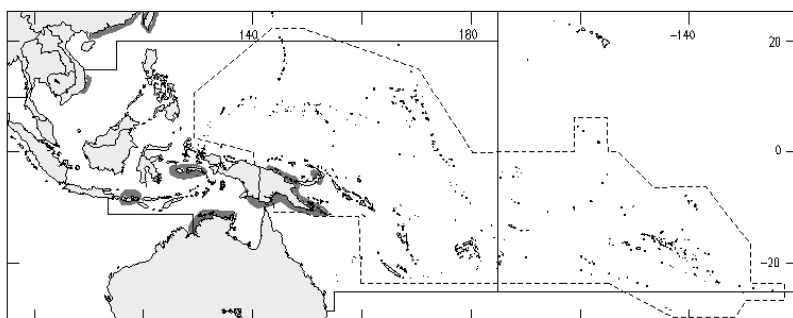


Diagnostic characters: Body depth 3.0 to 3.3 times in standard length (for specimens 12 to 50 cm standard length); head length 2.2 to 2.5 times in standard length. Interorbital area and dorsal head profile slightly convex; **preopercle angle produced, with 3 to 5 distinctly enlarged serrae; upper edge of operculum straight or slightly convex;** maxilla reaches to, almost to, or slightly past vertical at rear edge of eye; adults with a step or abrupt bend on ventral edge of maxilla; midlateral part of lower jaw with 2 rows of teeth, the inner ones slightly larger; nostrils of adults subequal, or rear nostrils about twice as large as anteriors. First gill arch with 7 to 10 gill rakers on upper limb, 15 to 19 on lower limb; length of longest gill raker subequal to longest gill filaments. Pyloric caeca 7 to 10. **Dorsal fin with XI spines and 14 or 15 soft rays**, the third or fourth spines longest, usually shorter than longest soft ray, the interspinous membranes deeply incised; anal fin with III spines and 8 soft rays; caudal fin slightly to moderately rounded; pectoral-fin rays 17 to 19, the fin length 1.6 to 2.1 times in head length; pelvic fins end well short of anus, their length 2.0 to 2.6 times in head length. Lateral body scales rough, with a few auxiliary scales in adults; **lateral-line scales 57 to 70; lateral scale series 105 to 127.** **Colour:** head and body pale brownish or greenish grey, with conspicuous, small, brownish black spots on dorsolateral part of body, rear part of head, and on median fins; some specimens with faint dark band from eye to end of operculum, another from eye to notch of preopercle, and third a continuation of maxillary streak; pectoral-fin rays brownish, the membranes clear. Juveniles with dark spots on head and body arranged in 3 longitudinal rows.

Size: Maximum total length about 80 cm; maximum weight 7 kg.

Habitat, biology, and fisheries: Rocky and trawlable bottoms in depths of 71 to 290 m. Nothing has been published on the biology of *Epinephelus epistictus*. Probably of some commercial importance, but separate catch statistics are not available for this species. Caught with trawls and handlines.

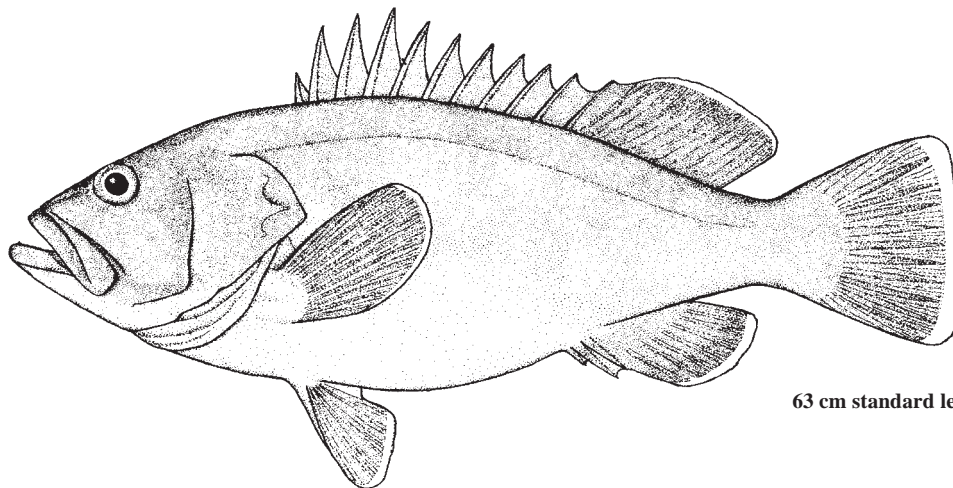
Distribution: Mainly continental localities in the tropical Indo-West Pacific region: from Red Sea to South Africa and across northern Indian Ocean to Viet Nam, China (including Hong Kong and Fujian and Taiwan provinces), Korea, Japan, Ogasawara Islands, Indonesia, Papua New Guinea, and northern Australia.



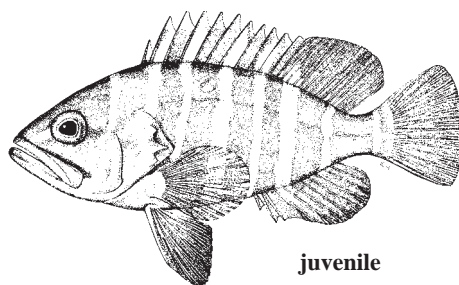
***Epinephelus ergastularius* Whitley, 1930**

Frequent synonyms / misidentifications: None / *Epinephelus septemfasciatus* (non Thunberg, 1793); *E. octofasciatus* non Griffin, 1926.

FAO names: En - Sevenbar grouper; Fr - Mérou sept raies; Sp - Mero de siete bandas.



63 cm standard length



juvenile

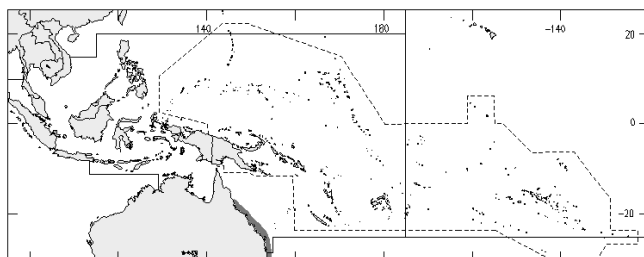
Diagnostic characters: Body depth 2.6 to 2.9 times in standard length (for specimens 19 to 89 cm standard length); head length 2.4 to 2.6 times in standard length. Interorbital area and dorsal head profile slightly convex; preopercle finely serrate, the serrae on the rounded corner not enlarged and the ventral edge with 1 to 4 small serrae; upper edge of operculum almost straight; maxilla reaches to or almost to vertical at rear edge of eye; midlateral part of lower jaw with 2 rows of teeth; rear nostrils of adults 2 to 4 times larger than anterior nostrils.

First gill arch with 7 to 9 gill rakers on upper limb, 14 or 15 on lower limb; outer side of first gill arch with small bony tooth plates. **Dorsal fin with XI spines and 14 or 15 soft rays**, the third spine usually longest, 2.6 to 3.2 times in head length and subequal to length of longest soft ray, the interspinous membranes deeply incised; **anal fin with III spines and 9 or 10 soft rays**; caudal fin slightly rounded in juveniles, truncate to slightly emarginate in adults; pectoral-fin rays 18 or 19; the fin length 1.7 to 2.4 times in head length; pelvic fins distinctly shorter than pectoral fins. Lateral body scales rough; no auxiliary scales; **lateral-line scales 63 to 70**; **lateral scale series 103 to 116**. **Colour:** body of juveniles brown, with 7 broad dark bars, the first from dorsal-fin origin to upper edge of operculum, the last bar covering most of caudal peduncle, its upper half black; the pale spaces separating second and third dark bars and that between fourth and fifth dark bars are narrower than those between third and fourth or fourth and fifth and sixth dark bars; prominent black maxillary streak; median and pelvic fins dark brown; pectoral fins hyaline brown, pelvic fins blackish brown. Adults pinkish grey, with no trace of dark bars; fins darker than body and with white margins (except along spinous part of dorsal fin).

Size: Maximum total length at least 157 cm; maximum weight about 66 kg.

Habitat, biology, and fisheries: Adults are caught in depths of 108 to 370 m; juveniles are found in depths of 15 to 128 m. Commonly caught with hook-and-line off the coast of New South Wales.

Distribution: Known only from east coast of Australia between 18° and 36°S.

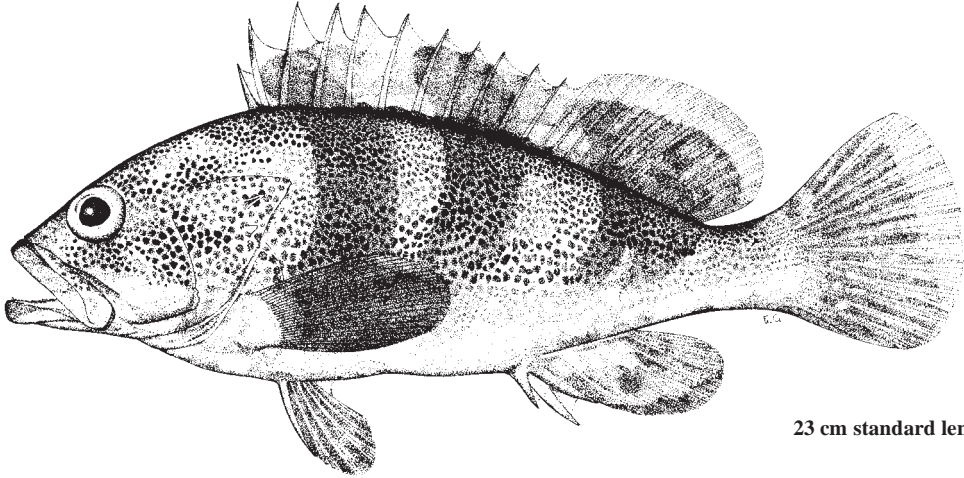


Epinephelus fasciatomaculosus (Peters, 1866)

(Plate III, 21)

Frequent synonyms / misidentifications: *Epinephelus fasciatomaculatus* (Peters, 1866) (misspelling) / *Epinephelus akaara* (non Temminck and Schlegel, 1842); *E. diacanthus* (non Valenciennes, 1828); *E. sexfasciatus* (non Valenciennes, 1828).

FAO names: En - Rock grouper; Fr - Mérou rocaille; Sp - Mero de las piedras.



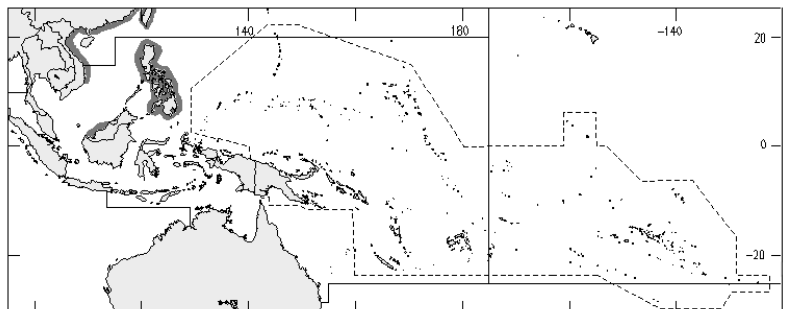
23 cm standard length

Diagnostic characters: Body depth 2.8 to 3.3 times in standard length (for specimens 9 to 29 cm standard length); head length 2.4 to 2.6 times in standard length. Interorbital area and dorsal head profile slightly convex; **preopercle angular, the serrae at the angle slightly enlarged; upper edge of operculum straight;** maxilla reaches about to below rear third of eye or a little past eye; midlateral part of lower jaw with 2 or 3 rows of subequal teeth; nostrils subequal. First gill arch with 7 or 8 gill rakers on upper limb, 14 to 16 on lower limb. Dorsal fin with XI spines and 15 to 17 soft rays, the third or fourth spines longest, 2.5 to 3.1 times in head length, and a little shorter than longest dorsal-fin rays, the interspinous membranes incised; anal fin with III spines and 8 soft rays; caudal fin rounded; pectoral-fin rays 17 to 19, the fin length 1.5 to 1.8 times in head length; pelvic fins not reaching past anus, their length 1.9 to 2.3 times in head length. Lateral body scales rough, with auxiliary scales; **lateral-line scales 48 to 52; lateral scale series 92 to 106.** **Colour:** head and body pale greyish brown, with numerous small dark brown, brownish yellow or russet spots; 5 slightly oblique broad dark bars usually visible on body, the last covering peduncle, the first 4 extending into dorsal fin; the first 2 bars are darker dorsally and extend to the margin of spinous dorsal fin; ventral parts of head and body whitish or pinkish; soft dorsal, caudal, and anal fins with faint pale spots and streaks; minute gold tag often visible at tips of some dorsal-fin spines. Dark body bars faint in adults and may be lost in preservative, except for dorsal part of first 2 bars.

Size: Maximum total length about 30 cm.

Habitat, biology, and fisheries: Shallow rocky areas. Feeds on fishes, prawns, crabs, worms, and gastropods. Females mature at 12.5 cm standard length, and most sexual transition occurs in fish 2 or 3 years old (14 to 16 cm). Maximum age is 6 years. Of some commercial importance in Hong Kong and Taiwan Province of China. Although a small species, it is excellent as a food fish and brings a good price. Caught with trawls, gill nets, and hook-and-line.

Distribution: Western Pacific from southern Japan to Malaysia, including Taiwan Province of China, Philippines, Viet Nam, China, Hong Kong, Hainan, and Sarawak.

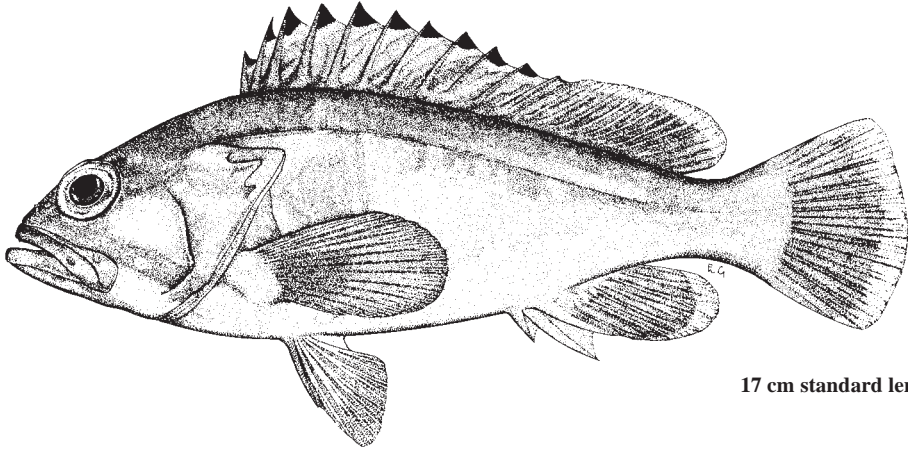


Epinephelus fasciatus (Forsskål, 1775)

(Plate III, 22)

Frequent synonyms / misidentifications: *Epinephelus emoryi* Schultz, 1853 / *Epinephelus retouti* non Bleeker, 1868.

FAO names: En - Blacktip grouper; Fr - M  rou oriflamme; Sp - Mero banderilla.



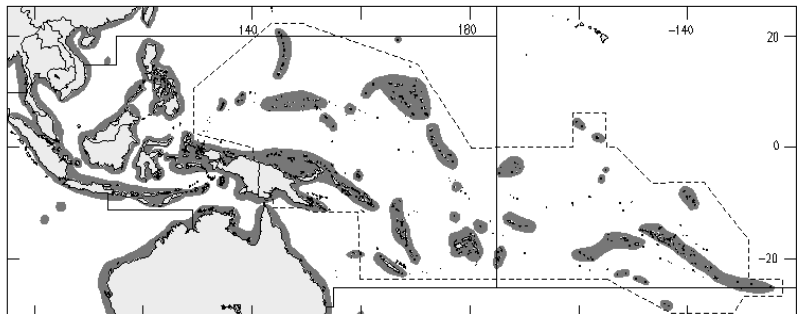
17 cm standard length

Diagnostic characters: **Body depth 2.8 to 3.3 times in standard length** (for specimens 10 to 26 cm standard length); head length 2.3 to 2.6 times in standard length. Preopercle rounded, the rear edge serrate; upper edge of operculum straight; midlateral part of lower jaw with 2 to 4 rows of teeth; nostril subequal. First gill arch with 6 to 8 gill rakers on upper limb, 15 to 17 on lower limb. Pyloric caeca 10 to 16. Dorsal fin with XI spines and 15 to 17 soft rays, the third to eleventh spines subequal and slightly shorter than longest dorsal-fin ray, the interspinous membranes distinctly incised; anal fin with III spines and 8 soft rays; **caudal fin slightly to moderately rounded; Central-Pacific specimens often with truncate caudal fins;** pectoral-fin rays 18 to 20, the fin length 1.5 to 2.0 in head length; pelvic fins not reaching past anus. **Lateral body scales rough, with numerous auxiliary scales; nape and dorsoposterior part of head densely covered with minute auxiliary scales;** lateral-line scales 49 to 75; lateral scale series 92 to 135. **Colour:** ground colour pale greenish grey, to pale reddish yellow to scarlet; **body often with 5 or 6 faint dark bars, the last on peduncle; body scales (except ventrally) with pale centre and dark rear margin, producing a faint checked pattern;** usually with irregular pale blotches and spots on body (a midlateral series diminishing in size posteriorly from behind pectoral-fin base to caudal peduncle) and dark brown line along crease of dorsal-fin base; dorsal part of head and nape, including upper jaw, dark red or reddish brown or with bands and blotches of similar colour; most specimens with dark band from below eye to interopercle; rim of orbit black and often bordered by a pale bluish line. Fins reddish orange, pale yellowish green or greenish brown, **the outer triangular part of interspinous membranes of dorsal fin black (dark red in fish from Western Australia and in some specimens from deep water), with pale yellow or white spot behind tip of each spine.**

Size: Maximum total length about 40 cm.

Habitat, biology, and fisheries: Coral reefs and rocky bottom from shore to depths of 160 m. Feeds during day and night on brachyuran crabs, fishes, shrimps, galatheid crabs, stomatopods, ophiuroids, and octopus. Abundant in shallow water and widely used for food. Readily caught with hook-and-line, spear, traps, and gill nets.

Distribution: Indo-West Pacific region from Red Sea to Pitcairn Islands; in the western Pacific from Japan (south of 33°) and Korea to southern Queensland and Lord Howe Island, and including virtually all tropical islands of the region.

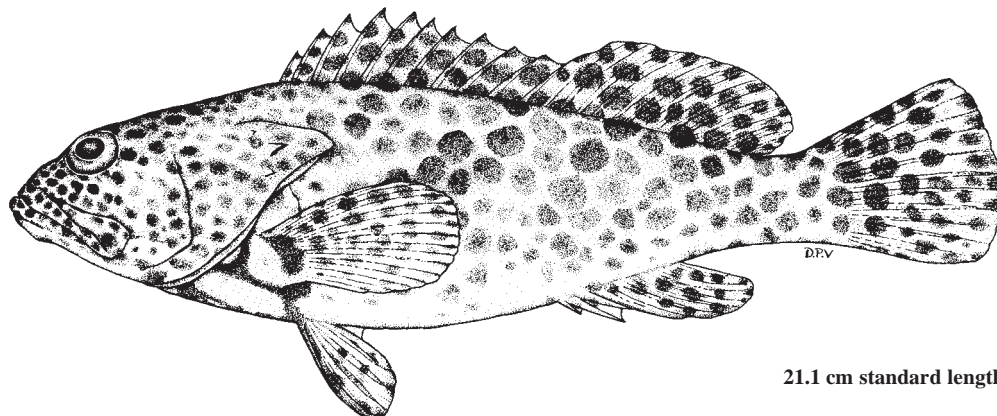


Epinephelus faveatus (Valenciennes, 1828)

(Plate III, 23)

Frequent synonyms / misidentifications: None / *Epinephelus macrospilos* (non Bleeker, 1855); *E. quoyanus* (non Valenciennes, 1830); *E. merra* non Bloch, 1793; *E. spilotoceps* non Schultz, 1953; *E. hexagonatus* (non Forster, 1801).

FAO names: En - Barredchest grouper; Fr - Mérou écharpe; Sp - Mero bandeado.



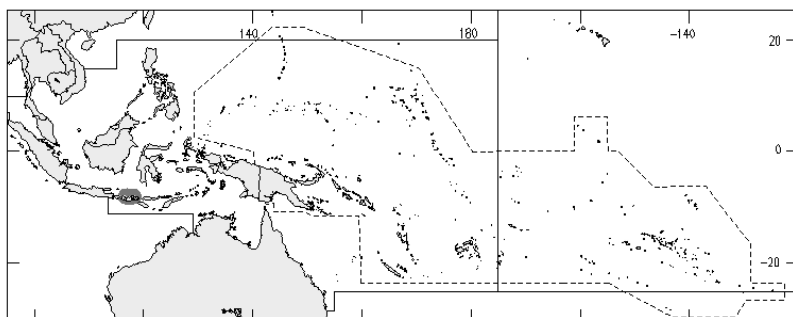
21.1 cm standard length

Diagnostic characters: Body depth 3.0 to 3.5 times in standard length (for specimens 9 to 26 cm standard length); head length 2.3 to 2.6 times in standard length; caudal peduncle depth 3.8 to 4.3 times in head length. Interorbital area flat or slightly concave, the dorsal head profile convex; preopercle rounded, with shallow indentation just above corner and slightly enlarged serrae at the corner; upper edge of operculum slightly convex; maxilla reaches past vertical at rear edge of eye; midlateral part of lower jaw with 2 rows of teeth; nostrils subequal. First gill arch with 7 to 10 gill rakers on upper limb, 14 to 16 on lower limb. Pyloric caeca about 25. **Dorsal fin with XI spines and 16 to 18 soft rays, the third or fourth spine longest, 2.6 to 3.9 times in head length and shorter than longest dorsal-fin rays, the interspinous membranes incised; anal fin with III spines and 8 soft rays, the second and third spines subequal, 3.6 to 4.3 times in head length; caudal fin rounded, length of middle rays 1.65 to 1.9 times in head length; pectoral-fin rays 17 to 19, the fin length 1.7 to 2.2 times in head length; pelvic fins reaching anus, 2.2 to 2.6 times in head length. Lateral body scales smooth (except for area covered by pectoral fin), with numerous auxiliary scales; lateral-line scales 48 to 52; lateral scale series 83 to 98. **Colour:** head, body, and fins pale, covered with close-set roundish brown spots of unequal size, most of those on body larger than pupil; 4 groups of 2 or 3 spots at base of dorsal fin darker than other spots on body; 2 oblique dark bands on side of chest; pectoral fins dusky, with dark blotch at base and obscure dark spots, more distinct on inner surface of fin; spots on median fins darker than those on body.**

Size: Maximum total length 40 cm.

Habitat, biology, and fisheries: Shallow-water coral reefs and rocky areas. Apparently a small species; females are mature at 17 cm standard length. Separate statistics are not available for this species, but undoubtedly of importance in artisanal fisheries. Caught with hook-and-line, gill nets, lift nets, traps, and spear.

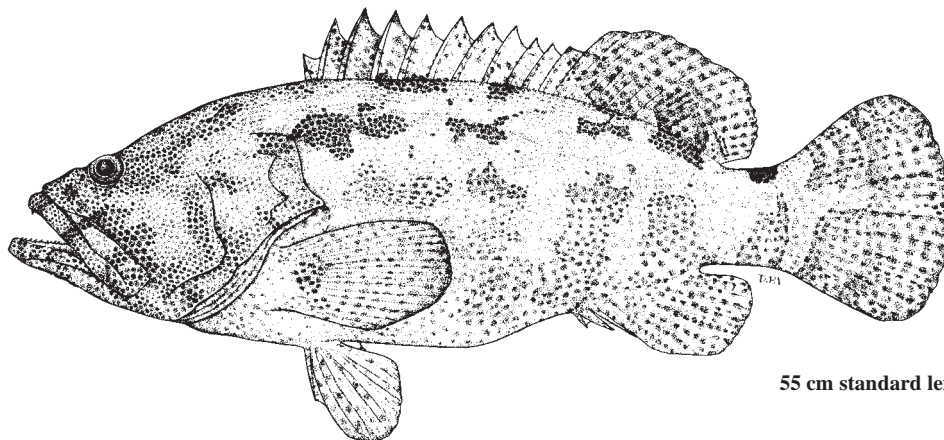
Distribution: Northeastern Indian Ocean: Southern India, Sri Lanka, and southern Indonesia (Bali and Lombok). *Epinephelus faveatus* has only recently been recognized and distinguished from similar species, so it is likely that its distribution is continuous from Pakistan to Indonesia.



Epinephelus fuscoguttatus (Forsskål, 1775)

Frequent synonyms / misidentifications: None / *Epinephelus polyphkadion* (non Bleeker, 1849) (= *E. microdon* (Bleeker, 1856)).

FAO names: En - Brownmarbled grouper; Fr - Mérou marron; Sp - Mero manchado.

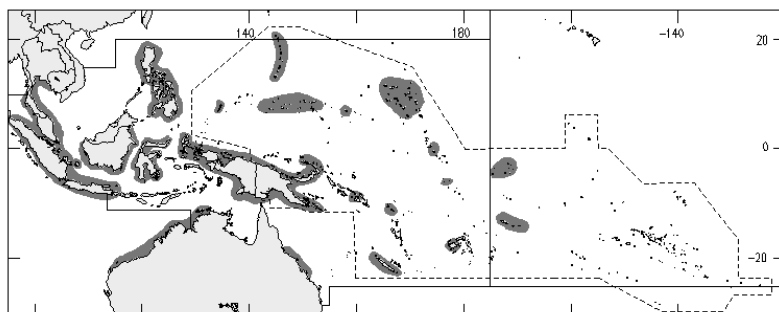


Diagnostic characters: Body depth 2.6 to 2.9 times in standard length (for specimens 11 to 55 cm standard length); head length 2.3 to 2.5 times in standard length. Interorbital area flat or slightly concave; dorsal head profile of adults indented at eyes and distinctly convex from there to dorsal-fin origin; upper edge of operculum distinctly convex, descending almost vertically to rear end of operculum; ventral edge of preorbital bone indented below nostrils. Maxilla extends well posterior to eye; midlateral part of lower jaw with 3 or 4 rows of teeth, the inner teeth about twice length of outer teeth; canines inconspicuous; nostrils close together; posterior nostrils triangular, 4 to 7 times larger than anteriors in adults. First gill arch with 10 to 12 gill rakers on upper limb, 17 to 21 on lower limb (but rudiments often difficult to count); gill rakers short and stout, raker at angle subequal to longest gill filaments, other rakers distinctly shorter. Dorsal fin with XI spines and 14 or 15 soft rays, the third or fourth spines longest, 2.9 to 3.5 times in head length and obviously shorter than longest dorsal-fin rays, the interspinous membranes distinctly incised; anal fin with III spines and 8 soft rays; caudal fin rounded; pectoral-fin rays 18 to 20, the fin length 1.7 to 2.1 times in head length; pelvic fins not reaching anus, 2.0 to 2.5 times in head length. Lateral body scales smooth, with auxiliary scales; lateral-line scales 52 to 58; lateral scale series 102 to 115. **Colour:** pale yellowish brown, with 5 vertical series of dark brown blotches that are very irregular in outline; head, body, and fins covered with close-set small brown spots, those on the dark blotches much darker than spots in between blotches; small black saddle spot on rear half of peduncle; 2 or 3 faint, dark bars at side of jaws.

Size: Maximum total length at least 95 cm (120 cm and 11 kg in the Philippines).

Habitat, biology, and fisheries: Shallow coral reefs and rocky bottoms to depths of 60 m; juveniles in seagrass areas. Feeds on fishes, crabs, and cephalopods. Implicated in ciguatera fish poisonings at some Pacific localities. Occasionally seen in local markets. Used in cage culture operations in Singapore. Caught with hook-and-line, traps, and spear.

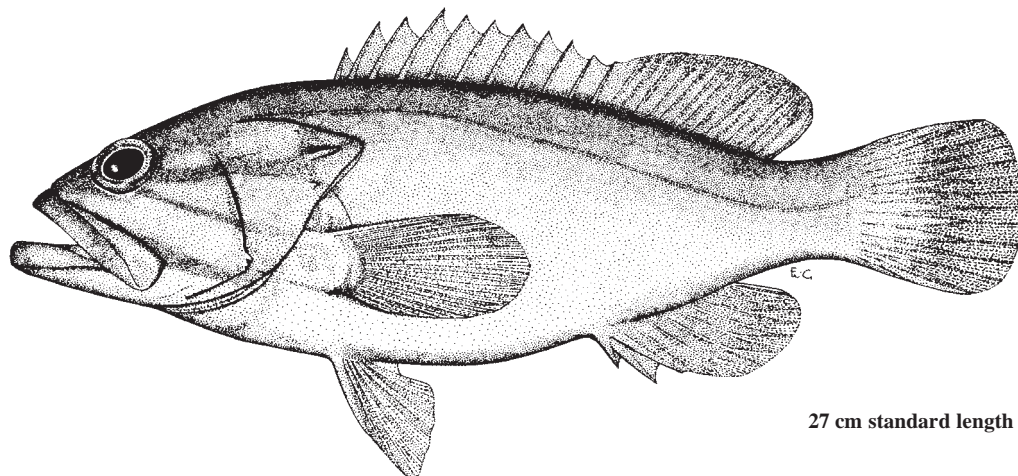
Distribution: Indo-West Pacific region from Red Sea to Phoenix Islands, including Indonesia, Japan, Philippines, New Guinea, tropical coast of Australia, New Caledonia, and most tropical islands of the region; not known from Persian Gulf, Asian mainland, Hawaii or French Polynesia.



Epinephelus heniochus Fowler, 1904

Frequent synonyms / misidentifications: *Epinephelus hata* Katayama, 1953 / *Epinephelus epistictus* (non Temminck and Schlegel, 1842).

FAO names: En - Bridled grouper; Fr - Mérrou bride; Sp - Mero embridado.



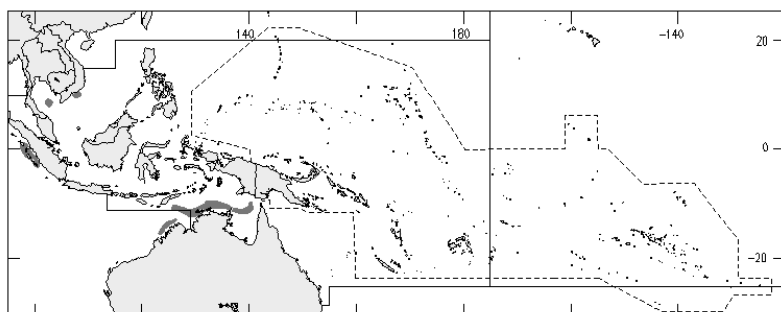
27 cm standard length

Diagnostic characters: Body depth 2.7 to 3.2 times in standard length (for specimens 10 to 27 cm standard length); head length 2.2 to 2.4 times in standard length. Interorbital area slightly convex; dorsal head profile convex; **preopercle angular, with 2 to 4 distinctly enlarged serrae at the angle; upper edge of operculum approximately straight;** maxilla usually reaches to or slightly past a vertical at rear edge of eye; **lower edge of maxilla with a step-like bend in adults;** canines at front of jaws well developed, especially in upper jaw; midlateral part of lower jaw with 2 rows of teeth; rear nostrils about twice as large as anterior nostrils. **First gill arch with 7 to 9 gill rakers on upper limb, 14 to 16 on lower limb.** Pyloric caeca 7 or 8. Dorsal fin with XI spines and 14 or 15 soft rays, the third or fourth spines longest, 3.0 to 3.8 times in head length and shorter than longest dorsal-fin rays; anal fin with III spines and 8 soft rays; caudal fin rounded; pectoral-fin rays 16 to 18, the fin length 1.6 to 1.9 times in head length; and pelvic fins 1.9 to 2.4 times in head length. **Lateral body scales rough, without auxiliary scales; lateral-line scales 54 to 60; lateral scale series 89 to 100.** **Colour:** head and body pale brown dorsally, shading to whitish or pale pink ventrally; some specimens with minute brownish black dots on body and rear part of head; faint dark brown stripe from eye to end of operculum, another darker stripe from lower edge of eye to subopercle and a third from edge of preorbital to interopercle; pectoral fins hyaline greyish yellow; lower part of caudal fin sometimes darker than rest of fin; margin of interspinous dorsal fin membranes yellow.

Size: Maximum total length at least 43 cm.

Habitat, biology, and fisheries: Most specimens have been taken with trawls on mud or silty sand bottom in depths of 40 to 235 m. Nothing has been published on the biology of this species. Reported as "common but not abundant" in the South China Sea, and "not a very popular food fish" in the markets of Singapore. Caught with trawls and vertical longlines.

Distribution: Tropical western Pacific: Singapore, Indonesia, the Philippines, Gulf of Thailand, Viet Nam, northern Australia, and New Britain. Although Katayama's type-specimens of *Epinephelus hata* were purchased from the Nagasaki fish market, the absence of other records of *E. heniochus* from Japan indicates that the types of *E. hata* may have been caught south of Japan.

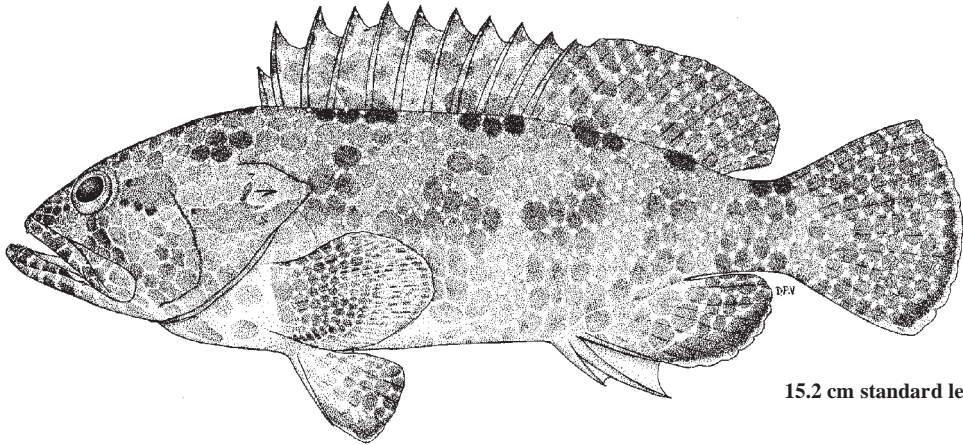


Epinephelus hexagonatus (Forster, 1801)

(Plate III, 24)

Frequent synonyms / misidentifications: None / *Epinephelus merra* non Bloch, 1793; *E. macrospilos* (non Bleeker, 1855); *E. spilotoceps* non Schultz, 1953; *E. quoyanus* (non Valenciennes, 1830).

FAO names: En - Starspotted grouper; Fr - M erou m elif ere; Sp - Mero mielero.



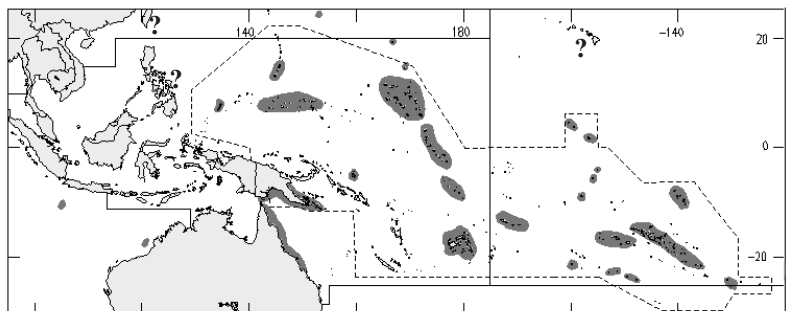
15.2 cm standard length

Diagnostic characters: Body depth 2.8 to 3.4 times in standard length (for specimens 10 to 17 cm standard length); head length 2.5 to 2.6 times in standard length. Preopercle rounded, the ventral serrae slightly enlarged; upper edge of operculum convex; midlateral part of lower jaw with 3 to 5 rows of teeth; nostrils subequal. First gill arch with 7 to 9 gill rakers on upper limb, 17 to 19 on lower limb. Dorsal fin with XI spines and 15 to 17 soft rays, the **fifth to ninth spines subequal (2.5 to 2.8 times in head length)** and slightly shorter than longest soft rays; anal fin with III spines and 8 soft rays, **the second spine 2.1 to 2.5 times in head length, distinctly longer than third spine or depth of peduncle**; caudal fin rounded; **pectoral-fin rays 17 to 19, the fin length 1.6 to 1.9 times in head length**; pelvic fins not reaching past anus, 1.8 to 2.1 times in head length. Lateral body scales rough, with auxiliary scales; **lateral-line scales 61 to 70**; lateral scale series 93 to 114. **Colour:** head and body covered with polygonal (mostly hexagonal) brown spots that tend to merge, leaving only conspicuous triangular white dots at corners of the polygons; dark spots on belly and ventral part of head more rounded and separated, and often reddish brown; 4 or 5 brownish black saddle blotches (formed by groups of darker spots) on dorsal part of body and caudal peduncle, the first 4 extending onto base of dorsal fin; irregular dark bar, formed by darker polygonal spots, on lower part of body below each saddle blotch; large brown or olive spot just behind eye, often joined to similar spot on opercle; fins with close-set dark brown or reddish brown spots and white dots, except distal half of pectoral fins with faint dark spots and no white dots; pelvic and anal fins with pale edge and dark brown submarginal band; interspinous dorsal-fin membranes with dark brown triangle and short white or pale yellow filament behind tip of each spine.

Size: Maximum total length about 26 cm.

Habitat, biology, and fisheries: A common coral-reef species, usually found in shallow outer-reef areas exposed to surge. Feeds mainly on fishes and crustaceans. Too small to be of commercial importance except as a food fish in artisanal fisheries. Caught with hook-and-line, traps, spear, and gill nets.

Distribution: Tropical Indo-West Pacific region from Kenya to the Pitcairn Group. Known from most tropical Indo-Pacific islands (both on and off the Pacific Plate), including islands of the Great Barrier Reef, but no verifiable records from the mainland coast of Australia, Indonesia, the Philippines, Taiwan Province of China, or Hawaii.

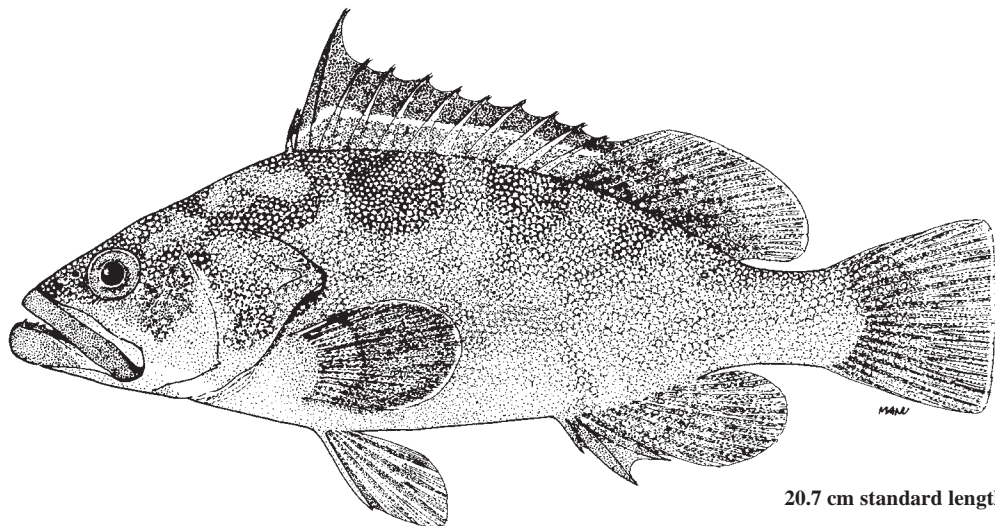


Epinephelus irroratus (Forster, 1801)

(Plate IV, 25)

Frequent synonyms / misidentifications: *Epinephelus spiniger* Günther, 1859; *E. albopunctulatus* Boulenger, 1895 / None.

FAO names: En - Marquesan grouper; Fr - Mérrou Marqueses; Sp - Mero marquesano.



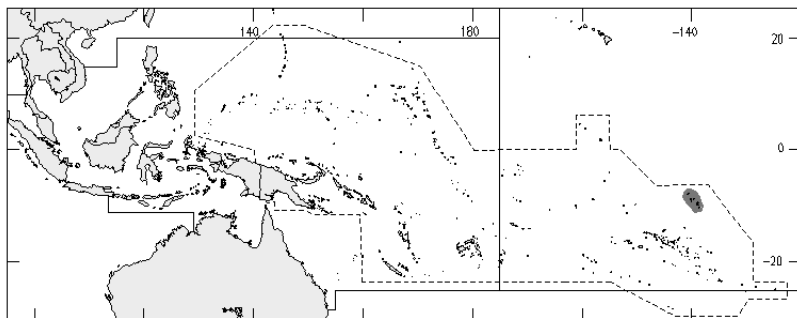
20.7 cm standard length

Diagnostic characters: Body depth 2.7 to 3.3 times in standard length (for specimens 14 to 28 cm standard length); head length 2.4 to 2.6 times in standard length. Interorbital area and dorsal head profile slightly convex; preopercle corner rounded and slightly indented, the lower serrae scarcely enlarged; upper edge of operculum almost straight; maxilla reaching to or just past vertical at rear edge of eye; midlateral part of lower jaw with 2 to 4 rows of teeth; rear nostril about twice size of anterior nostril. First gill arch with 6 to 8 gill rakers on upper limb, 13 to 16 on lower limb. Dorsal fin with XI spines and 16 soft rays, the second spine elongated in adults, more than twice length of third spine, the interspinous membranes not or only slightly incised; anal fin with III spines and 8 soft rays; caudal fin truncate to slightly rounded; pectoral-fin rays 18 to 20, the fin length 1.6 to 1.9 times in head length; pelvic fins not reaching past anus, 1.8 to 2 times in head length. Lateral body scales rough, with auxiliary scales; lateral-line scales 70 to 75; lateral scale series 117 to 136. **Colour:** reddish brown with white dot on each scale (dots may not persist in preservative); maxillary streak dark reddish brown; spinous dorsal fin with prominent dark red margin; white line along rear edges of median and pectoral fins.

Size: Maximum total length at least 34 cm.

Habitat, biology, and fisheries: Abundant in shallow water around fringing coral reefs. Nothing has been published on the biology of this species, but it is of considerable interest to the artisanal fishery of the Marquesas Islands. Caught with hook-and-line, spear, and traps.

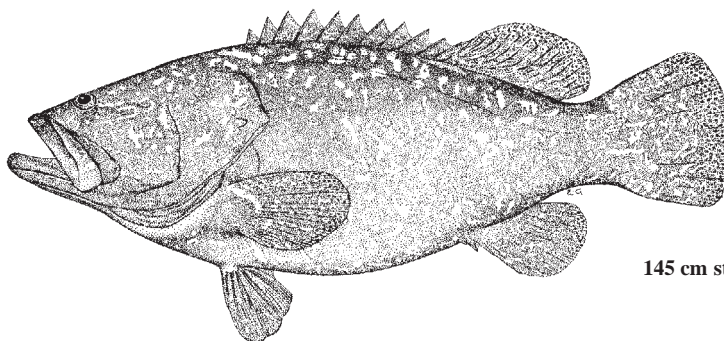
Distribution: Known only from the Marquesas Islands and from a single specimen taken at Minami Tori Shima (Marcus Island), but the latter record may be erroneous.



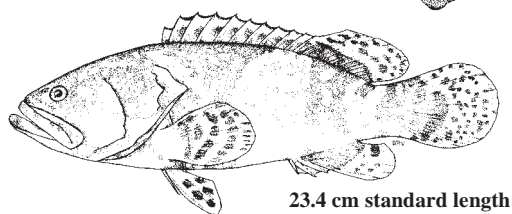
Epinephelus lanceolatus (Bloch, 1790)

Frequent synonyms / misidentifications: *Promicrops lanceolatus* (Bloch, 1790) / *Epinephelus tauvina* (non Forsskål, 1775).

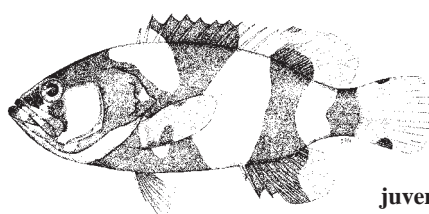
FAO names: En - Giant grouper; Fr - Mériou lancéolé; Sp - Mero lanceolado.



145 cm standard length



23.4 cm standard length

juvenile
3 cm standard length

Diagnostic characters: **Body robust, its width 1.5 to 1.75 times in body depth; body depth 2.4 to 3.4 times in standard length (for specimens 12 to 179 cm standard length); head length 2.2 to 2.7 times in standard length; eye diameter 5.8 to 14 times in head length; interorbital width 3.3 (at 177 cm standard length) to 6.2 (at 12 cm standard length) times in head length.** Interorbital area flat to slightly convex, the dorsal head profile convex; preopercle finely serrate, the corner rounded; **upper edge of operculum convex;** maxilla reaching past eye; **midlateral part of lower jaw with 2 or 3 rows of teeth (at 20 to 25 cm standard length) increasing to 15 or 16 rows in a specimen of 177 cm standard length; canine teeth at front of jaws small or absent;** nostrils subequal. First gill arch of juveniles with 8 to 10 gill rakers on upper limb and 14 to 17 on lower limb; rudiments in adults are difficult to distinguish from bony platelets covering gill arch. Dorsal fin with XI spines and 14 to 16 soft rays, the **third to eleventh spines subequal, shorter than longest soft rays** and 3.1 to 5.7 times in head length; anal fin with III spines and 8 soft rays; caudal fin rounded; pectoral-fin rays 18 to 20, the fin length 1.8 to 2.2 times in head length; pelvic fins not reaching anus, 2.1 to 2.6 times in head length. Lateral body scales smooth, with auxiliary scales; **lateral-line scales 54 to 62, the anterior scales with branched tubules** (except small juveniles); lateral scale series 95 to 105. **Colour:** **small juveniles (less than 15 cm) yellow, with 3 irregular black areas, the first from spinous dorsal fin to belly and chest and extending onto head, the second from base of soft dorsal fin to anal fin and the last at base of caudal fin; subadults (25 to 60 cm) with irregular white or yellow spots on the black areas and fins with black spots; adults (90 to 165 cm) dark brown with faint mottling, the fins with numerous small black spots; large adults (180 to 250 cm) dark brown, fins darker.**

Size: One of the largest groupers, attains 260 cm total length; maximum weight 288 kg.

Habitat, biology, and fisheries: Occurs in caves on coral reefs and around wrecks; juveniles and adults also found in estuaries and harbours. Caught at depths of 100 m, but more often in shallow water. Feeds on crustaceans (mainly spiny lobsters and large crabs), a variety of fishes including sharks and batoids, and juvenile sea turtles. Not common enough to be of commercial importance; rare in some places due to spearfishing. Caught with hook-and-line and spear.

Distribution: Indo-Pacific region from Red Sea to South Africa and eastwards to Hawaiian and Pitcairn islands, including Japan, Taiwan Province of China, Philippines, Indonesia, Thailand, Australia, and islands of the Central Pacific.

