

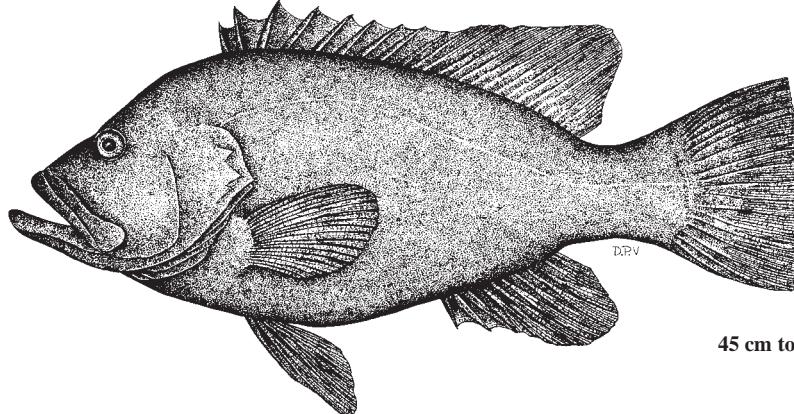
Subfamily EPINEPELINAЕ

Tribe EPINEPELINI

Aethaloperca rogaa* (Forsskål, 1775)*(Plate I, 1)**

Frequent synonyms / misidentifications: *Cephalopholis rogaa* (Forsskål, 1775) / None (rarely misidentified).

FAO names: En - Redmouth grouper; Fr - Vielle roga; Sp - Cherna roga.



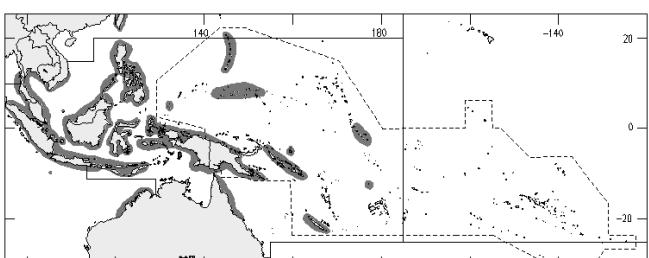
45 cm total length

Diagnostic characters: Body deep and compressed, its depth greater than head length and 2.1 to 2.4 times in standard length; body width 2.3 to 2.8 times in body depth; head length 2.5 to 2.75 times in standard length. Dorsal head profile steep, straight, or slightly concave along snout and distinctly convex from eye to dorsal fin; preorbital depth 6.5 to 9.2 times in head length; preopercle finely serrate, the lower edge fleshy; rear nostrils round or oval, not much larger than front ones. Maxilla reaches past eye; small canines at front of jaws, none elsewhere; 2 to 4 rows of small slender teeth at side of lower jaw; palatine teeth present; ventroposterior corner of maxilla with a distinct bony protuberance; supramaxilla slender. First gill arch with 8 to 10 gill rakers on upper limb, 15 to 17 on lower limb; longest raker slightly longer than longest gill filaments. Dorsal fin with IX spines and 17 or 18 soft rays, the fin origin over opercle, and the third or fourth spines longest; dorsal-fin membranes slightly incised between the spines; anal fin with III spines and 8 or 9 soft rays; middle dorsal and anal-fin rays elongated in adults, giving these fins an angular profile, with the rear margin almost vertical; caudal fin truncate, with 8 branched rays in upper lobe and 7 in lower lobe; pectoral fins asymmetric, with 17 to 19 rays; pelvic fins subequal to pectoral fins, extending beyond anus. Scales on body rough, with auxiliary scales; lateral-line scales 48 to 54; lateral scale series 94 to 104. **Colour:** dark brown to black, occasionally with an orange cast, usually with a pale vertical bar on side of abdomen; distal part of spinous dorsal fin dark orange to brownish red; inside of mouth, gill cavity and upper jaw membranes reddish orange. Juveniles with a broad white posterior margin on caudal fin and a narrow white margin on soft dorsal fin.

Size: Maximum total length 60 cm.

Habitat, biology, and fisheries: Well-developed coral reefs in depths of 3 to at least 60 m. Usually seen in or near caves and holes in the reef. Small fishes (including *Pempheris* sp., a common cave dweller) are the primary food of this species, and it also feeds on stomatopods (*Pseudosquilla* sp.). Preliminary data indicate that it spawns at any time of the year and matures (females?) at a length of about 35 cm standard length. Occasionally seen in markets, but this species is not common. Caught with hook-and-line, spear, and probably in traps.

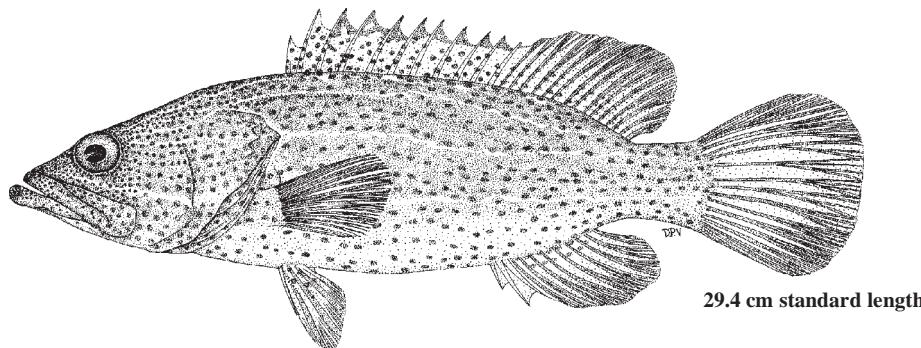
Distribution: Red Sea to South Africa and east to the Gilbert Islands in the Central Pacific; including Thailand, Japan, Philippines, Indonesia, Australia, Papua New Guinea, Palau, as well as Solomon, Caroline, and Gilbert islands.



Anpyerodon leucogrammicus* (Valenciennes, 1828)*(Plate I, 2)**

Frequent synonyms / misidentifications: *Serranus micronotatus* Rüppell, 1830; *S. urophthalmus* Bleeker, 1855 / None.

FAO names: En - Slender grouper; Fr - Mérou élégant; Sp - Mero elegante.

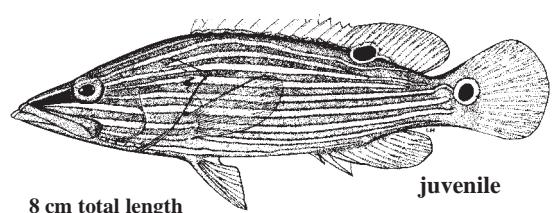
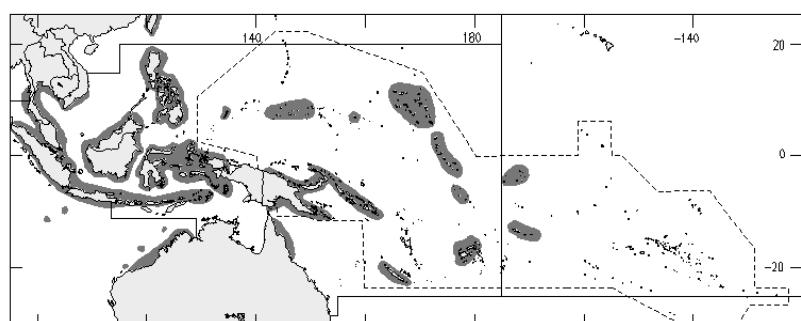


Diagnostic characters: Body and head elongate and markedly compressed, its depth distinctly less than head length, 3.1 to 3.7 times in standard length; body width 2.3 to 2.8 times in body depth. Head pointed, its length 2.3 to 2.5 times in standard length; dorsal head profile almost straight, the interorbital region slightly concave, flat or slightly convex; preorbital narrow, its depth 14 to 17 times in head length; preopercle rounded, finely serrate, the lower serrae only slightly enlarged, the lower edge fleshy; ventral edge of interopercle with a shallow indentation; upper edge of operculum distinctly convex; diameter of rear nostrils about twice that of anteriors. Maxilla reaches well past eye, the exposed part covered with tiny scales; **no teeth on palatines**; canines at front of jaws rudimentary or absent; teeth at sides of lower jaw subequal, in 2 or 3 irregular rows; no bony process on rear end of maxilla; supramaxilla well developed. First gill arch with 7 to 9 gill rakers on upper limb, 14 to 17 on lower limb; rakers subequal to gill filaments in length. Dorsal fin with XI spines and 14 to 16 soft rays, the fin origin over the opercle, the membranes distinctly incised between the spines; anal fin with III spines and 8 or 9 soft rays; caudal fin rounded, with 8 branched rays in upper lobe and 7 in lower lobe; pectoral fins short, thin, transparent, and symmetrical, with 15 to 17 rays; pelvic fins not reaching anus. Midlateral body scales rough; lateral-line scales 61 to 72; lateral scale series 106 to 125; auxiliary scales present on body scales. **Colour:** adults greenish to brownish grey with numerous orange-red spots on head (becoming smaller anteriorly), body, dorsal fin, and basally on caudal fin; 4 longitudinal whitish bands or series of streaks often visible on postorbital head and body; membranes of soft dorsal, anal, and caudal fins clear. Juveniles with longitudinal pale bluish grey stripes on a gold background; a blue-edged black spot (or double spot) at base of caudal fin and another at base of soft dorsal fin.

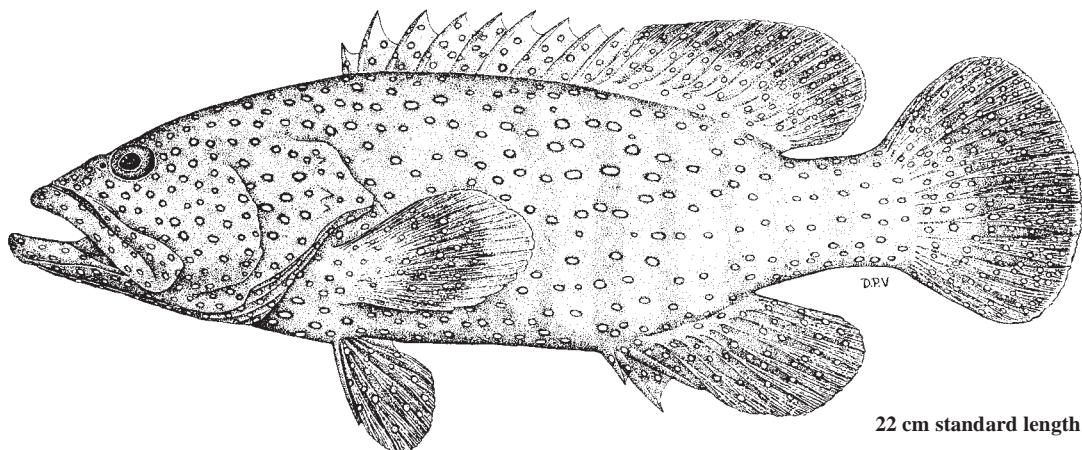
Size: Maximum total length at least 60 cm.

Habitat, biology, and fisheries: A coral-reef species usually found on protected reefs in depths of 5 to 80 m. Adults primarily piscivorous. The distinctive blue and gold striped juveniles are mimics of the wrasse *Halichoeres purpurescens* (Bloch and Schneider, 1801). Often seen in markets but not plentiful enough to be of commercial importance. Caught with hook-and-line, spear, and probably in traps.

Distribution: Red Sea to Mozambique and east to Samoa and the Phoenix Islands; including Japan, Philippines, Indonesia, Australia, and Papua New Guinea.



(from Randall and Kuiter, 1989)

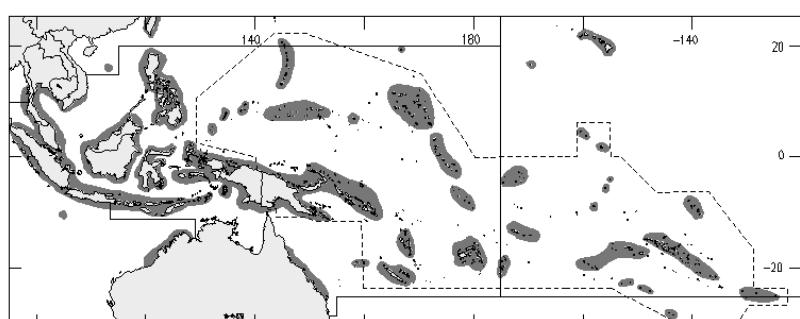
Cephalopholis argus* Bloch and Schneider, 1801*(Plate I, 3)****Frequent synonyms / misidentifications:** None / *Cephalopholis cyanostigma* (non Valenciennes, 1828).**FAO names:** En - Peacock hind; Fr - Vielle ciosomoer; Sp - Cherna pavo real.

Diagnostic characters: Body depth distinctly less than head length, 2.7 to 3.2 times in standard length (for specimens 10 to 40 cm standard length); head length 2.4 to 2.7 times in standard length. Eye small, its diameter distinctly less than snout length; interorbital area flat to slightly convex; preopercle rounded, finely serrate in young, virtually smooth in large adults, the lower edge fleshy; subopercle and interopercle smooth. Maxilla scaly, reaching well past eye. First gill arch with 9 to 11 gill rakers on upper limb, 17 to 19 on lower limb; rudimentary rakers on lower limb difficult to distinguish from intercalated bony plates. **Dorsal fin with IX spines and 15 to 17 soft rays, the membranes indented between the spines; anal fin with III spines and 9 soft rays;** pectoral-fin rays 16 to 18; pectoral fins clearly longer than pelvic fins, 1.4 to 2.0 times in head length; pelvic fins not reaching anus, 1.9 to 2.4 times in head length; caudal fin well rounded. Lateral body scales rough, with a few auxiliary scales in adults; lateral-line scales 46 to 51; lateral scale series 95 to 110. **Colour:** dark brown, covered with small black-edged blue ocelli; often with 5 or 6 pale bars on rear part of body and a large pale area over the chest; rear margin of median fins usually with a narrow white edge; distal part of pectoral fins sometimes maroon brown; triangular membranes at tips of dorsal-fin spines orange-gold.

Size: Maximum total length 55 cm.

Habitat, biology, and fisheries: A common tropical species found in a variety of coral reef habitats from tide pools to depths of at least 40 m. In the Gulf of Aqaba, *Cephalopholis argus* is found in social units comprising up to 12 adults, including 1 dominant male. Each group occupies a specific area (up to 2 000 m²) that is defended by the territorial male and subdivided into secondary territories, each inhabited by a single female. Primarily (75 to 95%) piscivorous, *C. argus* has been blamed for numerous cases of ciguatera in the Pacific region. This common and widespread species is important to artisanal fisheries throughout the Indo-West Pacific region. Caught with hook-and-line, spear, and in traps.

Distribution: *C. argus* is the most widely distributed of the groupers, occurring from the Red Sea to South Africa and east to French Polynesia and the Pitcairn Group, including Japan, northern Australia, Lord Howe Island, Marquesas, and throughout Micronesia. Recently introduced to Hawaii.

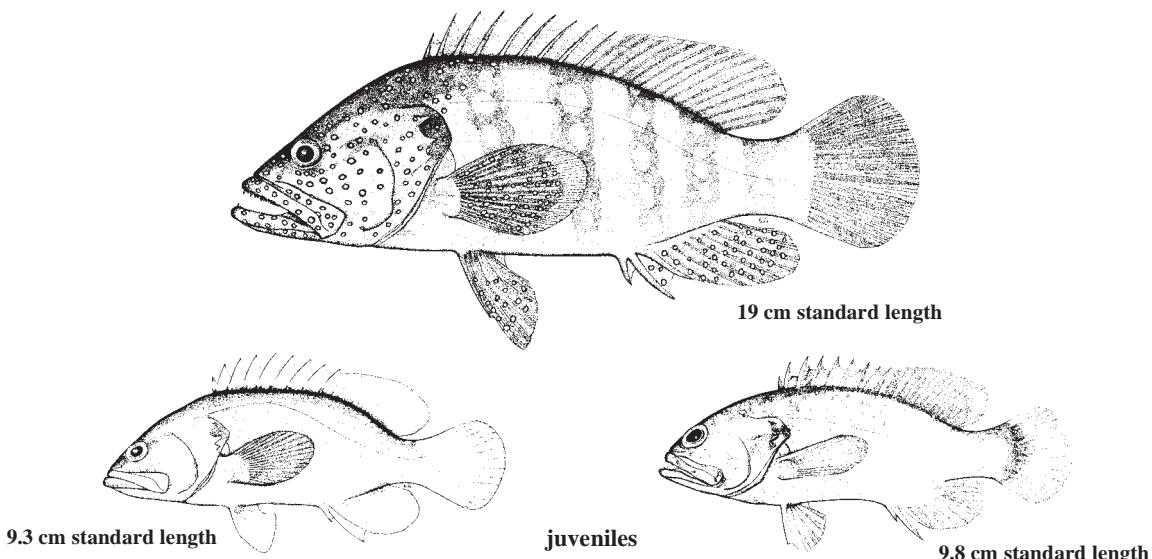


***Cephalopholis cyanostigma* (Valenciennes, 1828)**

(Plate I, 4)

Frequent synonyms / misidentifications: *Cephalopholis kendalli* Evermann and Seale, 1907; *C. xanthopterus* Allen and Stark, 1975 / *Cephalopholis miniata* (non Forsskål, 1775); *C. argus* non Bloch and Schneider, 1801; *C. micropogon* (non Bleeker, 1852).

FAO names: En - Bluespotted hind; Fr - Vielle étoiles bleues; Sp - Cherna de pintas azules.

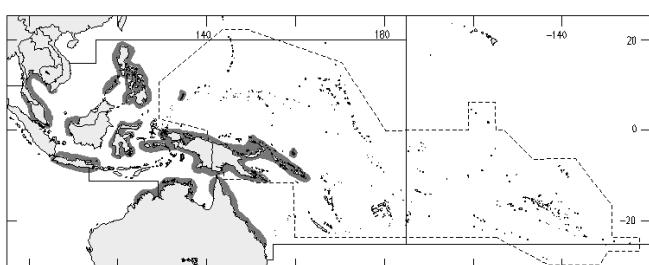


Diagnostic characters: Body somewhat compressed, its width 2.0 to 2.3 times in body depth; body depth less than head length, 2.6 to 3.0 times in standard length (for specimens 8 to 23 cm standard length); head length 2.3 to 2.6 times in standard length. Interorbital area flat to slightly convex, its width subequal to eye diameter and maxilla width; preopercle rounded, finely serrate, the lower edge fleshy; subopercle and interopercle smooth or with a few serrae; upper edge of operculum very convex, the rear edge almost vertical; maxilla scaly, reaching well past eye. First gill arch with 7 to 9 gill rakers on upper limb, 14 to 18 on lower limb. **Dorsal fin with IX spines and 15 to 17 soft rays**, the fin membrane indented between the spines; **anal fin with III spines and 8 soft rays**; caudal fin well rounded; pectoral-fin rays 15 to 18, the fin length distinctly longer than pelvic-fin length, 1.5 to 1.8 times in head length; pelvic fins usually not reaching anus, 1.8 to 2.1 times in head length. Body scales rough, with a few auxiliary scales in adults; lateral-line scales 46 to 50; lateral scale series 92 to 106. **Colour:** adults brown to brownish red, with numerous small black-edged blue ocelli on head, body, and fins, those on head and chest larger and more distinctly black-edged than those on upper part of body, those on fins smaller (except basally on pectoral fins) and also distinctly black-edged (spots entirely dark in preservative, the ones on body faint); body often with dark chain-like bars; proximal two-thirds of pectoral fins with blue ocelli becoming smaller distally, the distal part of fin orange-yellow with a blackish edge or white edge and black submarginal line; median fins darker than body, the rear margin bluish white with a submarginal blackish band. Juveniles with head, body, and pectoral fins dark brown, the other fins bright yellow; blue ocelli on head and front of body indistinct or absent.

Size: Maximum total length 30 cm.

Habitat, biology, and fisheries: Coral reefs and seagrass or algal beds at depths of 1 to 50 m. Feeds on crustaceans and fishes. Probably of importance to artisanal fisheries. Caught with hook-and-line, gill nets, spear, and in traps.

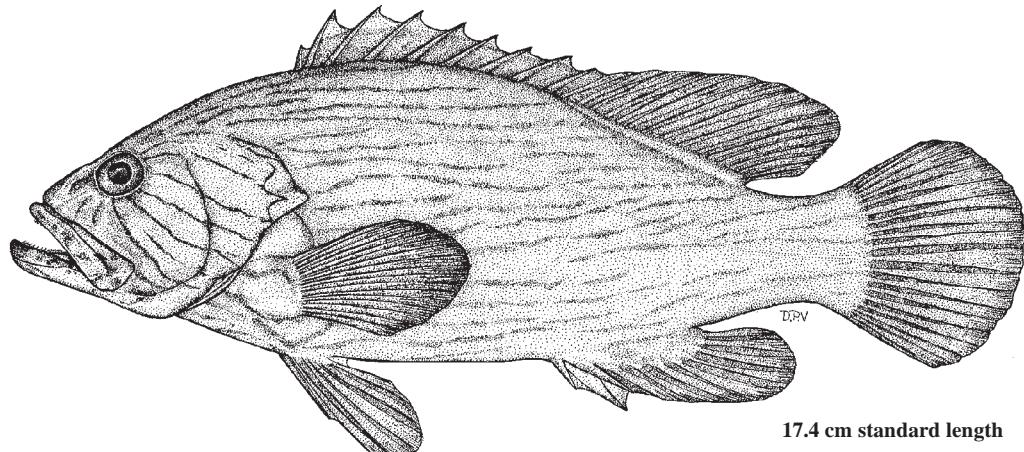
Distribution: Tropical western Pacific, including Philippines, Thailand, Indonesia, Papua New Guinea, Palau, New Britain, Solomon Islands, and north coast of Australia from Dampier Islands off Western Australia to Capricorn Islands of the southern Great Barrier Reef.



***Cephalopholis formosa* (Shaw and Nodder, 1812)**

Frequent synonyms / misidentifications: None / “*Cephalopholis boelang*” (Valenciennes, 1828); *C. boenak* (non Bloch, 1790).

FAO names: En - Bluelined hind; Fr - Vielle lignes bleues; Sp - Cherna rayada.

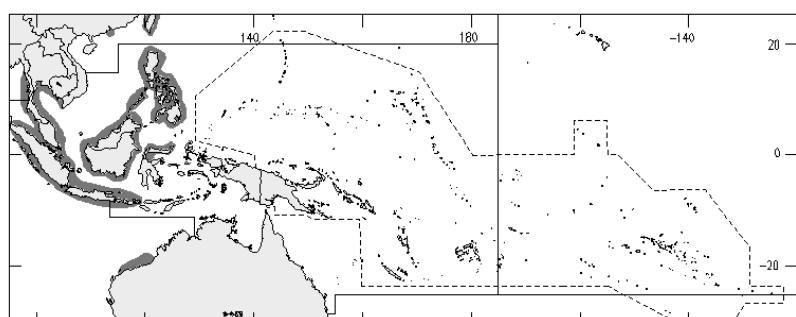


Diagnostic characters: Body depth 2.5 to 2.9 times in standard length (for specimens 10 to 26 cm standard length); head length 2.4 to 2.6 times in standard length. **Preorbital depth 3.6 to 4.3% of standard length, more than 1/2 maxilla width.** Interorbital area convex; preopercle rounded, finely serrate, the lower edge fleshy; subopercle and interopercle smooth; maxilla naked, reaching to or just past vertical at rear edge of eye. First gill arch with 8 to 10 gill rakers on upper limb, 14 to 18 on lower limb. Dorsal fin with IX spines and 15 to 17 soft rays, the membranes indented between the spines; **anal fin with III spines and 8 (rarely 7) soft rays, the second spine 12 to 14% of standard length, not reaching past tip of third spine;** caudal fin well rounded; pectoral-fin rays 16 to 18, pectoral fins usually longer than pelvic fins, 1.5 to 1.8 times in head length; pelvic fins reaching about to anus, 1.6 to 2.0 times in head length. Body scales rough, without auxiliary scales; lateral-line scales 47 to 51; lateral scale series 91 to 109. **Colour:** dark brown to yellowish brown, with slightly irregular dark blue lines on head, body and fins (those on body and fins sometimes absent); snout, lips, and ventral part of head and chest with small dark blue spots (blue markings become black in preservative, and may be lost on some specimens, especially older museum material).

Size: Maximum total length 34 cm.

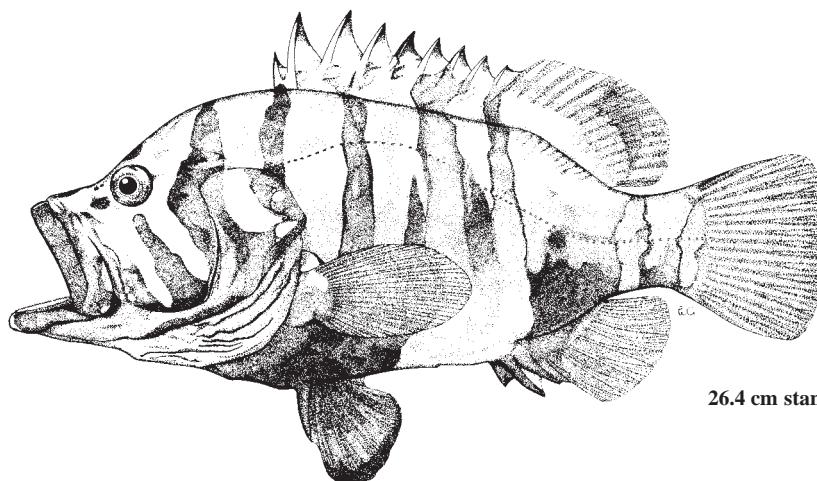
Habitat, biology, and fisheries: Like the chocolate hind (*Cephalopholis boenak*), the preferred habitat of the bluelined hind is shallow dead or silty reefs; and this may account for the primarily continental distributions of these 2 species. Too small to be of much commercial importance as a food fish, but often seen in markets. Caught with hook-and-line, gill net, traps, and in trawls.

Distribution: Primarily continental and seems to avoid atolls or oceanic islands. Occurs from western India to Thailand, Indonesia, Philippines, China, Taiwan Province of China, Japan (Honshu), and northern Australia.

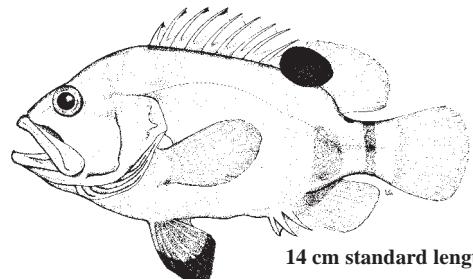


***Cephalopholis igarashiensis* Katayama, 1957**

(Plate I, 5)

Frequent synonyms / misidentifications: None / None.**FAO names:** En - Garish hind; Fr - Vielle voyant; Sp - Cherna chillona.

26.4 cm standard length



14 cm standard length

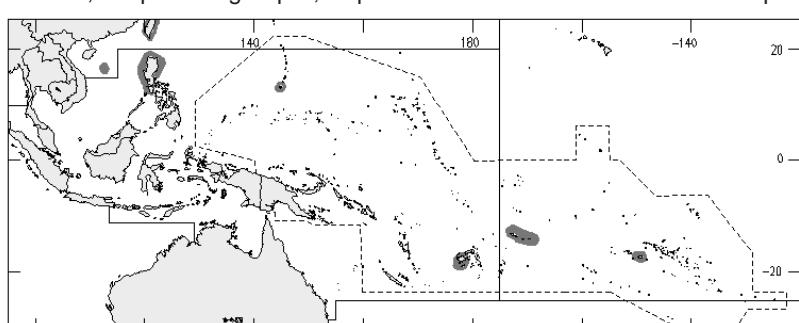
juvenile

Diagnostic characters: Body depth greater than head length, 2.0 to 2.4 times in standard length (for specimens 13 to 29 cm standard length); body width 2.3 to 2.6 times in body depth; caudal peduncle depth equal to or greater than its length; head length 2.3 to 2.5 times in standard length. Dorsal head profile straight or slightly concave to above eye, the nape markedly convex; lateral line noticeably arched over pectoral fin. Interorbital area flat; preopercle rounded, finely serrate, the ventral serrae slightly enlarged, the lower edge irregular but hidden by skin; subopercle and interopercle finely serrate; upper edge of operculum distinctly convex; maxilla reaching vertical at rear edge of eye. First gill arch with 8 or 9 gill rakers on upper limb, 16 or 17 on lower limb. Dorsal fin with IX spines and 14 soft rays, the membranes distinctly indented between the spines; anal fin with III spines and 9 soft rays; caudal fin rounded; pectoral-fin rays 18 or 19, the fin length 1.6 to 1.8 times in head length; pelvic fins reach to or beyond anus, 1.7 to 2.0 times in head length. Body scales rough, without auxiliaries; lateral-line scales 60 to 65; lateral scale series 101 to 117. **Colour:** head, body, and fins reddish orange; 7 lemon yellow bars on dorsal part of body, extending onto dorsal fin; 3 broad yellow bands radiating from eye; fins red, except for extension of yellow bars from body into dorsal fin and membranes at tips of dorsal-fin spines, which are orange. Juveniles more yellowish, with a large black spot in dorsal fin, pelvic fins and tips of interspinous dorsal-fin membranes blackish; tips of pelvic fins blackish in large juveniles or small adults.

Size: Maximum total length about 43 cm.

Habitat, biology, and fisheries: A rare, deep-water grouper; a specimen from Tahiti was taken in a depth of 250 m. Like most groupers, it is said to feed on fishes and crustaceans. This species seems too rare to be of commercial importance. Caught with hook-and-line and in traps; marketed fresh.

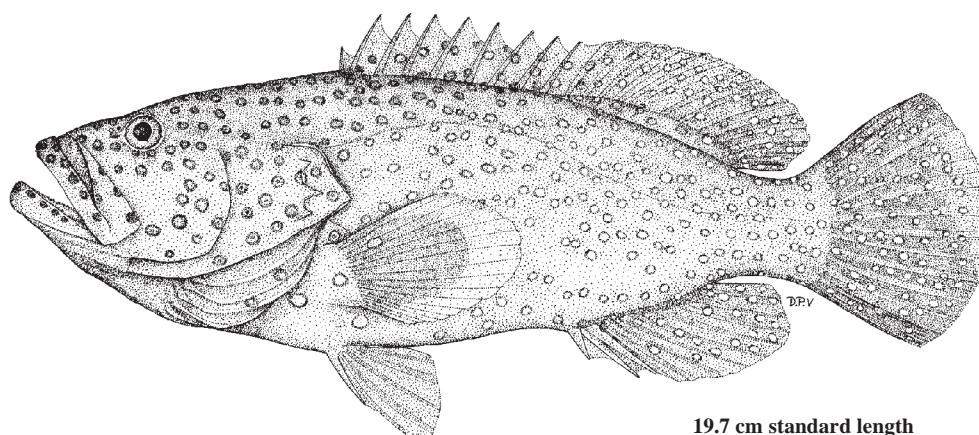
Distribution: Tropical western Pacific: southern Japan, Taiwan Province of China, Guam, Philippines, South China Sea, Samoa, and Tahiti.



Cephalopholis miniata* (Forsskål, 1775)*(Plate I, 6)**

Frequent synonyms / misidentifications: None / *Cephalopholis sexmaculata* (non Rüppell, 1830).

FAO names: En - Coral hind; Fr - Vieille de corail; Sp - Cherna estrellada.



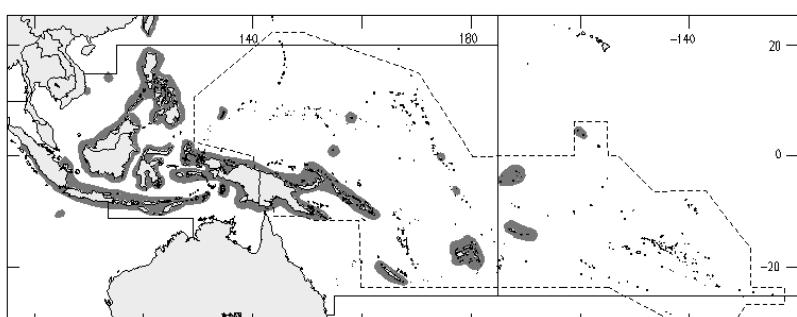
19.7 cm standard length

Diagnostic characters: Body depth 2.6 to 3.0 times in standard length (for specimens 10 to 30 cm standard length); head length 2.4 to 2.6 times in standard length. Interorbital area flat to slightly convex; preopercle rounded, finely serrate, the lower edge fleshy; upper edge of operculum very convex; maxilla scaly, reaching to or beyond vertical at rear edge of eye. First gill arch with 7 to 9 gill rakers on upper limb, 14 to 16 on lower limb. **Dorsal fin with IX spines and 14 to 16 soft rays, the membranes distinctly indented between the spines; anal fin with III spines and 9 (rarely 8) soft rays**, the fin margin rounded in adults; caudal fin well rounded; pectoral-fin rays 17 or 18, the fin length 1.4 to 1.75 times in head length; pelvic fins usually not reaching anus, 1.9 to 2.3 times in head length. Midlateral body scales ctenoid; no auxiliary scales; lateral-line scales 47 to 56; lateral scale series 94 to 114. **Colour:** orange-red to reddish brown, covered with small (usually dark-edged) pale blue-grey spots; pectoral fins orange-yellow distally; soft dorsal, caudal, and anal fins often with a narrow blue margin and blackish submarginal line; pelvic fins orange-red, the distal edge dark bluish grey. Juveniles more yellowish, with faint pale blue spots, fewer than in adults.

Size: Maximum total length about 40 cm.

Habitat, biology, and fisheries: Well-developed exposed coral reefs in clear water at depths of 2 to 150 m. Feeds mainly during early morning (07.00 to 09.00 h) and midafternoon (14.00 to 16.00 h). Most prey are fishes that school just above the reef (predominantly *Pseudanthias squamipinnis*), and most of these are caught by a quick rush ("ambush attack") from the bottom. *Cephalopholis miniata* forms haremic groups comprising a dominant male and 2 to 12 females. These groups occupy territories of up to 475 m², subdivided into secondary territories, which are defended by a single female. Females are mature at 25 cm standard length. Although moderately small, *C. miniata* is a common species of considerable economic importance to local fisheries. Caught with hook-and-line, spear, and in traps.

Distribution: Tropical Indo-Pacific and Red Sea (but not the Persian Gulf or French Polynesia), from the African coast (south to Durban, South Africa) to the Line Islands in the Central Pacific, including most islands in Indian Ocean and western Central Pacific, southern Japan, Taiwan Province of China, Philippines, Indonesia, northern Australia, Papua New Guinea, New Caledonia, and the islands of Micronesia.

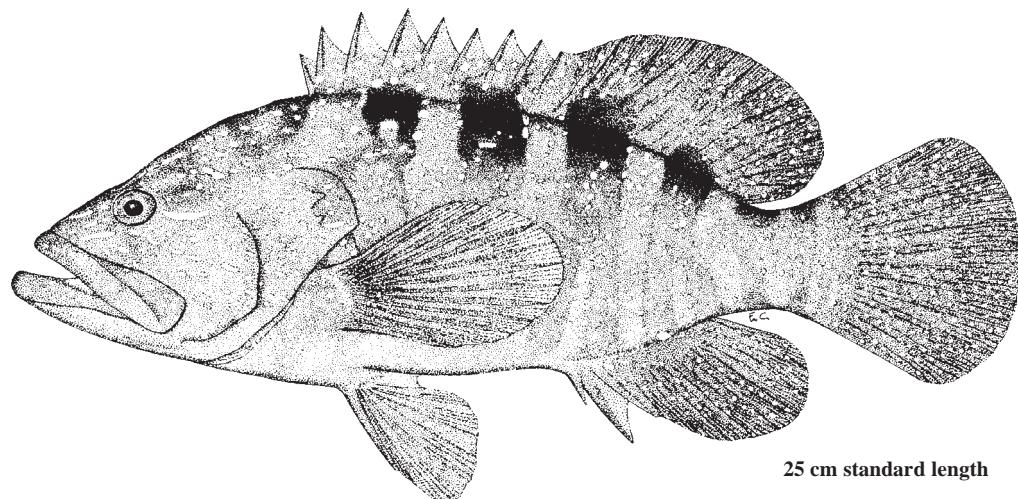


***Cephalopholis sexmaculata* (Rüppell, 1830)**

(Plate I, 7)

Frequent synonyms / misidentifications: *Cephalopholis coatesi* Whitley, 1937; *C. gibbus* Fourmanoir, 1954 / *Cephalopholis miniata* (non Forskål, 1775).

FAO names: En - Sixblotch hind; Fr - Vielle six taches; Sp - Cherna de seis manches.

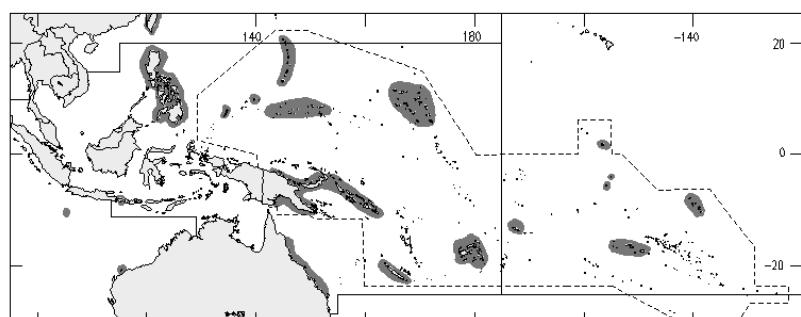


Diagnostic characters: Body depth 2.5 to 3.0 times in standard length (for specimens 13 to 39 cm standard length); head length 2.3 to 2.5 times in standard length. Interorbital area flat to slightly convex; dorsal head profile of large specimens (more than 30 cm standard length) distinctly concave above the eyes; preopercle rounded, finely serrate in young, virtually smooth in large adults, the lower edge fleshy; subopercle and interopercle with a few small serrae mostly hidden by skin; maxilla scaly, reaching past eye. First gill arch with 7 to 9 gill rakers on upper limb, 14 to 16 on lower limb. Dorsal fin with IX spines (the fin membranes distinctly indented between them) and 14 to 16 soft rays; anal fin rounded, with III spines and 9 soft rays; caudal fin well rounded; pectoral-fin rays 16 to 18, pectoral fins clearly longer than pelvic fins, 1.4 to 1.6 times in head length; pelvic fins 1.9 to 2.2 times in head length. Lateral body scales rough, without auxiliary scales (just a few in very large specimens); lateral-line scales 49 to 54; lateral scale series 95 to 108. **Colour:** orange-red, with small blue spots sparsely scattered on body but more densely on head and median fins; head also with elongated blue spots and lines; body with 4 dark bars (sometimes very faint) merging dorsally with blackish blotches at base of dorsal fin and extending onto the fin; 2 similar but smaller dark bar/blotches on caudal peduncle; the spaces between the dark body bars sometimes very pale; pectoral fins orange-red.

Size: Maximum total length at least 48 cm.

Habitat, biology, and fisheries: Coral reefs in depths of 10 to 150 m; a secretive species, generally seen hiding in caves and crevices on the outer reef slope. The sixblotch hind is more active nocturnally in shallow water and diurnally in deeper water. Feeds mainly on fishes. Probably of commercial interest to certain local fisheries. Caught with hook-and-line, traps, and spear.

Distribution: Red Sea and Indo-West Pacific region from South Africa to French Polynesia, including Christmas Island, Indonesia, South China Sea, Philippines, southern Japan, Palau, Queensland, New Guinea, Solomon Islands, Caroline Islands, Mariana Islands, Marshall Islands, Line Islands, Fiji Islands, Society Islands, and the Marquesas.

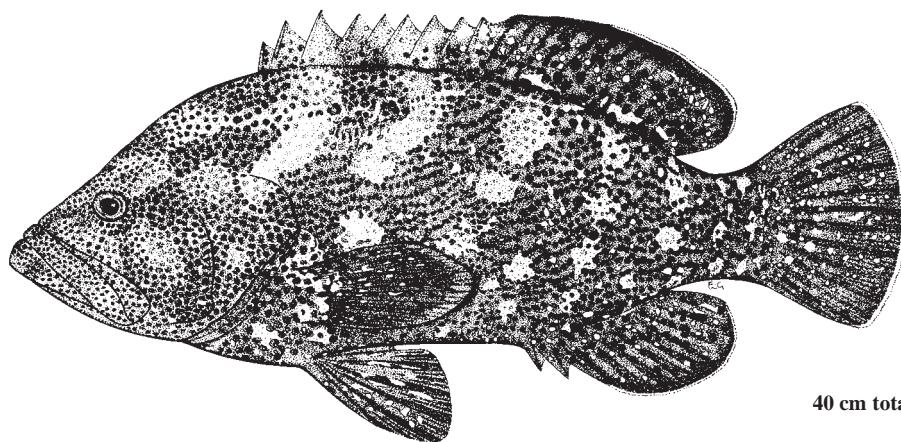


Cephalopholis sonneratii (Valenciennes, 1828)

(Plate I, 8)

Frequent synonyms / misidentifications: *Cephalopholis purpureus* Fourmanoir, 1966 / "Cephalopholis aurantius" (non Valenciennes, 1828), *C. formosanus* (Tanaka, 1911).

FAO names: En - Tomato hind; Fr - Vielle ananas; Sp - Cherna piña.



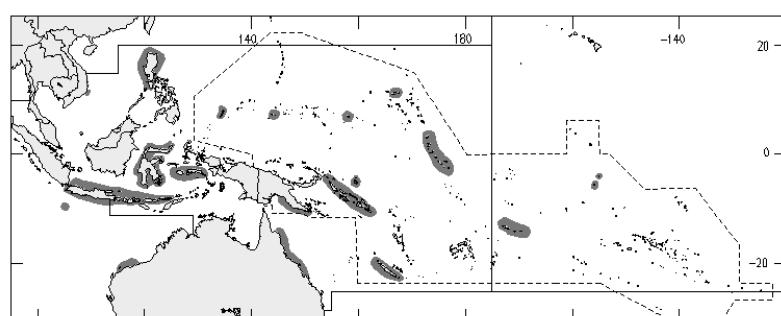
40 cm total length

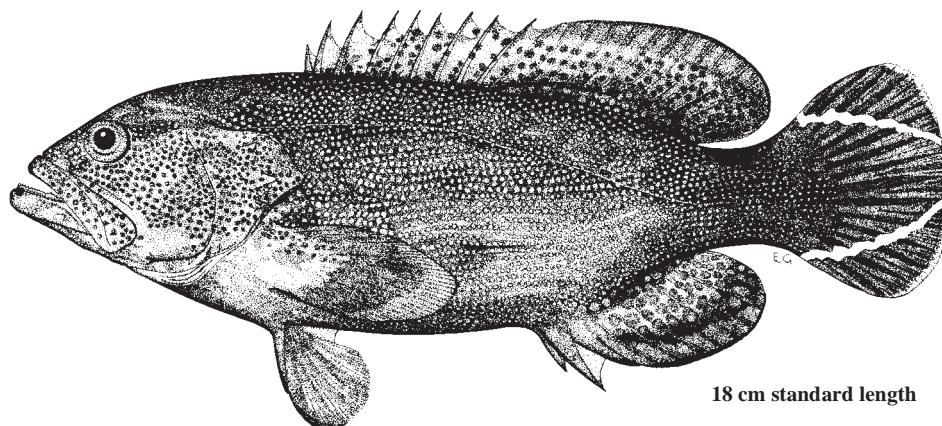
Diagnostic characters: Body depth greater than or subequal to head length, 2.3 to 2.7 times in standard length (for specimens 9 to 41 cm standard length); head length 2.5 to 2.7 times in standard length. Dorsal head profile of adults straight to concave, the nape distinctly convex; interorbital area flat to slightly convex; preopercle rounded, finely serrate, with a shallow notch just above the "corner", the lower edge serrate or irregular with broad spinules, usually exposed; subopercle and interopercle finely serrate; maxilla reaches past eye. First gill arch with 7 to 9 gill rakers on upper limb, 14 to 16 on lower limb. Dorsal fin with IX spines and 14 to 16 soft rays, the membranes distinctly indented between the spines; anal fin with III spines and 9 soft rays; caudal fin rounded; pectoral-fin rays 18 to 20; **pectoral fins subequal to pelvic fins, 1.5 to 1.7 times in head length for specimens of 15 to 40 cm length (in specimens larger than 40 cm, the pelvic fins are longer than the pectoral fins); pelvic fins reaching to beyond anus.** Lateral body scales rough; lateral-line scales 66 to 80; lateral scale series 115 to 134. **Colour:** adults from Pacific Ocean generally pale reddish to yellowish brown, covered with small brownish red or dark brown spots. Juveniles dark reddish brown to nearly black, the rear margin of caudal fin and sometimes pectoral fins whitish; or body brownish orange with scattered pale greenish spots, and black spot between upper and middle opercular spines; adults from Indian Ocean with orange-red to reddish brown body, often with scattered small whitish or purple spots; purple network on head, maxilla, and lips; pectoral fins orange distally; membranes of soft dorsal, caudal, anal, and pelvic fins dusky; dorsal-fin rays orange distally; pelvic-fin tips blackish.

Size: Maximum total length 57 cm.

Habitat, biology, and fisheries: Coral reefs in depths of 20 to 100 m. Feeds on fishes and crustaceans. Females mature at about 28 cm standard length and males at about 34 cm. A common and widespread species of commercial importance throughout most of its range. Caught with hook-and-line, spear, and in traps.

Distribution: Indo-Pacific from east coast of Africa to the Line Islands in the Central Pacific; in the western Pacific, *Cephalopholis sonneratii* ranges from southern Japan to southern Queensland. Known from both continental and insular localities, including most islands in the tropical Indian and Pacific Oceans, but not reported from the Red Sea or Persian Gulf.



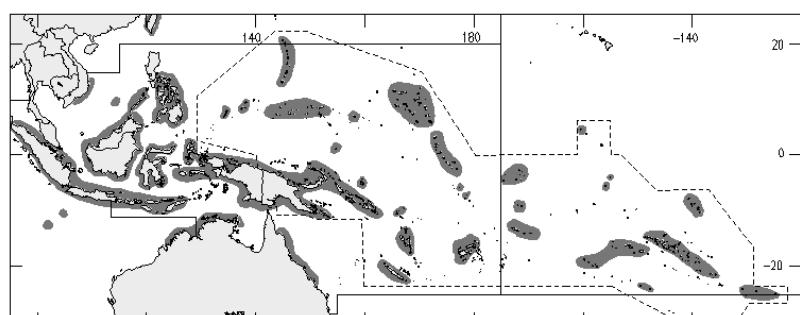
Cephalopholis urodetata* (Bloch and Schneider, 1801)*(Plate II, 9)****Frequent synonyms / misidentifications:** *Cephalopholis nigripinnis* (Valenciennes, 1828) / None.**FAO names:** En - Darkfin hind; Fr - Vielle alle noire; Sp - Cherna alinegra.

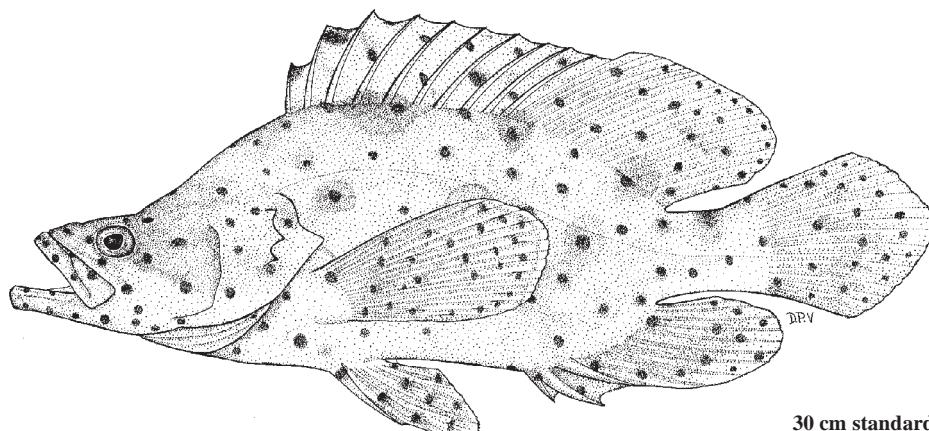
Diagnostic characters: Body depth less than head length, 2.7 to 3.3 times in standard length (for specimens 9 to 21 cm standard length); head length 2.4 to 2.7 times in standard length. Interorbital area convex; preopercle rounded, finely serrate, the lower edge fleshy; subopercle and interopercle usually smooth; maxilla reaching well past eye; snout and maxilla with minute cycloid scales. First gill arch with 7 to 9 gill rakers on upper limb, 15 to 17 on lower limb. Dorsal fin with IX spines and 14 to 16 soft rays; anal fin with III spines and 9 (rarely 8) soft rays; caudal fin rounded; pectoral-fin rays 17 to 19, pectoral fins distinctly longer than pelvic fins, 1.3 to 1.7 times in head length; pelvic fins usually not reaching anus, 1.8 to 2.3 times in head length. Lateral body scales rough, without auxiliary scales; **lateral-line scales 54 to 68**; lateral scale series 88 to 108. **Colour:** reddish brown to brownish red, darker posteriorly; body sometimes with small pale spots and/or 4 faint, irregular, dark bars that bifurcate ventrally and another 2 dark bars on caudal peduncle; head with numerous, small, close-set orange/red spots (more evident on paler parts of head) and sometimes with irregular reddish brown blotches; dark spot between upper and middle opercular spines (more evident on juveniles); a pair of small dark spots on edge of lower lip in line with the pair of anterior canine teeth; **soft dorsal and anal fins with small orange-red spots; outer triangular part of interspinous dorsal-fin membranes orange**; pelvic fins orange-red, usually with a dark blue edge. **Caudal fin with 2 white to bluish white bands that converge posteriorly, the area between the bands dark, often with pale spots, the outer corners of the fin red, with a whitish margin.** **Pectoral fins reddish brown basally, becoming yellow distally.**

Size: Maximum total length 28 cm.

Habitat, biology, and fisheries: A common coral reef species, usually seen in outer reef areas, but also found in lagoons, back-reef areas and on the reef-top. Depth range 1 to 60 m. Feeds mainly on fishes (68%) and crustaceans. Because of its small size, the darkfin hind is not of much interest as a food fish (except perhaps to subsistence fisheries), but it does well in an aquarium and may find a market as an aquarium fish. Caught with hook-and-line, gill nets, and in traps.

Distribution: Indo-West Pacific region from South Africa to French Polynesia and the Pitcairn Islands, probably occurs at all tropical islands and shallow banks of this region; also known from southern Japan to northern coast of Australia.



Cromileptes altivelis* (Valenciennes, 1828)*(Plate II, 10)****Frequent synonyms / misidentifications:** None / None.**FAO names:** En - Humpback grouper; Fr - Mérou bossu; Sp - Mero jorobado.

30 cm standard length

Diagnostic characters: Body compressed, its depth less than head length, and 2.6 to 3.0 times in standard length; body width 2.4 to 2.6 times in body depth; head length 2.5 to 2.8 in standard length; **head depressed anteriorly, the dorsal profile distinctly concave, rising steeply at the nape**; preorbital narrow, its depth 3.0 to 5.0 times in eye diameter and 15 to 32 times in head length. Anterior nostril tubular; **posterior nostril a large, crescentic, vertical slit**. Jaws with bands of villiform teeth; no canines; palatines with teeth; no step or knob on ventral edge of maxilla; supramaxilla well developed. Preopercle finely serrate, the serrae at the angle slightly enlarged, the lower edge smooth; opercle with middle spine inconspicuous, the upper and lower spines rudimentary. Gill rakers short; first gill arch with 8 to 11 rakers on upper limb, and 13 to 17 on lower limb. **Dorsal fin with X spines and 17 to 19 soft rays**, the fin origin over opercle, the fin membranes not incised between the spines, the posterior spines longest and the soft rays even longer; anal fin with III spines and 9 or 10 soft rays; caudal fin rounded, with 8 branched rays in upper lobe and 7 in lower lobe; pectoral-fin rays 17 or 18. Scales on body smooth (the ctenii greatly reduced); lateral-line scales 54 to 62; lateral scale series 106 to 122. Supraneural bones slender, the second more than 1/2 length of first; no trisegmental pterygiophores in dorsal or anal fins; rear edge of first dorsal pterygiophore slightly excavated; epipleural ribs on vertebrae 1 to 8. Cranium elongate, depressed anteriorly and elevated posteriorly; least interorbital width about 10% of cranium length; postorbital part of cranium elongated, 60% or more of cranium length; supraoccipital crest not extending onto frontals. **Colour:** pale greenish brown, with widely spaced small black spots on head, body, and fins; some spots on body and base of median fins overlain by a large dusky blotch.

Size: Maximum total length 70 cm.

Habitat, biology, and fisheries: Well-developed coral reefs as well as dead or silty reef areas, from tide pools to depths of 40 m. Growth in captivity is very slow. Juveniles are prized as aquarium fishes, and adults are one of the most expensive fishes in fish markets. Caught with hook-and-line, spear, and in traps.

Distribution: Western Pacific from southern Japan to Palau, New Caledonia, and southern Queensland (Australia); in the eastern Indian Ocean from the Nicobars to Broome, Western Australia. Reports from the western Indian Ocean are unsubstantiated. Records from Hawaii are probably based on released aquarium fishes.

