Epinephelus polystigma (Bleeker, 1853) Fig. 387; Pl. XXIA **SERRAN Epin 89**

Serranus polystigma Bleeker, 1853a:244 (type localities: "Benculen, Sumatra" [= ?Bengkulu, Sumatera] and Ambon, Indonesia).

Synonyms: ***Serranus australis*** Castelnau, 1875:7 (type locality: Cape York, Queensland, Australia). ***Epinephelus rahanus*** Popta, 1918:1 (type locality: Raha, Muna, Sulawesi [Celebes], Indonesia).

FAO Names: En - White-dotted grouper; **Fr** - Mérou points blancs; **Sp** - Mero punteado blanco.

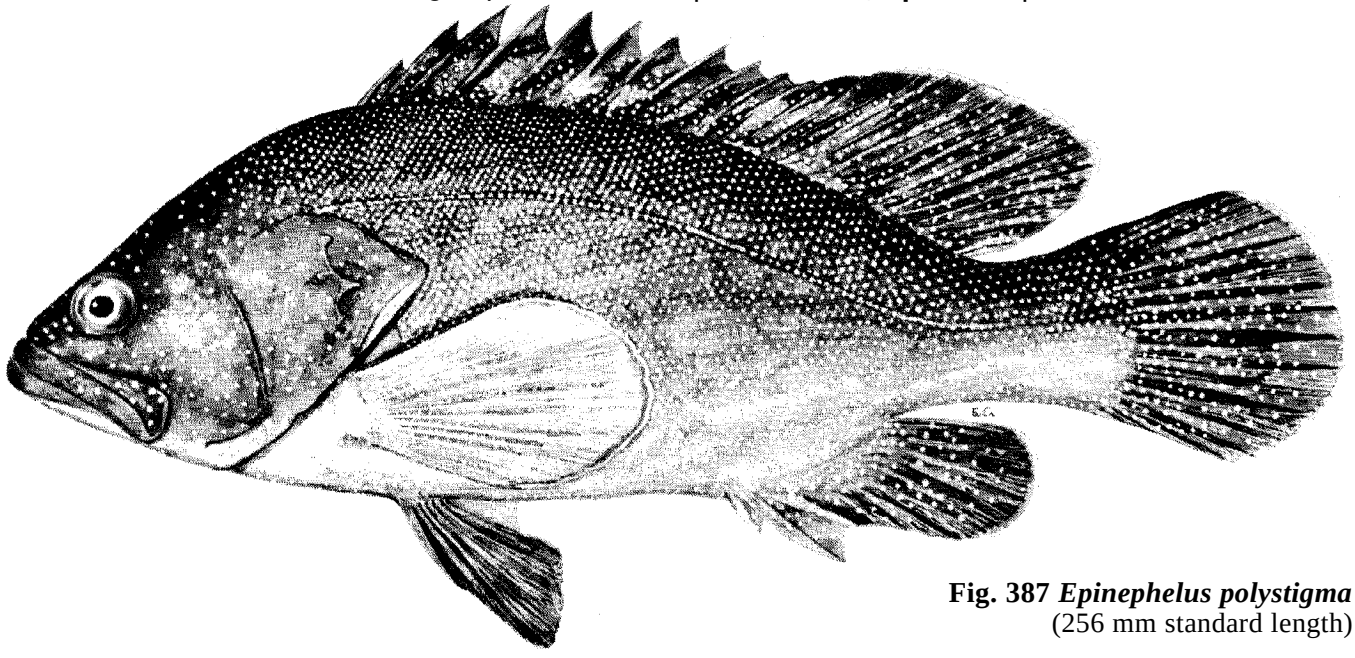

Fig. 387 ***Epinephelus polystigma***
(256 mm standard length)

Diagnostic Features: Body depth contained 2.6 to 2.9 times in standard length (for fish 10 to 38 cm standard length). Head length contained 2.3 to 2.7 times in standard length; interorbital area flat; snout short, its length subequal to eye diameter; preorbital depth less than greatest width of upper lip; preopercle rounded, finely serrate, the serrae at corner slightly enlarged; upper edge of operculum mostly straight; anterior nostrils funnel shaped, the rear margin expanded as a flap reaching rear nostril; rear nostril diameter 2 to 4 times larger than front nostril diameter; maxilla reaches past vertical at rear edge of eye, the lower edge with a rounded step at front of widest part; midlateral part of lower jaw with 2 or 3 rows of small subequal teeth; 2 short stout canines at front of both jaws. Gill rakers shorter than gill filaments, 8 or 9 on upper limb, 13 to 16 on lower limb, total 21 to 24. Dorsal fin with XI spines and 15 or 16 rays, the third or fourth spine longest, its length contained 2.7 to 3.3 times in head length and distinctly shorter than longest dorsal-fin rays, the interspinous membranes distinctly incised; anal fin with III spines and 8 rays; pectoral-fin rays 16 to 18; pectoral-fin length contained 1.6 to 1.8 times, pelvic-fin length contained 2.0 to 2.2 times in head length; caudal fin well rounded. Lateral-body scales ctenoid, with auxiliary scales. Lateral-line scales 49 to 55; lateral-scale series 81 to 91. Pyloric caeca 8. **Colour:** Head, body, and fins dark brown, covered (except on pelvic fins) with white or pale yellow dots (dots may be absent in preserved specimens); soft dorsal, anal, caudal, and pectoral fins with a narrow orange-red margin. Juveniles (8 or 9 cm standard length) with some larger, dark-edged, round or horizontally elongate, white spots on body (in addition to white dots); a smaller juvenile (22 mm standard length) taken in the same collection has dark-edged white spots, as large or larger than pupil, in about 3 irregular rows on body.

Geographical Distribution: ***E. polystigma*** is known only from the western Pacific: Indonesia, Philippines, Papua New Guinea, New Ireland, and the Solomon Islands (Fig. 388).

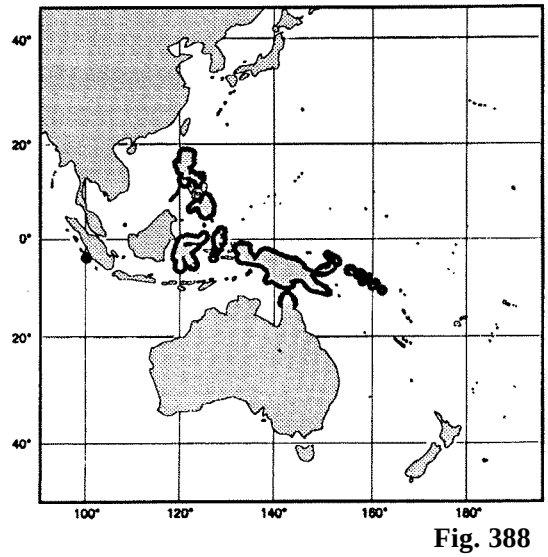

Fig. 388

Habitat and Biology: This species is known only from brackish or freshwater areas; the usual habitat seems to be mangrove areas. A 19 cm standard length specimen from the Philippines is a ripe female.

Size: Attains at least 38 cm standard length (48 cm total length).

Interest to Fisheries: ***E. polystigma*** seems to be a rare species; consequently, it is of little interest to fisheries. Caught with hook-and-line, spears, and traps.

Local Names:

Literature: Randall and Heemstra (1991).

Remarks: This species appears to be closely related to ***E. caeruleopunctatus,*** which also has a short snout, narrow preorbital, wide upper lip, upper edge of operculum sinuous or slightly convex, enlarged rear nostrils, high soft dorsal fin, and similar meristic characters. These two species differ somewhat in colour patterns: the white spots of ***E, caeruleopunctatus*** are larger and more disparate in size, and the small spots are often overlain with large pale blotches; also most specimens show an oblique black saddle blotch on rear half of peduncle and 4 or 5 faint dark blotches on body at base of dorsal fin; large adults (over 40 cm standard length) are brownish, covered with indistinct, contiguous, small pale spots.

Epinephelus posteli Fourmanoir and Crosnier, 1964 | Fig. 389; Pl. XXIB | **SERRAN Epin 48**

Epinephelus posteli Fourmanoir and Crosnier, 1964:18, pl. 14, fig. C (type locality: vicinity of Fort Dauphin, Madagascar).

Synonyms: None.

FAO Names: En - Striped-fin grouper (formerly: Tiger grouper); **Fr -** Mérou aile zébrée (formerly: Mérou tigre); **Sp -** Mero aleta listada (formerly: Mero tigre).

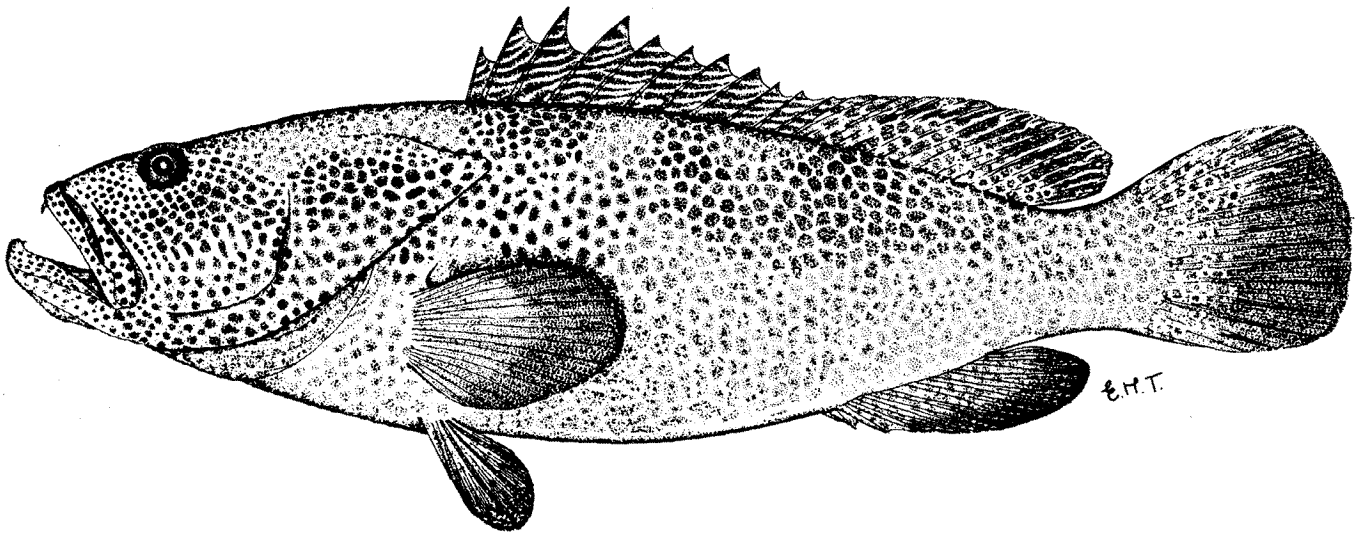

Fig. 389 ***Epinephelus posteli***
(670 mm standard length)

Diagnostic Features: Body depth contained 3.1 to 3.5 times in standard length (4 specimens, 48 to 67 cm standard length); body width contained 1.7 to 2.0 times in the depth. Head length contained 2.3 to 2.4 times in standard length; interorbital width contained 5.9 to 6.8 times in head length; interorbital area concave; preopercle rounded, finely serrate, with a shallow indentation just above corner; upper edge of operculum almost straight; opercular spines inconspicuous; nostrils subequal; maxilla not reaching past eye; a pair of large, curved, fixed canines (their length equal to half eye diameter) at front of upper jaw and a pair of similar but slightly smaller canines at front of lower jaw; lateral part of both jaws with an outer row of 8 or 9 slightly smaller fixed canines and an inner row of smaller, more slender, depressible teeth. Gill rakers 7 or 8 on upper limb (of which 7 are rudiments); 10 to 15 on lower limb (including 6 to 10 rudiments). Dorsal fin with XI spines and 15 or 16 rays, the third to fifth spines usually longest, their length contained 3.3 to 3.6 times in head length and shorter than the longest dorsal-fin rays, the interspinous membranes deeply incised; anal fin with III spines and 9 rays; pectoral-fin rays 18; pectoral-fin length contained 1.9 to 2.2 times, pelvic-fin length contained 2.6 to 2.8 times in head length; caudal fin rounded. Lateral-body scales smooth, mostly embedded, and covered with tiny auxiliary scales; lateral-line scales difficult to count (about 59 to 64); lateral-scales series also difficult to count (about 98 to 108). **Colour:** Head and body covered with small, irregular, close-set dark red or reddish brown spots, the pale interspaces forming an irregular pale network pattern; dark spots run in rows paralleling the fin rays of soft dorsal and caudal fins; interspinous membranes

of dorsal fin with several horizontal dark streaks; live fish with 4 narrow, irregular, oblique, pale bars running down and forward on body: dark spots of some rows on distal part of caudal and soft dorsal fins of some fish merge to form dark streaks running alonq or between the fin rays: soft dorsal, caudal, anal, and paired fins generally darker than body.

Geographical Distribution: ***E. posteli*** is known only from Madagascar, South Africa (Natal), and southern Mozambique (Fig. 390).

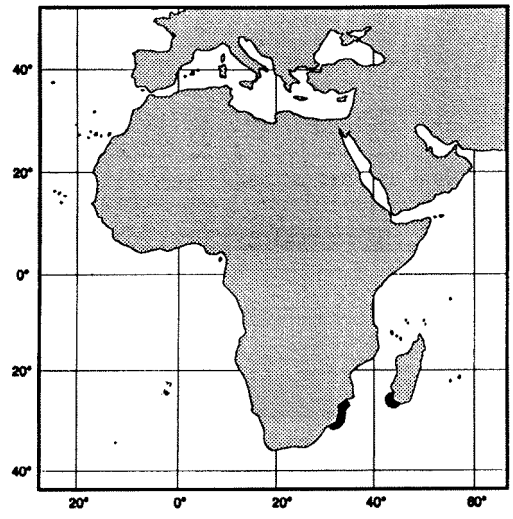

Fig. 390

Habitat and Biology: Coral reefs in depths of 20 to 50 m. The testes of a 61 cm standard length specimen contained a central lumen and numerous "brown bodies" along the lateral edges of the gonadal lamellae.

Size: Attains at least 67 cm standard length (81 cm total length) and a weight of 8.6 kg.

Interest to Fisheries: ***E. posteli*** appears to be rare, but it is of some importance to South African sport fishermen along the northern coast of a Natal. Caught with hook-and-line and spear.

Local Names:

Literature: Heemstra and Randall (1986); Randall and Heemstra (1991).

Remarks: This distinctive species is not closely related to the other reticulated species of ***Epinephelus*** (***E. hexagonatus*** et al.). The teeth in the jaws are larger than any other species of the genus, except ***E. bruneus.***

Epinephelus quernus Seale, 1901 Fig. 391; PI. XXIC **SERRAN Epin 90**

Epinephelus quernus Seale, 1901:3, fig. 1 (type locality: Honolulu).

Synonyms: None.

FAO Names: En - Hawaiian grouper; **Fr -** Mérou hawaiien; **Sp -** Mero hawaiano.

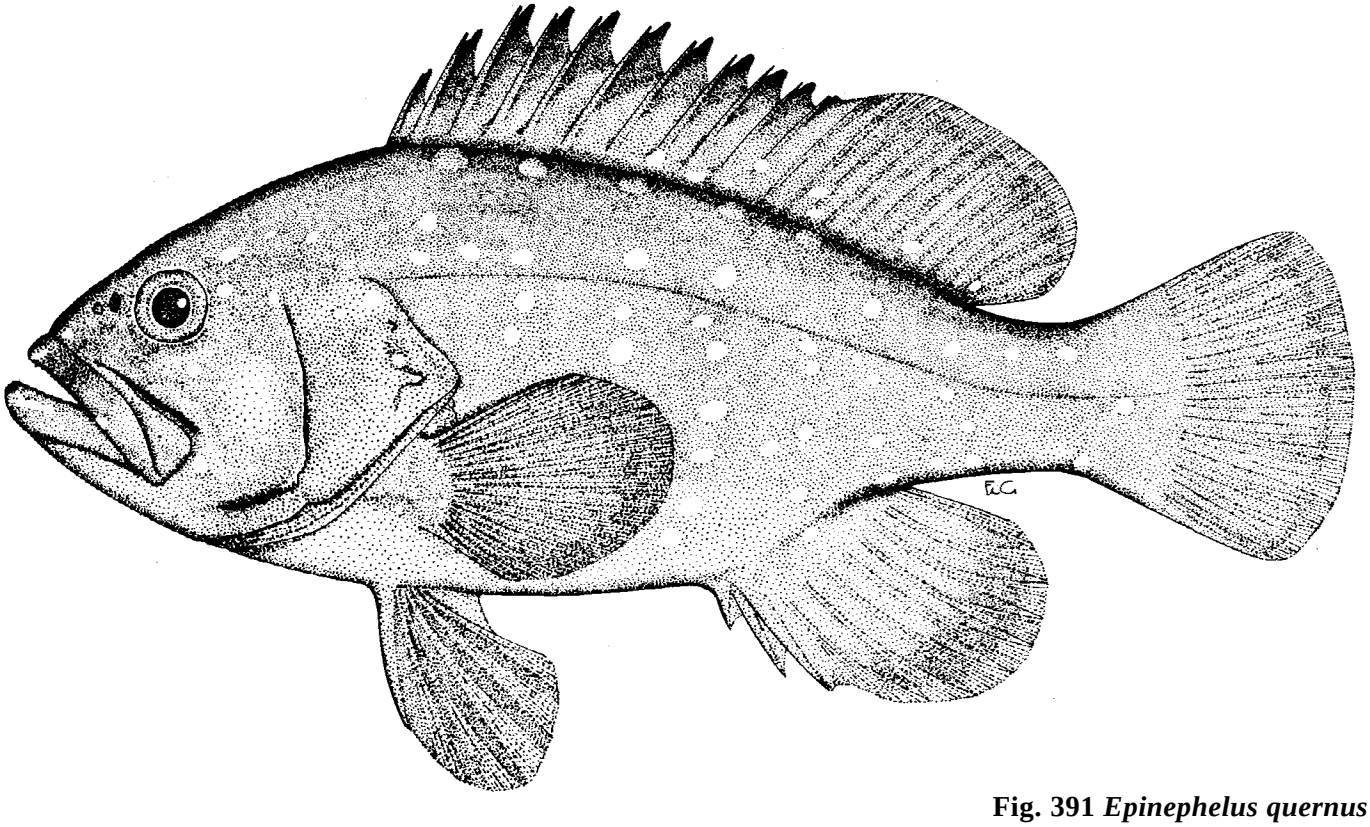

Fig. 391 ***Epinephelus quernus***
(194 mm standard length)

Diagnostic Features: Body depth contained 2.3 to 2.7 times in standard length (for fish 10 to 39 cm standard length); body width contained 2.0 to 2.5 times in the depth. Head length contained 2.3 to 2.5 times in standard length; interorbital area convex, the width subequal to eye diameter for fish 10 to 20 cm standard length; preopercle subangular, the corner with 3 to 5 enlarged serrae, the lowest directed ventrally; ventral edge of preopercle fleshy, without serrae; edge of interopercle and subopercle smooth or with a few serrae; upper edge of operculum convex; rear nostrils of adults ovate and enlarged, its greatest diameter 2 to 4 times larger than diameter of front nostrils. Gill rakers 8 or 9 on upper limb, 15 or 16 on lower limb, total 23 to 24. Dorsal fin with XI spines and 14 or 15 rays, the third or fourth spine longest, its length contained 2.4 to 3.1 times in head length and slightly shorter than the longest dorsal-fin rays; interspinous dorsal-fin membranes deeply incised; anal fin with III spines and 9 rays; pectoral-fin rays 19 or 20; pelvic-fin origin below base of pectoral fin; pectoral fins subequal to pelvic fins, pectoral-fin length contained 1.7 to 2.1 times in head length; caudal fin rounded. Midlateral-body scales ctenoid, with auxiliary scales; lateral-line scales 66 to 73; lateral-scale series 122 to 142. Pyloric caeca numerous; 101 counted on a 16 cm standard length specimen. **Colour:** Juveniles greyish brown to dark brown, with 8 vertical series of white spots on body; adults dark brown with the same vertical series of white spots, but they are less distinct and obscured by numerous additional pale spots and blotches of variable size; fins mostly unspotted and coloured like body, except for a few pale spots on basal part of dorsal fin.

Geographical Distribution: ***E. quernus*** is endemic to the Hawaiian Islands and Johnston Island (Fig. 392).

Habitat and Biology: Depth range 20 to 380 m; adults usually found in deeper water. Seki (1984) found that ***E. quernus*** feeds mainly on fishes, with crustaceans (mainly shrimps) as the next most common prey.

Size: Attains at least 80 cm total length and a weight of 10 kg.

Interest to Fisheries: In 1984 the commercial landings for ***E. quernus*** comprised 25 metric tons (6% of the deepwater bottom fishes landings) for the main Hawaiian Islands (Polovina, 1987).

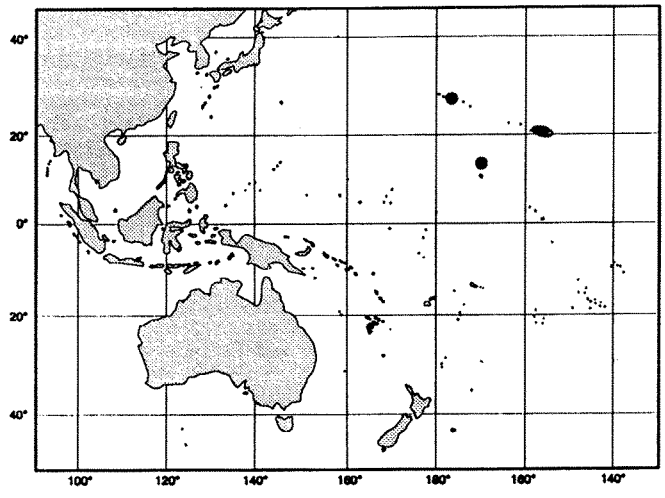

Fig. 392

Local Names: HAWAII: Hapuupuu.

Literature: Randall and Heemstra (1991).

Remarks: ***E. quernus*** appears to be closely related to ***E. niphobles*** of the Eastern Pacific, which has similar meristic characters (except for fewer lateral-scale series, 100 to 106), deep body, enlarged posterior nostrils, deeply incised spinous dorsal-fin membranes, and juveniles dark reddish brown with white spots in a grid-like pattern of vertical series and horizontal rows on body and dorsal fin. ***E. niphobles*** adults differ from ***E. quernus*** in having a truncate caudal fin, the second dorsal-fin spine longest, and a uniform dark brown colour pattern without white spots.

Epinephelus quoyanus (Valenciennes, 1830) Fig. 393; PI. XXID **SERRAN Epin 10**

Serranus Quoyanus Valenciennes in Cuv. and Val., 1830519 (type locality: New Guinea).

Synonyms: ***Serranus Gilberti*** Richardson, 1842:19 (type locality: Port Essington, Northern Territory, Australia). ***Serranus megachir*** Richardson, 1846:230 (type locality: coasts of China). ***Serranus pardalis*** Bleeker, 1849:37 (type locality: Sumbawa, Indonesia). ***Perca melanocelidota*** Gronovius, 1854:11O (type locality: "Indian Ocean"). ***Serranus alatus*** Alleyne and Macleay, 1877:264, pl. 4, fig. 2 (type locality: Hall Sound, New Guinea). ***Serranus carniatus*** Alleyne and Macleay, 1877:265, pl.4, fig. 3 (type locality: Cape Grenville, Queensland, Australia). Often misidentified as ***E. macrospilos*** or ***E. hexagonatus.***

FAO Names: En - Longfin grouper (formerly:Honycomb grouper);**Fr -** Mérou longues ailes; **Sp -** Mero aleta larga.

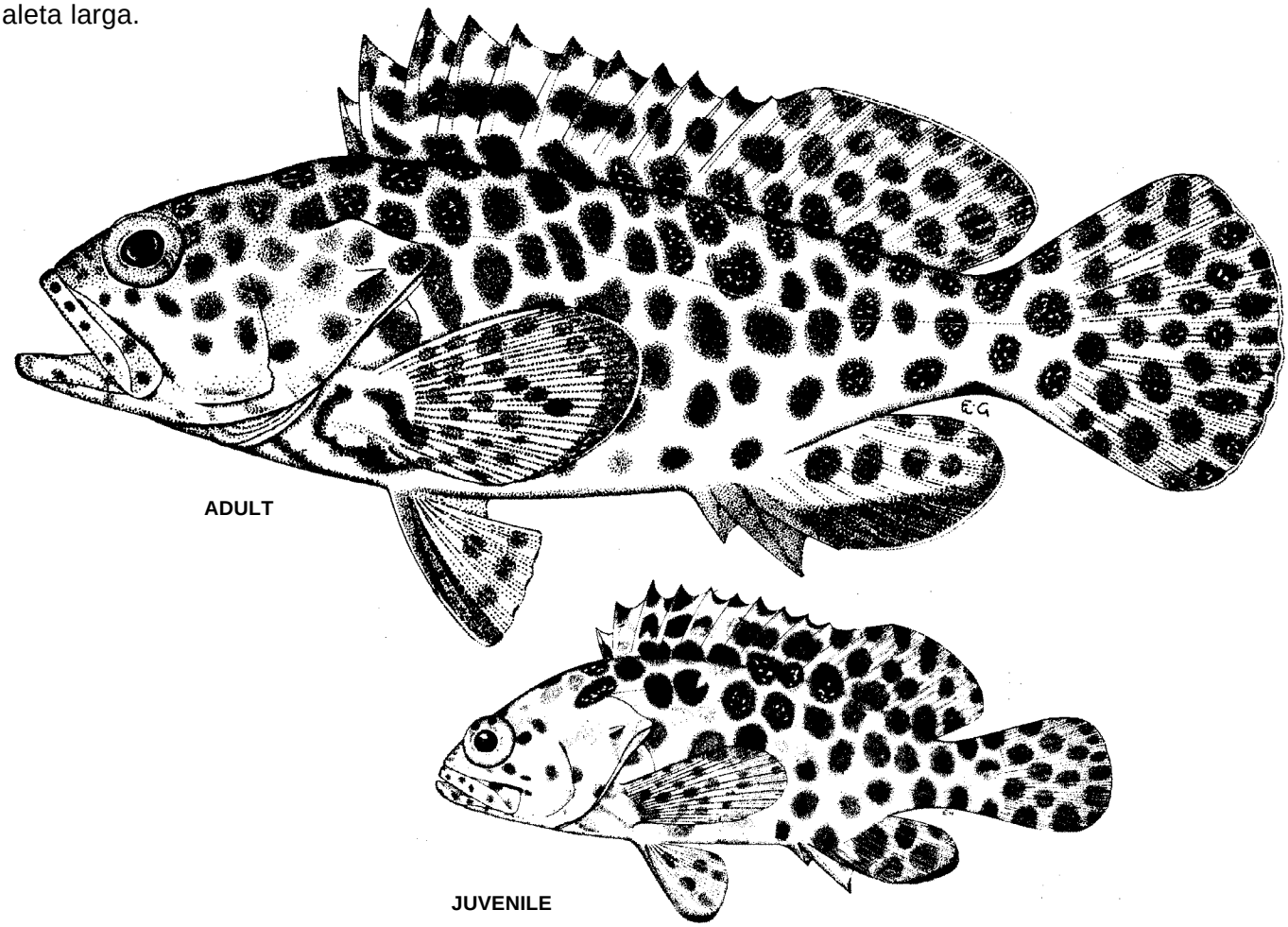

Fig. 393 ***Epinephelus quoyanus***
(adult 140 mm standard length, juvenile 59 mm standard length)

Diagnostic Features: Body depth contained 2.8 to 3.2 times in standard length (for fish 10 to 31 cm standard length). Head length contained 2.3 to 2.6 times in standard length; dorsal head profile evenly curved; snout subequal to eye diameter, snout length contained 4.6 to 5.3 times in head length: preopercle rounded or subangular; upper edge of operculum almost straight; posterior nostril diameter about twice that of anterior nostrils; maxilla reaches to or past vertical at rear edge of eye; midlateral part of lower jaw with 2 or 3 rows of teeth; lower jaw barely projecting in front of upper jaw. Gill rakers 6 to 8 on upper limb, 14 to 16 on lower limb. Dorsal fin with XI spines and 16 to 18 rays, the fourth spine usually longest, its length contained 2.3 to 3.0 times in head length and shorter than the longest dorsal-fin ray; anal fin with III spines and 8 rays, the second and third spines subequal, their length contained 2.8 to 3.8 times in head length and less than or subequal to depth of peduncle; pectoral-fin rays 17 to 19; pectoral-fin length 26 to 35% of standard length, contained 1.2 to 1.7 times in head length: pelvic-fin length 1.6 to 2.1 times in head length; caudal-peduncle depth contained 3.1 to 3.6 times in head length; caudal fin rounded; length of middle caudal-fin rays contained 1.35 to 2.0 times in head length. Lateral-body scales ctenoid; auxiliary scales present; lateral-line scales 48 to 52; lateral-scale series 80 to 96. Pyloric caeca 21. **Colour:** Head and body pale, mostly covered with large, close-set, hexagonal to roundish, dark brown spots (some spots reddish brown or black), dorsally the spots are so close together that the pale interspaces form a reticulum, but ventrally the spots are more separated and their margins more diffuse; similar dark spots on median fins;

chest with 2 dark brown bands that are confluent below pectoral-fin bases and nearly joined anteriorly at gill opening, thus isolating a large pale area on ventral part of chest and another pale area between upper dark band and dark blotch that usually covers most of pectoral-fin base; isthmus and ventral surface of chest with irregular dark brown bands and pale blotches; dark spots on head smaller anteriorly, but always 3 or 4 times larger than nostrils; a squarish unspotted white or pale area on cheek at rear end of maxilla; ventral edge of anal and caudal fins and leading edge of pelvic fins with white line and broad blackish submarginal band; pectoral fins mostly dusky with indistinct dark spots (more distinct in specimens from Australia). Colour pattern of small juveniles (3 to 10 cm standard length) is essentially similar to that of adults.

Geographical Distribution: ***E. quoyanus*** is a western Pacific species which occurs from southern Japan to Australia, including Taiwan, China, Hong Kong, Philippines, Viet Nam, Thailand, Indonesia, New Guinea and associated islands, and north coast of Australia (Western Australia to northern New South Wales [29º47'S]), including islands of the Great Barrier Reef (Fig. 394). Except for the record from the Andaman Islands (Day, 1875:13, pt. 2, fig. 2, misidentified as ***"Serranus merra"***), this species is not known from the Indian Ocean. ***E. quoyanus*** is also not reported from the islands of Micronesia, Melanesia or the central Pacific.

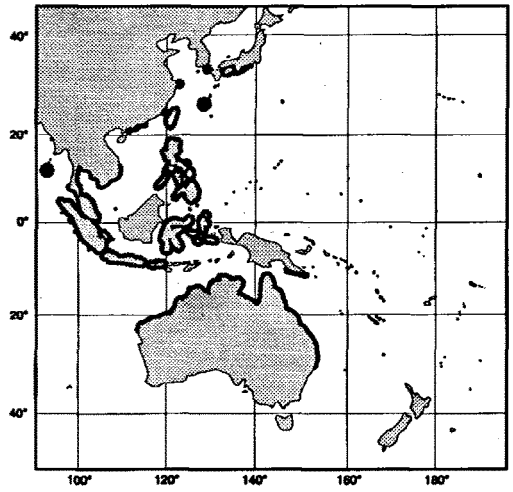

Fig. 394

Habitat and Biology: A sedentary little grouper, ***E. quoyanus*** is usually found on inshore silty reefs; we found no records from depths greater than 50 m. According to Chan (1968), this species (reported as ***E. megachir***) feeds on crustaceans, fishes, and worms, and it is the second most common inshore grouper of the Hong Kong area. The enlarged fleshy pectoral fins of this species appear to be related to its habit of sitting on the substrate, with its pectoral fins in contact with the bottom.

Size: Maximum known 31 cm standard length.

Interest to Fisheries: ***E. quoyanus*** is of some economic importance in fisheries at Hong Kong and Taiwan (and probably at other places where it is common). In the Penghu Islands, Taiwan, it is the most common grouper species at the Makung market, and it is often sold alive. It is usually caught with gill nets and hand-lines.

Local Names: AUSTRALIA: Long-finned rock-cod; HONG KONG: Long-finned grouper; Gum-chin-paan, Fah-gau-paan, Fah-tau-mui; JAPAN: Moyôhata.

Literature: Randall and Heemstra (1991). Illustrations of ***E. quoyanus*** were published as ***"Epinephelus megachir"*** by Jordan and Richardson (1910:fig. 8; dark bars on chest mentioned in text, but not shown on figure); Katayama (1960:pl. 49; dark bars on chest mentioned in text, but not shown on figure; 1988:pl. 348, fig. G [same drawing published in 1960]); Chan (1968); Burgess and Axelrod (1974:figs 241, 242 and 245; 1976:figs 318-320); Grant (1975:240); Coleman (1981); and Shen (1984:fig. 289-18). It was misidentified as***"Epinephelus merra"*** by Coleman (1974); Grant (1975:colour pl. 60); Schroeder (1980) and Shen (1984:fig. 289-19). ***E. quoyanus*** was illustrated under its correct name by Russell (1983); Sainsbury et al. (1985); Grant (1987); Allen and Swainston (1988).

Remarks: ***E. quoyanus*** is one of 9 shallow-water coral reef species that have a rounded caudal fin and close-set dark brown spots with the pale interspaces forming a network on the body. These reticulated groupers have been much confused in the literature, and many museum specimens have been misidentified; the other species differ from ***E. quoyanus*** as follows:

E. bilobatus has 3 bilobed dark blotches or close-set pairs of dark brown spots on body at base of dorsal fin, pectoral fins with several small dark spots, no dark bands on chest, pectoral-fin length 1.5 to 1.8 times in head length.

E. faveatus has the lateral-body scales smooth (except for area covered by pectoral fins), pectoral-fin length contained 1.7 to 2.2 times, pelvic-fin length contained 2.2 to 2.6 times, and caudal-peduncle depth contained 3.8 to 4.3 times in head length.

E. hexagonatus has conspicuous white dots on body between the dark spots and no dark bands on chest, length of second anal-fin spine distinctly longer than third anal-fin spine or depth of peduncle, lateral-line scales 61 to 70, and sides of lower jaw with 3 to 5 rows of testh.

E. macrospilos has the lateral-body scales mostly smooth, no dark bands on chest, pectoral-fin length 1.5 to 2.0 times in head length, lower jaw distinctly projecting, and small juveniles (3 to 7 cm standard length) with a large black area covering two-thirds of caudal fin.

E. maculatus has the dorsal-fin membranes not incised between the spines, third or fourth dorsal-fin spine usually longer than dorsal-fin rays; and juveniles are yellowish brown, with well-separated small black spots mainly on head and fins and a few large white blotches on body and dorsal fin.

E. melanostigma has a single black blotch at base of last 4 dorsal-fin spines, no black bands on chest, body depth in head length 3.0 to 3.4 times in standard length, fourth to ninth dorsal-fin spines longest (their length contained 2.9 to 3.8 times in head length), and lateral-line scales 56 to 68.

E. merra has the pectoral fins covered with distinct small black spots largely confined to the rays, length of second anal-fin spine much longer than depth of caudal peduncle, and lateral-scale series 98 to 114.

E. spilotoceps has a large black blotch at base of last 4 dorsal-fin spines, 2 similar but smaller dark blotches at base of soft dorsal fin and a third small dark blotch on top of peduncle; it also has dark spots rather than dark bands on the chest, minute (nostril-sized) black spots on the snout, fewer dorsal-fin rays (14 to 16) and more lateral-line scales (59 to 69).

Epinephelus radiatus (Day, 1867) Fig. 395; Pl. XXIE **SERRAN Epin 50**

Serranus radiatus Day, 1867:699 (type locality: near Madras, India).

Synonyms: ***Epinephelus döderleinii*** Franz, 1910:35 (type localities, Yokahama and Zushi, Japan). Often misidentified as ***"Epinephelus morrhua."***

FAO Names: En - Oblique-banded grouper; **Fr -** Mérou zébré; **Sp -** Mero acebrado.

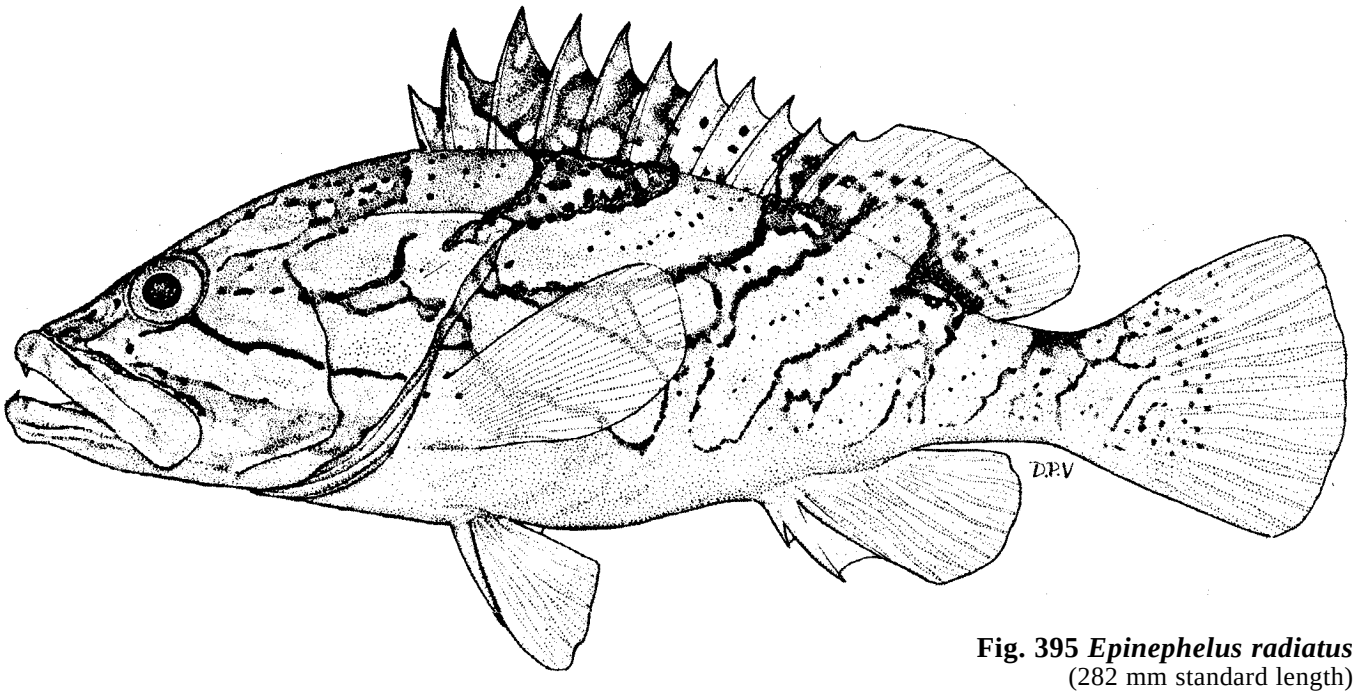

Fig. 395 ***Epinephelus radiatus***
(282 mm standard length)

Diagnostic Features: Body depth contained 2.6 to 3.0 times in standard length (for fish 11 to 42 cm standard length). Head length contained 2.1 to 2.3 times in standard length; interorbital area nearly flat, the dorsal head profile slightly convex; preopercle angle with 2 to 5 distinctly enlarged serrae; upper edge of operculum almost straight; adults with rear nostril diameter 2 or 3 times that of front nostrils; maxilla reaches to or past vertical at rear edge of eye; midlateral part of lower jaw with 2 rows of teeth. Gill rakers 8 or 9 on upper limb, 16 to 18 on lower limb, the longest gill raker distinctly shorter than the longest gill filaments. Dorsal fin with XI spines and 13 to 15 rays, the third spine longest, its length contained 2.6 to 3.0 times in head length and longer than the longest dorsal-fin ray, the interspinous membranes deeply incised; anal fin with III spines and 8 rays, the second and third spines subequal; pectoral-fin rays 17 or 18, the fin almost transparent; pectoral-fin length contained 1.7 to 2.2 times, pelvic-fin length contained 2.1 to 2.8 times in head length; caudal fin convex to moderately rounded. Lateral-body scales distinctly ctenoid, without auxiliary scales; lateral-line scales 52 to 66; lateral-scale series 102 to 120. **Colour:** Small adults (20 to 40 cm standard length) buff, with 5 oblique dark-edged pale bands as follows: first band from upper half of eye,

curving and broadening on nape; second band branching from first band just behind eye, bifurcating on operculum, the upper branch continuing dorsally, broadening on body and extending even more broadly over middle of spinous dorsal fin; third band continued as lower branch of second band, curving dorsally from end of operculum and expanding at base of last 2 spines and first 3 or 4 rays of dorsal fin (this band with a ventral extension from an included pale circle covered by tip of pectoral fin); fourth band runs from rear end of dorsal fin, branching at midside, with one branch going towards anal-fin origin, the other to rear end of anal-fin base; fifth band on caudal peduncle (sometimes divided into 2 short branches at lower edge of peduncle); dark bands with scattered small black spots and pale blotches, especially dorsally; pale interspaces (between the dark bands) with small dark brown spots, mainly arranged in series along middle of interspaces; dark brown line from lower edge of eye to edge of subopercle; faint dark band along maxillary groove and continuing to edge of interopercle. Large adults (40 to 50 cm standard length) with dark-edged bands replaced by series of dark spots (except for dark line running posteriorly from lower edge of eye); no spots on ventral third of body; dorsal fin and most of caudal fin covered with small dark spots. Juveniles (10 to 20 cm standard length) dark brown with black-edged pale brown bands (= white markings on smaller fish) enclosing numerous small black spots. Small juveniles (4 to 7 cm standard length) are mostly dark greenish brown, with dark-edaed immaculate white markinas that represent the pale interspaces on laraer specimens; fins translucent white, except for spinous dorsal fin which is coloured like the dody.

Geographical Distribution: ***E. radiatus*** occurs from the Red Sea to Japan. We have examined specimens or seen photographs from the Red Sea, Aden, Reunion, Mauritius, Chagos, Gulf of Oman, India, Sri Lanka, northwestern Australia, Taiwan, Japan, Papua New Guinea, and Japan (Fig. 396). The Natal record that was reported by Heemstra and Randall (1986) is unsubstantiated.

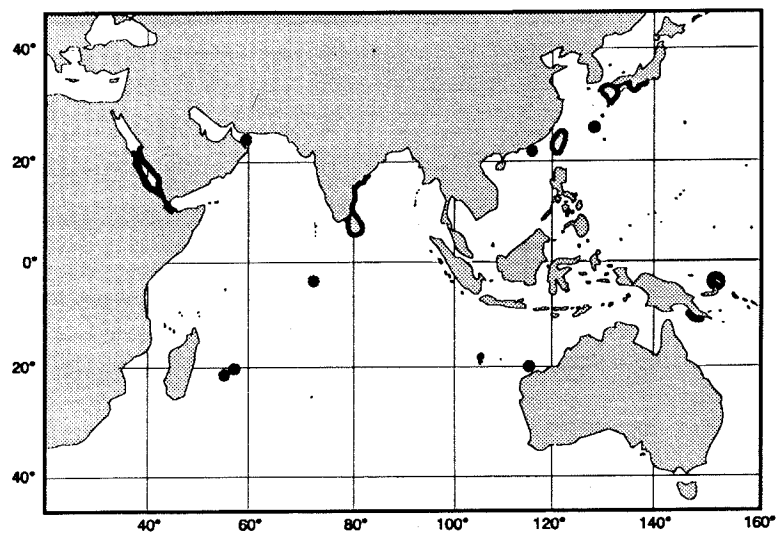

Fig. 396

Habitat and Biology: Adults of this deep-water species are known from depths of 80 to 383 m; juveniles have been found in 18 to 20 m. ***E. radiatus*** is apparently rare.

Size: Attains at least 57 cm standard length (about 70 cm total length).

Interest to Fisheries: Apparently of some commercial importance in Japan. Caught with handlines and vertical longlines.

Local Names: HONG KONG: Yau-paan; JAPAN: Kakehashihata; SRI LANKA: Raja laveya, Kallu kaleva.

Literature: Illustrations of ***E. radiatus*** have been published by Day (1875, as ***Serranus morrhua***); Katayama (1960, as ***E. morrhua***); Hiyama and Yasuda (1971, as ***E. cometae***); Kyushin et al. (1977, as ***E. morrhua***); Chang et al. (1979, as ***E. morrhua***); Gloerfelt-Tarp and Kailola (1984); Sainsbury et al. (1985); Heemstra and Randall (1984, 1986); Randall and Klausewitz (1986); Shirai (1986, as ***E. morrhua***); Kohno (1987, as ***E. morrhua);*** Allen and Swainston (1988); Katayama (1988); Lee (1990).

Remarks: Juveniles of ***E. magniscuttis*** show a pattern of dark spots on the head and body that is similar to the dark bands of juvenile ***E. radiatus;*** but ***E. magniscuttis*** lacks the solid dark lines or bands that are more or less developed on ***E. radiatus*** (at least a narrow one from lower edge of eye).

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