Local Names: JAPAN: Mahata-modoki; MAURITIUS: Vieille plate grise; NEW CALEDONIA: Loche plate grise; REUNION: Plat.

Literature: Randall and Heemstra (1991).

Remarks: ***E. octofasciatus*** is closely related to ***E. septemfasciatus,*** which differs in having the body depth usually less (depth contained 2.5 to 3.1 times in standard length), caudal peduncle usually mbre slender (peduncle depth contained 1.2 to 1.5 times in its length), diameter of rear nostrils greater than distance from nostril to orbit, and in the configuration of the dark body bars (6 dark bars wholly below dorsal fin and 2 narrow dark bars below middle rays of soft dorsal fin; 3 pale interspaces below soft dorsal fin). Katayama (1975, 1988) identified the ***E. octofasciatus*** in Japan as ***"Epinephelus mystacinus*** Poey," which also has 8 dark bars on the body; but ***E. mystacinus*** has fewer lateral-scale series (99 to 112), the pelvic fins are shorter than the pectoral fins, and the dark bars on the body are narrower (their width equal to or less than the pale interspaces). ***E. mystacinus*** is known from the western Atlantic and the Galapagos Islands.

E. ergastularius, which is known only from the east coast of Australia, is another similar species. Adults have a truncate or emarginate caudal fin and fine dermal ridges on the body at the base of the dorsal fin; also, the fins have white margins. Juveniles can be distinguished by the spacing of the dark brown bars on the body: on ***E. ergastularius*** the pale space separating the second and third dark bars and that between the fourth and fifth bars is distinctly narrower than the interspaces between the third and fourth or fifth and sixth bars; on ***E. octofaciatus*** all the pale interspaces are about the same width.

Epinephelus ongus (Bloch, 1790) Fig. 377; Pl. XXC **SERRAN Epin 46**

Holocentrus Ongus Bloch, 1790:69, pl. 234 (type locality: "Japan").

Synonyms: ***Serranus dichropterus*** Valenciennes in Cuv. and Val.,1828:293 (unnecessary replacement name for ***Holocentrus ongus*** Bloch). ***Serranus reticulatus*** Valenciennes in Cuv. and Val., 1828:323 (type locality: Java). ***Serranus tumilabrus*** Valenciennes in Cuv. and Val.,1828:346 (type locality: Seychelles). ***Serranus bataviensis*** Bleeker, 1849:38 (type locality: Jakarta, Java). ***Epinephelus summana hostiaretis*** Whitley, 1954:25 (type locality: Queensland, Australia). ***Epinephelus slacksmithi*** Whitley, 1959:312 (type locality: Heron Island, Queensland, Australia).

FAO Names: En - White-streaked grouper; **Fr** - Mérou à flocons; **Sp** - Mero nubifero.

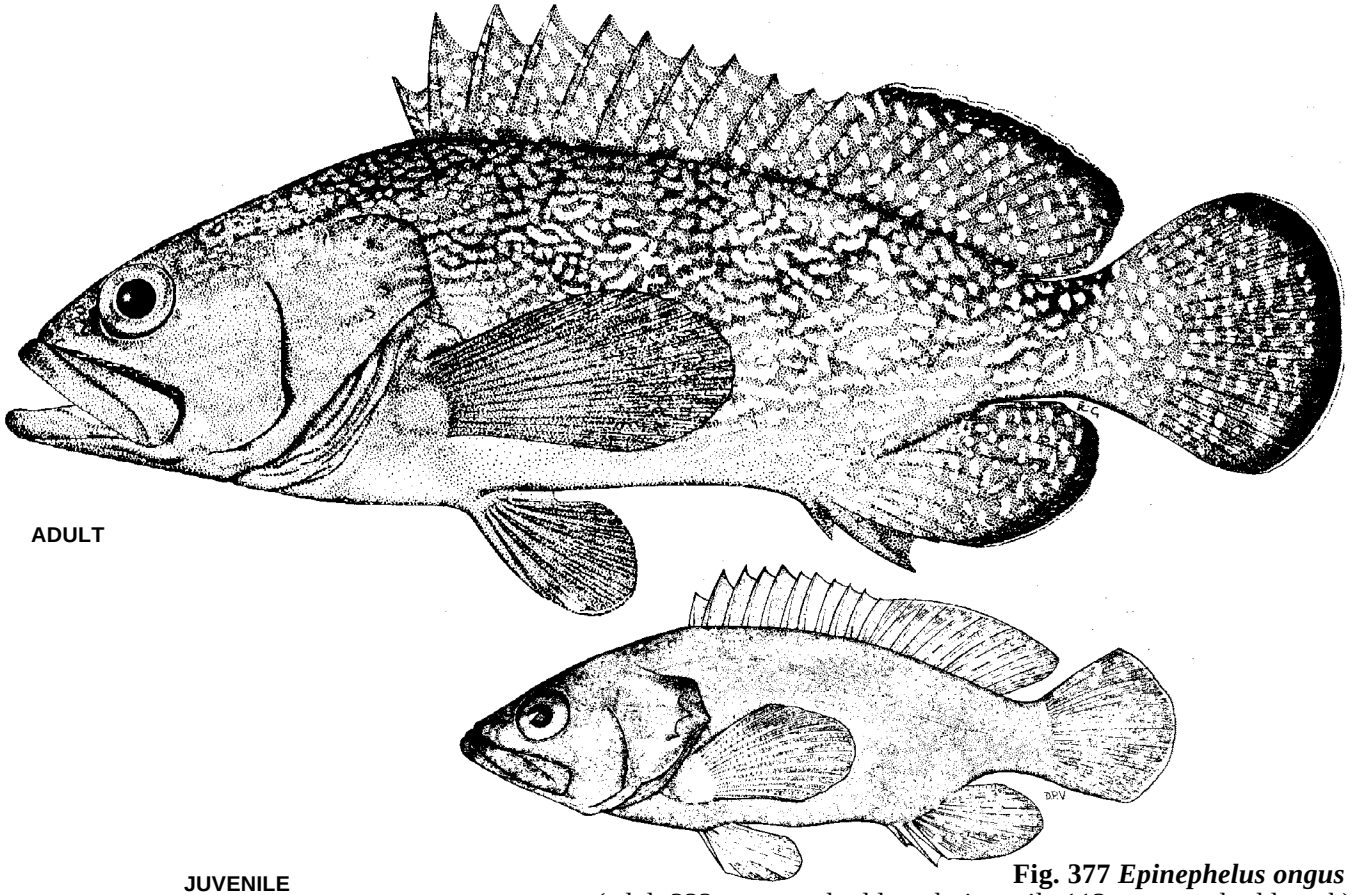

Fig. 377 *Epinephelus ongus*
(adult 222 mm standard length, juvenile 112 mm standard length)

Diagnostic Features: Body depth contained 2.7 to 3.2 times in standard length (for fish 11 to 25 cm standard length); body width contained 1.7 to 2.2 times in the depth. Head length contained 2.3 to 2.5 times in standard length; head pointed, the interorbital area flat, the dorsal head profile slightly convex; preopercle rounded, the serrae small and mostly covered by skin; upper edge of operculum strongly convex, the rear edge almost vertical, the upper spine extending posterior to lower spine; posterior nostril diameter about twice that of anterior nostril; maxilla reaches to or slightly past vertical at rear edge of eye; small, embedded scales on maxilla; teeth small, 2 to 4 rows at midlateral part of lower jaw; canines at front of jaws small or absent. Gill rakers 8 to 10 on upper limb, 15 to 18 on lower limb (including 6 to 8 rudiments on each limb). Dorsal fin with XI spines and 14 to 16 rays, the third or fourth spine longest, its length contained 2.6 to 3.4 times in head length, the interspinous membranes incised; anal fin with III spines and 8 rays; pectoral fins large and fleshy, with 15 to 17 rays; pectoral-fin length contained 1.4 to 1.7 in head length; pelvic fins end well short of anus, their length contained 2.0 to 2.3 times in head length: caudal fin rounded. Lateral-body scales ctenoid, with auxiliary scales; lateral-line scales 48 to 53; lateral-scale series 95 to 109. **Colour:** Body brown, with numerous small white spots which, in fish larger than 10 cm standard length are horizontally elongate and, in adults, tend to form wavy white lines; several round or irregular pale blotches (eye-sized or larger) usually superimposed over small white spots; head brown, with numerous small white spots dorsally behind eyes; black maxillary streak usually hidden by maxilla; median fins with small white spots and streaks, the posterior margin blackish with a white edge; paired fins greyish brown. Juveniles of about 6 cm standard length are brown, covered with small, dark-edged white spots which are round, except on front part of dorsal fin where thev are elonaated; the whitespotson the paired fins become fewer and fainter with growth, and are absent in adults.

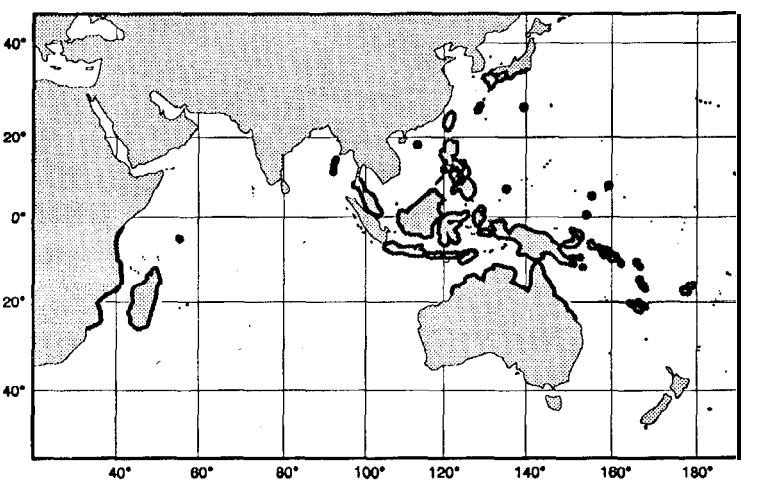

Fig. 378

Geographical Distribution: ***E. ongus*** is widely distributed in the Indo-Pacific region, from the east coast of Africa (northern Mozambique to Kenya) to the Ryukyu and Marshall Islands and south to Fiji, New Caledonia and northern Australia (Fig. 378). It is replaced in the Red Sea by the closely-related endemic ***E. summana.*** Most of the verifiable records for ***E. ongus*** are from islands, and as far as we know, it does not occur in the Persian Gulf or on the coasts of Arabia, India, Sri Lanka, or Asia. We have examined specimens from Mozambique, Zanzibar, Kenya, Madagascar, Seychelles, Indonesia, Philippines, Ryukyus, New Guinea, Solomon Islands, Australia (northwestern Australia to southern Queensland), Palau Islands, Caroline Islands, Marshall Islands, Santa Cruz Islands, New Hebrides, New Calendonia, and Fiji.

Habitat and Biology: ***E. ongus*** occurs in shallow water on coral reefs and rocky substrata. According to Myers (1989) "***E. ongus*** occurs primarily on inner coastal and lagoon reefs, even in brackish water, where it frequents ledges and caves at depths of 5 to 25 m."

Size: Myers (1989) and Katayama (1988) give a maximum size of 40 cm standard length, but the largest specimen that we have seen was 25 cm standard length (31 cm total length). Sizes over 40 cm that have been attributed to ***E. ongus*** probably refer to ***E. caeruleopunctatus,*** with which it is often confused.

Interest to Fisheries: Although this cryptic species is not very common, it is of some interest to fisheries in Japan (and probably elsewhere). It is caught with hook-and-line, spear, and traps.

Local Names: AUSTRALIA: Specklefin rockcod; JAPAN: Namihata; NEW CALEDONIA: Loche à taches claires.

Literature: Randall and Heemstra (1991).

Remarks: ***E. ongus*** is closely related to ***E. summana,*** which is endemic to the Red Sea. It differs from ***E. ongus*** in having shorter pectoral fins (length contained 1.65 to 2.1 times in head length), shorter pelvic fins (length contained 2.2 to 2.7 times in head length), and the posterior nostrils of adults are vertically elongated (their length contained 2 to 4 times diameter of anterior nostrils). The white-edged black margin on the median fins of ***E. ongus*** is poorly developed or absent in ***E. summana.***

The sympatric ***E. caeruleopunctatus*** has a similar colour pattern, but the caudal and anal fins have only a few white spots (confined mainly to proximal part of these fins), and the paired fins of juveniles are mostly unspotted. It also has 17 to 19 pectoral-fin rays, 51 to 61 lateral-line scales, upper edge of operculum

sinuous or slightly convex, and the rear nostrils of adults are vertically elongated, their length 5 or 6 times diameter of front nostrils. This species also attains a larger size than ***E. ongus*** (at least 60 cm total length).

Epinephelus perplexus Randall, Hoese and Last, 1991 | Fig. 379 | **SERRAN Epin 87**

Epinephelus perplexus Randall, Hoese and Last in Randall and Heemstra, 1991:222, fig. 116 (new name for ***Epinephelus thompsoni*** Whitley, 1948:89 [a junior secondary homonym of ***Stereolepoides thompsoni*** Fowler, 1923 which is a junior synonym of ***E. lanceolatus*** (Bloch)]; type locality: 58 km northeast of Cape Moreton, Queensland).

Synonyms: None.

FAO Names: En - Puzzling grouper; **Fr -** Mérou curieux; **Sp** - Mero acertijo.

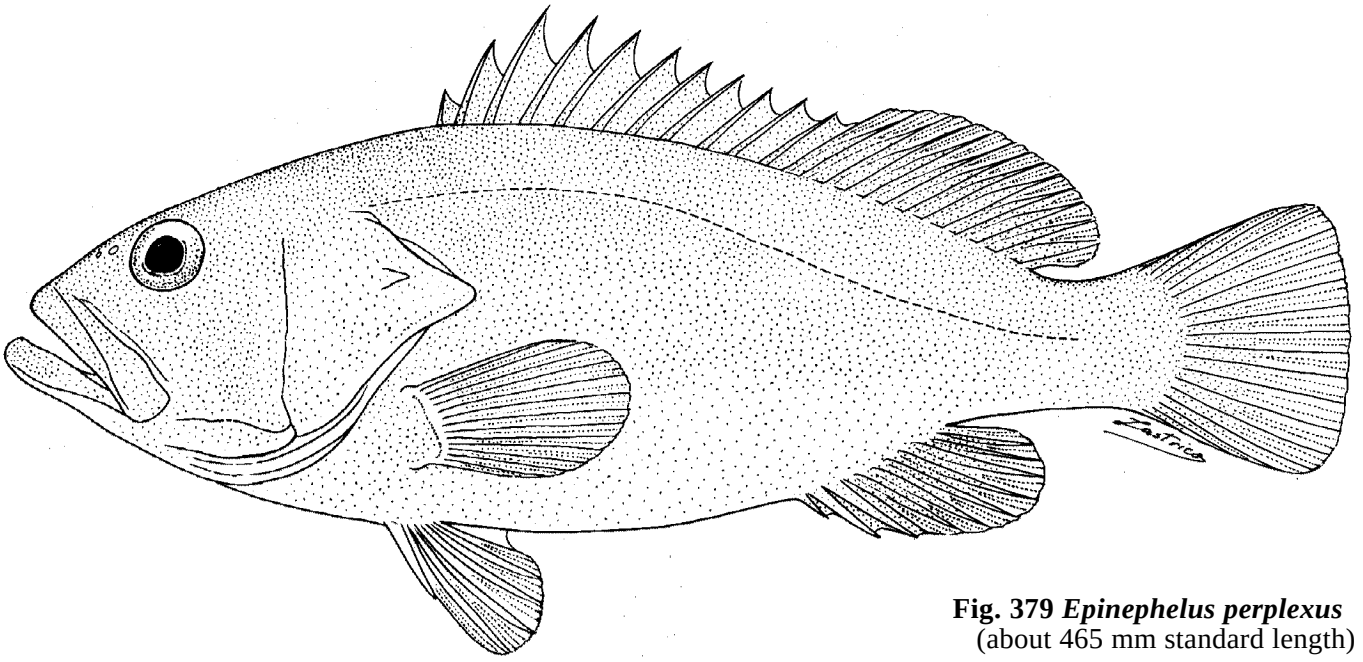

Fig. 379 ***Epinephelus perplexus***
(about 465 mm standard length)

Diagnostic Features: (Data from a 465 mm standard length fish that was fixed with its mouth wide open; hence ratios of standard length and head length are only approximate.) Body depth contained 2.9 times in standard length. Head length contained 2.3 to 2.4 times in standard length; snout length contained about 3.8 times, eye diameter contained 6.0 times, interorbital width contained 6.8 times and suborbital depth contained 9.5 times in head length; interorbital area slightly convex; preopercle finely serrate, the corner produced into a bulge bearing 7 moderately enlarged serrae; upper edge of operculum straight or nearly straiaht: rear nostrils ovate, about twice size of front nostrils: midlateral part of lower jaw with 2 rows of teeth. Gill rakers 10 on upper limb, 17 on lower limb. Dorsal fin with XI spines and 13 rays, the third spine longest, its length contained 3.3 to 3.4 times in head length and slightly longer than longest dorsal-fin ray; interspinous dorsal-fin membranes deeply incised; anal fin with III spines and 8 rays; pectoral fins not fleshy, with 18 rays; pectoral-fin length contained 2.0 to 2.1 times and pelvic-fin length contained 2.5 times in head length; caudal fin slightly rounded, longest caudal-fin ray contained 2.2 times in head length. Lateral-body scales ctenoid, without auxiliary scales; lateral-line scales 52; lateral-scale series 104. **Colour:** "... after long preservation in formalin, light brown. Margins of unpaired fins dark brown. A dark spot on each body-scale. No dark moustache or other conspicuous markings." (Whitley, 1948).

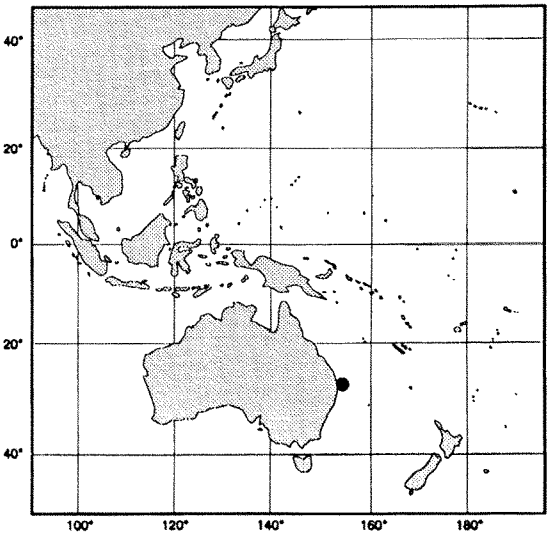

Fig. 380

Geographical Distribution: Known from a single specimen caught off southern Queensland, Australia (Fig. 380).

Habitat and Biology: The holotype was collected at a depth of 129 to 137m.

Size: Attains at least 46 cm standard length.

Interest to Fisheries: None.

Local Names:

Literature: Randall and Heemstra (1991); Randall et al. (1993).

Remarks: Randall et al. (1991) noted that the combination of meristic and morphological features of ***E. perplexus*** is unique, and differentiates this species from all other groupers. The absence of additional specimens may indicate an unusually deep habitat for this species.

Epinephelus poecilonotus (Temminck and Schlegel, 1842) Fig. 381; Pl. XXD **SERRAN Epin 47**

Serranus poëcilonotus Temminck and Schlegel, 1842:6, pl.4, fig. 2 (type locality: Japan).

Synonyms: Often misidentified as ***"Epinephelus morrhua."***

FAO Names: En - Dot-dash grouper; **Fr** - Mérou morse; **Sp -** Mero punto y linea.

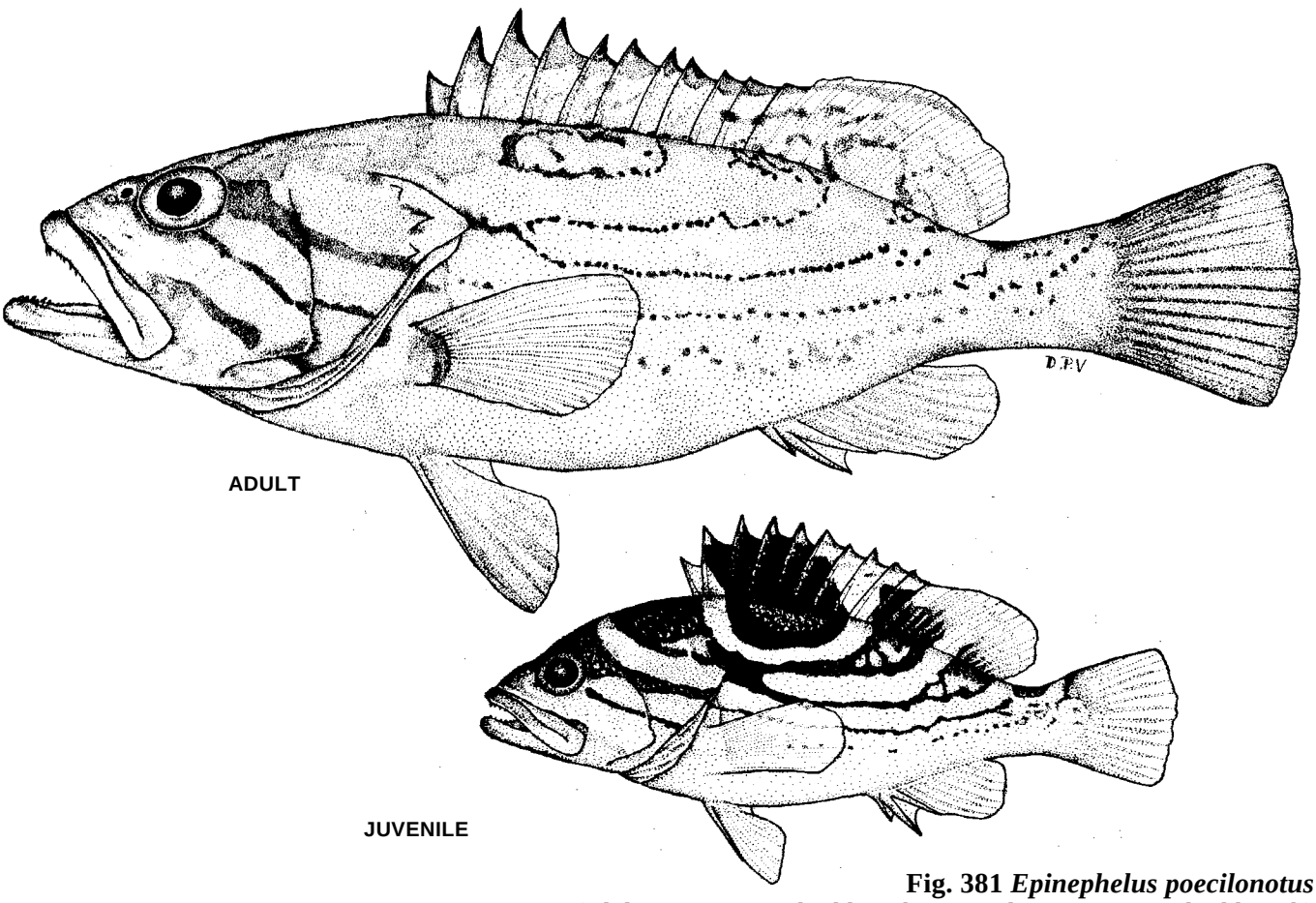

Fig. 381 ***Epinephelus poecilonotus***
(adult 286 mm standard length, juvenile 112 mm standard length)

Diagnostic Features: Body depth contained 2.6 to 3.1 times in standard length (for fish 11 to 52 cm standard length). Head length contained 2.3 to 2.5 times in standard length; interorbital area slightly convex; preopercle angle with 2 to 5 enlarged serrae; upper edge of operculum slightly convex; maxilla reaches about to vertical at rear edge of eye; adults with a step on ventral edge of maxilla; rear nostrils of adults larger than front ones; midlateral part of lower jaw with 2 rows of teeth. Gill rakers 8 to 10 on upper limb, 15 to 18 on lower limb; longest gill raker subequal to longest gill filaments. Dorsal fin with XI spines and 14 or 15 rays, the third or fourth spine longest, its length contained 2.6 to 3.1 times in head length and subequal to longest dorsal-fin ray, the interspinous membranes deeply incised (adults with membrane free length at front of third and fourth spines half or more of spine length); anal fin with III spines and 8 rays; pectoral fins not fleshy, with 17 to 19 rays; pectoral-fin length contained 1.7 to 2.1 and pelvic-fin length contained 2.0 to 2.6 times in head length; caudal fin convex. Lateral-body scales ctenoid (with auxiliary scales on adults); lateral-line scales 54 to 63; lateral-scale series 110 to 121 (1 specimen from Sri Lanka with 104 and 1 from Kenya with 136). Pyloric caeca 8 or 9. **Colour:** Small juveniles (5 to 12 cm standard length) pale yellowish grey, with oval black blotch on body between bases of third to ninth dorsal-fin spines and extending to edge of fin between first and seventh spines: a semicircular pale band passes ventrally around the oval black

blotch and isolates it from a dark brown band that begins broadly on nape and bifurcates just behind operculum, the upper branch curving dorsally and expanding broadly over basal half of dorsal fin between the ninth spine and fourth soft ray, the lower branch also curving dorsally and expanding at base of the last 4 dorsal-fin rays. A second curved brown band, parallel to the one above, runs from interorbital area and rear edge of eye to a black saddle spot on caudal peduncle; a third (and narrowest) dark brown band runs from lower edge of eye to subopercle and continues as a series of dark dots along ventral part of body to base of caudal fin. Fins pale yellow, except where dark markings occur on dorsal fin. On larger juveniles (15 to 25 cm standard length) the oval black blotch at base of dorsal-fin spines and the dark brown bands on body break into series of black spots, a faint dark band runs from the dark maxillary streak to corner of preopercle. On small adults (40 to 50 cm standard length) most of the dark spots on body are faint or have disappeared completely and the dark bands on head are fading too; at this stage the fins are yellowish brown, the triangular interspinous dorsal-fin margins abruptly orange-yellow or brownish yellow; soft dorsal, anal, and caudal fins shading to blackish distally with a bluish white edge.

Geographical Distribution: ***E. poecilonotus*** is an Indo-West Pacific species ranging from the east coast of Africa to Japan, Korea, South China Sea, Viet Nam and Fiji (Fig. 382); it is not known from the Red Sea or the Persian Gulf. We examined specimens from South Africa (Natal to Port Alfred), Mozambique, Kenya, Somalia, Comoros, Mauritius, Maldives, Sri Lanka, India, and Japan.

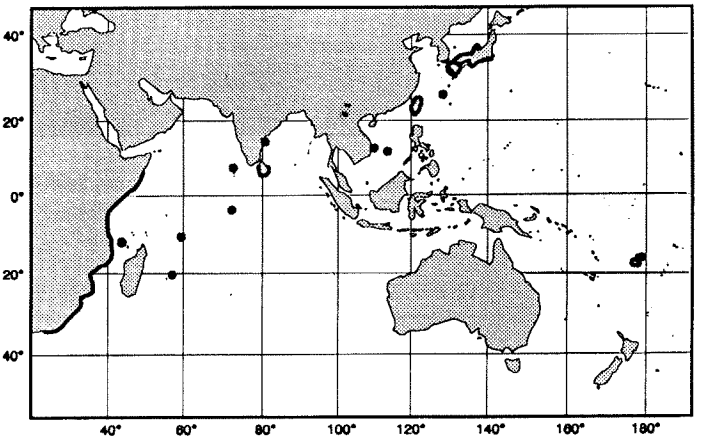

Fig. 382

Habitat and Biology: This deep-water species has been taken in depths of 45 to 375 m. Morgans (1982) reported 19 specimens, (as ***"Epinephelus praeopercularis"***) taken by hook-and-line at the bottom in 95 to 130 m on the North Kenya Banks; these specimens were 35 to 51 cm standard length, and Morgans estimated that maturity occurs at 415 mm total length (35 cm standard length).

Size: Attains at least 63 cm total length and a weight of 4 kg.

Interest to Fisheries: Except for Morgans' (1982) report (see above), ***E. poecilonotus*** seems to be rare. It is caught with hook-and-line, vertical longline, and occasionally in trawls.

Local Names: JAPAN: Iyagohata.

Literature: Katayama (1988); Randall and Heemstra (1991).

Remarks: ***E. poecilonotus*** is one of 4 deep-water groupers (the ***E. morrhua*** species-complex) that are characterized by having the body depth less than head length, caudal fin convex or rounded, 2 to 5 large spines at corner of preopercle, adults with 2 rows of teeth at sides of lower jaw, dorsal-fin rays 13 to 15, pectoral fins not fleshy, pelvic-fin length contained 2.0 to 2.8 times in head length, lateral-line scales 54 to 66, no auxiliary scales on body, and the colour pattern dominated by curving dark bands or longitudinal series of dark spots. The other 3 species of this species complex are ***E. morrhua, E. radiatus,*** and ***E. tuamotuensis.*** These 4 species have often been confused, and we can find no meristic or morphological characters that will distinguish them. Juveniles are readily identified by their colour patterns, but in large adults these distinctive markings are less obvious. (See **Key to Species,** colour descriptions and illustrations of each species for details.)

E. morrhua has a dark blotch at base of fifth to ninth dorsal-fin spines connected by a dark band to the upper edge of operculum. J.L.B. Smith (1958) confused ***E. morrhua*** with ***E. poecilonotus;*** his fig. A is of a 33 cm total length ***E. morrhua*** from Mozambique and his fig. B (reproduced as ***E. morrhua*** in Heemstra and Randall, 1986: fig. 166.53) is a 55 cm total length ***E. poecilonotus*** from Kenya.

Juveniles of ***E. radiatus*** have 5 irregular, solid, dark brown bands (with age only the edges remain dark) that run down and forward from dorsal edge of body, the first from nape to eye, the second from base of middle dorsal-fin spines to upper end of gill opening, the third and fourth dark bands from anterior and posterior dorsal-fin rays, both branching as they pass ventrally, and the last dark band on caudal peduncle; with growth, the dark bands break into spots and disappear ventrally on adults; soft dorsal fin and dorsal part of caudal fin densely spotted.

E. tuamotuensis has the dark bands on head and body forming a coarse reticulum that does not extend to the ventral part of body.

Epinephelus polylepis Randall and Heemstra, 1991 | Fig. 383; Pl. XXE | **SERRAN Epin 88**

Epinephelus polylepis Randall and Heemstra, 1991:226, pl. 19c, figs 118-119 (type locality: Persian Gulf, off Bahrain).

Synonyms: ***Epinephelus chlorostigma*** (non Valenciennes): Boulenger, 1895:503 (in part; Muscat, Oman); Blegvad, 1944:83 (Stiffe Bank, Persian Gulf); Kotthaus, 1970:44, fig. 219 (WSW of Bombay); Randall et al., 1978:174, pl. 62 (Bahrain); Sivasubramaniam and Ibrahim, 1982:58, fig. (Qatar); Al-Baharna, 1986:227, fig. (Bahrain); Kuronuma and Abe, 1986:86, pl. 8 (Kuwait City market). ***Epinephelus*** sp. Randall, 1987a:109, 113 (Gulf of Aden to India).

FAO Names: En - Smallscaled grouper; **Fr** - Mérou petites écailles; **Sp -** Mero escamoso.

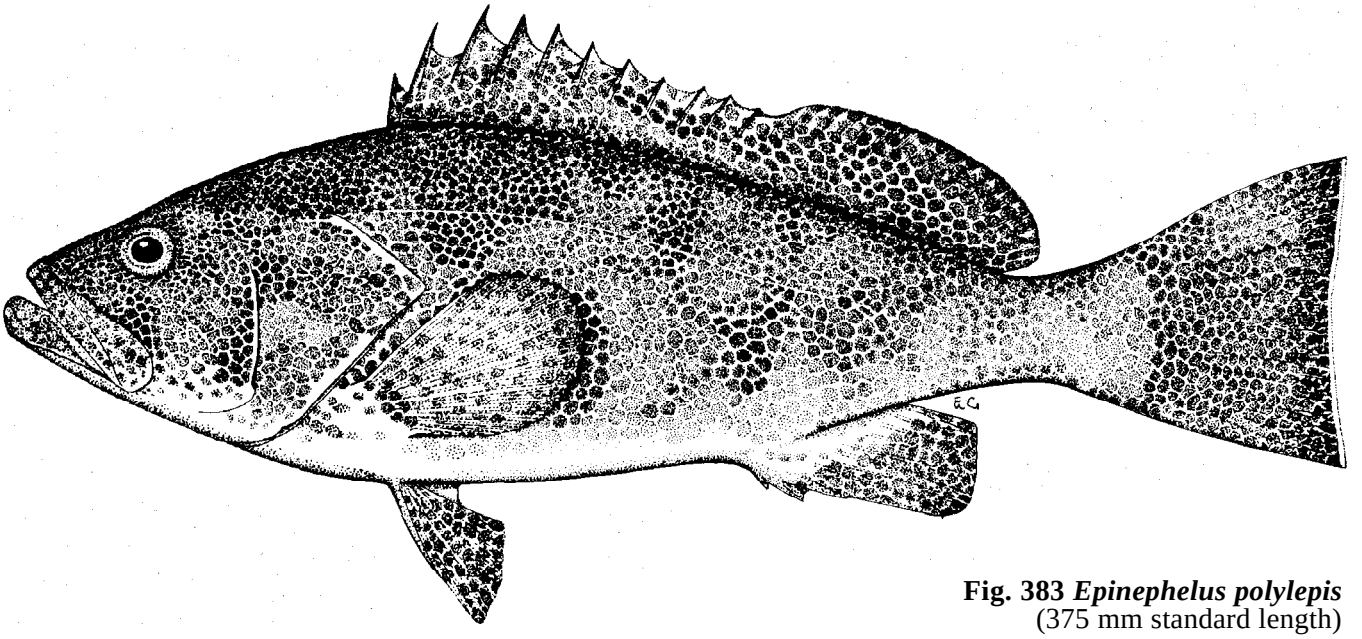

Fig. 383 ***Epinephelus polylepis***
(375 mm standard length)

Diagnostic Features: Body depth contained 2.6 to 3.3 times in standart length (for fish 14 to 45 cm standard length); body width contained 1.8 to 2.4 times in the depth. Head length contained 2.5 to 2.8 times in standard length; interorbital slightly convex, the dorsal head profile almost straight; preopercle angular, with an indentation above the corner and enlarged serrae below the indentation; upper edge of operculum straight; rear nostrils slightly larger than front ones; maxilla reaches to below rear half of eye; a pair of small fixed canines at front of jaws; midlateral part of lower jaw with 2 rows of teeth, the inner ones twice length of outer teeth. Gill rakers 9 or 10 on upper limb, 17 or 18 on lower limb, 25 to 28 total. Dorsal fin with XI spines and 17 (rarely 16) rays, the third or fourth spine longest, its length contained 2.5 to 2.9 times in head length, the anterior interspinous membranes moderately incised; anal fin rounded or slightly angular, with III spines and 8 rays, the second or third ray longest, its length contained 2.1 to 2.5 times in head length; pectoral fins not fleshy, with 18 or 19 rays; pectoral-fin length contained 1.6 to 2.0, pelvic-fin length contained 1.9 to 2.4 times in head length; caudal-peduncle depth contained 3.2 to 3.7 times in head length; caudal fin truncate or slightly emarginate. Lateral-body scales ctenoid, with auxiliary scales; lateral-line scales 65 to 72; lateral-scale series 126 to 137. Pyloric caeca 28 to 34. **Colour:** Head, body, and fins pale, covered (except ventral parts of head and.body) with numerous small close-set dark brown spots; spots on fins and dorsal parts of head and body smaller and closer together than those on sides and ventrally. Rear edge of caudal fin with white line and row of blackish brown spots. Dark maxillary streak present.

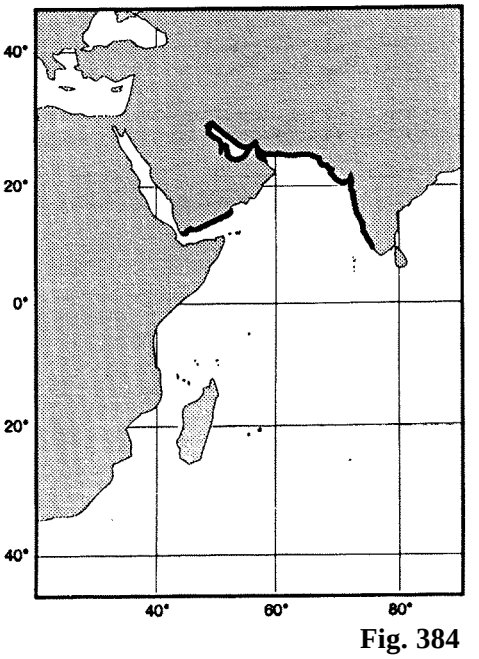

Fig. 384

Geographical Distribution: ***E. polylepis*** is at present known only from the northwest Indian Ocean (Gulf of Aden, Gulf of Oman, Persian Gulf, Pakistan, and west coast of India) (Fig. 384). Since this species has only recently been discovered, it may be expected to have a wider distribution.

Habitat and Biology: All of the specimens with habitat data were collected with trawls in depths of 33 to 100 m. Nothing has been published on the biology of this species.

Size: Attains at least 51 cm standard length; 61 cm total length (data from a photograph supplied by Gabriella Bianchi). The female holotype, 44 cm standard length, weighed 2.1 kg when fresh.

Interest to Fisheries: ***E. polylepis*** was found to be common in the Persian Sea off Oman in November 1983 (G. Bianchi, personal communication).

Local Names: IRAN: Somman.

Literature: Randall and Heemstra (1991); see also references listed under "Synonyms" (above).

Remarks: ***E. polylepis*** was previously misidentified as ***E. chlorostigma,*** which is very similar and appears to be mostly allopatric (the only locality where both species have been recorded is Aden in the Gulf of Aden). ***E. chlorostigma*** differs in having fewer scales (lateral line 48 to 53, lateral-scale series 96 to 122) and a more pointed anal fin in adults (fourth or fifth ray longest, its length contained 1.9 to 2.3 times in head length).

E. gabriellae, the third species of the ***E. chlorostigma*** species-complex, appears to be sympatric with ***E. polylepis*** in the Gulf of Aden and along the south coast of Oman. It differs from ***E. polylepis*** in having fewer scales (lateral line 52 to 54, lateral-scale series 106 to 126), fewer dorsal-fin rays (14 or 15), more pyloric caeca (about 76), more elongate body (depth contained 3.2 to 3.6 times in standard length), and the caudal fin is more concave in adults (concavity 5 to 15 times in head length).

Epinephelus polyphekadion (Bleeker, 1849) Fig. 385; Pl. XXF **SERRAN Epin 41**

Serranus polyphekadion Bleeker, 1849:39 (type locality: Jakarta).

Synonyms: ***Serranus Goldmanni*** Bleeker, 1855d:434 (type locality: Obi Islands, Moluccas). ***Serranus microdon*** Bleeker, 1856b:86 (type locality: Ora Malang, southeast Java). ***Serranus dispar*** variety b Playfair in Playfair and Günther, 1867:6, pl. 1, fig. 3 (type locality: Zanzibar).

FAO Names: En - Camouflage grouper; **Fr** - Merou camouflage; **Sp** - Mero disfrazado.

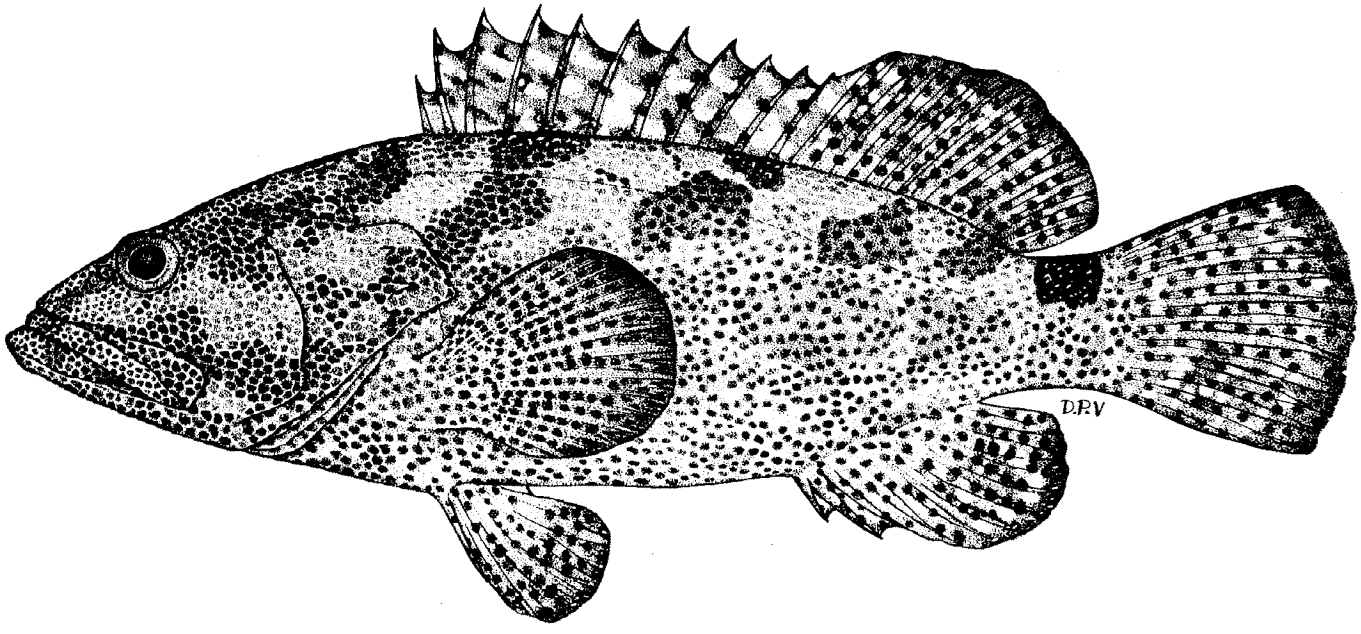

Fig. 385 ***Epinephelus polyphekadion***
(292 mm standard length)

Diagnostic Features: Body depth contained 2.7 to 3.1 times in standard length (for fish 11 to 41 cm standard length), Head length contained 2.3 to 2.5 times in standard length; interorbital area flat, the dorsal head profile evenly convex; preopercle rounded, the serrae at corner slightly enlarged; upper edge of operculum very convex; rear nostril diameter about twice diameter of front nostrils; maxilla reaches to or beyond vertical at rear edge of eye; midlateral part of lower jaw with 2 or 3 rows of teeth; fixed canines at front of jaws inconspicuous. Gill rakers 8 to 10 on upper limb, 15 to 17 on lower limb, total 24 to 27. Dorsal fin with XI

spines and 14 or 15 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 ray, the interspinous membranes moderately incised; anal fin with III spines and 8 rays; pectoral-fin rays 16 to 18; pectoral-fin length contained 1.7 to 2.1 times, pelvic-fin length contained 1.9 to 2.4 times in head length; caudal fin rounded. Lateral-body scales ctenoid, with auxiliary scales. Lateral-line scales 47 to 52; lateral-scale series 95 to 113. **Colour:** Head, body, and fins pale brown, covered with numerous small dark brown spots; head and body with irregular dark blotches (more distinct on live specimens) superimposed over the dark spots; prominent black saddle blotch on caudal peduncle; dark spots extend all over head, including lower jaw, lips, branchiostegal membranes, gular area, and inside of mouth; numerous small white spots on fins (more distinct on live fish) and a few on head and body. Juveniles with a pair of blackish spots on each side of snout and a black spot at margin of second and third interspinous dorsal-fin membranes.

Geographical Distribution: ***E. polyphekadion*** is widely distributed in the tropical and subtropical Indo-West Pacific region from the Red Sea and east coast of Africa to French Polynesia. In the western Pacific it ranges from southern Japan to southern Queensland and Lord Howe Island. We have examined specimens from the Red Sea, Mozambique, Zanzibar, Bassas da India (Mozambique Channel), Madagascar, St. Brandon's Shoals, Seychelles, India, Cocos-Keeling Islands, Western Australia, Indonesia, Philippines, Ryukyu Islands, Ogasawara Islands, Palau Islands, Caroline Islands, Solomon Islands, Great Barrier Reef, Lord Howe Island, New Caledonia, Marshall Islands, Gilbert Islands, Ellice Islands, Fiji, Tonga, Line Islands, Rapa, Marquesas, and the Tuamotus. Additional reliable records are from Djibouti, Tanzania, Maldives, Chagos Islands, Papua New Guinea, New Ireland, Rotuma, Samoa, and Society Islands (Fig. 386).

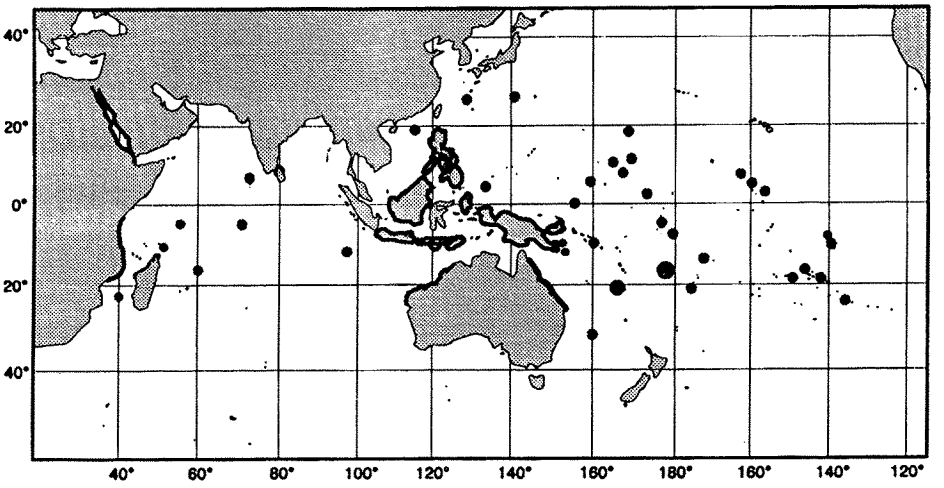

Fig. 386

Habitat and Biology: ***E. polyphekadion*** is almost always found in clear water on coral reefs, either in lagoons or on the outer reef; it is most abundant at islands, particularly atolls. It feeds mainly on crustaceans (primarily portunid crabs, but also some scyllarid and panularid lobsters) and fishes; gastropods and cephalopods are lesser important food items. Morgans (1959:647, as ***"Epinephelus dispar"***), studying the population off Kenya, reported that females are mature at 38 cm standard length, males at about 42 cm standard length, and spawning occurs in January and February. Caillart and Morize (1989) used oxytetracycline as a marker to study the rate of microstriae deposition in the otoliths of 14 captive adults: they found that usually one microstria was deposited every 2 days, but that the frequency varies among fish. ***E. polyphekadion*** is probably the grouper species that is the least wary of divers, hence it is uncommon at localities with heavy spearfishing.

Size: Attains at least 61 cm standard length (75 cm total length) and a weight of 4 kg.

Interest to Fisheries: ***E. polyphekadion*** was formerly common in the markets of Zanzibar and probably throughout its range. It is of considerable importance in the artisanal fisheries of the tropical Indo-Pacific region, but occasionally implicated in cases of ciguatera fish poisonings. Recently, the aquaculture industry of Singapore has become interested in the culture of this species (which is known locally as the "marble grouper"). Caught with hook-and-line, spears, and traps.

Local Names: AUSTRALIA: Small-toothed rockcod; GAMBIER ISLANDS: Hapuku; JAPAN: Madarahata; MARQUESAS: Haoa; NEW CALEDONIA: Loche crasseuse; SINGAPORE: Marble grouper; TAHITI: Hapuu; TUAMOTUS: Kito.

Literature: Randall and Heemstra (1991).

Remarks: ***E. polyphekadion*** is the valid name for the species that most recent authors have identified as ***E. microdon.*** This species has often been confused with ***E. fuscoguttatus,*** which has a similar colour pattern of irregular dark blotches superimposed on numerous small dark brown spots and a black saddle blotch on the peduncle. But ***E. fuscoguttatus*** has 18 to 20 pectoral-fin rays, 28 to 31 gill rakers, a distinct indentation in dorsal head profile above the eyes, and rear nostril diameter of adults 4 to 8 times front nostrils.

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