

Diagnostic Features : Snout long, 42 to 48% of head length, its anterolateral margin slightly convex and incompletely supported by bone; orbit moderate in size, 23 to 27% of head length; upper jaw short, 22 to 26% of head length; suborbital width 50 to 63% of orbit diameter; orbit 1.7 to 1.8 times into snout; teeth in bands in both jaws; inner gill rakers on first arch 0 + 7; head ridges strong, spiny, supraoccipital and post-temporal ridges developed; scales on top of head and on occipital crest with a single spinous ridge; dorsal surface of snout completely scaled; underside of head, including mandibular rami, covered with scales having a single spinous ridge. First dorsal fin with 2 spines and 8 or 9 rays, no elongated rays, height about equal to postorbital length of head; pectoral fin rays i17 to i18. Light organ barely visible as a black crescent before anus. Body scales large, adherent; stout spinules on broad tripod bases in 1 to 6 parallel, ridge-like rows, middle row much enlarged; scales below midbase of first dorsal fin 4.5 to 5.5. Pyloric caeca about 9. **Colour**: overall brownish to greyish, fins dusky to black; no distinctive body or fin markings; mouth bluish-grey, gill cavity blackish; fins dusky.

Geographical Distribution : Southern Japan, East China Sea, and the Philippines, but may extend into Indian Ocean, Australia and New Zealand (Fig. 405).

Habitat and Biology : Benthopelagic in 630 to 990 m depth.

Size : To at least 48 cm total length.

Interest to Fisheries : Occasionally taken in trawls, but no separate catch statistics are maintained.

Local Names : JAPAN: Soroi-hige.

Literature : Günther (1877, 1887); Gilbert & Hubbs (1916, 1920); Okamura (1970a); Yatou, *in* Okamura & Kitayama (1984).

Remarks : Jordan & Gilbert (1904) considered Günther's Kermadec Island and New Zealand specimens as specifically distinct from the Japanese specimens and called them *C. kermadecus* n.sp. In their synonymy for *C. parallelus*, Gilbert & Hubbs (1920:515) suggested that the New Zealand specimens represent a third species. Alcock's (1889) record of this species from Indian waters must be considered suspect as are those of Weber (1913) and Weber & de Beaufort (1929). Brauer's (1906) record of the species from southwestern Africa probably are misidentifications of *C. braueri* Barnard, 1925. Atlantic records of the species probably represent *C. acanthiger* Barnard, 1925. *Coelorinchus parallelus* probably has a distribution restricted to the western Pacific from Japan to the Philippines. Specimens reported from the Indian Ocean, East Indies, and New Zealand should be re-examined. Okamura (1970a:198) states that Japanese ichthyologists have also confused *C. kamoharai* and *C. multispinulosus* with *C. parallelus*.

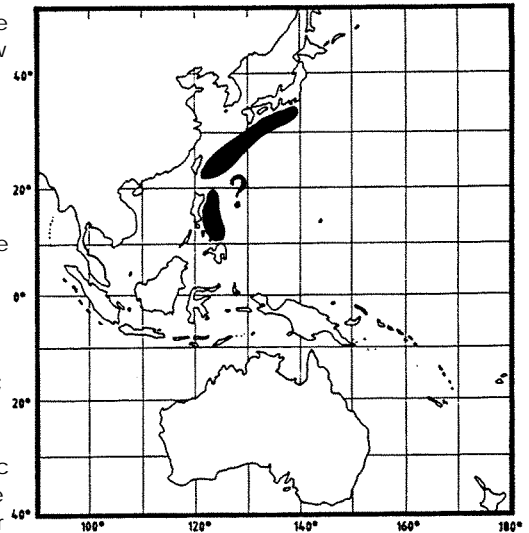


Fig. 405

Coelorinchus productus Gilbert & Hubbs, 1916

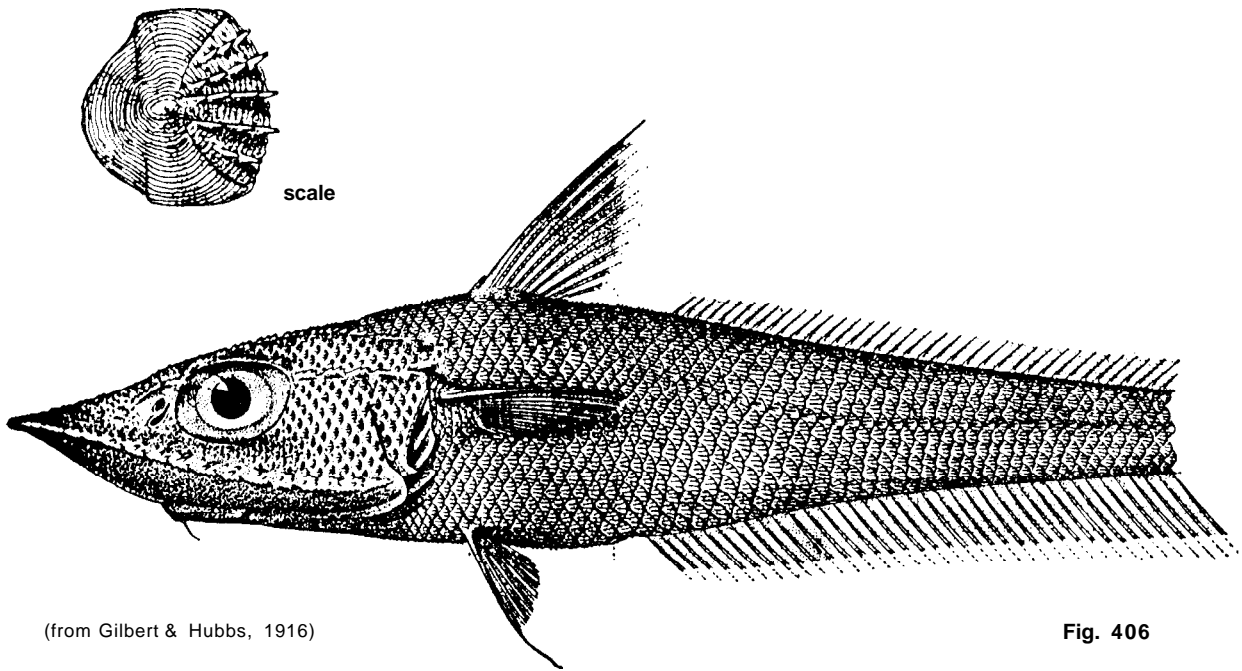
Fig. 406

MACROUR Coel 33

Scientific Name with Reference : *Coelorhynchus productus* Gilbert & Hubbs, 1916, *Proc.U.S.Natl.Mus.*, 51:175.pl. 9, fig. 1 (Suruga Gulf, Japan, 360 to 543 m).

Synonyms : None

FAO Names : En - Unicorn grenadier.



(from Gilbert & Hubbs, 1916)

Fig. 406

Diagnostic Features : Snout moderately long, pointed, 1.5 to 1.7 times into orbit diameter, 39 to 42% of head length, its anterolateral margin completely supported by bone, its sides convex in vertical view; orbit 26 to 29% of head length; upper jaw 22 to 23% of head length; barbel 5 or 6 times into orbit diameter; teeth in a broad, short band in premaxillary, the band falling well short of end of rictus; mandibular band longer, narrower; mouth opening restricted by folds of lip; inner gill rakers on first arch 1 or 2 + 5 or 6; head ridges strong, supraoccipital scute developed, several similar single-keeled scutes follow on nape; underside of head naked except for small patch below preopercle angle. First dorsal fin with 2 spines and 8 to 10 rays, second spinous ray about equal to or somewhat less than postrostral length of head; pectoral fin rays i16 to i18. Light organ small, length 2.8 to 3 times into orbit diameter; periproct slightly removed from anal fin origin, fossa of light organ narrow, extending forward immediately before anus, anterior end about equidistant from pelvic fin insertions and anal fin origin. Body scales covered with daggerlike spinules in 3 to 5 slightly divergent ridgelike rows, the median row strongest; scales below midbase of first dorsal fin 4.5. Pyloric caeca about 27. **Colour**: overall brownish to swarthy, silvery ventrally; fins dusky to blackish; no distinctive body or fin markings; mouth and gill cavities blackish.

Geographical Distribution : Japan (Suruga Bay) southward to East China Sea (Fig.407).

Habitat and Biology : Benthopelagic in 271 to 600 m depth.

Size : To at least 31 cm total length.

Interest to Fisheries : Taken as bycatch by trawlers.

Local Names : JAPAN: Tengu-hige.

Literature : Gilbert & Hubbs (1916); Yatou *in* Okamura & Kitayama (1984).

Remarks : Closely related to *C. anatirostris*, with which it was formerly synonymized (Okamura, 1970a), but Yatou (*in* Okamura & Kitayama, 1984) recognized it as distinct from that species (see Remarks under *C. anatirostris*).

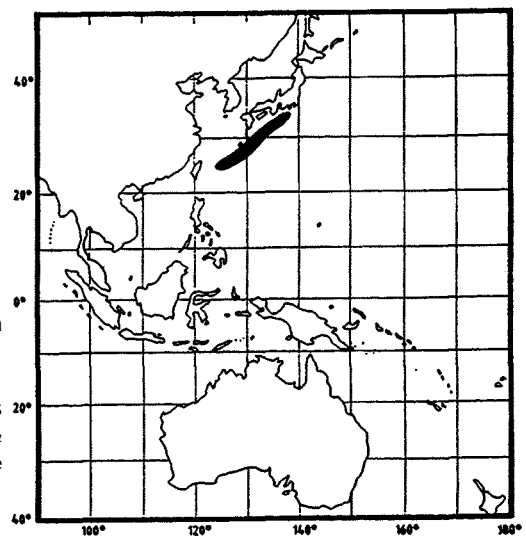


Fig. 407

Coelorinchus scaphopsis (Gilbert, 1890)

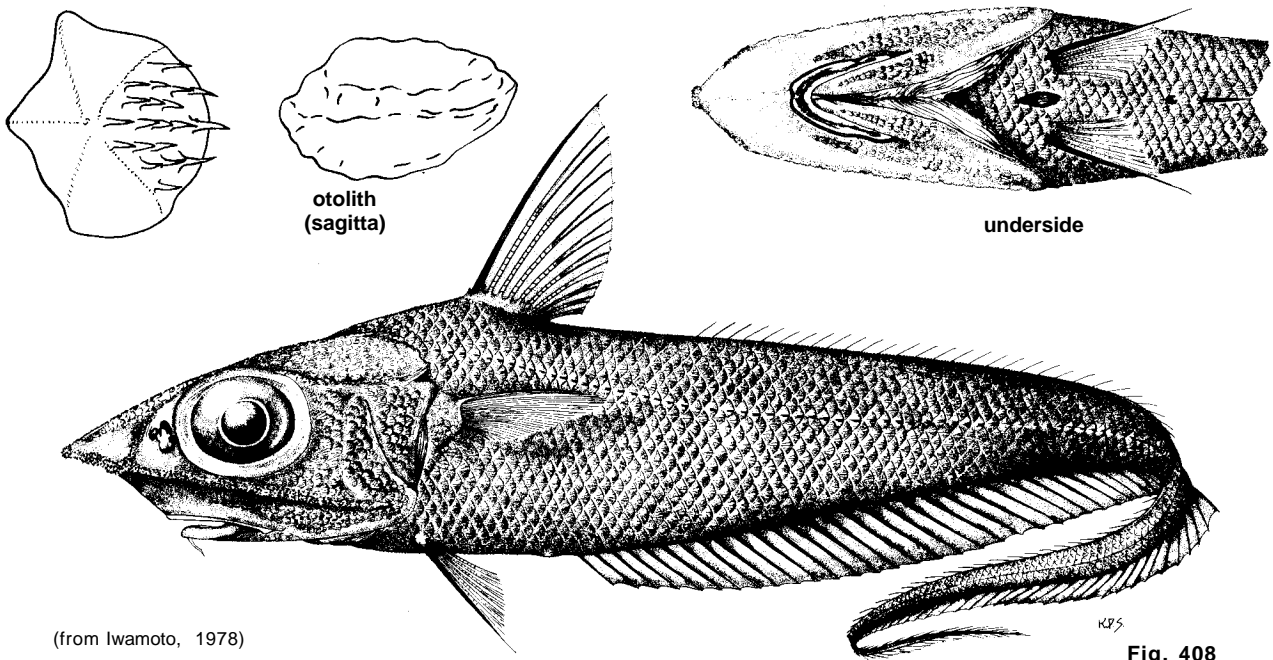
Fig. 408

MACROUR Coel 34

Scientific Name with Reference : *Macrurus (Coelorhynchus) scaphopsis* Gilbert, 1890, *Proc.U.S.Natl. Mus.*, 13: 115 (Gulf of California, 265 m).

Synonyms : *Coelorhynchus scaphopsis* - Goode & Bean, 1896.

FAO Names : En - Shoulderspot grenadier



(from Iwamoto, 1978)

Fig. 408

Diagnostic Features : Snout relatively short, its antero-lateral margin incompletely supported by bone; terminal scute broad, blunt; orbit diameter 31 to 37% of head length, usually slightly more than snout length; upper jaws 28 to 32% of head length; teeth in narrow bands in both jaws; inner gill rakers on first arch 1 or 2 + 8 to 10; head ridges strong but not especially spiny; underside of snout naked; naked ventral margins on suborbital and mandible. First dorsal fin with 2 spines and 7 or 8 rays, its height usually less than postrostral length; pectoral fin rays i17 to i19. Anus slightly removed (1 to 3 scales) from anal fin origin; a large lens-shaped black fossa of light organ between pelvic fin bases. Body scales moderate in size, relatively adherent; spinules in 3 to 9 subparallel rows, middle row longest and slightly higher than others; scales below midbase of first dorsal fin 3.5 to 4.5. Swimbladder oval; 4 short, broad retia mirabilia and gas glands. Pyloric caeca 15 to 26. **Colour**: swarthy to greyish overall; fins dusky to blackish; mouth pallid; gill cavity blackish, paler inwardly.

Geographical Distribution : Southern California and northern Gulf of California; probably also in outer slope waters of Baja California and mainland Mexico (Fig. 409).

Habitat and Biology : Benthopelagic in 183 to 296 m depth.

Size : To at least 34 cm total length.

Interest to Fisheries : Commonest grenadier in upper Gulf of California (Lavenberg & Fitch, 1966), and occasionally taken by commercial trawlers fishing for Dover sole off Santa Barbara, California (Iwamoto, 1978).

Local Names : USA: Shoulderspot grenadier.

Literature : Gilbert (1890); Lavenberg & Fitch (1966); Iwamoto (1978).

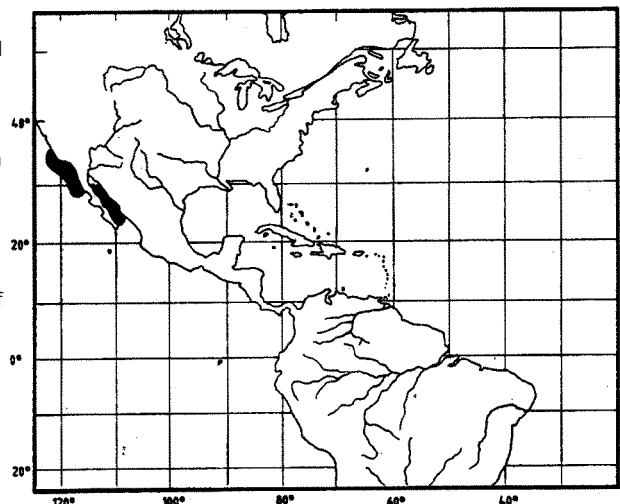


Fig. 409

Coelorinchus ventrilux Marshall & Iwamoto, 1973

Fig. 410

MACROUR Coel 35

Scientific Name with Reference : *Coelorinchus ventrilux* Marshall & Iwamoto, in Marshall, 1973, Mem. Sears Found.Mar.Res., 1 (pt.6):543 (Florida Straits; 23°55'N, 80°34'W; 494 m).

Synonyms : None.

FAO Names : En - Firebelly grenadier.

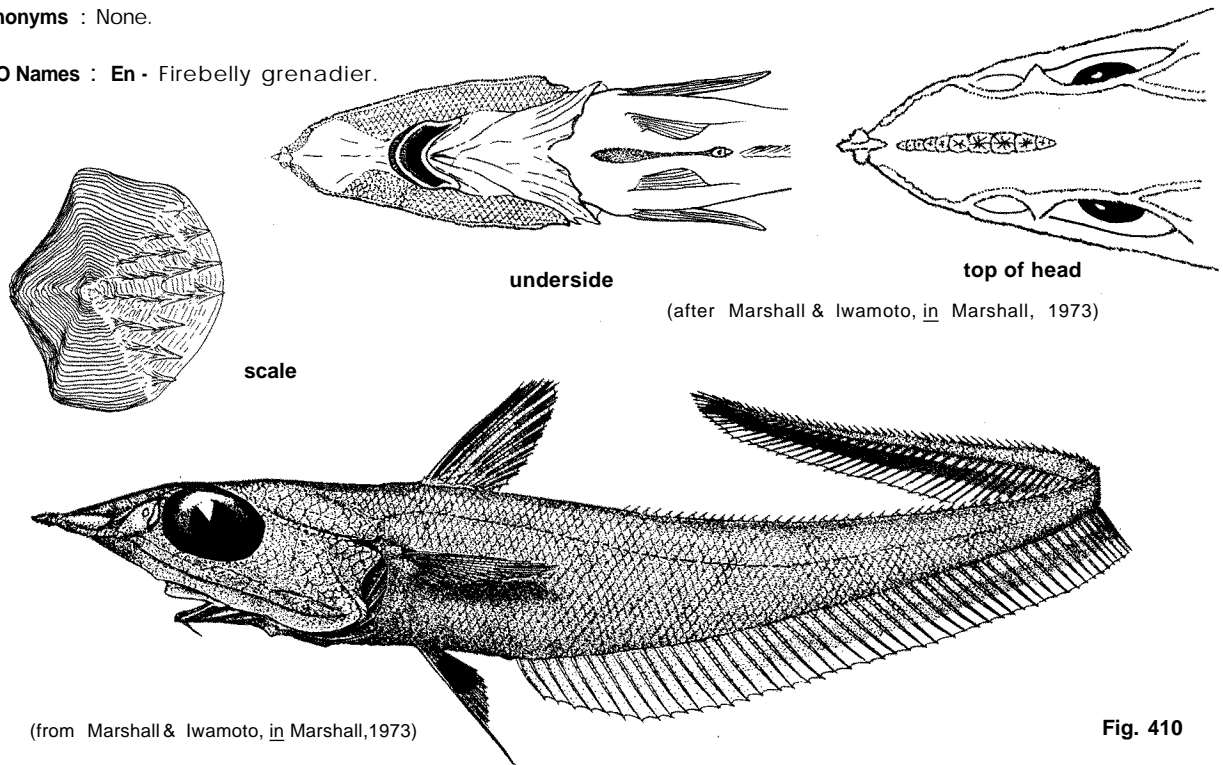


Fig. 410

Diagnostic Features : Snout long, sharply pointed, 41 to 45% of head length; its anterolateral margin incompletely supported by bone; orbit diameter 27 to 31% of head length, somewhat larger than upper jaw, which is 24 to 28% of head length; inner gill rakers on first arch 7 to 9 total; head ridges strong but with short, generally conical spinules; terminal snout scute longer than wide, with blunt lateral arms; underside of snout naked medially; behind leading edges of snout dorsally, a broad transparent area on either side mostly lacking scales or with thin finely spinulated scales; leading edge ventrally with characteristic broadened scales; subopercle projects behind preopercle as a fairly broad tab. First dorsal fin with 2 spines and 9 or 10 rays, much shorter than postrostral length of head; pectoral fin rays i16 to i19. Light organ large, visible as a blackish streak leading from anus to a long black naked fossa on rear half of chest. Anus immediately anterior to anal fin origin. Scales covered with fine spinules arranged in parallel to slightly divergent rows; scales below midbase of first dorsal fin 4.5 to 5; below second dorsal fin origin 5. **Colour**: pale light greyish-brown to tawny, blackish or densely punctuate on belly and chest; oral cavity pale, branchial cavity blackish; a narrow median strip of dark punctuations ventrally on snout; membrane between second spinous ray and first segmented ray of first dorsal fin black; pectoral fins with large black blotch; anal fin dusky anteriorly becoming black-striped posteriorly.

Geographical Distribution : West Indies (Fig.411).

Habitat and Biology : Benthopelagic in about 300 to 500 m depth over steep slopes of islands.

Size : To 30 cm total length.

Interest to Fisheries : None at present.

Literature : Marshall & Iwamoto (in Marshall, 1973).

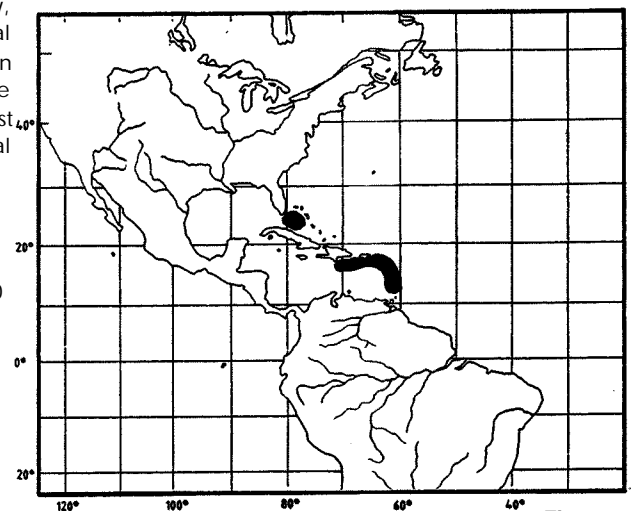


Fig. 411