

squamation, mandibular teeth, retia mirabilia and gas glands, and gill rakers, which suggest closer affinity to *Malacocephalus*. The position of *M. occidentalis* appears, indeed, to be somewhat intermediate between the two genera. New species recently described further obscure the distinction between the two and may require a different alignment of the included species.

***Mataeocephalus* Berg, 1898**

MACROUR Mat

Genus with Reference : *Mataeocephalus* Berg, 1898, Comm. Mus. Nac. Buenos Aires 1:41 (replacement name for *Coelocephalus* Gilbert & Cramer, 1897, preoccupied).

Synonyms : *Coelocephalus* Gilbert & Cramer, 1897:422 (non Agassiz,1843) (type species *Coelocephalus acipenserinus* Gilbert & Cramer, 1897, by monotypy).

Diagnostic Features : Snout rather long, flattened, tipped with a bifid terminal snout scute; a rather distinctive row of coarse scales along leading edge of snout; underside of head variously naked; a groove on each side dorsally behind leading edge; mouth small, inferior, upper jaws less than 30% head length. Premaxillary teeth in a wide short band ending far short of end of rictus; mandibular teeth in a broad and short band, or in a moderately long, tapered band. Opercular opening restricted dorsally and ventrally; gill membranes broadly attached to isthmus without a free posterior fold. Outer rakers on first gill arch usually absent, a few rudimentary plates in some individuals. Serrations on first dorsal fin obsolete to few and widely spaced. Spinules on body scales short, conical, in parallel rows. Periproct rather small to large, close to or rather far removed from anal fin.

Habitat, Distribution and Biology : Tropical waters of the Pacific and Indian oceans; not known from the Atlantic. Benthopelagic in about 400 to 1 100 m depth.

Size : To more than 30 cm total length.

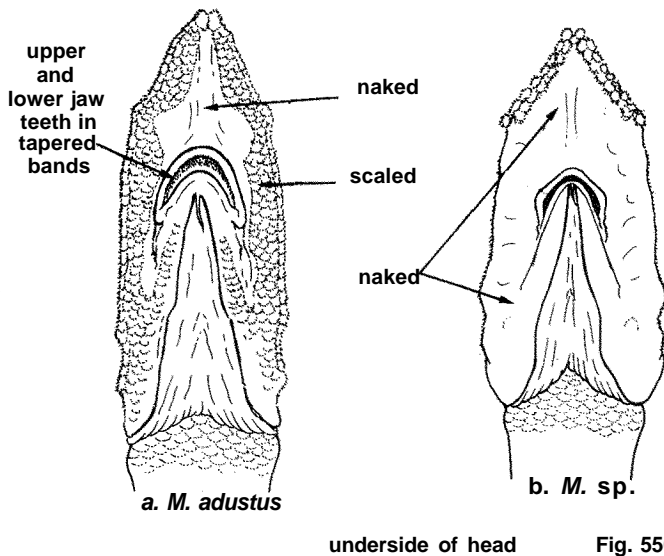
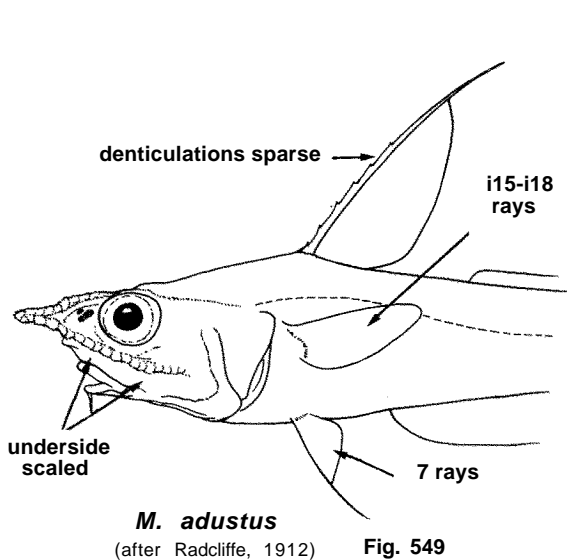
Interest to Fisheries : Most of the species are too small, found too deep, or are too rare to be of Commercial significance.

Literature : Marshall (1973); Iwamoto(1979).

Remarks : Drs. Y. I. Sazonov & Y. N. Shcherbachev (of the P.P. Shirshov Institute of Oceanology) are revising the genus. They have informed the author (in litt., Sept. 1982) that one nominal species is relegated to subspecific level, another is sunk into synonymy, and a third hitherto unrecognized species is included in the genus, giving a total of four species, two of which have two subspecies.

Key to Nominal Species of *Mataeocephalus* (excluding *M. microstomus* (Regan, 1908) because of inadequate original description and no study specimens)

- 1a. Pelvic fin rays 7; pectoral fin rays i15 to i18. Periproct region small. Premaxillary teeth in a broadly tapered band extending almost to end of jaw. Underside of head mostly scaled. Denticulations on second spinous ray of first dorsal fin obsolete or few (3 to 5). (Figs. 549,550a)..... *M. adustus*



1b. Pelvic fin rays 8 or 9; pectoral fin rays i19 to i25. Periproct region moderate to large. Pre-maxillary teeth in broad, short, truncated bands on anterior part of jaw only (Fig. 551). Underside of head mostly naked (Fig. 550b) Denticulations on second spinous ray of first dorsal fin well developed

2a. Scales below midbase of first dorsal fin 8.5 to 11; below origin of second dorsal fin 6.5 to 9 (Fig. 552) *M.tenuicauda*

2b. Scales below midbase of first dorsal fin 7 or 8; below origin of second dorsal fin 5 to 6

3a. Spinule rows on body scales 8 to 10; distance from orbit to preopercle angle 31 to 35% of head length; sub-orbital width 16 to 17% of head length; length of upper jaws 22 to 25% of head length; interspace between dorsal fins about 30 to 40% of head length (Fig.553) ... *M. nigrescens*

3b. Spinule rows on body scales 5 or 6; distance from orbit to preopercle angle 28 to 30% of head length; sub-orbital width 13 to 15.5% of head length; length of upper jaws 19 to 21.5% of head length; interspace between dorsal fins 19 to 26% of head length (Fig.554) *M. acipenserinus*

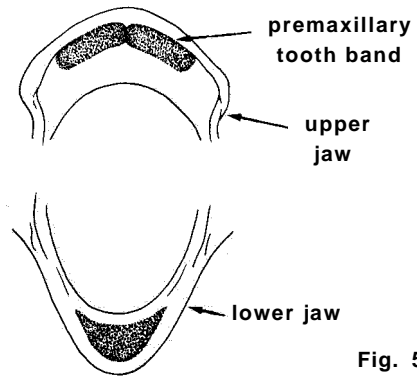


Fig. 551

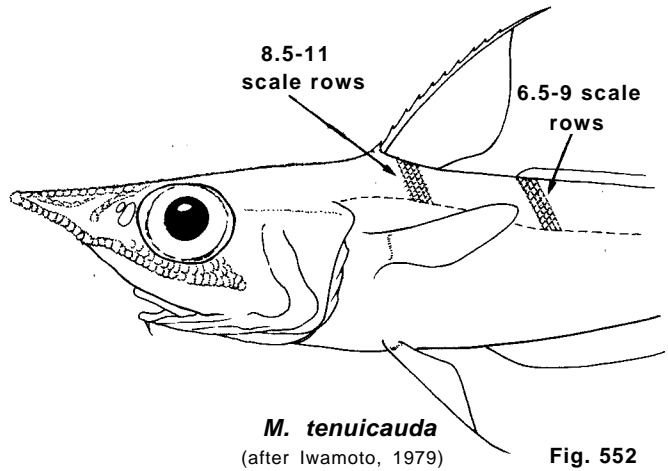


Fig. 552

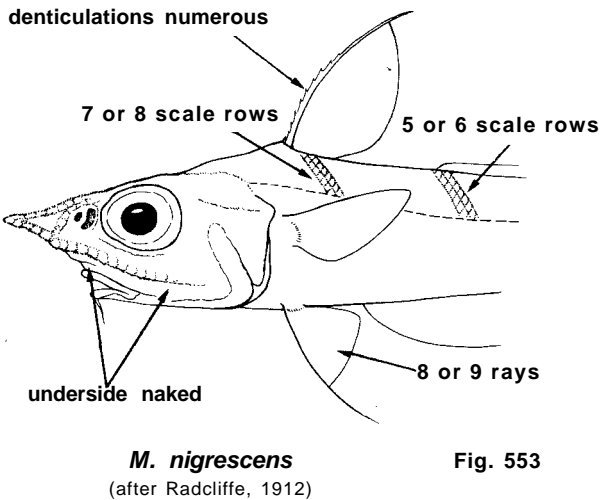


Fig. 553

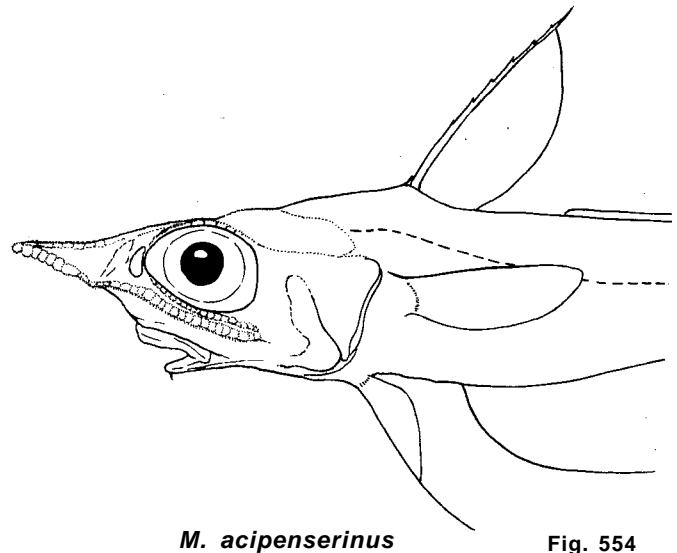


Fig. 554

List of Species

- Mataeocephalus acipenserinus* (Gilbert & Cramer, 1897)
- Mataeocephalus adustus* Smith & Radcliffe, 1912
- Mataeocephalus microstomus* (Regan, 1908)
- Mataeocephalus nigrescens* Smith & Radcliffe, 1912
- Mataeocephalus tenuicauda* (Garman, 1899)

Mataeocephalus acipenserinus (Gilbert & Cramer, 1897)

Fig. 555

MACROUR Mat 1

Scientific Name with Reference : *Coelocephalus acipenserinus* Gilbert & Cramer, 1897: Proc. U.S. Natl. Mus 19: 422, pl. 42, fig. 1 (Kaiwi Channel, Hawaiian Islands, 337 fms (616 m)).

Synonyms : *Mataeocephalus acipenserinus* -- Gilbert, 1905.

FAO Names : En - Sturgeon grenadier.

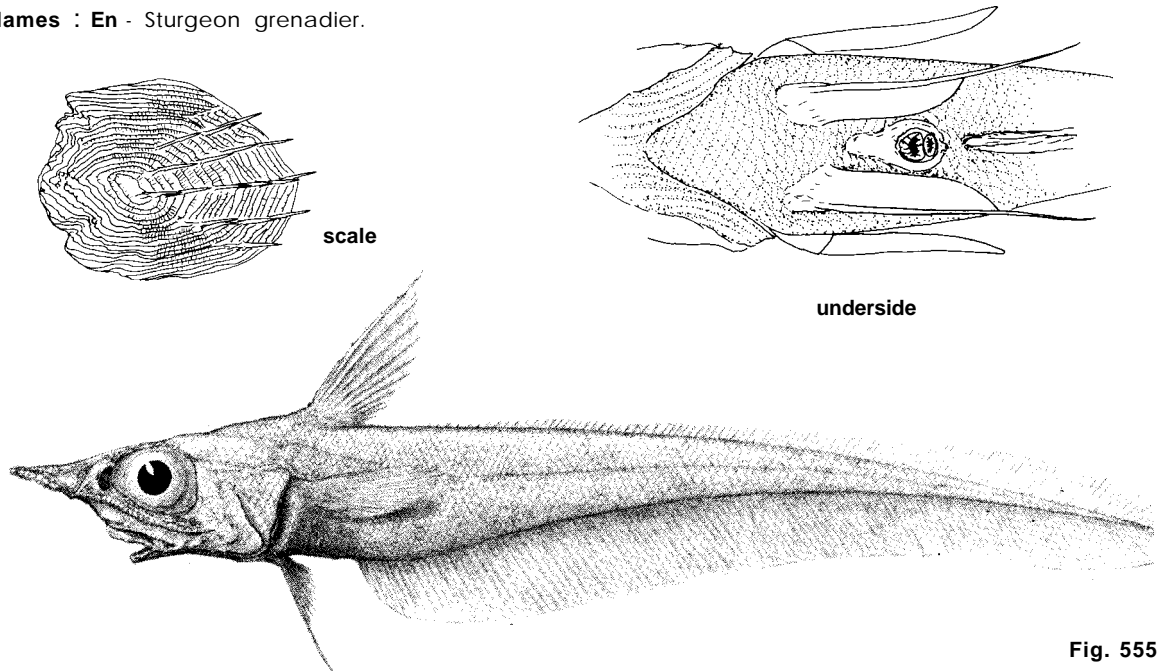


Fig. 555

Diagnostic Features : Snout with a prominent, bifid, terminal scute, its length 38 to 42% of head length; underside of head almost entirely naked, with relatively little ventral overlap of scales along leading snout edge; posterior nostril less than 4 times into orbit diameter; orbit diameter 27 to 30% of head length; interorbital width 19 to 22% of head length; barbel 3 or 4% of head length; inner gill rakers on first arch usually 7 or 8 total. Jaw teeth in wide, short bands, occupying anterior part of mouth only. First dorsal fin with 2 spines and 8 or 9 segmented rays, serrations on second spine few and widely spaced, height of fin 55 to 64% of head length; pectoral fin rays i20 to i24; pelvic fin rays 8 or 9. Spinules on body scales short, conical, reclined, in 4 to 6 parallel rows, none particularly enlarged; scales below second dorsal fin about 8. Periproct moderate sized, pear-shaped to oval, situated about midway between pelvic and anal fins; a small black fossa anterior to anus usually developed.

Geographical Distribution : Hawaiian Islands (Fig.556)

Habitat and Biology : Benthopelagic in about 400 to 730 m depth.

Size : To about 20 cm total length.

Interest to Fisheries : A very abundant species in about 400 to 700 m depth off Hawaii, but of no current commercial interest.

Literature : Gilbert&Cramer (1897); Gilbert (1905).

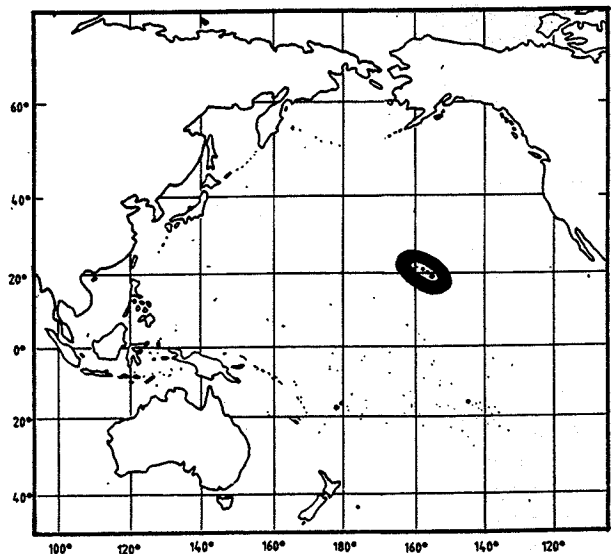


Fig. 556

Mataeocephalus tenuicauda (Garman, 1899)

Fig. 557

MACROUR Mat 2

Scientific Name with Reference : *Macrurus tenuicauda* Garman, 1899, Mem. Mus. Comp. Zool. Harvard 24: 216, pl 49, fig. 1 (Gulf of Panama, ALBATROSS sta. 3384, 838 m).

Synonyms : *Mataeocephalus tenuicauda* -- Gilbert & Hubbs, 1916.

FAO Names : En - Slender-tail grenadier

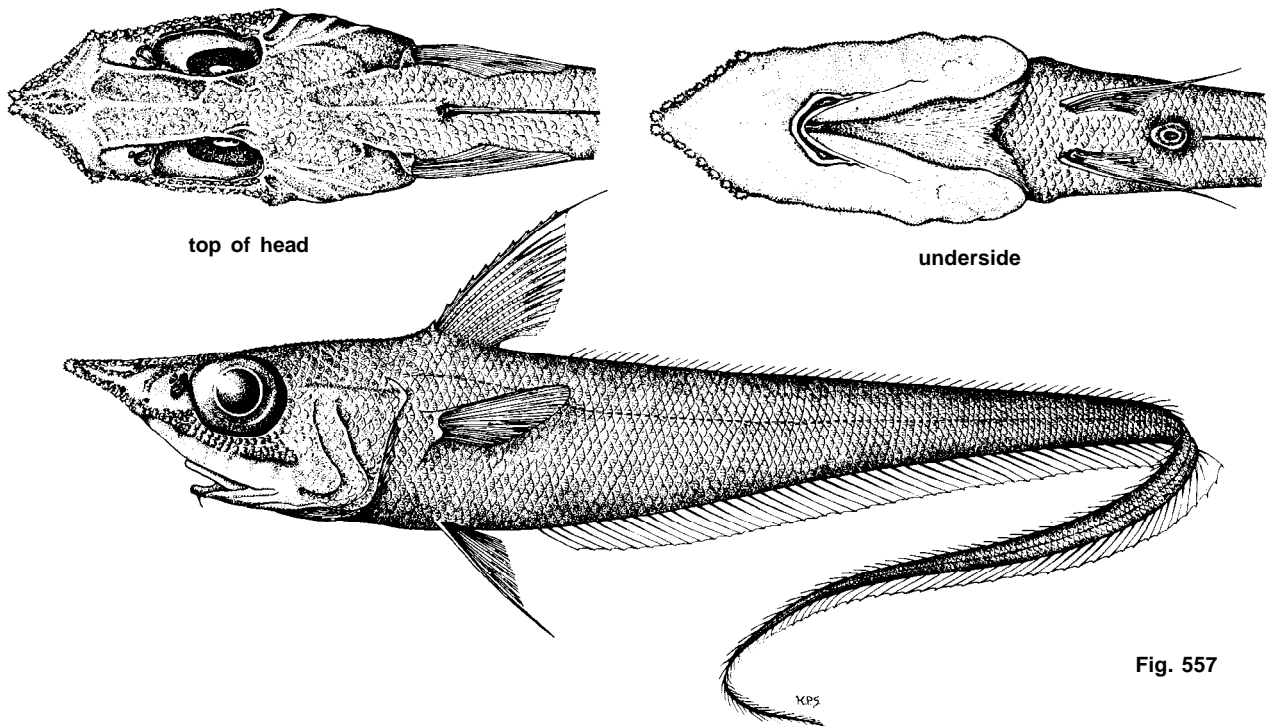


Fig. 557

Diagnostic Features : Snout with a prominent, bifid terminal scute; snout length 36 to 42% of head length; posterior nostril less than 5 times into orbit diameter; underside of head almost entirely naked, with relatively little ventral overlap of scales along leading snout edge; orbit 26 to 30% of head length; interorbital 19 to 22% of head length; barbel 4 to 6% of head length; inner gill rakers of first arch usually 6 to 8 total. Premaxillary teeth in wide, short, truncated band ending far short of end of rictus; mandibular teeth in a broad, short, tapered band. First dorsal fin with 2 spines and 8 to 10 segmented rays, its length 52 to 63% of head length; pectoral fin rays 21 to 25; pelvic fin rays 8 or 9. Spinules on body scales short, conical, in parallel rows, none particularly enlarged; scales below second dorsal fin 8.5 to 11. Periproct large, oval, removed from anal fin by several scale rows; pyloric caeca 16 to 21.

Geographical Distribution : Pacific coast of Panama and Ecuador; Cocos Island; Galapagos (Fig.558).

Habitat and Biology : Benthopelagic in 700 to 1 159 m depth.

Size : To more than 30 cm total length.

Interest to Fisheries : A common species in about 700 to 1 100 m depth off the Pacific coast of Panama and Ecuador, but of no current commercial interest.

Literature : Garman (1899); Iwamoto (1979).

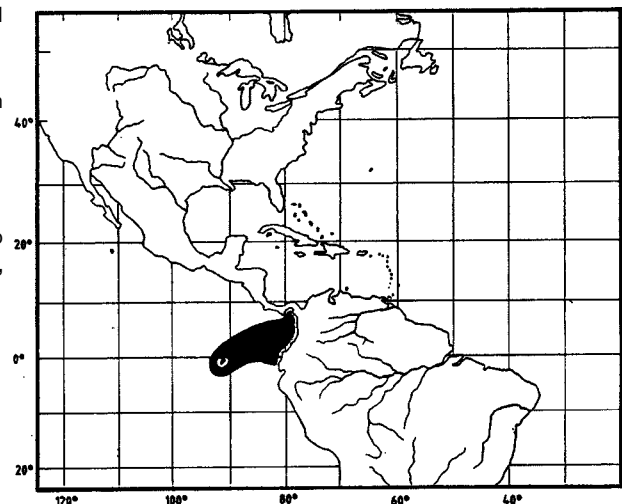


Fig. 558