

Sphagemacurus Fowler, 1925

MACROUR Spha

Genus with Reference : *Sphagemacurus* Fowler, 1925, Am.Mus. Novit. 162:3 (type species *Macrurus hirundo* Collett, 1896, by original designation).

Synonyms : *Grenurus* Parr, 1946 (type species *Grenurus grenadae* Parr, 1946, by original designation).

Diagnostic Features : Macrourines with 7 branchiostegal rays. Body compressed and deep; snout blunt, high, tipped with a strong terminal scute, naked ventrally. A short barbel present. Jaw teeth small, in narrow bands. First dorsal fin base elevated; pelvic fin origin below gill cover, well forward of pectoral fin bases; anal fin origin below or anterior to base of first dorsal fin. Anus and urogenital openings in middle of a broad periproct spanning about 2/3 of the area between pelvic and anal fins (Fig. 655). Precaudal vertebrae 11 or 12. Swimbladder with 2 retia mirabilia. Body scales with short, sharp spinules arranged in parallel to slightly divergent rows (Fig. 656); reticulate structure developed.

Habitat, Distribution and Biology : Benthopelagic in about 500 to 2 300 m. Apparently worldwide in tropical waters, except absent in eastern Pacific.

Size : To about 25 cm total length:

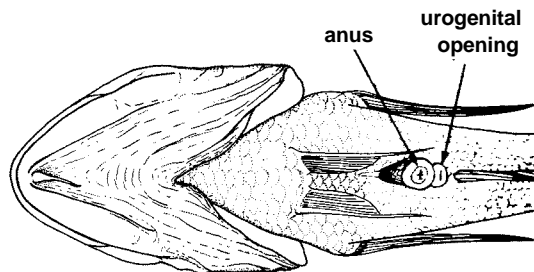
Interest to Fisheries : In the Gulf of Mexico, *S. grenadae* is taken occasionally as part of the bycatch of deepwater trawlers. Off Hawaii, *S. gibber* was occasionally taken in moderate numbers during exploratory deepwater trawling in the 1960's. The species are too small and never found in sufficient quantity to be of commercial interest except as bycatch.

Literature : Fowler (1925); Parr (1946); Marshall (1973).

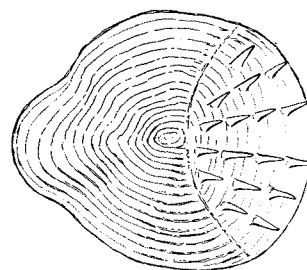
Remarks : Characters used to construct the key to species were taken from the literature and from limited study specimens. The key should be used with that thought in mind.

Key to Species of *Sphagemacurus*

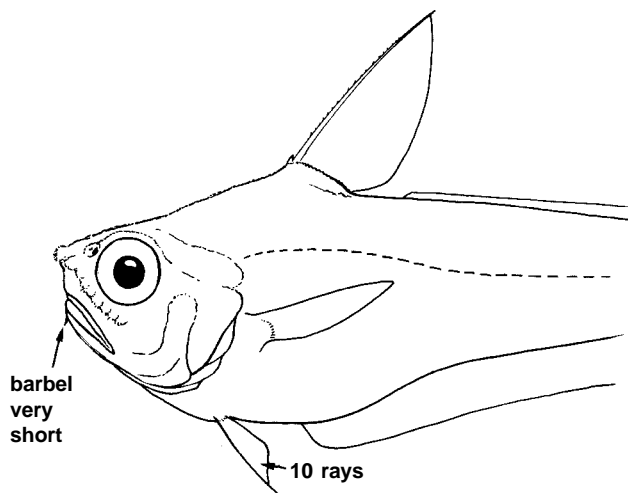
- 1a. Inner gill rakers on first arch 14 or 15 total; length of upper jaw 40 to 41% of head length; interorbital space 30 to 32% of head length; pelvic fin rays 12 or 13.....***S. gibber*** (Hawaiian Islands)
- 1b. Inner gill rakers on first arch 11 or fewer; length of upper jaw less than 40% of head length; interorbital space less than 30% of head length; pelvic fin rays 8 to 14
 - 2a. Barbel much less than 1/2 orbit; inner gill rakers on lower limb of first arch 7; pelvic fin rays 10 ***S. decimalis*** (Philippines, Fig.657)
 - 2b. Barbel about equal to or more than 1/2 orbit diameter; inner gill rakers on lower limb of first arch 7 or more; pelvic fin rays 8 to 14



underside Fig. 655



scale Fig. 656 (after Gilbert & Hubbs, 1920)



S. decimalis Fig. 657 (after Gilbert & Hubbs, 1920)

3a. Orbit about 1.2 times or more into distance orbit to angle of preopercle; pelvic fin rays 8 to 10; barbel about 1/2 or less of greatest orbit diameter ***S. richardi***
(Indonesia, Fig.658)

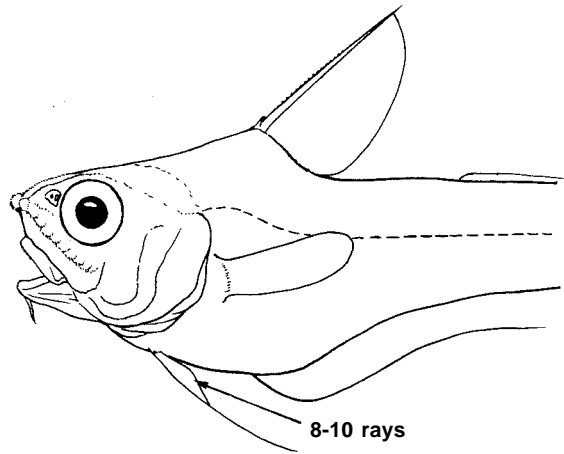
3b. Orbit less than 1.2 times into distance orbit to angle of preopercle; pelvic fin rays 10 to 14; barbel about 1/2 or more of greatest orbit diameter

4a. Orbit diameter 31 to 36% of head length, shorter or longer than snout; barbel 16 to 31% of head length; pelvic fin rays 11 to 14 ***S.pumiliceps***
(Indian O., Philippines, Indonesia)

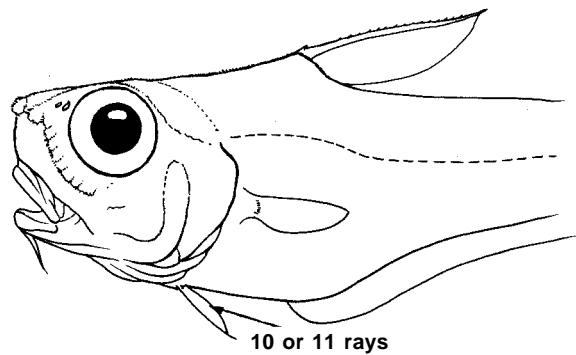
4b. Orbit diameter 33 to 40% of head length, longer than snout; barbel 18.5 to 26% of head length; pelvic fin rays 10 to 12

5a. Interorbital space 26 to 30 of head length; upper jaw 37 to 39% of head length; pelvic fin rays 10 or 11 ***S. hirundo***
(NE Atlantic, Fig.659)

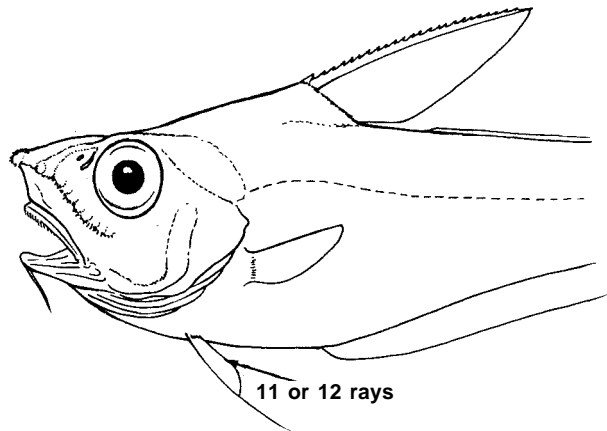
5b. Interorbital space 22 to 27% of head length; upper jaw 34 to 37% of head length; pelvic fin rays 11 or 12 ***S. grenadae***
(W Atlantic, Fig.660)



S. richardi Fig. 658
(after Weber & de Beaufort, 1929)



S. hirundo Fig. 659
(after Nybelin, 1948)



S. grenadae Fig. 660
(after Marshall, 1973)

List of Species

- Sphagemacrurus decimalis*** (Gilbert & Hubbs, 1920)
Sphagemacrurus gibber (Gilbert & Cramer, 1897)
Sphagemacrurus grenadae (Parr, 1946)
Sphagemacrurus hirundo (Collett, 1896)
Sphagemacrurus richardi (Weber, 1913)
Sphagemacrurus pumiliceps (Alcock, 1894)

Sphagemacrus grenadae (Parr, 1946)

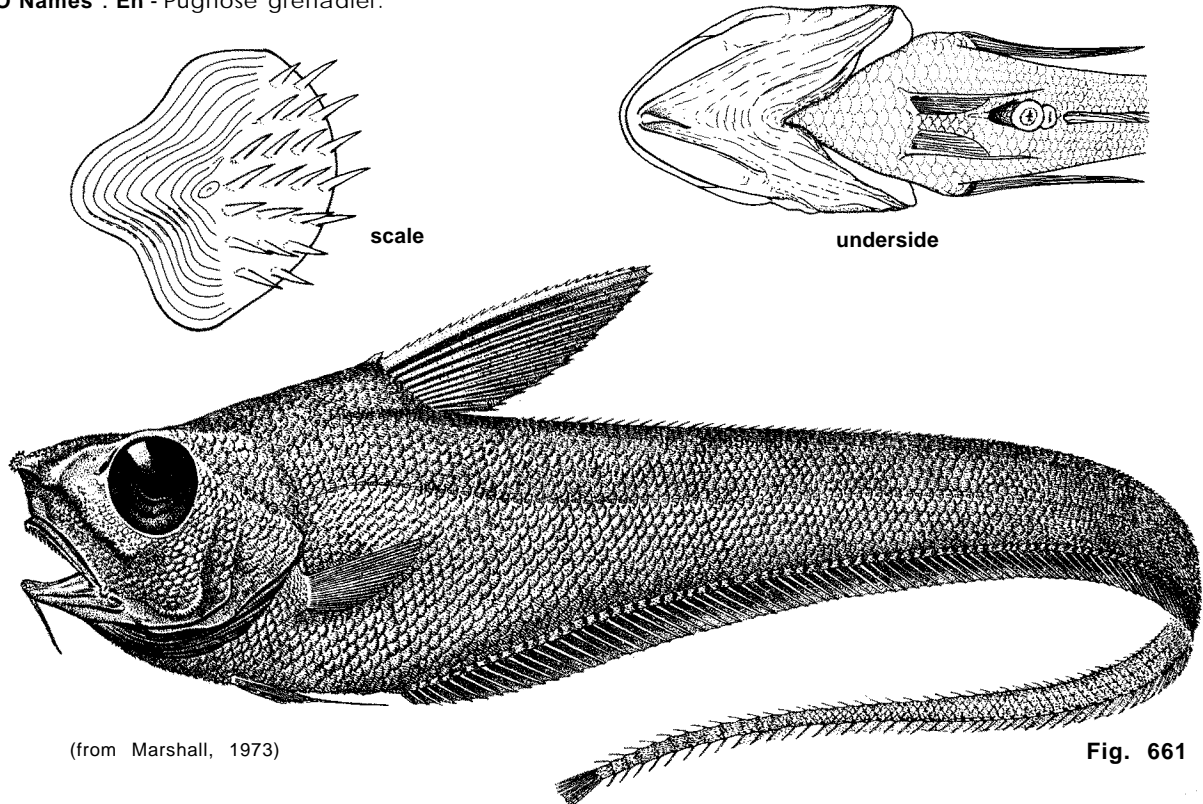
Fig. 661

MACROUR Spha 1

Scientific Name with Reference : *Grenurus grenadae* Parr, 1946, *Bull. Bingham Oceanogr. Coll.* 10 (1): 46 (off Grenada, West Indies: 12°03'55"N, 61°49'40"W; 576 fms, [1053 m]; BLAKE sta. 265).

Synonyms : *Sphagemacrus grenadae* -- Marshall, 1973.

FAO Names : En - Pugnose grenadier.



(from Marshall, 1973)

Fig. 661

Diagnostic Features : Orbit longer than snout, about 0.9 to 1.1 times into distance orbit to angle of preopercle; barbel more than 1/2 orbit diameter. Inner gill rakers on first arch 9 or 10 total. Pelvic fin rays 11 or 12. Measurements in percentages of head length: orbit diameter 33 to 35; interorbital 22 to 27; upper jaws 34 to 37; barbel length 18.5 to 25.8. About 9 short, stumpy pyloric caeca.

Geographical Distribution : Gulf of Mexico and Caribbean Sea; one record from Hudson Canyon (ca. 39°N, 72°W) (Fig. 662).

Habitat and Biology : Benthopelagic in about 1 000 to more than 1 500 m depth.

Size : To about 25 cm total length.

Interest to Fisheries : Forms a part of the by-catch of deepwater trawls in the Gulf of Mexico, but is of no commercial significance.

Literature : Parr (1946); Marshall (1973).

Remarks : The species is closely related to *S. hirundo* from the eastern Atlantic and *S. pumiliceps* from the Indian Ocean. Characters used to distinguish the three are not supported by statistically significant numbers and should be viewed with caution. A more thorough study using adequate numbers of specimens is necessary.

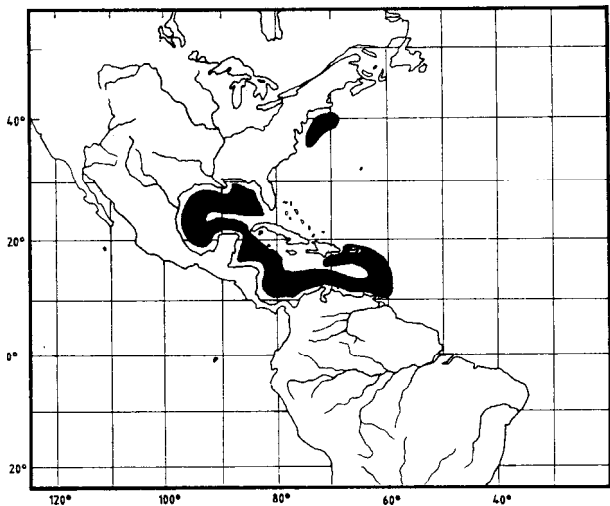


Fig. 662

Trachonurus Günther, 1887**MACROUR Tra**

Genus with Reference : *Trachonurus* Günther, 1887, *Rep. Sci. Results Voy. CHALLENGER, Zool.*, 22:142 (as subgenus of *Macrurus*) (type species *Coryphaenoides villosus* Günther, 1877, by monotypy).

Synonyms : None

Diagnostic Features : Macrourines with 7 branchiostegal rays. Head laterally compressed, snout bluntly rounded; interopercle broadly exposed ventrally and covered with scales; a short barbel present. Jaw teeth short, in narrow bands. Spinous dorsal ray flexible, with a smooth leading edge. Pelvic fins small, originating behind pectoral fin, with 6 or 7 rays. Anus and urogenital openings in middle of broad periproct spanning area between pelvic and anal fins. Squamation strongly adherent, bristly, scales with rather few upright spinules; usually a patch of scales on gular membrane and a few small scales on branchiostegal membranes. Precaudal vertebrae 12 or 13. Swimbladder with 2 retia mirabilia. **Colour**: dark brown or black.

Habitat, Distribution and Biology : Worldwide in warm temperate to tropical seas but absent on continental margins of the eastern Pacific and in the South Atlantic. Benthopelagic in about 500 to 1 600 m depth; occasionally taken in deep midwaters.

Size : To more than 65 cm total length.

Interest to Fisheries : *Trachonurus sulcatus* is commonly taken by trawlers in continental slope waters of the Gulf of Mexico along with the commercial royal red shrimp *Pleoticus robustus*, but it is of no value. So far as known, none of the other species of this genus are taken in any quantity to be of fishery interest.

Literature : Parr (1946); Okamura (1970a); Marshall (1973).

Remarks : The genus constitutes a well-defined monophyletic unit of 6 or more. Parr (1946:79) synonymized *T. asperrimus* (Vaillant, 1888) with *T. sulcatus* (Goode & Bean, 1885); Marshall (1973:621) later synonymized that species and *T. sentipellis* Gilbert & Cramer, 1897, with *T. villosus* (Günther, 1877) and recognized only the last species. A study of Gilbert & Hubbs's (1920) material from the Philippines and East Indies has shown that these specimens constitute an undescribed species. Additional material recently collected off New Zealand and Australia has revealed two or more undescribed species. A cursory comparison of specimens of *T. villosus* from off Japan, *T. sentipellis* from Hawaii, and *T. sulcatus* from the Atlantic suggests that each represents a distinct species, but so far these ideas have not been documented.

A key to the species cannot be prepared until the results of further research become available.

Tentative List of Species :

Trachonurus sentipellis Gilbert & Cramer, 1897
Trachonurus sulcatus (Goode & Bean, 1885)
Trachonurus villosus (Günther, 1877)
Trachonurus species A (Philippines and Indonesia)
Trachonurus species B (New Zealand and Australia)
Trachonurus species C (Australia)

Trachonurus sulcatus (Goode & Bean, 1885)

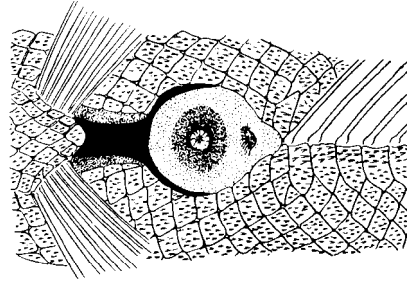
Fig. 663

MACROUR Tra 1

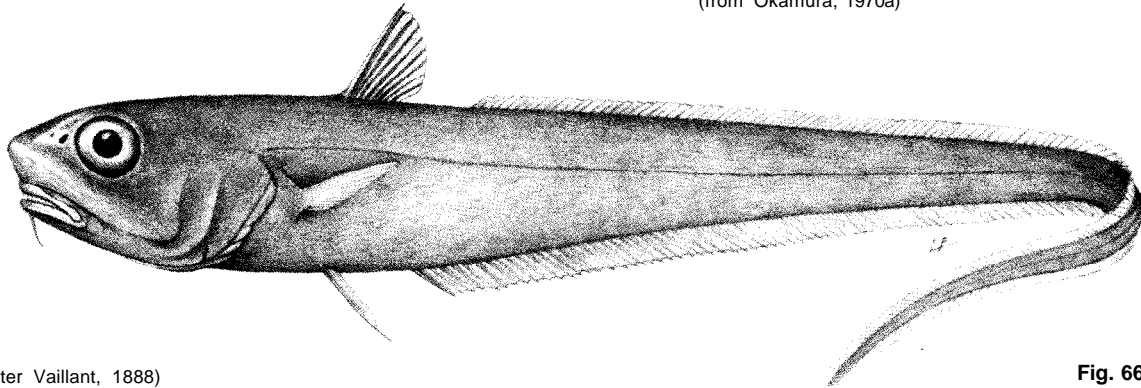
Scientific Name with Reference : *Cotyphaenoides sulcatus* Goode & Bean, 1885, *Proc. U.S. Natl. Mus.*, 8:596 (n. Gulf of Mexico; 28°38'30"N, 87°02'W in 768 m; ALBATROSS sta. 2394).

Synonyms : *Cotyphaenoides asperrimus* Vaillant, 1888; *Macrurus (Malacocephalus) sulcatus* -- Günther, 1887; *Trachonurus asperrimus* -- Roule, 1919.

FAO Names : En - Bristly grenadier.



underside
(from Okamura, 1970a)



(after Vaillant, 1888)

Fig. 663

Diagnostic Features : Lateral snout profile broadly rounded (juveniles often have more pointed snouts); posterior nostril more than 2 times into suborbital; greatest body depth about equal to or more than postrostral length of head. Lateral line complete and well developed. Pelvic fin rays 7, rarely 6; pectoral fin rays 14 to 16. Pyloric caeca 9 to 13, short and thick, but not stumplike.

Geographical Distribution : Warm waters of the North Atlantic (Fig. 664).

Habitat and Biology : Benthopelagic in about 700 to 1 500 m depth.

Size : To about 50 cm total length.

Interest to Fisheries : Taken as bycatch of royal red shrimp (*Pleoticus robustus*) in continental slope waters of the Gulf of Mexico.

Literature : Vaillant (1888); Koefoed (1927); Parr (1946); Marshall (1973).

Remarks : The species is probably closest to the Pacific species *T. villosus*, but its more rounded snout profile and its smaller posterior nostril are distinguishing.

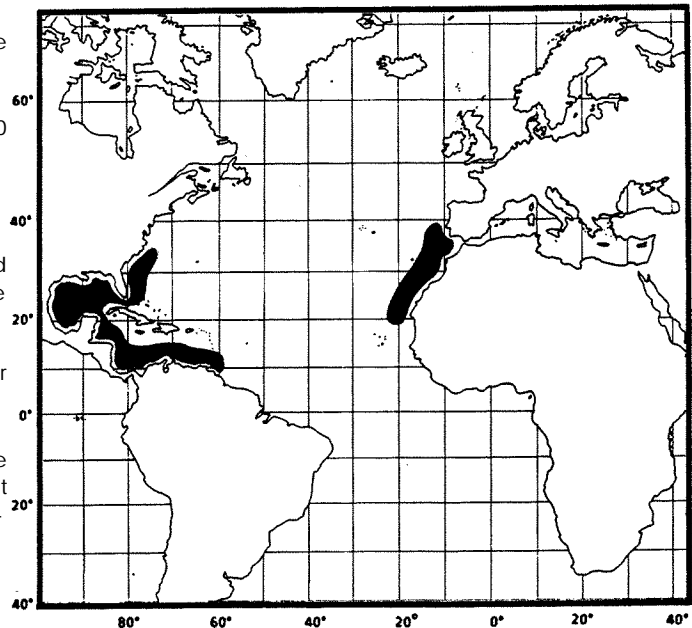


Fig. 664