

CENTROGENIIDAE

(= Centrogenysidae)

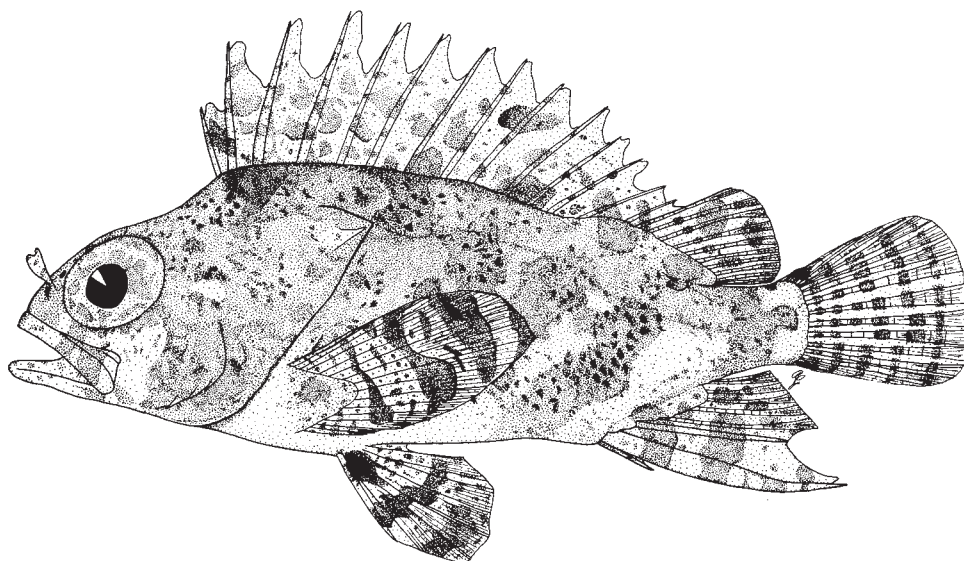
False scorpionfish

by A.C. Gill

A single species in this family.*Centrogenys vaigiensis* (Quoy and Gaimard, 1824)

Frequent synonyms / misidentifications: *Centropristes scorpaenoides* Cuvier in Cuvier and Valenciennes, 1829; *Sebastes stoliczkae* Day, 1875 (including combinations of these in *Myriodon*, *Gennadius*, and *Rhabdosebastes*) / None.

FAO names: En - False scorpionfish.



Diagnostic characters: A perch-like species; moderately deep bodied (greatest body depth 34 to 39% standard length). Head large, 42 to 44% standard length. **Posterior rim of anterior nostril with large fringed flap.** Opercle with 2 spines, the lower spine strong and conspicuous, the upper spine (near dorsal edge of operculum) weak and concealed by skin and scales; **preopercle finely serrate posteriorly, with 3 or 4 large, antrorse (forward pointing) spines on ventral margin.** Mouth moderately large and protrusible, reaching to anterior half of eye; supramaxilla present. A band of villiform teeth in each jaw; a chevron-shaped band of villiform teeth on vomer; an elongate patch of villiform teeth on each palatine; no teeth on tongue. Seven branchiostegal rays; branchiostegal membranes not united. Gill rakers short or rudimentary, the first gill arch with 15 to 19 gill rakers, of which 3 to 6 on upper limb, and 12 to 14 on lower limb. **Dorsal fin with XIII or XIV spines and 9 to 11 branched, segmented rays, the origin of fin situated over middle of head above posterior edge of preopercle;** dorsal-fin membranes project slightly beyond spine tips. **Anal fin short based, with III spines and 5 branched, segmented rays; second anal-fin spine strong and very long (28 to 32% standard length), reaching to or beyond posterior margin of anal fin when depressed.** **Caudal fin rounded to truncate, with 6 (rarely 5) and 6 branched rays in upper and lower part, respectively, and 4 to 6 unbranched rays in upper and lower part.** **Pelvic fins positioned behind pectoral fins, consisting of I spine and 5 branched, segmented rays, the inner ray broadly bound to body by membrane.** **Pectoral-fin rays 12 to 14, with only the upper ray unbranched.** Scales on body ctenoid, extending onto snout; lateral line relatively low on body, extending from gill opening to caudal-fin base, consisting of 36 to 44 tubed scales, with additional 4 to 6 tubed scales on caudal fin; tubed scales on body each with a dorsal branch of tube extending to edge of scale; soft portions of dorsal and anal fins with basal covering of scales. Vertebrae 11+14; lower hypurals (hypurals 1 and 2) fused into a single plate. Tooth plates of fifth ceratobranchials broadly overlapping and

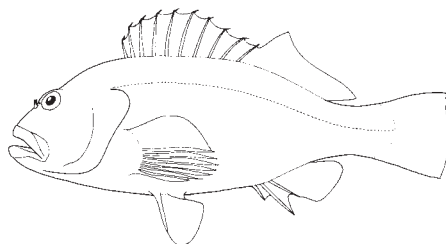
asymmetrical. **Colour:** head and body pale grey to pale brown, paler ventrally, with dark grey to brown mottling; fins pale grey or pale brown to white or clear, with large dark grey to dark brown spots, these forming irregular bands (particularly on pectoral and pelvic fins, and on anterior part of anal fin).

Similar families occurring in the area

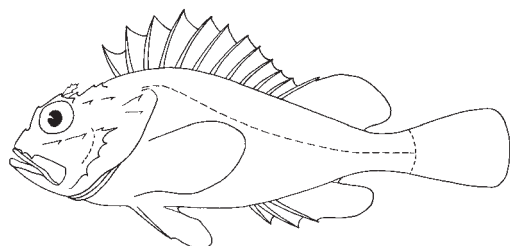
Cirrhitidae: similar in general appearance, but easily distinguished in having X dorsal-fin spines, cycloid scales, branchiostegal membranes joined and forming a free fold across isthmus, 6 branchiostegal rays, 10+16 vertebrae, the lower 5 to 7 pectoral-fin rays unbranched and usually thickened with deeply incised membranes, and in lacking large antrorse spines on the ventral edge of the preopercle.

Scorpaenidae: distinguished by the more extensive head spination/ornamentation, particularly in having a suborbital stay (or ridge), a spine-like extension of third infraorbital bone toward the preopercle (usually bound to the preopercle in most species).

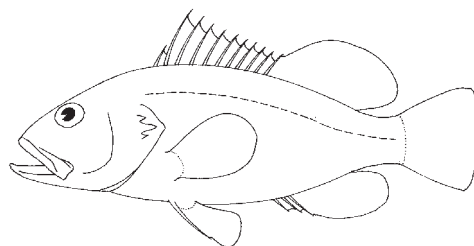
Serranidae: sometimes resemble *Centrogenys* (particularly certain benthic anthiines), but easily distinguished in having 3 opercular spines, 6 to 22 segmented anal-fin rays, usually fewer dorsal-fin spines (usually XI or fewer; only *Niphon* and *Acanthistius* have as many as XIII), and at least some canine teeth in the jaws.



Cirrhitidae



Scorpaenidae

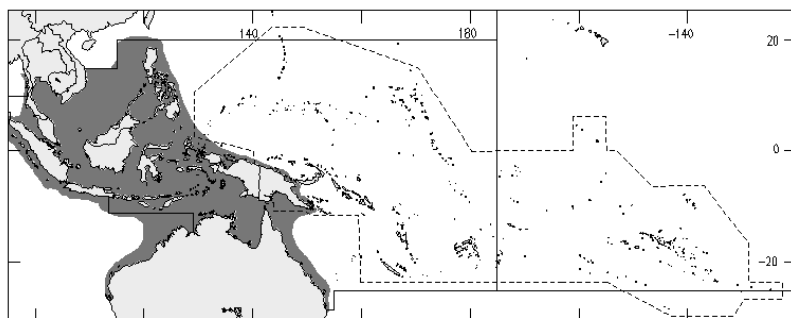


Serranidae

Size: Maximum total length about 25 cm.

Habitat, biology, and fisheries: A sedentary species that occurs on rocky reefs and rubble bottoms in shallow coastal waters. Feeds during the day on small fishes, shrimps, and crabs. Of no commercial importance, although occasionally enters the aquarium fish trade.

Distribution: West Pacific and eastern Indian oceans, from Nicobar Islands east to New Guinea and northern Australia, north to the Ryukyu Islands.



Reference

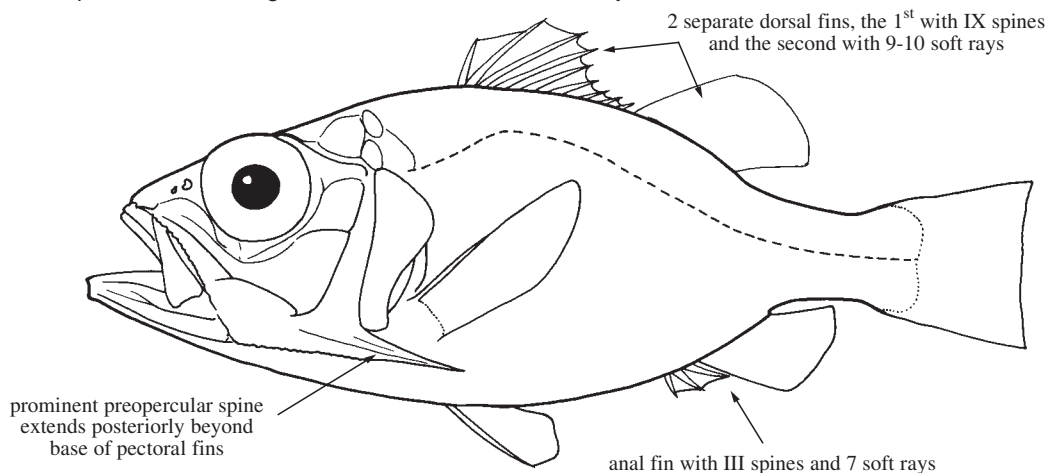
Weber, M. and L.F. de Beaufort. 1931. *The fishes of the Indo-Australian Archipelago*. Vol. 6. Leiden, E.J. Brill, 448 p.

OSTRACOBERYCIDAE

Ostracoberycids

by K.E. Carpenter

Diagnostic characters: Body ovoid and moderately compressed (size to around 19 cm standard length), its height 37 to 44% of standard length. Eye large, longer than snout length; **a very strong spine extending back from lower limb of preopercle beyond base of pectoral fins**; juveniles up to 10 cm standard length with a median supraoccipital spine. Gill rakers on first gill arch 4 to 9 on upper limb and angle, and 9 to 17 on lower limb. **Two separate (but close) dorsal fins, the first with IX spines and the second with 9 or 10 soft rays.** **Anal fin with III spines and 7 soft rays.** Caudal fin truncate. Lateral line with 48 to 58 scales. **Colour:** brownish on upper sides and whitish on lower sides; fins mostly hyaline, without prominent markings, the first dorsal fin more dusky.



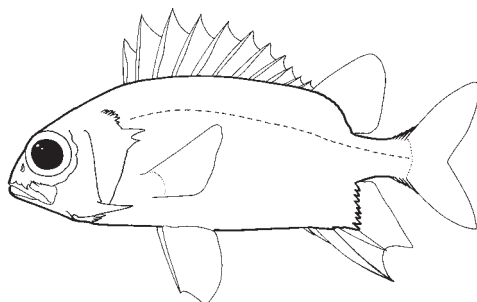
Habitat, biology, and fisheries: Demersal or near bottom on the continental slope at depths between 250 and 710 m. Very little is known about the biology of these fishes. Caught incidentally in deep-bottom trawls.

Similar families occurring in the area

The prominent spine extending posteriorly from the preopercle, general body shape, 2 distinct dorsal fins, and pelvic-fin formula distinguishes ostracoberycids from all other fishes in the area. Other fishes with a prominent preopercular spine either have a single dorsal fin and very different body shape (e.g. some Engraulidae and Pomacanthidae) or an armoured head and very different body shape (e.g. Dactylopteridae and Triglidae of the subfamily Peristediinae), or different pelvic- and anal-fin spine and ray counts.

Ostracoberycids superficially resemble fishes of the order Beryciformes but have the typical perciform pelvic-fin configuration of I spine and 5 soft rays not found in beryciforms. They also differ from all beryciforms with the combination of an elongate preopercular spine, and 2 separate dorsal fins or anal fin with III spines.

Ostracoberycids most closely resemble holocentrid fishes of the genus *Sargocentron* and some *Neoniphon* that also possess an elongate preopercular spine. However, the preopercular spine in these beryciform fishes does not extend beyond the base of the pectoral fins and, they possess IV anal-fin spines (III in ostracoberycids), a pelvic-fin ray configuration of I spine and 7 soft rays (I spine and 5 soft rays in ostracoberycids), and forked caudal fins (truncate in ostracoberycids). In addition, holocentrids with prominent preopercular spines are nearshore fishes while ostracoberycids are found on the continental slope.



Sargocentron (Holocentridae)

Key to the species of Ostracoberycidae occurring in the area

- 1a. Lower limb of first gill arch with 9 to 13 gill rakers; juveniles with median supraoccipital spine that curves forward *Ostracoberyx paxtoni*
(southern Queensland)
- 1b. Lower limb of first gill arch with 15 to 17 gill rakers; juveniles with median supraoccipital spine that curves slightly posteriorly *Ostracoberyx dorygenys*
(southern Japan, Philippines, western Indian Ocean)

List of species occurring in the area

- Ostracoberyx dorygenys* Fowler, 1934
- Ostracoberyx paxtoni* Quero and Ozouf-Costaz, 1991

Reference

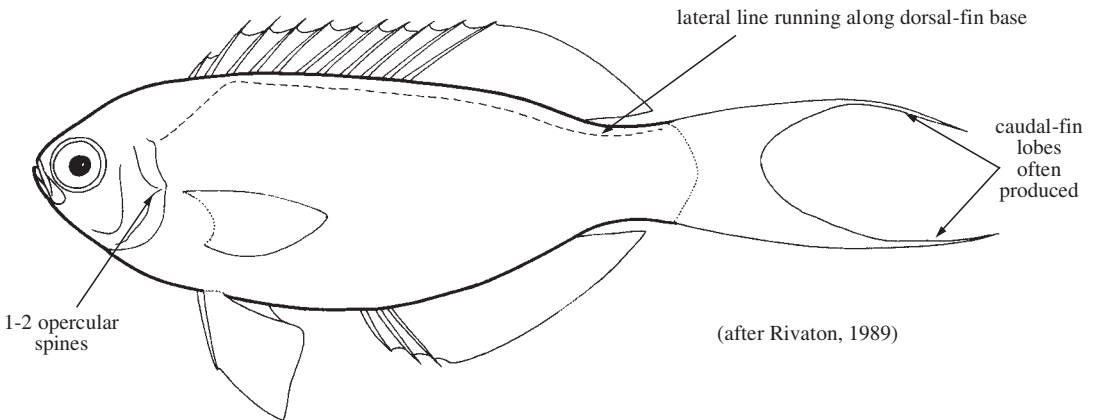
Quero, J.-C. and C. Ozouf-Costaz. 1991. *Ostracoberyx paxtoni*, nouvelle espèce des côtes est de l'Australie. Remarques sur les modifications morphologiques des *Ostracoberyx* au cours de leur croissance (Perciformes, Ostracoberycidae). *Cybium*, 15(1):43-54.

CALLANTHIIDAE

Groppos (also goldies and splendid perches)

by W.D. Anderson, Jr.

Diagnostic characters: Body oblong, somewhat compressed (size to about 25 cm). Eyes moderate to large, their diameter longer than snout length. **Nasal organ without lamellae.** **Opercular spines 1 or 2.** Mouth terminal and oblique; jaws almost equal. Jaws with caniniform, conical, and villiform teeth; vomer usually with teeth; palatine with or without teeth; pterygoids and tongue without teeth. **Branchiostegal rays 6.** First gill arch with 7 to 12 gill rakers on upper limb and 17 to 28 on lower limb (total 24 to 38). Dorsal fin not incised at junction of spinous and soft rays. Soft rays of dorsal and anal fins somewhat elongated, posteriormost rays sometimes noticeably produced. Caudal fin lunate to almost truncate, upper and lower lobes frequently produced in larger individuals. **Dorsal fin with XI spines and 9 to 11 soft rays.** Anal fin with III spines and 9 to 11 soft rays. Principal caudal-fin rays 15 (8 in upper lobe, 7 in lower lobe), or 17 (9 in upper lobe, 8 in lower lobe). Pectoral-fin rays 17 to 23 (usually 19 to 22). Pelvic fins with I spine and 5 soft rays. Membranes of dorsal and anal fins without scales. Axillary scales of pelvic fins and scaly interpelvic process typically well developed. Most of head, including maxillae and usually dentaries, covered with scales. Scales moderate to large, ctenoid, without ctenial bases in posterior field. **Series of modified scales with unique ornamentation along body midlaterally.** **Lateral line running along base of dorsal fin and terminating near base of ultimate soft dorsal-fin ray or continuing posteriorly on dorsolateral surface of caudal peduncle.** Tubed lateral-line scales 14 to 42. Vertebrae 10+14=24. **Colour:** magnificently coloured, with various shades of red, orange, yellow, blue, and purple being prominent.

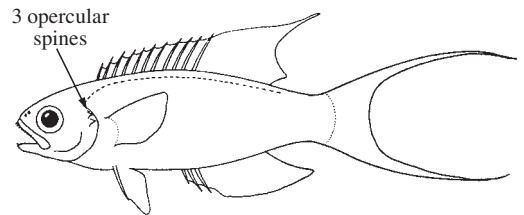


Habitat, biology, and fisheries: Usually found near the bottom over rocky areas and on reefs (frequently near a reef-sand boundary) in depths of 4 to 660 m. Carnivorous. Probably protogynous hermaphrodites.

Remarks: In the past considered as members of the family Serranidae, but species of Callanthiidae share derived characters that are not found in the Serranidae.

Similar families occurring in the area

Serranidae: 3 opercular spines (versus 1 or 2 in Callanthiidae); nasal organ with lamellae (versus nasal organ devoid of lamellae); 6 or 7 branchiostegal rays (versus 6); midlateral body scales without ornamentation (versus series of midlateral body scales with unique ornamentation); lateral line running at least a few scale rows below dorsal fin, usually uninterrupted and usually extending to at least base of caudal fin (versus lateral line running along base of dorsal fin and terminating near base of ultimate soft dorsal-fin ray or continuing posteriorly on dorsolateral surface of caudal peduncle).



Serranidae (subfamily Anthiinae)



Key to the species of Callanthiidae occurring in the area

Remarks on key characters: counts of lateral-line scales are of tubed scales along the body.

- 1a. Lateral-line scales 34 to 41 (usually 35 to 40); dorsal fin with XI spines and 10 or 11 soft rays (almost always 11); anal fin with III spines and 10 or 11 soft rays (almost always 11); first gill arch with 7 to 10 gill rakers on upper limb and 23 to 28 on lower limb (total 30 to 38, usually 32 to 36); principal caudal-fin rays 17 (9 in upper lobe, 8 in lower lobe); 2 opercular spines *Callanthias australis*
- 1b. Lateral-line scales 14 to 17; dorsal fin with XI spines and 9 soft rays; anal fin with III spines and 9 soft rays; first gill arch with 8 or 9 gill rakers on upper limb and 18 to 20 on lower limb (total 26 to 29); principal caudal-fin rays 15 (8 in upper lobe, 7 in lower lobe); 1 opercular spine *Grammatonotus crosnieri*

List of species occurring in the area

The symbol  is given when species accounts are included.

-  *Callanthias australis* Ogilby, 1899
-  *Grammatonotus crosnieri* (Fourmanoir, 1981)

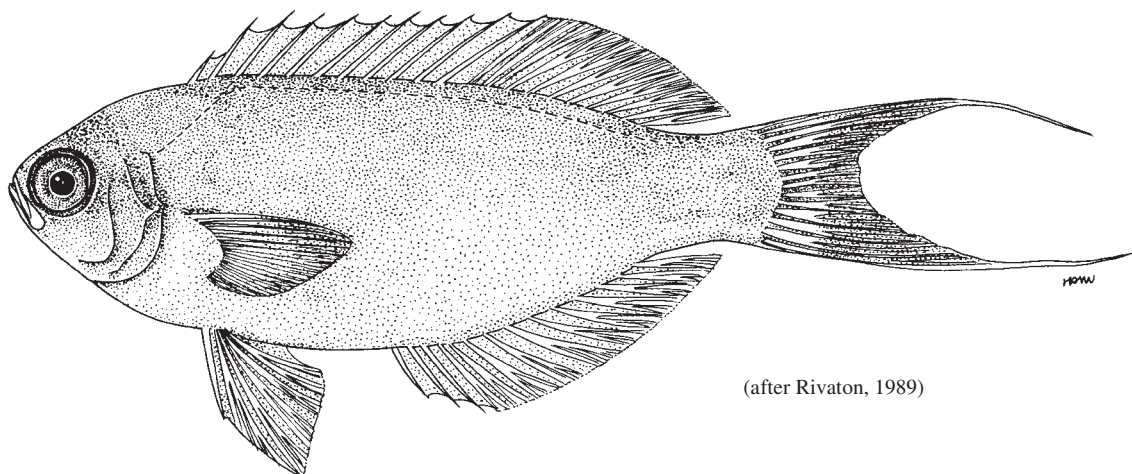
Reference

Anderson, W.D., Jr. and G.D. Johnson. 1984. A new species of *Callanthias* (Pisces: Perciformes: Percoidae: Callanthiidae) from the southeastern Pacific Ocean. *Proc. Biol. Soc. Wash.*, 97(4):942-950.

Callanthias australis Ogilby, 1899

Frequent synonyms / misidentifications: *Callanthias platei australis* Ogilby, 1899 / *Callanthias allporti* Günther, 1876.

FAO names: En - Glorious groppo.



(after Rivaton, 1989)

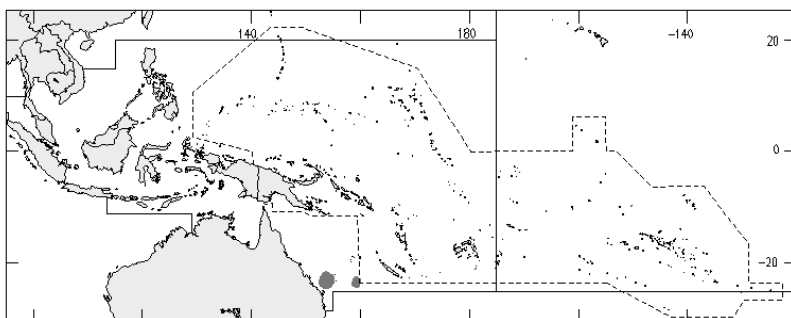
Diagnostic characters: Body slender to moderately deep. Head moderate. Eyes moderate. **Opercular spines 2. First gill arch with 7 to 10 gill rakers on upper limb and 23 to 28 on lower limb (total 30 to 38, usually 32 to 36). Dorsal fin with XI spines and 10 or 11 soft rays (almost always 11). Anal fin with III spines and 10 or 11 soft rays (almost always 11). Principal caudal-fin rays 17 (9 in upper lobe, 8 in lower lobe); branched caudal-fin rays 15 (8 in upper lobe, 7 in lower lobe); both lobes of caudal fin well produced in some specimens (these possibly males). Pectoral-fin rays 18 to 23 (usually 21 or 22). Tubed lateral-line scales 34 to 41 (usually 35 to 40). Colour:** body and head rose, mostly orange with admixture of yellow, or mostly yellow; dorsal, anal, and pelvic fins yellow or mostly yellow; caudal fin yellow proximally and rosy or purplish distally or almost entirely purplish red; dorsalmost and ventralmost caudal-fin rays, when produced, yellow distally or for their entire lengths; pectoral fins yellow, or with considerable yellow basally and most of fins rosy or purplish red.

Size: Maximum standard length about 25 cm; commonly to 18 cm.

Habitat, biology, and fisheries: Occurs in depths of 15 to 365 m. A schooling species that seeks the cover of caves and crevices at night and when disturbed. Presumably feeds on plankton. No information available on fisheries.

Distribution: Occurs in waters off New Zealand and in temperate waters off Australia; also known from a collection made northeast of Rockhampton (Queensland) and from another collection in the Chesterfield Island region of the Coral Sea; may reach Indonesian waters.

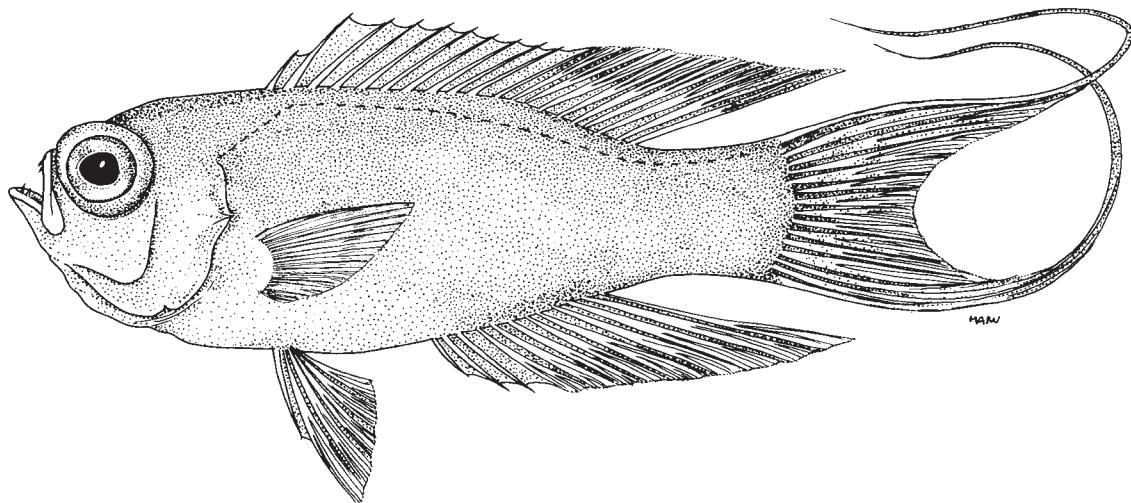
Remarks: Closely related to *Callanthias japonicus* from Japanese waters and *C. platei* from the eastern South Pacific; all 3 taxa may be subspecies of a single wide-ranging species.



Grammatonotus crosnieri (Fourmanoir, 1981)

Frequent synonyms / misidentifications: *Callanthias crosnieri* Fourmanoir, 1981 / None.

FAO names: En - Uncle Phoo's groppo.



Diagnostic characters: Body depth moderate to fairly deep. Head moderate. Eyes fairly large. **One opercular spine. First gill arch with 8 or 9 gill rakers on upper limb and 18 to 20 on lower limb (total 26 to 29).** Both lobes of caudal fin extremely well produced in some specimens (these possibly males). **Dorsal fin with XI spines and 9 soft rays. Anal fin with III spines and 9 soft rays. Principal caudal-fin rays 15 (8 in upper lobe, 7 in lower lobe); branched caudal-fin rays 13 (7 in upper lobe, 6 in lower lobe).** Pectoral-fin rays 18 to 20. **Tubed lateral-line scales 14 to 17.** **Colour:** upper body dull orange or yellow, lower body pale to rosy; head orange or yellow above, pale below; fins mostly dull orange to yellow.

Size: Maximum standard length 12 cm.

Habitat, biology, and fisheries: Known from depths of 170 to 210 m. No other information available.

Distribution: Known only from the Philippines, off the southwestern coast of Luzon.

