Order SCORPAENIFORMES
DACTYLOPTERIDAE
Flying gurnards

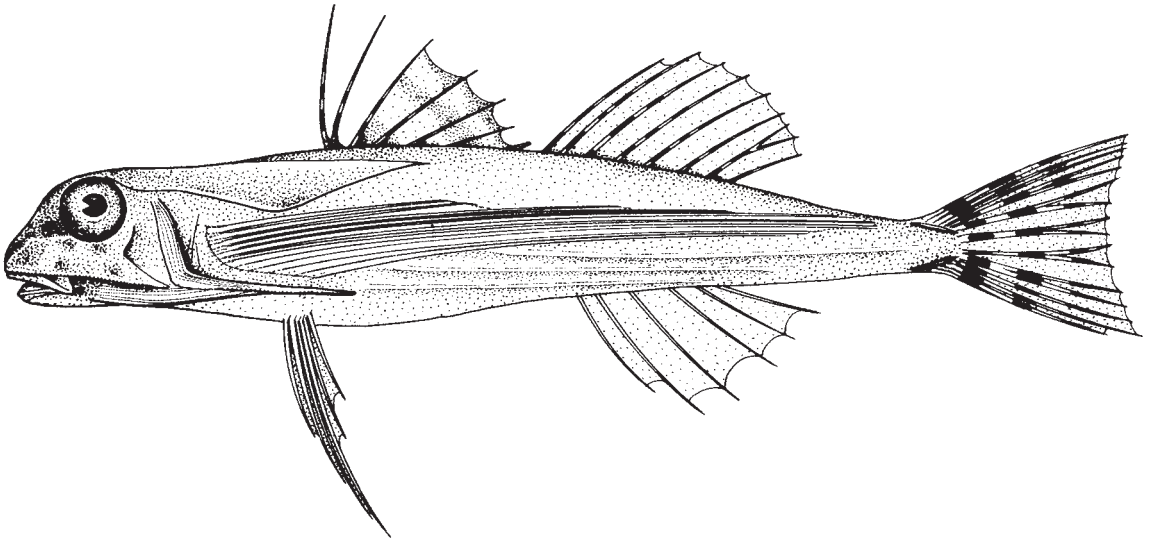
by W.F. Smith-Vaniz, US Geological Survey, Florida, USA

A single species occurring in the area.

Dactylopterus volitans (Linnaeus, 1758)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Flying gurnard; **Fr** - Poule de mer; **Sp** - Alón.



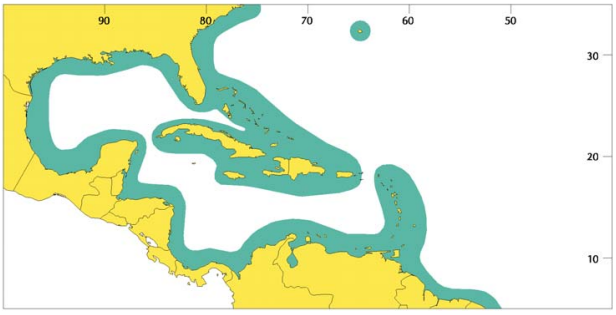
Diagnostic characters: A moderately elongate fish. **Head blunt, top and sides encased in a bony shield; a long, keeled spine extending posteriorly from the nape to below midbase of first dorsal fin; angle of preopercle also bearing a long spine**, with a serrate keel; jaws with a band of small nodular teeth. Spinous and soft dorsal fins separated by a deep notch; **anterior 2 dorsal-fin spines adjacent to each other, interconnected by a basal membrane, and not separated from remainder of spinous dorsal fin**; anal fin with only 6 soft rays; caudal fin emarginate, with 2 sharp keels on its base; bases of pectoral fins horizontal, the fins divided into 2 sections, an anterior short part of 6 soft rays and a posterior long part of 26 to 30 soft rays which reach the caudal-fin base in adults. Scales scute-like with sharp keels. **Colour:** variable with surroundings; often yellowish brown, with bright blue spots on pectoral fins.

Similar species occurring in the area

The bony head shield in combination with the long keeled spine on nape and the long serrated preopercular spine will readily distinguish this species from all others occurring in the area. The Triglidae, which are superficially similar in having large pectoral fins and the head encased in bony armour, differ additionally in having the spinous dorsal fin entire and all spines united by a fin membrane.

Size: Maximum: to at least 45 cm; common to 20 cm.

Habitat, biology, and fisheries: A benthic fish inhabiting sandy or muddy bottoms in coastal waters at depths to about 80 m; capable of "walking" on the bottom by alternately moving the pelvic fins while using the short pectoral-fin rays to scratch in the sand, probably in searching of food. Widely reported in the literature as capable of leaping free of the surface and gliding for short distances, hence the common name (but these reports are erroneous). When the fish is alarmed, the pectoral fins are spread laterally. Feeds primarily on benthic crustaceans, especially crabs, clams, and small fishes. Not fished commercially. Separate statistics are not reported for this species. Adults are occasionally taken with seines (mandingas, Venezuela); young of about 5 cm are commonly taken at night (attracted by light). Barely used for food.



Distribution: Throughout the area, including Bermuda; northward extending to Massachusetts and southward to Argentina.

References

Eschmeyer, W.N. 1997. A new species of Dactylopteridae (Pisces) from the Philippines and Australia, with a brief synopsis of the family. *Bull. Mar. Sci.*, 60(3):727-738.

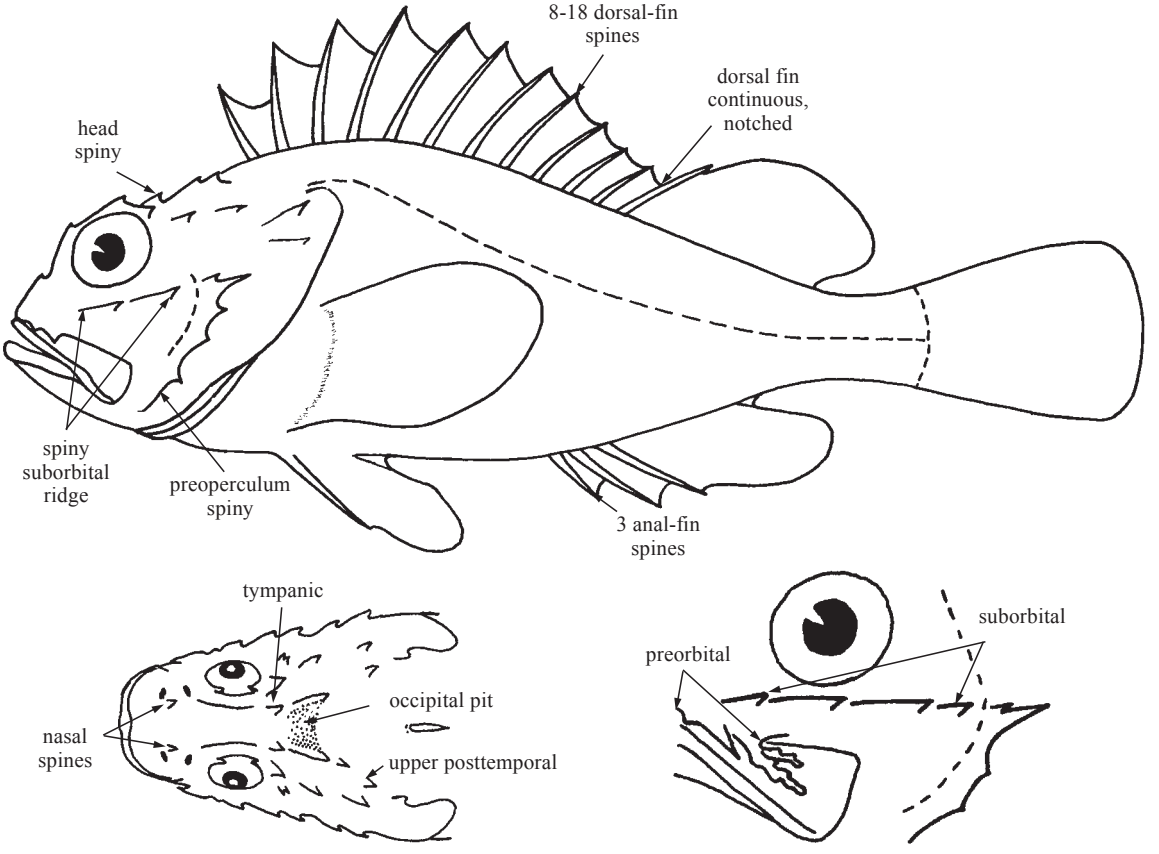
Eschmeyer, W.N. and L.J. Dempster. 1990. Dactylopteridae. Checklist of the fishes of the eastern tropical Atlantic (Clofeta), Vol. 2, edited by J.C. Hureau, C. Karrer, A. Post, and L. Saldanha. UNESCO Paris, pp 690-691.

SCORPAENIDAE

Scorpionfishes (also rosefishes, rockfishes, stingfishes)

by S.G. Poss, Ocean Springs, Mississippi, USA and W.N. Eschmeyer, California Academy of Sciences, USA

Diagnostic characters: Body usually weakly, rather than strongly, compressed; body depth 21 to 50% standard length. **Head moderate to large, 37 to 50% standard length**, often notably depressed and with cirri, particularly above eye. Eye small to relatively large, 4 to 14% of standard length. Snout short to long, often prominent, 6 to 20% of standard length. Mouth often large and upturned, upper jaw 9 to 23% standard length. Numerous small conical teeth present on upper and lower jaws, with those on vomer and palatine present or absent. Branchiostegal rays typically 7 (rarely 6). Gill rakers on first arch usually small or moderate, 1 to 9 in upper arch, 4 to 20 in lower arch. **All species with suborbital stay (or ridge), an extension of the third infraorbital bone (second suborbital) extending backward across cheek and usually firmly bound to preopercle. Most species with numerous head spines**, with those on lacrimal bone (first infraorbital bone), orbital margin and behind occiput most prominent. **Preopercular margin with 3 or more spines, usually 4 or 5; other spines scattered on head. Dorsal fin with strong venomous spinous part bearing 8 to 18 spines** connected to soft-rayed part posteriorly, with 7 1/2 to 13 1/2 soft rays, the last typically split to its base and counted as 1 1/2. **Anal-fin spines normally 3 in the area**. Caudal fin typically rounded or truncate, never forked, 15 to 40% standard length, usually about 27 to 35% standard lenth. Pectoral fins usually large, with 11 to 24 rays; with rays of larger individuals of most species branched. Pelvic fins thoracic in position, with 1 strong spine and 5 (or less often 4) branched rays. Scales in most species relatively small and either ctenoid (rough to touch) or cycloid (secondarily without ctenii and smooth to touch), entirely absent in others, or present only as deeply-embedded scale rudiments. Lateral-line present, with 12 to 54 pored or tubed scales (lateral-line scales trough-like in the subfamily Setrachinae). When present, scales above lateral line 4 to 8; scales below lateral line 10 to 19. **All species possess striated swimbladder musculature that is extrinsic in nearly all species**, with musculature present even in those lacking swimbladders. Pyloric caecae 1 to 16. Vertebrae 24 to 29. **Colour:** most species strongly camouflaged, red, reddish brown, or brown in colour, and usually have barred or mottled colour patterns that are typically darker dorsally than ventrally. Those caught below about 50 m are mostly red and white, often with spots of darker red, brown, or black.



Habitat, biology, and fisheries: Scorpionfishes and their near relatives are typically found on or near the bottom, which they often strongly resemble. Most species in the area are found on relatively nearshore hard bottoms and reefs, or associated with coral rubble, from the surface to a depth of 150 m. Some species in the area range into deeper waters (to 800 m) and onto softer bottoms, although outside the area, captures to 1 113 m have been reported. A few species, such as those of the genera *Setarches* and *Ectreposebastes* are pelagic or semipelagic, occurring offshore in depths of 200 to 800 m. Many species are relatively small, typically under 200 mm standard length and their biology poorly studied. Nonetheless, most are known to lead solitary lives, and evidently aggregate only for reproduction. The young of most species are planktonic, with many settling out of the plankton relatively quickly. Most feed primarily on arthropods and many feed on small fishes as they attain larger sizes. Most species are extremely well camouflaged and excellent ambush predators. Vividly (aposematically) coloured lionfishes or turkeyfishes found in the Indo-Pacific (but not in this area) are notable exceptions. Most scorpionfishes are ovoviviparous, producing between a few hundred and a few thousand eggs, although some are viviparous. Although all are edible, most species are small and relatively dangerous to handle, or occur on hard bottoms, and thus do not form the basis of large fisheries, despite being at times common in bycatch and their flesh generally of excellent quality for food. Because most species are too small, not abundant enough, or found on rocky bottoms, they are presently of little commercial importance in the Western Central Atlantic. However, larger species are often encountered in local fresh-fish markets and highly valued as food. A few shallow-water species are caught by sport fishermen on hook-and-line, some taken by the handline fishery, and others caught incidental to trawl fisheries. *Helicolenus dactylopterus* is commonly taken by trawlers working moderate depths (400 to 600 m) for shrimp. Some scorpionfishes are of considerable commercial importance outside Area 31, especially in cold water regions.

Remarks: Nearly all scorpionfishes possess well-developed venom glands associated with their fin-spines and should be handled with extreme caution, lest painful and potentially fatal wounds inflicted by their sharp fin and head spines. Wounds can result in intense pain and swelling (death has not resulted from stings of Atlantic species, as is the case for stings from certain Indo-Pacific species). Immerse wounded area in hot water to partially denature the protein toxin and to help relieve pain. See a physician for treatment of shock and for prevention of infection, if needed.

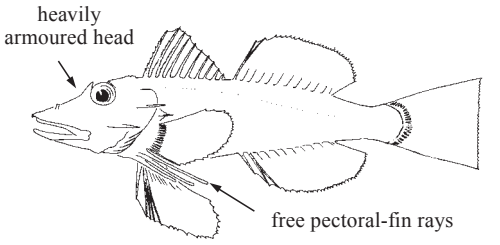
Similar families occurring in the area

Fishes of several other bony-fish families are superficially similar to scorpaenids in general appearance. Like their near relatives, the searobins (Triglidae), scorpaenids possess a bony suborbital stay below and behind the eye that attaches to the preopercle. In addition, most scorpionfishes bear numerous head spines not seen in species otherwise of similar colour or body shape.

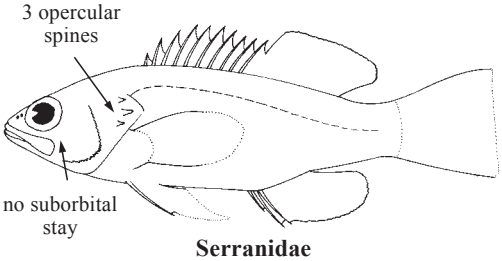
Triglidae (searobin family): possess a very broad suborbital stay; all species have heavily armoured heads and free, highly mobile, lowermost pectoral-fin rays (only few scorpaenids possess heavily armored heads or free pectoral-fin rays (none in the area), and none have these characteristics in combination as do searobins, except for the Apistinae (Indo-Pacific), which can be distinguished from triglids by their movable lacrimal bone).

Serranidae: similar to some scorpaenids in head and body shape, but often having concave, lunate, or forked caudal fins; no suborbital stay under eye that attaches to preopercle; often 3 opercular spines (typically only 2 in scorpaenoids); many species possess large canine teeth common in anterior end of upper and lower jaws (in contrast to the comparatively uniform small teeth of scorpaenoids).

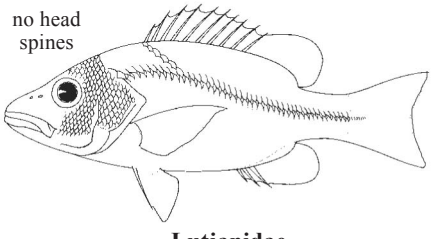
Lutjanidae and other perch-like families: Some red-coloured scorpionfishes resemble red snappers, but snappers and other bass-like families lack the characteristic head spines of scorpaenids.



Triglidae



Serranidae



Lutjanidae

Key to the species of Scorpaenidae occurring in the area

1a. Dorsal-fin spines almost always 13; palatine teeth absent . . . . . ***(Scorpaenodes)*** → ***2***

1b. Dorsal-fin spines almost always 12; palatine teeth present . . . . . → ***3***

2a. Pectoral-fin rays 18 to 20, usually 19; 1 or more small spines below main row of suborbital spines (Fig. 1) . . . . . ***Scorpaenodes carribaeus***

2b. Pectoral-fin rays 16 to 18, usually 17; suborbital ridge with a single row of spines, without spines below main row . . . . . ***Scorpaenodes tredecimspinosus***

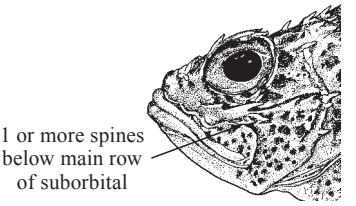


Fig. 1 ***Scorpaenodes carribaeus*** **head**

3a. Second preopercular spine longest (Fig. 2); soft dorsal fin rays 11 1/2 or more . . . . . ***Helicolenus dactylopterus***

3b. First preopercular spine longest, not counting accessory spine at base of first spine (Fig.3); soft dorsal fin rays 10 1/2 or fewer (usually 8 1/2 or 9 1/2) . . . . . → ***4***

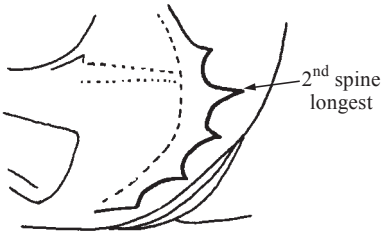


Fig. 2 ***Helicolenus***

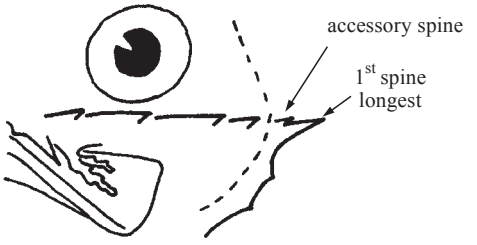


Fig. 3

4a. Lateral line incomplete, only anterior 4 or 5 scales present; black spots on caudal peduncle (Fig. 4) . . . . . ***Phenacoscorpius nebris***

4b. Lateral line complete, extending to caudal fin; pigment on caudal peduncle not strongly spotted . . . . . → ***5***

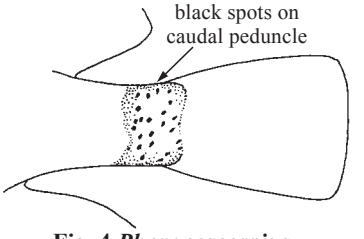


Fig. 4 ***Phenacoscorpius***

5a. Scales on body cycloid (smooth to touch) . . . . . → ***6***

5b. Scales on body ctenoid (rough to touch) . . . . . → ***8***

6a. Bones of head strong; a pit in occiput on top of head in most species (Fig. 5); scales relatively large, about 50 vertical rows above lateral lines on sides . . . . . ***(Scorpaena)*** → ***16***

6b. Bones of head weak, translucent, cavernous; no pit in occiput on top of head; scales tiny, not in definite rows, roughly equivalent to 100 vertical rows above lateral line . . . . . → ***7***

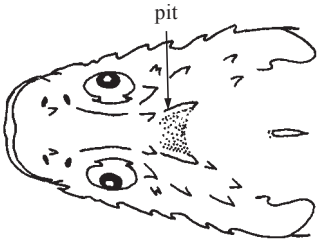


Fig. 5 ***Scorpaena***

7a. Pectoral-fin rays 18 to 20; soft anal-fin rays 6 1/2; orbit diameter contained about 2 times in interorbital width; anterior preorbital (lacrimal) spine much shorter than posterior 2 . . . . . ***Ectreposebastes imus***

7b. Pectoral-fin rays 21 to 25, soft anal-fin rays usually 5 1/2; orbit diameter about equal to interorbital width (7 to 9% standard length); anterior preorbital (lacrimal) spine as long as posterior 2 . . . . . ***Setarches guentheri***

8a. Pectoral fin square-cut and slightly bilobed in large specimens, longest rays near upper edge of fin (Fig. 6); pectoral-fin rays 21 to 24, rarely 20 . . . . . ***Trachyscorpia cristulata***

8b. Pectoral fin more or less wedge-shaped, longest rays at about middle of fin (Fig. 7); pectoral-fin rays usually 19 or fewer, rarely 20 . . . . . ***→ 9***

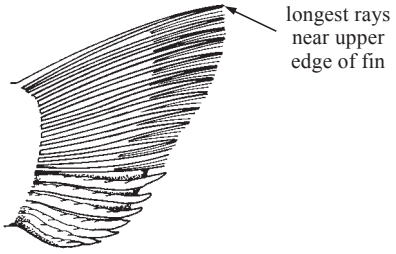


Fig. 6 pectoral fin

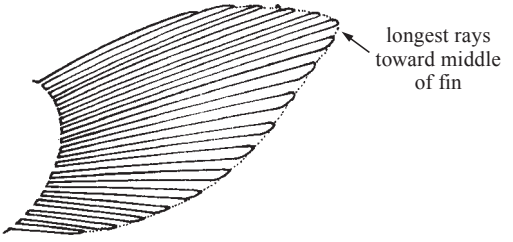


Fig. 7 pectoral fin

9a. All pectoral-fin rays unbranched . . . . . ***(Pontinus) → 12***

9b. Some upper pectoral-fin rays branched at tip, except in small juveniles . . . . . ***→ 10***

10a. Suborbital ridge with 7 or more spinous points; 9 1/2 soft dorsal-fin rays; third dorsal-fin spine not especially elongated . . . . . ***Idiastion kyphos***

10b. Suborbital ridge with 3 or 4 spinous points, not counting any on preoperculum; 10 1/2 soft dorsal-fin rays or if 9 1/2 then third dorsal-fin spine elongated . . . . . ***(Neomerinthe) → 11***

11a. Dorsal-fin soft rays usually 10 1/2, rarely 9 1/2; scales above lateral line in more than 55 vertical rows from supracleithral spine to base of hypural; snout length 1.1 to 1.7 times orbit diameter . . . . . ***Neomerinthe hemingwayi***

11b. Dorsal-fin soft rays usually 9 1/2, rarely 8 1/2 or 10 1/2; scales above lateral line in fewer than 50 vertical rows; snout length 0.7 to 1.3 times orbit diameter . . . . . ***Neomerinthe beanorum***

12a. Pectoral-fin rays 19 to 20 . . . . . ***Pontinus helena***

12b. Pectoral-fin rays 15 to 18 . . . . . ***→ 13***

13a. Snout relatively long, 1.3 to 2 times diameter of orbit . . . . . ***Pontinus castor***

13b. Snout relatively short, roughly equal to diameter of orbit . . . . . ***→ 14***

14a. Pectoral-fin rays 16, rarely 15 or 17; right and left hypohyals each with long ventrally-directed process at junction of anteriormost right and left branchiostegal rays (not readily visible when mouth is closed)(Fig. 8) . . . . . ***Pontinus nematophthalmus***

14b. Pectoral-fin rays 17 or 18, rarely 16; hypohyals without long descending process . . . . . ***→ 15***

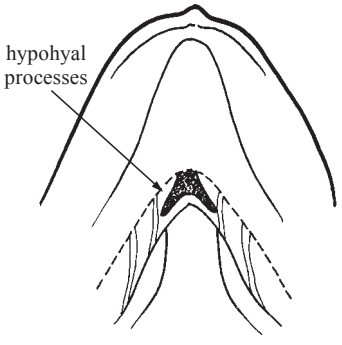


Fig. 8 ventral view of head

15a. Third dorsal-fin spine notably elongate in specimens larger than about 120 to 130 mm standard length; first (anterior) preorbital spine on ventral margin of lacrimal bone points forward as well as down . . . . . ***Pontinus longispinis***

15b. Third dorsal-fin spine not notably elongate; first (anterior) preorbital spine on ventral margin of lacrimal bone points back as well as down . ***Pontinus rathbuni***

16a. Three or 4 preorbital spines on ventral margin of lacrimal bone in all but juvenile specimens (less than about 50 to 60 mm standard length) (Fig. 9a, b) . . . . . → ***17***

16a. Two preorbital spines on ventral margin of lacrimal bone (Fig. 9c) . . . . . → ***18***

Fig. 9 preorbital spines

17a. Inside surface of pectoral fin and adjacent body with large white spots on a black background in specimens greater than 30 mm standard length (Fig. 10) . ***Scorpaena plumieri***

17b. Inside surface of pectoral fin pallid or sometimes with large dark blotches on fin . . . . . ***Scorpaena dispar***

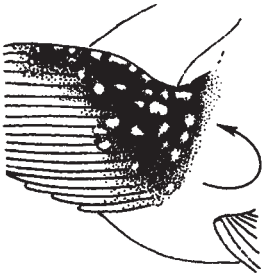


Fig. 10 pectoral fin (*Scorpaena*)

18a. No occipital pit at top of head; supplemental preopercular spine absent (absent in *S. melasma*, which has well-developed pit) . . . . . → ***19***

18b. Occipital pit on top of head (see figure in family account) in specimens greater than about 50 to 60 mm (shallow in *S. albifimbria, S. brachyptera, S. elachys*); supplemental spine present (absent *S. melasma*, small in *S. petricola* and *S. elachys*) . . . . . → ***20***

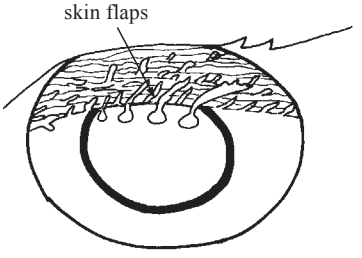


Fig. 11 lateral view of eye

19a. Mushroom-shaped skin flaps on dorsal part of eye (Fig. 11); predorsal length 40 to 47% of standard length; jaw length 24 to 26% standard length . . . . . ***Scorpaena inermis***

19b. No mushroom-shaped skin flaps on eye; predorsal length 34 to 40% of standard length; jaw length 19 to 23% standard length . . . . . ***Scorpaena calcarata***

20a. Supplemental preopercular spine absent . . . ***Scorpaena melasma***

20b. Supplemental preopercular spine present . . . . . → ***21***

21a. Distinct large spot on dorsal fin between spines 4 and 7 . . . . . → ***22***

21b. No large spot on dorsal fin between spines 4 and 7 . . . . . → ***23***

22a. Suborbital ridge with only a single spine at end of ridge (not counting preopercular spines); pectoral-fin rays 16 or 17; third anal-fin spine not longer than second anal-fin spine . ***Scorpaena bergii***

22b. Suborbital ridge prominent, but without spinous points; pectoral-fin rays 18 or 19 (rarely 17); third anal-fin spine longer than second anal-fin spine . . . . . ***Scorpaena isthmensis***

23a. Inside surface of pectoral fin and on body between pectoral and anal fins with distinct small brown spots (0.5 to 2 mm in diameter) on a pallid background (Fig. 12); 50 to 63 vertical scale rows above lateral line . . . . . ***Scorpaena brasilensis***

23b. Inside surface of pectoral fin without distinct brown spots; vertical scale rows usually less than 50 (except *Scorpaena petricola*) . . . . . → ***24***

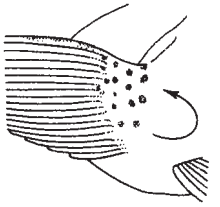


Fig. 12 pectoral fin

24a. Eye large, diameter of orbit 1.5 to 2.2 times snout length; pectoral fin in adults reaches past posterior end of anal-fin base . . . . . ***Scorpaena agassizii***

24b. Eye moderate, diameter of orbit 0.9 to 1.3 times snout length; pectoral fin in adults not reaching past third anal-fin spine . . . . . → ***25***

25a. Inside surface of pectoral fin with white specks less than 0.5 mm in diameter over a dusky background (Fig. 13); tympanic spine at front of occipital pit (see family figure) reduced or absent; supraoccular cirrus usually large and fleshy, with accessory flaps . . . . . ***Scorpaena grandicornis***

25b. Inside surface of pectoral fin usually pale-coloured, without white spots; tympanic spine well developed . . . . . → ***26***

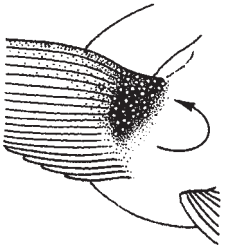


Fig. 13 pectoral fin

26a. Pectoral-fin rays 16 to 18; 1 or rarely 2 spines on suborbital ridge . . . . . → ***27***

26b. Pectoral-fin rays 19 to 20; usually 3 or infrequently 2 spines on suborbital ridge . . . . . → ***28***

27a. Pectoral-fin rays usually 18, sometimes 17; second anal-fin spine longer than third anal-fin spine; body depth 33 to 38% standard length . . . . . ***Scorpaena petricola***

27b. Pectoral-fin rays usually 16 or 17; second anal-fin spine less than or equal to third; body depth 38 to 41% standard length . . . . . ***Scorpaena elachys***

28a. Nasal spine present (see family figure); pectoral fin of moderate length, reaching past first anal-fin spine (greater than 29% standard length); 9 1/2 soft rays in dorsal fin . ***Scorpaena albifimbria***

28b. Nasal spine absent in adults (reduced in juveniles); pectoral fin short, not reaching to first anal-fin spine (less than 27% standard length); 8 1/2 soft rays in dorsal fin . . ***Scorpaena brachyptera***

List of species occurring in the area

The symbol is given when species accounts are included.

Ectreposebastes imus Garman, 1899.

Helicolenus dactylopterus (Delaroche, 1809).

Idiastion kyphos Eschmeyer, 1965.

Neomerinthe beanorum (Evermann and Marsh, 1900).

Neomerinthe hemingwayi Fowler, 1935.

Phenacoscorpius nebris Eschmeyer, 1965.

Pontinus castor Poey, 1860.
Pontinus corallinus Miranda-Ribeiro, 1903.S Brazil; may be a synonym of *Pontinus longispinis*; may be an extreme variant *P. longispinis*.
Pontinus helena Eschmeyer, 1965.
Pontinus longispinis Goode and Bean, 1896.
Pontinus nematophthalmus (Günther, 1860).
Pontinus rathbuni Goode and Bean, 1896.

Pterois volitans (Linneaeus, 1758). To 30 cm. Introduced from W Pacific; established in North Carolina, Georgia, and Florida.

Scorpaena agassizii Goode and Bean, 1896.
Scorpaena albifimbria Evermann and Marsh, 1900.
Scorpaena bergii Evermann and Marsh, 1900.
Scorpaena brachyptera Eschmeyer, 1965.
Scorpaena brasiliensis Cuvier, 1829.
Scorpaena calcarata Goode and Bean, 1882.
Scorpaena dispar Longley and Hildebrand, 1940.
Scorpaena elachys Eschmeyer, 1965.
Scorpaena grandicornis Cuvier, 1829.
Scorpaena inermis Cuvier, 1829.
Scorpaena isthmensis Meek and Hildebrand, 1928.
Scorpaena melasma Eschmeyer, 1965. From 1 to 2 S off the coast of Brazil, may be found in area.
Scorpaena petricola Eschmeyer, 1965. From 1 to 2 S off the coast of Brazil, may be found in area.
Scorpaena plumieri Bloch, 1789.

Scorpaenodes caribbaeus Meek and Hildebrand, 1928.
Scorpaenodes tredecimspinosus (Metzelaar, 1919).

Setarches guentheri Johnson, 1862.

Trachyscorpia cristulata (Goode and Bean, 1896).

References

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Ginsburg, I. 1953. Western Atlantic Scorpionfishes. *Smith. Misc. Coll.*, 121(8):103 p.

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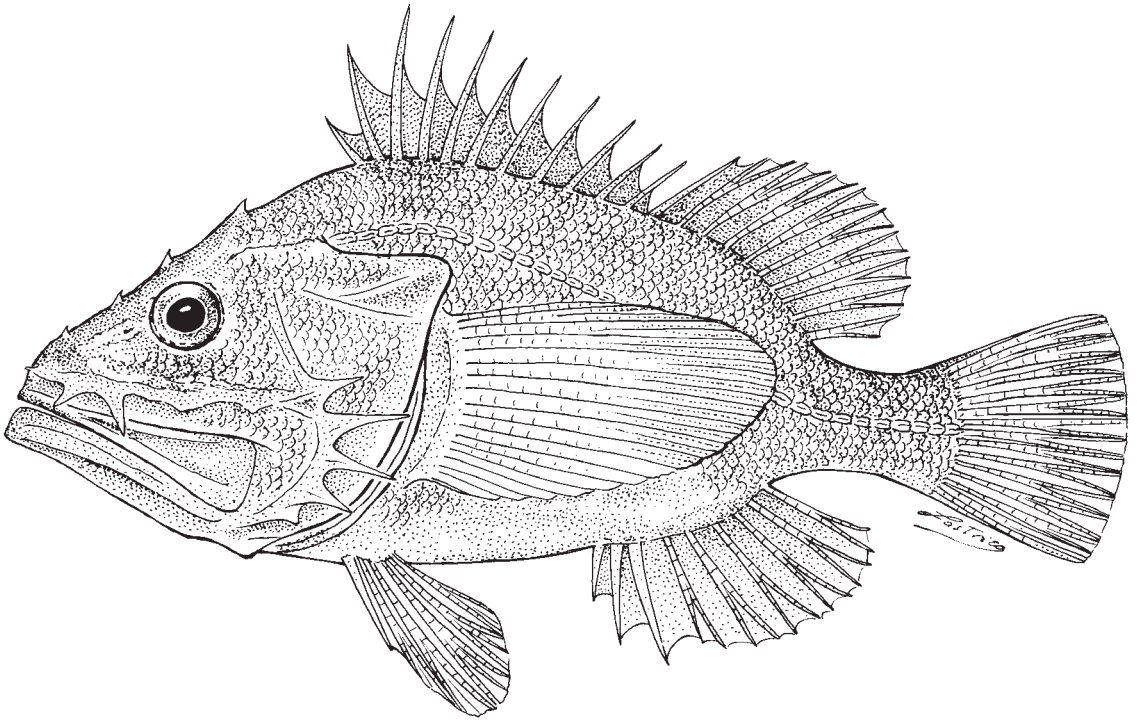
Ectreposebastes imus Garman, 1899 ERM

Frequent synonyms / misidentifications: None / None.

FAO names: En - Midwater scorpionfish; **Fr** - Rascasse profunde; **Sp** - Rascacio profundo.

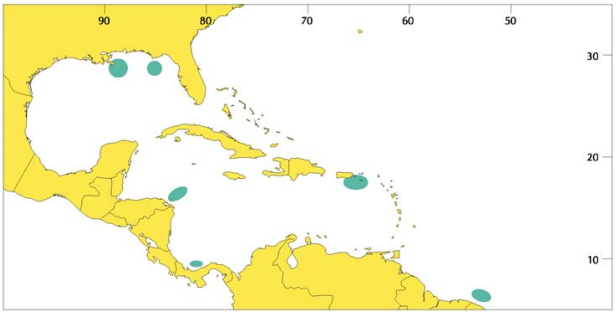


Diagnostic characters: Body relatively deep, 27 to 52% of standard length. Anteriormost preorbital spine minute relative to 2 more posterior spines. Dorsal surface of head scaled; anal fin with 3 spines and 5 to 6 1/2 soft rays, usually 6 1/2 (last split to base and counted as 1 1/2); pectoral-fin rays 18 to 20 . Pyloric caecae typically 5, cream coloured. Lateral-line scales trough-like. Swimbladder rudimentary or absent. **Colour: black, dark brown or maroon in adults**; buccal cavity black with orange and red patches; pharyngeal teeth red or orange.

Size: To 171 mm standard length.

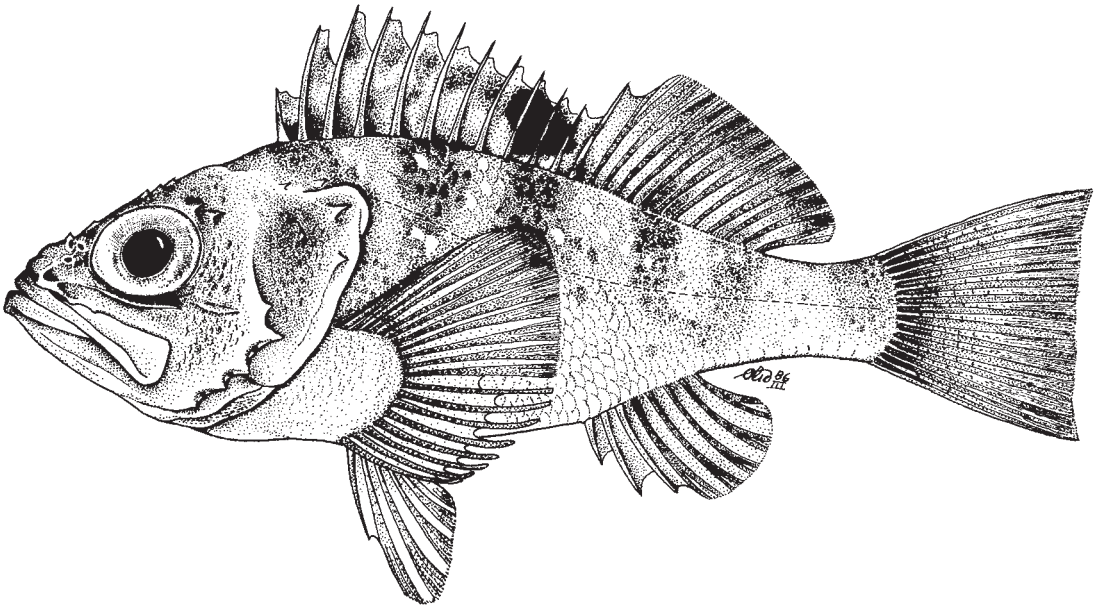
Habitat, biology, and fisheries: No fishery exists for this deep-water species. Has been taken by both trawls and midwater nets. Existing records suggest that the species is at least partially pelagic, particularly when young, and feeds on midwater shrimps of the genus *Sergestes*, as well as unidentified amphipods.

Distribution: One of the most widely distributed scorpionfishes, *E. imus* is found in warm waters worldwide along the upper continental shelf and off oceanic islands at depths of 150 to 800 m. It has been reported in the area from the north central Gulf of Mexico, off Honduras, in the Gulf of Darién in northwestern Colombia, off Suriname, and south of Puerto Rico. Outside the area it has been taken by midwater nets at depths of 150 to 2 000 m from Australia, New Caledonia, New Zealand, Indonesia, Taiwan Province of China, Japan, South Africa, South America, Hawaii, and the Galapagos. Some records from the southwest Pacific may represent another species, *Ectreposebastes niger*.



Helicolenus dactylopterus (Delaroche, 1809) BRF

Frequent synonyms / misidentifications: *Helicolenus maderensis* Goode and Bean, 1896.
FAO names: En - Blackbelly rosefish; **Fr** - Sébaste chèvre; **Sp** - Rascacio rubio.

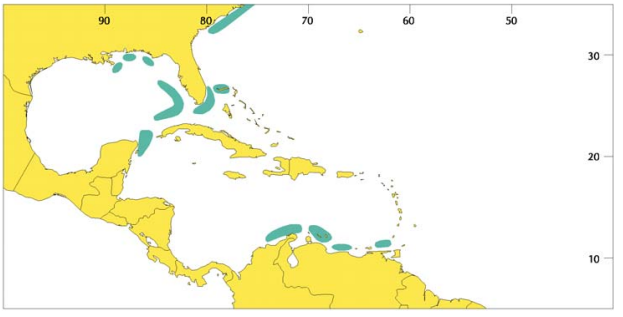


Diagnostic characters: A large-eyed, deep-living scorpionfish, with **characteristic spination on preopercular margin, the second spine from above the longest**. Low spines on head and no pit on top of head behind eyes. Usually 11 1/2 or 12 1/2 soft rays (last split to base and counted as 1 1/2) in dorsal fin; pectoral fins square-cut, tips of lower rays free from connecting membrane. Scales ctenoid (rough to touch). **Colour:** red above, pinkish white below; usually with darker red bars on side: 3 below anterior, middle, and posterior dorsal-fin spines, 1 v-shaped below soft dorsal fin, and 1 at base of caudal fin; bands less well marked in larger specimens; smaller specimens with black pigment near end of spinous dorsal fin.

Size: To about 400 mm standard length; commonly reaches 250 mm standard length.

Habitat, biology, and fisheries: Commonly taken on soft bottoms in shrimp trawls and sometimes by long lines off Florida, in the Gulf of Mexico, and over other shelf areas. It is only occasionally marketed fresh in small quantities.Found primarily between 200 and 650 m, but has been reported at depths as shallow as 84 m and as deep as 1000 m outside the fishing area. It feeds mainly on crustaceans and fish and is reported to be mildly venomous.

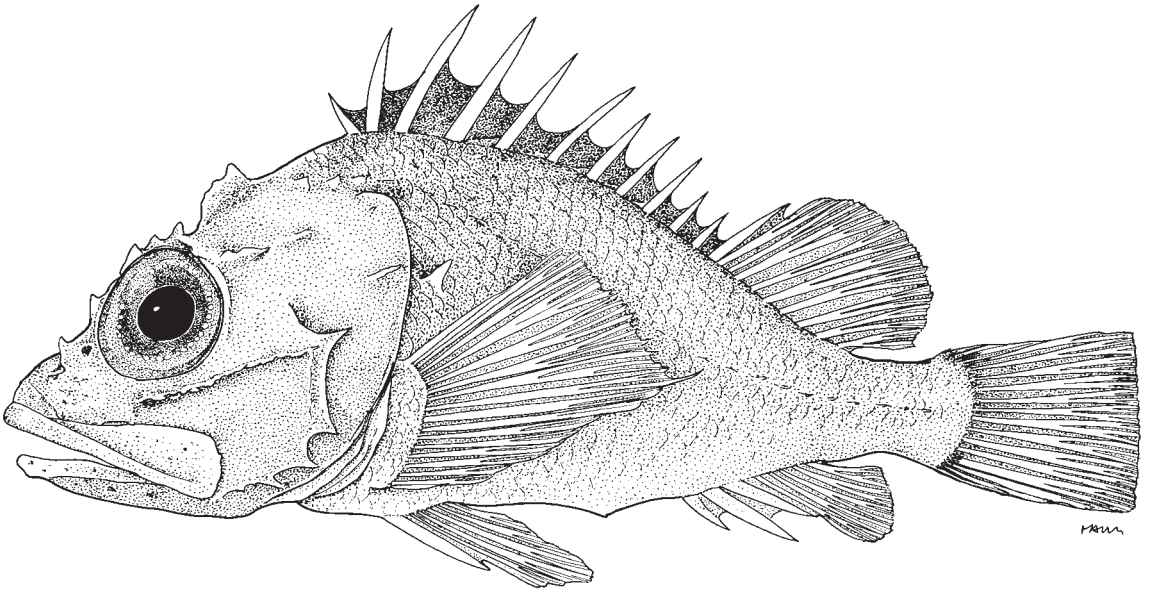
Distribution: Found off the Atlantic coast of the USA, Northeastern Gulf of Mexico, in the Yucatán Channel and off the coasts of Venezuela and Guyana. This species is absent from the Bahamas (except off Bimini and Grand Bahama Island) and the Antilles and rare or absent to the south of Guyana. However, it may occur along the Caribbean coast of Central America and, less probably, in the western Gulf of Mexico.



Idiastion kyphos Eschmeyer, 1965 IKY

Frequent synonyms / misidentifications: None / None.

FAO names: En - Sharpcheek scorpionfish.

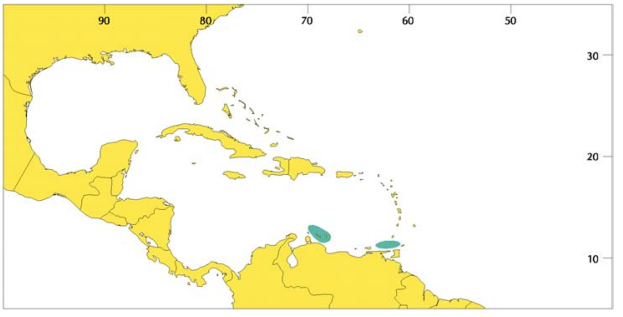


Diagnostic characters: Villiform teeth on premaxillae, dentary, vomer, palatine, and pharyngeal bones. Dorsal fin with 12 spines and 9 1/2 soft rays (last split to base and counted as 1 1/2). Pectoral fin with 17 or 18 rays. Swimbladder present. Interorbit with scales. **Head spines strongly developed, often with multiple points**. No occipital pit. Peritonium unpigmented. **Vertebrae 25**. All scales ctenoid (rough to touch), except on breast. Small slit behind fourth gill arch. **Colour:** colour in life unknown, but probably mostly red, with some dark markings on dorsum.

Size: Reaches 153 mm standard length.

Habitat, biology, and fisheries: Little is known of the biology of this rare deep water species, except that a few specimens have been collected on the bottom at depths of about 439 to 622 m.

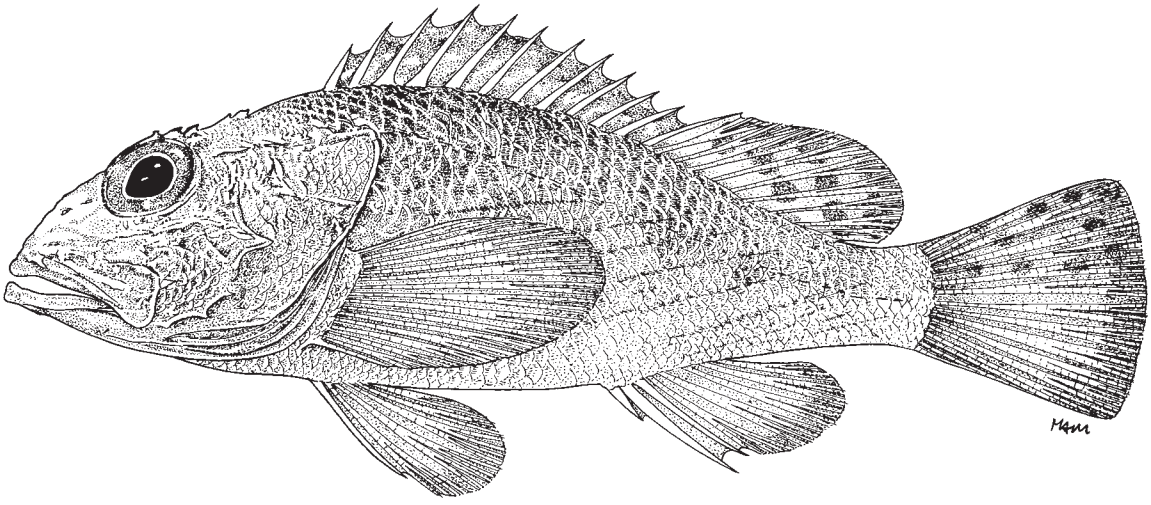
Distribution: This species is known from only a few scattered Atlantic localities, including off Venezuela.



Neomerinthe beanorum (Evermann and Marsh, 1900)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Spotwing scorpionfish.

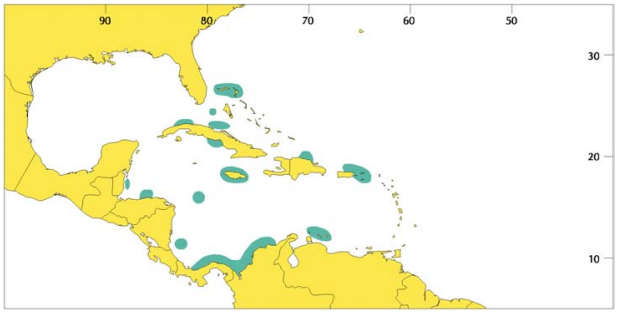


Diagnostic characters: Dorsal fin with 12 spines and 8 1/2 or 9 1/2 soft rays (last split to base and counted as 1 1/2). Pectoral fin with 16 to 18, but usually 17 rays, and with rays 3 to 9 from above branched in specimens larger than about 50 mm. Lacrimal bone with 2 downward-pointing preorbital spines on its ventral margin, with another smaller spine often present on its lateral face posteriorly. Infraorbital bones 2 and 3 (suborbital bones) with 1 and 2 spines respectively. Second preopercular spine much smaller than first or third. Scales ctenoid (rough to touch). **Vertical scale rows 40 to 45. Colour:** the colour of this species in life has not been reported, but is likely to be red, possibly with some yellow, with darker red marks and streaks scattered over dorsum, which appear brown in preserved specimens.

Size: Known to reach 155 mm standard length.

Habitat, biology, and fisheries: This species lives on hard bottoms at depths of between 90 and 375 m. Being infrequently taken, little else is known of its biology.

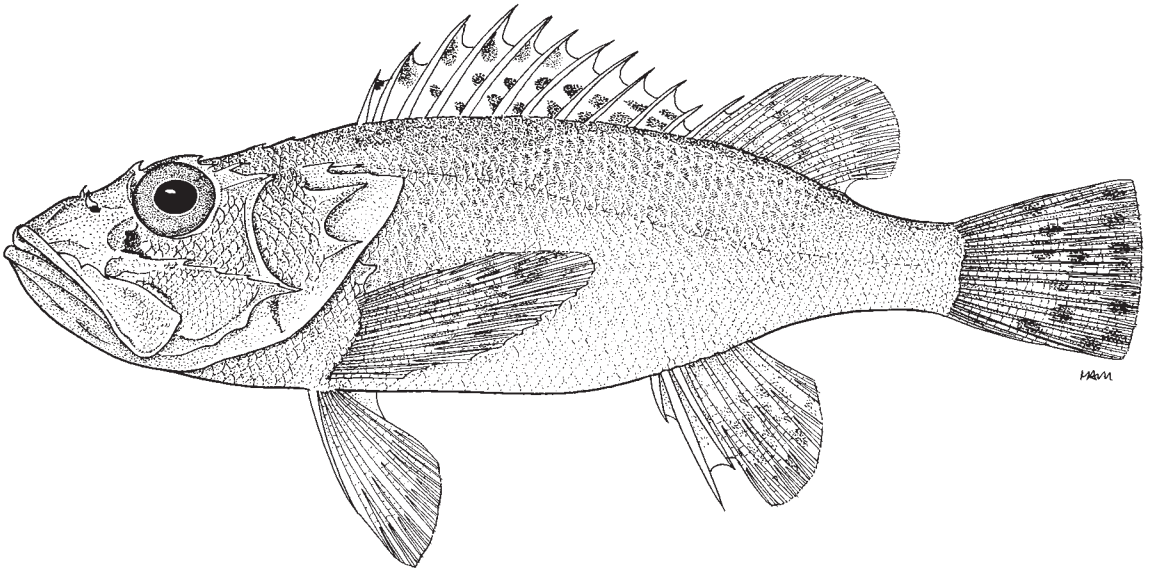
Distribution: This poorly known species has been taken off Puerto Rico and the Virgin Islands, Jamaica, Cuba, and the Bahaman side of Straits of Florida, and scattered offshore localities along the Central and South American mainland from Belize to Venezuela.



Neomerinthe hemingwayi Fowler, 1935

Frequent synonyms / misidentifications: *Neomerinthe tortugae* Hildebrand, 1940 / *Neomerinthe pollux* (Poey, 1860).

FAO names: En - Spinycheek scorpionfish.

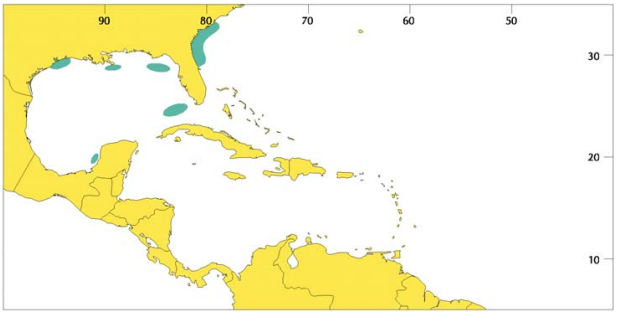


Diagnostic characters: Dorsal fin with 12 spines and 10 1/2 (rarely 9 1/2) soft rays (last split to base and counted as 1 1/2). Pectoral-fin rays 16 or 17, usually 17. Lacrimal bone with 2 downward-pointing preorbital spines on its ventral margin an another on its lateral face posteriorly. Infraorbital bones 2 and 3 (suborbital bones) with 1 and 2 spines respectively. Second preopercular spine absent, except in small juveniles. Scales ctenoid. **Vertical scale rows 60 to 70. Colour:** primarily red but mottled with brown; all fins, except pelvic, spotted; 3 dark spots near rear of lateral line.

Size: Reaches 315 mm standard length; common over 200 mm standard length.

Habitat, biology, and fisheries: This species is not commercially fished, although excellent eating specimens of good size are occasionally trawled over hard bottoms.

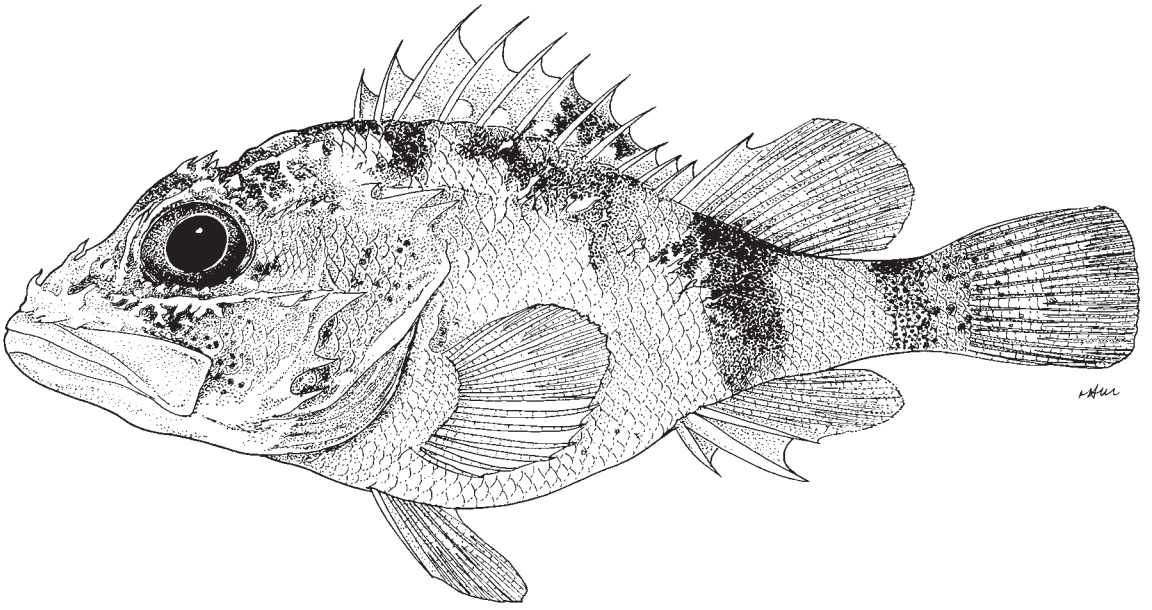
Distribution: This species is found in the northern part of the fishing area, from near Cape May, New Jersey, southward around the Florida peninsula to the Northern Gulf of Mexico to Texas. It has not been reported from the Bahamas, Cuba, or Caribbean islands. It is known from off Campeche, but has not yet been reported from other Mexican localities.



Phenacoscorpius nebris Eschmeyer, 1965

Frequent synonyms / misidentifications: None / None.

FAO names: En - Short-tube scorpionfish.



Diagnostic characters: Dorsal with 12 spines and 8 1/2 fin rays (last split to base and counted as 1 1/2). Pectoral-fin rays 15 to 17, some branched. No occipital pit. Lacrimal bone with 2 ventrally directed spines. Spines on suborbital ridge formed by infraorbital bones 2 and 3 with 5 or 6 spines. Second preopercular spine absent. Scales ctenoid (rough to touch). **Lateral line incomplete, with only 3 to 5 scales. Vertebrae 25. Colour:** head and body pinkish red; 2 dark saddles over dorsum, and another bar at base of soft dorsal-fin rays; caudal fin, pectoral fin, and soft rayed part of dorsal fin with dark red spots; **numerous small but distinct melanophores on caudal peduncle at base of caudal fin form a dark band or bar.**

Size: Reaches 84 mm.

Habitat, biology, and fisheries: Aside from the fact that *P. nebris* is taken in bottom trawls or traps at depths of 64 to 475 m, nothing is known about the biology of this species.

Distribution: This rare species has been reported from off the Peninsula de Guajira, Venezuela and in the north-central Gulf of Mexico.