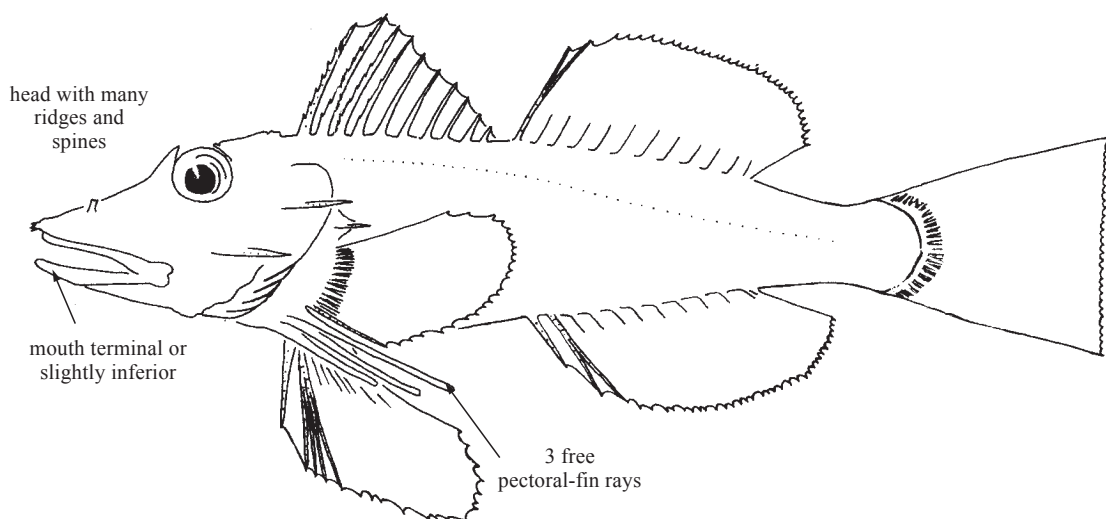


TRIGLIDAE

Searobins

By W.J. Richards, National Marine Fisheries Service, USA and G.C. Miller (retired), St. Simons Island, Georgia, USA

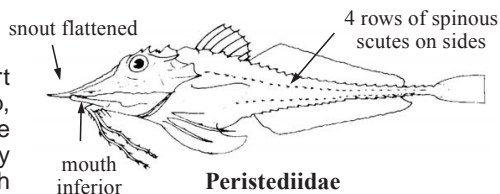
Diagnostic characters (diagnosis applies to Western Central Atlantic species only): Body moderately elongate. **Head large, bony, with many ridges and spines**, but without barbels or large forward-pointing projections on snout; **mouth terminal to slightly inferior**; **villiform teeth present in both jaws and on roof of mouth**. Two separate dorsal fins, the first with 9 to 11 spines, the second with 11 to 14 segmented soft rays; anal fin with 10 to 13 soft rays; pectoral fins short to long, with **3 lowermost rays free** (detached from the remaining fin rays which are joined by a membrane). Body with ctenoid scales, but lacking bony scutes. Swimbladder bilobed. **Colour**: variable, silver or red to black or dusky, belly always pale; juveniles usually with dark saddles on body; first dorsal fin often with a black spot or blotch; pectoral fins usually with some bands, spots, or blotches; however, a black fin variation may be found in some species that are usually coloured.



Habitat, biology, and fisheries: Searobins are medium-sized benthic fishes reaching to about 45 cm in total length inhabiting the continental and insular shelves of tropical and warm-temperate seas to depths of about 180 m (much deeper in other fishing areas). They occur on sandy or muddy substrates, rubble, or reef-type bottoms, using the free pectoral-fin rays for support and for search of food. Although most species are not the object of a special fishery, they often enter bottom-trawl catches, sometimes in moderately large quantities. The majority are considered as trashfish, but some of the larger species are used as food. One species (striped searobin) is considered a game fish with size records maintained. Their flesh is tasty and firm.

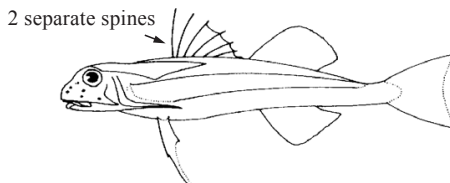
Similar families occurring in the area

Peristediidae: snout flattened, flanked laterally by a pair of short or long projections; mouth inferior, teeth absent; mandibular, lip, and chin barbels always present; only lowermost 2 rays of the pectoral fins free (lowermost 3 rays free in Triglidae); body scaleless but enclosed by 4 rows of spinous scutes on each side.



Peristediidae

Dactylopteridae: anterior 2 dorsal-fin spines separated from remainder of fin; head very blunt without projecting snout; pectoral fin without free rays although some lower rays nearly separate with some independent movement.



Dactylopteridae

Key to the genera of Triglidae occurring in the area

- 1a. Dorsal spines 10 (rarely 9 or 11), posterior spines short and may be difficult to find; soft dorsal fin with 12 or 13 rays; first and second dorsal spines never long and filamentous; opercular membrane partially scaled above opercular spine (Fig. 1) *Prionotus*
- 1b. Dorsal spines usually 11 (rarely 10 or 12); soft dorsal with 11 rays; first 1 or 2 dorsal spines often long and filamentous on males (with the exception of *B. brachyichir*); opercular membrane without scales; individuals relatively small (less than 17 cm standard length) (Fig. 2) . . . *Bellator*

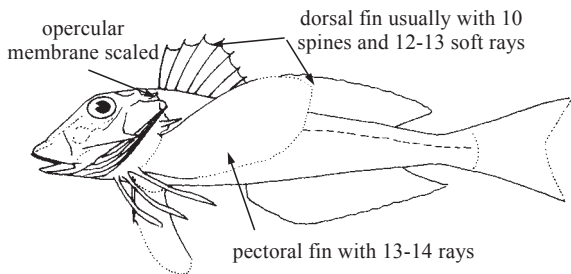


Fig. 1 *Prionotus*

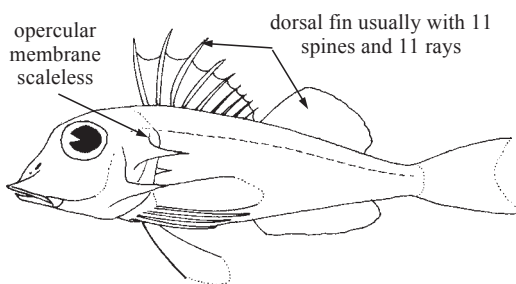


Fig. 2 *Bellator*

Key to *Bellator* species occurring in the area

- 1a. Cleithral spine long, extending well beyond tip of opercular spine (Fig. 3); chest scaled; thin horn-like projections extending well beyond snout → 2
- 1b. Cleithral spine short, not extending beyond tip of opercular spine (Fig. 4); chest naked; horn-like projections barely extend beyond snout, almost blunt → 3

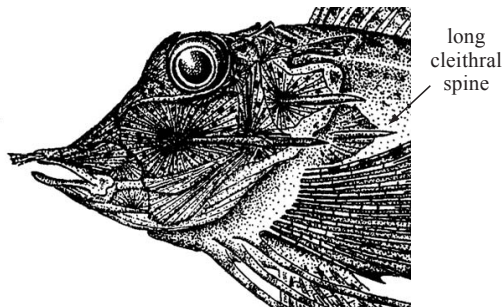


Fig. 3 lateral view of head (*Bellator militaris*)

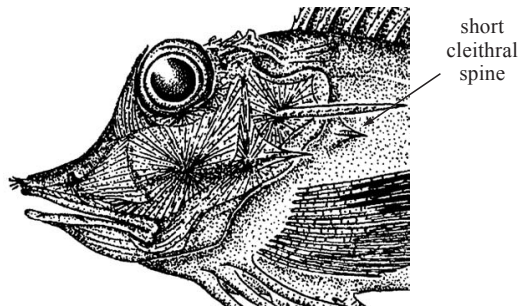


Fig. 4 lateral view of head (*Bellator brachyichir*)

- 2a. Supplemental spine on preopercular present; longest pectoral-fin rays reaching distal end of anal fin base in specimens over 10 cm; dorsal-most pectoral fin rays prominently marked with black and white bands; without dark ventral marginal band on pectoral fin; coloration in life rosy with horizontal yellow lines extending to caudal fin *Bellator militaris*
- 2b. Supplemental spine on preopercular spine absent or rudimentary; longest pectoral fin rays not reaching beyond third anal-fin ray; dorsal-most pectoral-fin rays lack black and white banding; dark band on ventral edge of pectoral fin *Bellator ribeiroi*
- 3a. First free ray of pectoral fin shorter than pectoral-fin length; eyeball with tabs or tentacles on dorsoposterior portion; nasal spines present; mouth small, maxillary not extending to anterior margin of eye; pectorals with alternating patches of light and dark pigment, appearing as brown patches on dorsal 1 to 2 pectoral-fin rays (often seen as bands) . . *Bellator egretta*
- 3b. First free ray of pectoral fin considerably longer than pectoral-fin length; eyeball without tabs or tentacles; nasal spines absent; mouth large, maxillary extending beyond anterior margin of eye; pectoral fins dusky or with an elongate black spot dorsally, posterior margin white. *Bellator brachyichir*

Key to the *Prionotus* species occurring in the area

- 1a. Mouth terminal with lower jaw produced, with small ventral bony knob at symphysis of lower jaw; pectoral fins very short (less than head length and not extending beyond origin of anal fin), colour black (Fig. 5); body with distinct silvery coloration; lower preopercular spine short, reaching only to distal end of operculum or immediately anterior to it; body cavity extends posteriad of anal-fin origin. *Prionotus stearnsi*
- 1b. Mouth subterminal, lower jaw not extending beyond upper jaw and without small ventral knob; pectoral fins moderate to long (equal to or greater than head length and extending to or beyond origin of anal fin), coloration variable, body coloration not silvery; preopercular spine not short, reaching past operculum; body cavity ends at anal-fin origin. → 2

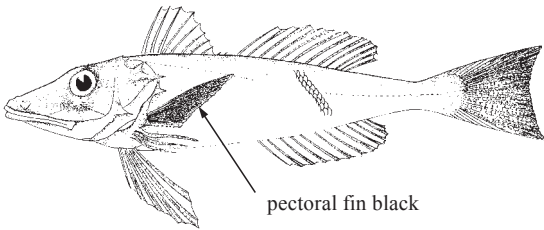


Fig. 5 *Prionotus stearnsi*

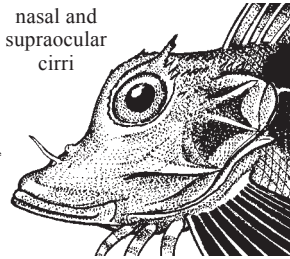


Fig. 6 *Prionotus ophryas*

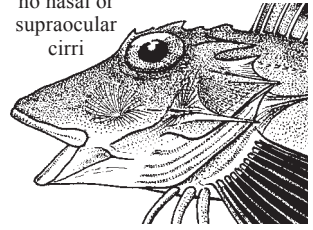


Fig. 7 *Prionotus beanii*

- 2a. Nasal and supraocular cirri present (Fig. 6) → 3
- 2b. Nasal and supraocular cirri absent (Fig. 7) → 4
- 3a. Pectoral fin rounded, upper 2 rays not extending to caudal-fin base as thread-like filament (Fig. 8) *Prionotus ophryas*
- 3b. Two uppermost rays of pectoral fin produced, extending to caudal-fin base as thread-like filaments (Fig. 9) *Prionotus murielae*

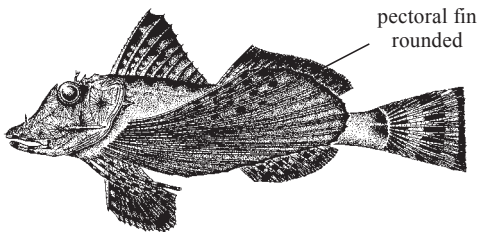


Fig. 8 *Prionotus ophryas*

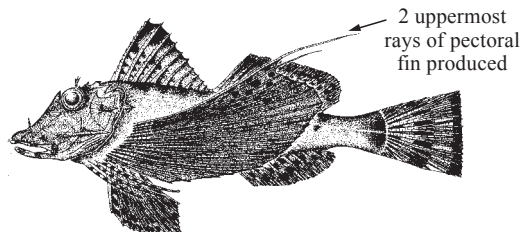


Fig. 9 *Prionotus murielae*

- 4a. Spinous dorsal fin with 2 non-ocellated blotches, 1 between the first and second spines, the other between the fourth and fifth spines; branchiostegal membranes light, never dark or dusky → 5
- 4b. Spinous dorsal fin without 2 non-ocellated spots; 1 spot may be ocellated or no distinct spots. → 6
- 5a. Throat (gular area) naked; joined pectoral-fin rays 12 to 14, modally 13; gill rakers on lower limb of first arch including angle usually 11, varying 10 to 13, branchiostegal rays white, not dusky or black *Prionotus scitulus*
- 5b. Throat (gular area) entirely scaled; joined pectoral rays 14 or 15, modally 14; gill rakers on lower limb of first arch including angle usually 9, varying 8 to 11, branchiostegal rays dusky or black. *Prionotus martis*

- 6a. Spinous dorsal fin with black spot between the fourth and fifth spine, with spot surrounded by hyaline area which extends anteriorly towards and to the first dorsal-fin spine → 7
- 6b. Spinous dorsal fin without black spot surrounded by hyaline area extending anteriorly → 8

7a. Branchiostegal rays white, not dusky or black; pectoral fin with small light blue or light-coloured spots; no large white spot on dorsal caudal peduncle
 *Prionotus longispinosus*

7b. Branchiostegal rays dusky or black; pectoral fin without small, numerous light-coloured blue spots; large white spot on dorsal caudal peduncle
 *Prionotus carolinus*

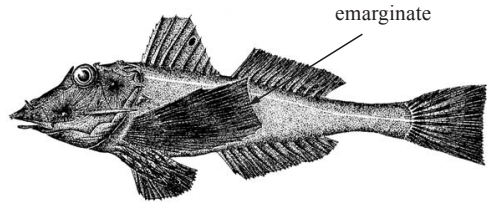


Fig. 10 *Prionotus beanii*

- 8a. Pectoral fins emarginate (Fig. 10) → 9
- 8b. Pectoral fins elongated or round, not emarginate (Fig. 11, 12) → 10

- 9a. Preopercular spine short (mean=9% standard length), reaching just past operculum, does not reach or extend to the distal end of the cleithral spine; pectoral fin with 2 broad dark areas separated and surrounded by lighter areas, nasal spines present or absent . . . *Prionotus beanii*
- 9b. Preopercular spine long (mean=12% standard length), extending well beyond the operculum, and does reach or extend to distal end of the cleithral spine; pectoral fin with dark spots and some pink coloration scattered throughout, nasal spines absent . *Prionotus paralatus*

- 10a. Pectoral fins elongated, lower joined rays much longer than upper joined rays (Fig. 11) → 11
- 10b. Pectoral fins rounded, lower joined rays not longer than upper joined rays (Fig. 12). → 12

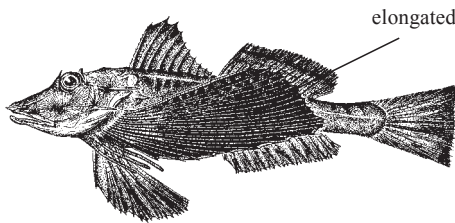


Fig. 11 *Prionotus rubio*

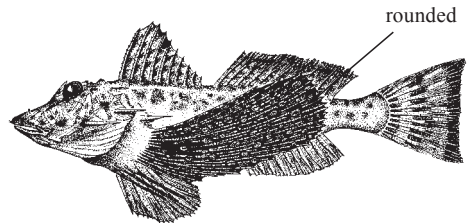





















Fig. 12 *Prionotus roseus*

- 11a. Pectoral fin elongate but only lower joined pectoral-fin rays elongated forming a concavity, reaching past posterior margin of anal fin and with black bands; nasal spines present, but may be small and difficult to discern (detection is best made by running finger downward toward snout on snout region) *Prionotus alatus*
- 11b. Pectoral fin elongate but obliquely truncate, not concave with only lowermost joined rays longer, rays reach past posterior margin of anal fin, pectoral fins uniformly black with distinct blue margin on ventral edge, nasal spines absent *Prionotus rubio*
- 12a. Dark bands or lines extending entirely across pectoral fin, 2 lateral stripes or spots (may be partial) from head to caudal fin → 13
- 12b. Dark bands or lines not extending entirely across pectoral fin, no lateral stripes on body → 14

- 13a.** Total gill rakers on first gill arch usually 17 to 24; dark narrow wavy vertical lines, placed close together on pectoral fin *Prionotus evolans*
- 13b.** Total gill rakers on first arch usually 8 to 16; dark broad vertical bands on pectoral fin (bands may be narrow in Gulf of Mexico specimens) *Prionotus tribulus*
- 14a.** Dorsal free ray of pectoral fin short, not reaching distal end of pelvic fin; pectoral fins with bright blue and/or dark ocellated spots throughout (spots on pectorals not ocellated on some variants), ventral edge dark or brown without blue margin *Prionotus roseus*
- 14b.** Dorsal free ray of pectoral fin long, reaching distal end of pelvic fin; pectoral fin lacking numerous blue or ocellated spots, ventral edge with a blue margin *Prionotus punctatus*

List of species occurring in the area

The symbol  is given when species accounts are included.

-  *Bellator brachyichir* (Regan, 1914).
-  *Bellator egretta* (Goode and Bean, 1896).
-  *Bellator militaris* (Goode and Bean, 1896).
-  *Bellator ribeiroi* Miller, 1965.
-  *Prionotus alatus* Goode and Bean, 1883.
-  *Prionotus beanii* Goode, 1896.
-  *Prionotus carolinus* (Linnaeus, 1771).
-  *Prionotus evolans* (Linnaeus, 1766).
-  *Prionotus longispinosus* Teague, 1951.
-  *Prionotus martis* Ginsburg, 1950.
-  *Prionotus murielae* Mowbray, 1928.
-  *Prionotus ophryas* Jordan and Swain, 1885.
-  *Prionotus paralatus* Ginsburg, 1950.
-  *Prionotus punctatus* (Bloch, 1793).
-  *Prionotus roseus* Jordan and Evermann, 1887.
-  *Prionotus rubio* Jordan, 1886.
-  *Prionotus scitulus* Jordan and Gilbert, 1882.
-  *Prionotus stearnsi* Jordan and Swain, 1885.
-  *Prionotus tribulus* Cuvier, 1829.

References

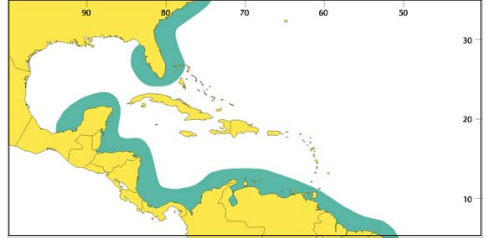
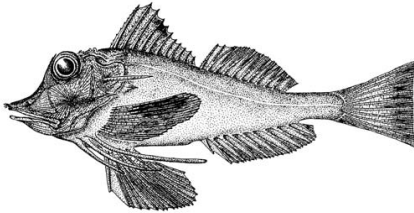
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- Miller, G. C. and W. J. Richards. 1991b. Nomenclatural changes in the genus *Prionotus* (Pisces: Triglidae). *Bull. Mar. Sci.*, 48:757-762.
- Russell, M., M. Grace, and E. J. Guthertz. 1992. Field Guide to the searobins (*Prionotus* and *Bellator*) in the western North Atlantic. *NOAA Tech. Rep. NMFS*, 107:26 p.
- Ross, S. T. 1983. Searobins (Pisces: Triglidae). *Mem. Hourglass Cruises*, 6(4):76 p.
- Teague, G. W. 1951. The sea-robins of America. A revision of the triglid fishes of the genus *Prionotus*. *Commun. Zool. Mus. Hist. Nat. Montevideo*, 3(61):59 p.

Bellator brachychir (Regan, 1914)

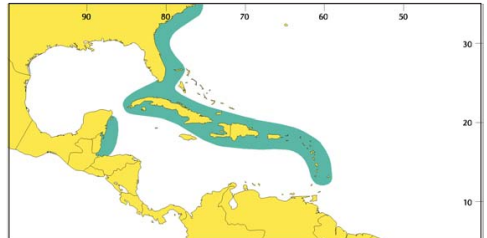
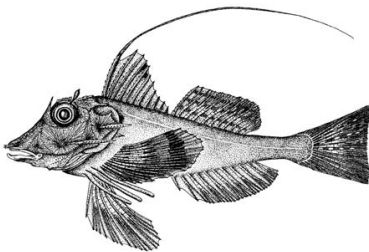
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En - Shortfin searobin.

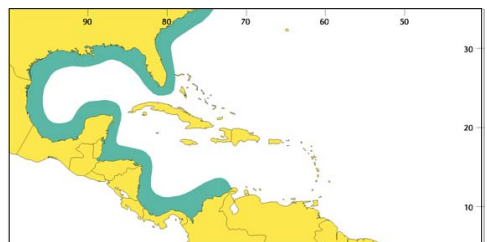
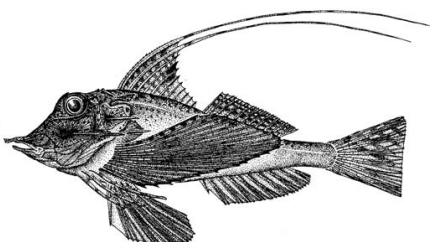
Small, generally less than 11 cm, maximum size to 16 cm. Little known. Usually in depths of 137 to 275 m, ranging from 27 to 366 m. Not fished commercially. North Carolina south to Uruguay.

***Bellator egretta*** (Goode and Bean 1896)**En** - Streamer searobin.

Small size, less than 100 mm standard length, maximum to 150 mm standard length with elongated first dorsal-fin spine. Head very spiny with sharp spine in front of eye, long spines on opercle and preopercle. Differs from all other *Bellator* species except *B. brachychir* by the opercular spine extending posterior to the cleithral spine. Differs from *B. brachychir* by the presence of papillae on eye, by the first free pectoral-fin ray shorter than pectoral fin, by smaller orbital width (mean = 9.3% standard length compared to 13.7% standard length), and by longer rostrum (mean = 18.5% compared to 14.4% standard length). Little known. Mature males sexually dimorphic. Depth ranges from 40 to 230 m, commonly 64 to 183 m. No commercial fisheries. North Carolina south to Barbados. Frequent synonyms are *Prionotus egretta* Goode and Bean 1896 and *Prionotus opercularis* Fowler 1952.

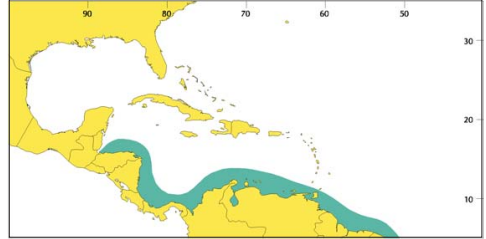
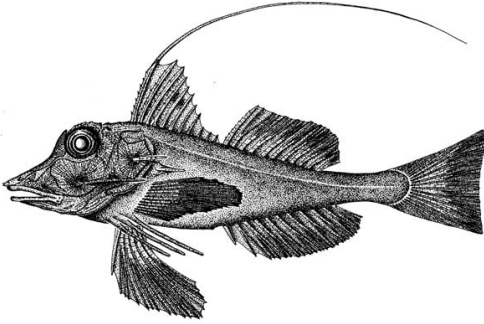
***Bellator militaris*** (Goode and Bean, 1896)**En** - Horned searobin.

Small, usually less than 11 cm standard length, maximum size to 16 cm. Little known with males sexually dimorphic. Depth usually 27 to 73 m, ranging from 20 to 216 m. No commercial fisheries. North Carolina south to Colombia along the coast.

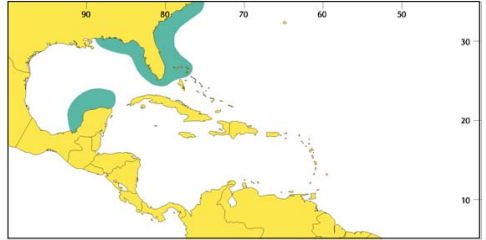
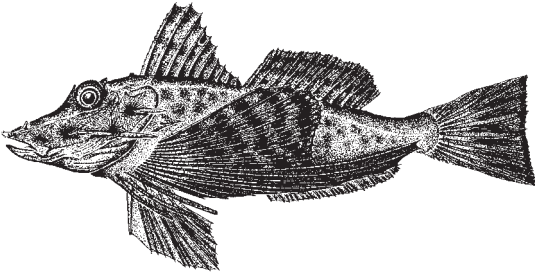


Bellator ribeiroi* Miller, 1965*En** - Caribbean searobin.

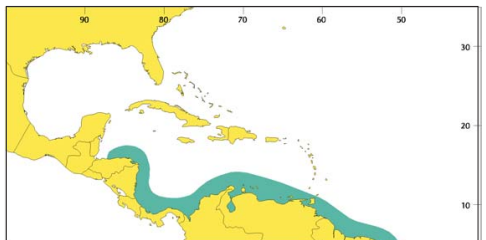
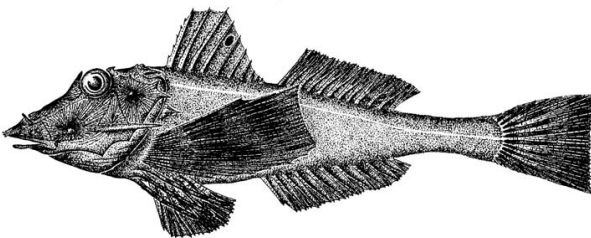
Small, usually less than 11 cm, maximum size to 16 cm. Little known. Mature males sexually dimorphic. Depth ranging from 40 to 79 m. Honduras to Brazil along continental margin of Central and South America.

***Prionotus alatus* Goode and Bean, 1883****PQA****En** - Spiny searobin.

Small, with maximum size to 20 cm. Found in depths from 55 to 457 m, usually ranging from 55 to 128 m. Too small for commercial importance, but flesh is edible. Virginia to south Florida and Bahamas, eastern Gulf of Mexico to Mississippi River Delta, and Campeche Bank.

***Prionotus beanii* Goode, 1896****En** - Bean's searobin; **Fr** - Grondin de Bean; **Sp** - Gallinita.

Small, with maximum size to 15 cm total length. Usually found in depths from 55 to 128 m, ranging from 46 to 274 m. Coastal species from Honduras to Brazil.

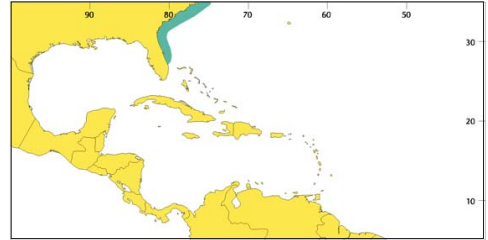
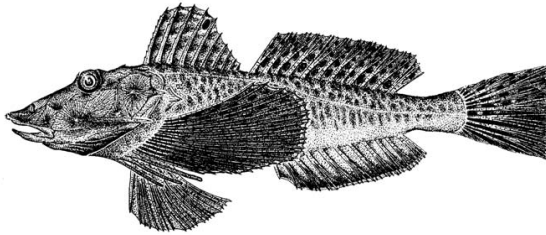


Prionotus carolinus (Linnaeus, 1771)

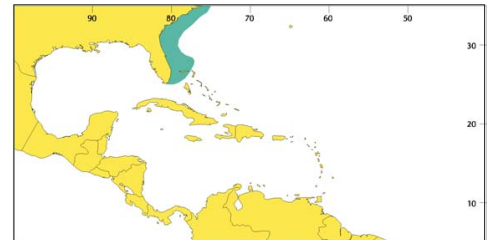
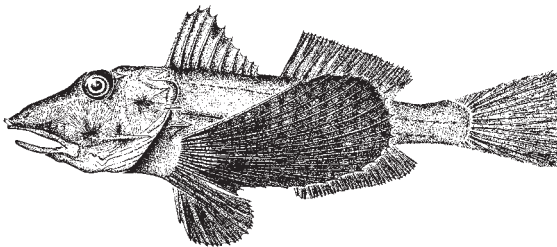
PQC

En - Northern searobin; **Fr** - Grondin carolin; **Sp** - Rubio carolino.

Small, maximum size to 38 cm. Usually in depths of 18 to 55 m, range from 9 to 170 m. Taken in commercial catches as bycatch, flesh edible. Nova Scotia to eastern Florida.

***Prionotus evolans*** (Linnaeus 1766)**En** - Striped searobin.

Maximum size to 45 cm. Pectoral fin rounded, of variable length from eighth anal-fin ray to distal of anal-fin base with brown coloration with very narrow vertical wavy brown lines and inner side blackish; lateral line darkened and parallel dark stripe below resulting in 2 distinct dark stripes on trunk to caudal peduncle; chest and interpelvic area scaled; nasal spines absent. Total gill rakers on first gill arch usually 17 to 24. Depth range 9 to 146 m, usually 18 to 64 m. Commercial bycatch and considered a gamefish and fished recreationally with all tackle record weight of 1.55 kg. From Nova Scotia south to northern Florida, rare north of Cape Cod. Possibly Little Bahama Bank. Frequent synonyms are *Trigla evolans* Linnaeus 1766, *Trigla lineata* Mitchill 1815, and *Prionotus sarritor* Jordan and Gilbert 1883.

***Prionotus longispinosus*** Teague, 1951**En** - Bigeye searobin.

Small, maximum size to 35 cm. Found in inshore bays and from shallow depths to 219 m, usually between 9 and 91 m. Northern Gulf of Mexico, absent from the Caribbean Sea.

