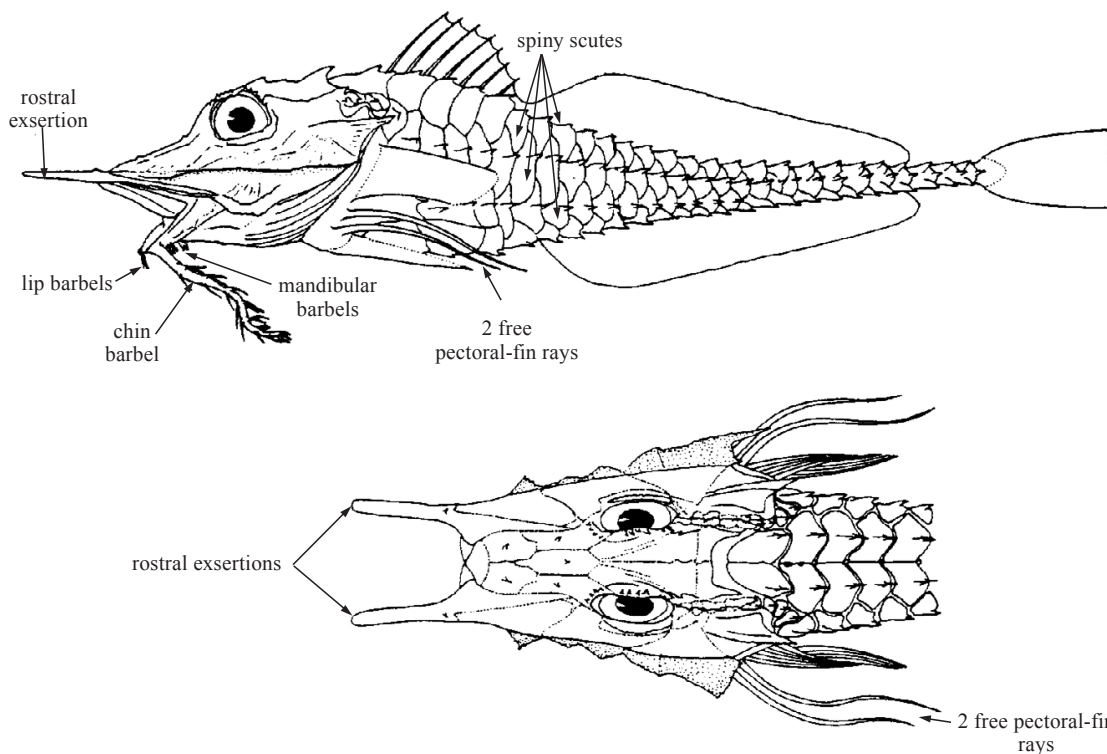


PERISTEDIIDAE

Armoured searobins (armoured gurnards)

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

Diagnostic characters: Body enclosed by 4 rows of spinous scutes on each side; lacking scales; head large, bony, with many ridges and spines; snout broad and flattened dorsoventrally, flanked anteriorly by a pair of short and broad or long and slender, projections (or rostral exsertions) of the first suborbital bones; mouth inferior, jaws incompletely closing; teeth absent on mandible, vomer, and palatine bones; tongue usually absent, but when present rudimentary with tip bifurcated; mandibular barbel present, lip and chin barbels usually present. Dorsal fin with separate spinous and soft portions, consisting of 7 to 9 spines and 16 to 23 segmented soft rays; anal fin with 16 to 23 soft rays; **pectoral fin short with joined rays and 2 free rays ventrally.** Swimbladder with single lobe. **Colour:** overall colour highly variable, from pinkish or reddish to yellowish or bluish, often with silvery reflections; often with dark or coloured spots, stripes, or bars.



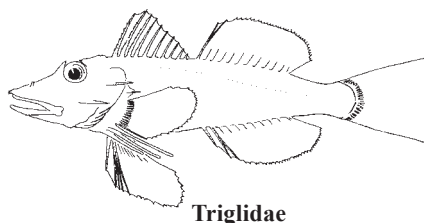
Habitat, biology, and fisheries: Armoured searobins inhabit continental or insular slopes in temperate and tropical waters. They are generally found greater than 180 m. They are often taken in trawl catches from deep waters and are considered trash fish and are very rarely used as food.

Remarks: Their lateral appearance varies little among species but diagnostic characters are best seen from dorsal views of the head, consequently dorsal views of the head are generally used in the species accounts. The diagnosis applies only to western Atlantic *Peristedion*.

Similar families occurring in the area

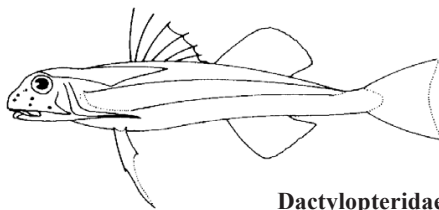
No other family has 4 rows of bony scutes covering the body. Further distinguishing characters are the following:

Triglidae: head bony but body covered with many rows of ctenoid scales, not bony scutes; 3 free lower pectoral fin rays, not 2.



Triglidae

Dactylopteridae: head bony but body covered with many rows of ctenoid scales, not bony scutes; head blunt with no projecting spines; lower pectoral-fin rays not divided to base; anterior 2 dorsal-fin spines separate from remainder of fin.



Dactylopteridae

Key to the species of Peristediidae occurring in the area

- 1a. Head narrow; perifacial rim extremely narrow, less than 2 mm wide at posterior margin (Fig. 1). *Peristedion gracile* species group → 2
- 1b. Head broad; perifacial rim broad, wider than 2 mm at posterior margin → 4

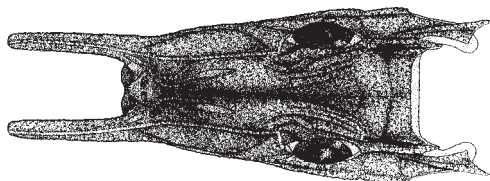


Fig. 1 *Peristedion gracile*

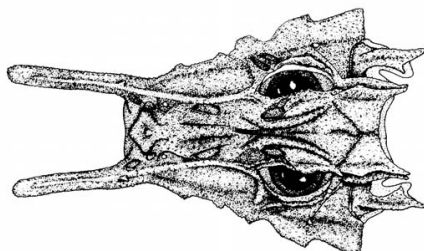


Fig. 2 *Peristedion greyae*

- 2a. Interorbital broad, nearly equal to least width of rostrum; body depth and width at anus nearly as great as head, body rectangular in appearance. *Peristedion gracile*
- 2b. Interorbital not broad, not nearly equal to least width of rostrum, strongly concave; body depth and width at anus much less than at head, with body not rectangular in appearance → 3
- 3a. First free pectoral-fin ray longer than joined rays; chin barbels few, 17 to 23 usually 21 *Peristedion imberbe*
- 3b. First free pectoral-fin ray shorter than joined rays; chin barbels numerous 34 to 57, usually 41 to 43 *Peristedion* n. sp. "t"
- 4a. Perifacial rim terminating posteriorly perpendicular to head; anterior edge of first ventral scute posterior to anterior edge of bony ridge of pelvic girdle → 5
- 4b. Perifacial rim terminating posteriorly as a spine or a flat spine-like projection; anterior edge of first ventral scute equal or anterior to anterior edge of bony ridge of pelvic girdle (possible exception is *P. miniatum*). → 11
- 5a. Dorsal preopercular ridge and second infraorbital spines very large; chin barbel counts constant 8 or 9, distinctive from other species in having the anterior cluster with 1 large and 2 small barbels, and the remaining clusters with 1 large and 1 small barbel (posterior clusters sometimes lacking small barbel *Peristedion miniatum*
- 5b. Dorsal preopercular ridge and second infraorbital spines not very large; chin barbel numbers usually much greater or less than 8 or 9, not distinctive as in *P. miniatum* → 6
- 6a. Rostral exsertions very short, broad, triangular shaped *Peristedion ecuadorensis*
- 6b. Rostral exsertions not short or triangular shaped → 7

- 7a.** Rostral exsertions extremely long and slender (when not broken), longer than snout (rostral exsertions measured from anterior tip to premaxillary symphysis; snout measured from premaxillary symphysis to anterior edge of orbit); lip barbels 1; chin barbels 0 to 1 (modally 0) *Peristedion antillarum*
- 7b.** Rostral exsertions not extremely long and slender, not longer than snout; lip barbel and chin barbel counts greater than 1 → 8
- 8a.** Head extremely broad, lip barbels 1+1 *Peristedion longispatha*
- 8b.** Head not extremely broad; lip barbel counts greater than 1+1 → 9
- 9a.** Lip barbels 2+1+2; mandibular barbel short, scarcely reaching past posterior articulation of jaw *Peristedion truncatum*
- 9b.** Lip barbels 2+2; mandibular barbel long, from nearly reaching posterior termination of perifacial rim to posterior half of first ventral scute → 10
- 10a.** Mandibular barbel very long, reaching past termination of perifacial rim to posterior half of first ventral scute; unicuspid spines on posterior scutes of superomedian series; peritoneum and posterior roof of mouth dark, heavily pigmented *Peristedion unicuspis*
- 10b.** Mandibular barbel not very long, not reaching past termination of perifacial rim; bicuspid spines on posterior scutes of superomedian series; peritoneum silvery, white, or translucent *Peristedion greyae*
- 11a.** Perifacial rim terminating as a strong spine; nasal spine large, chin barbels numerous, usually 31 or more *Peristedion brevirostre*
- 11b.** Perifacial rim terminating as a flat spine-like projection or as a small spine; nasal spine small or lacking; chin barbels less than 24 → 12
- 12a.** Chin barbels 12 to 18, usually 14 or 15 *Peristedion thompsoni*
- 12b.** Chin barbels 18 to 23, usually 21 or 22 *Peristedion altipinnis* (Brazilian species, not in area)

List of species occurring in the area

The symbol  is given when species accounts are included.

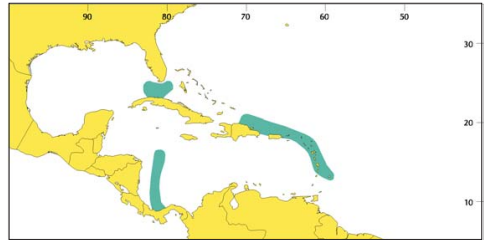
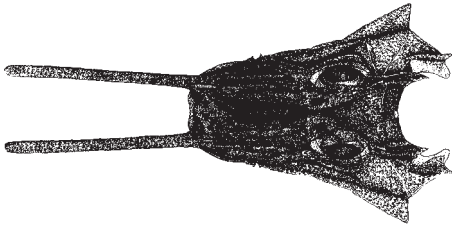
-  *Peristedion antillarum* Teague 1961.
-  *Peristedion brevirostre* (Günther 1860).
-  *Peristedion ecuadorensis* Teague, 1961.
-  *Peristedion gracile* Goode and Bean 1896.
-  *Peristedion greyae* Miller 1967.
-  *Peristedion imberbe* Poey 1861.
-  *Peristedion longispatha* Goode and Bean, 1886.
-  *Peristedion miniatum* (Goode, 1880).
-  *Peristedion* n. sp. "t".
-  *Peristedion thompsoni* Fowler 1952.
-  *Peristedion truncatum* (Günther, 1880).
-  *Peristedion unicuspis* Miller 1967.

References

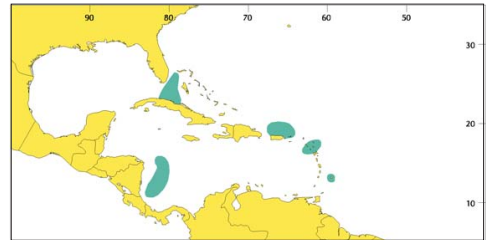
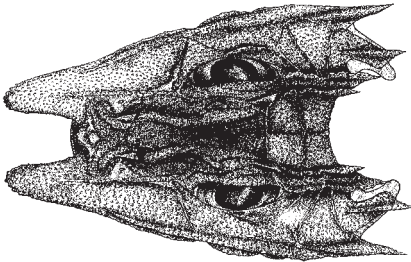
- Miller, G. C. 1967a. A new species of western Atlantic armored sea robin, *Peristedion greyae* (Pisces: Peristediidae). *Bull. Mar. Sci.*, 17:16-41.
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- Robins, C. R. and G. C. Ray. 1986. *A field guide to Atlantic coast fishes of North America. The Peterson field Guide Series.* United States, Houghton Mifflin Co., 354 p.
- Teague, G. W. 1961. The armored sea-robins of America, a revision of the American species of the Family Peristediidae. *An. Mus. Hist. Nat. Montevideo.*, (Ser. 2), 7(2):1-27.

Peristedion antillarum Teague, 1961**En** - Longnose armoured searobin.

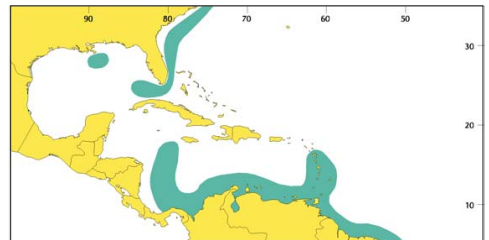
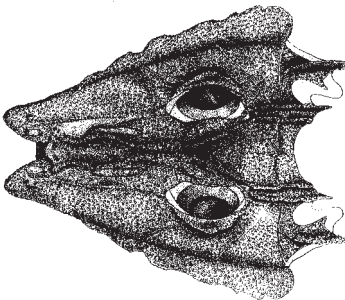
Maximum size to 18 cm standard length, commonly to 15 cm standard length. A slope species ranging from 329 to 649 m. Prejuveniles and juveniles less than 61 mm standard length usually occur at shallower depths (350 to 400 m) than adults (400 to 650 m). Bottom temperatures at capture depth are 10 to 11°C. Distribution is Antillean (including Straits of Florida) but also occurs from Honduras to Panama on offshore banks.

***Peristedion brevirostre*** (Günther, 1860)**En** - Flathead armoured searobin (AFS: Flathead searobin).

Maximum size to 25 cm standard length, commonly to 15 cm standard length. It is a rocky bottom slope species ranging from 220 to 527 m. The distribution is primarily Antillean but it does occur offshore from Honduras to Nicaragua. *Peristedion platycephalum* (Goode and Bean, 1886) is a junior synonym.

***Peristedion ecuadorensis*** Teague, 1961**En** - Pyramid nose armoured searobin.

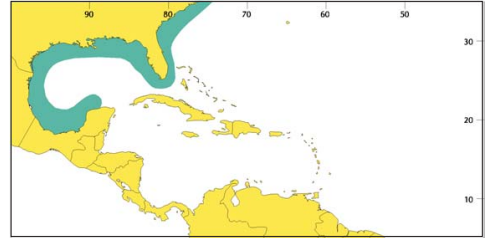
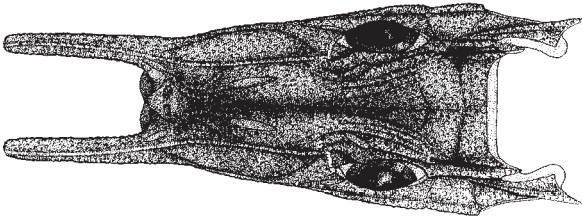
Maximum size to 20 cm standard length, commonly to 16 cm standard length. The species occurs on the slope ranging in depth from 324 to 910 m. Bottom temperatures ranging from 7 to 10.1°C averaging 9.1°C. The distribution is primarily coastal from Virginia south and into the Gulf of Mexico and from Honduras south to Brazil; but it does occur in the Lesser Antilles. It does not occur in the eastern tropical Pacific Ocean off Ecuador.



Peristedion gracile Goode and Bean, 1896

En - Temperate slender armoured searobin (AFS: Slender searobin).

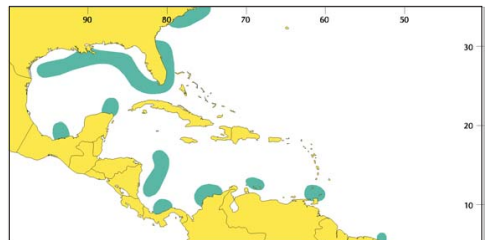
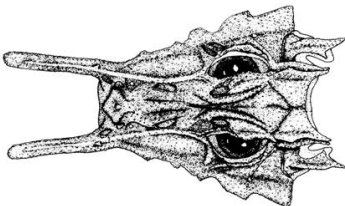
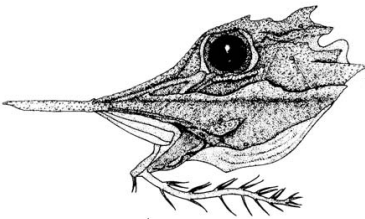
Maximum size to 20 cm, commonly to 16 cm standard length. It ranges in depth from 29 to 475 m, but generally occurs on the continental shelf in less than 146 m. Bottom temperatures at capture depths ranged from 13 to 22°C, averaging 16.5°C. Adults range from Virginia south to the Florida Keys and the Gulf of Mexico. It may be geographically sympatric with the Antillean slender armoured searobin in the Florida Keys, but it is allopatric by depth.



Peristedion greyae Miller, 1967

En - Prickly armoured searobin (AFS: Alligator searobin).

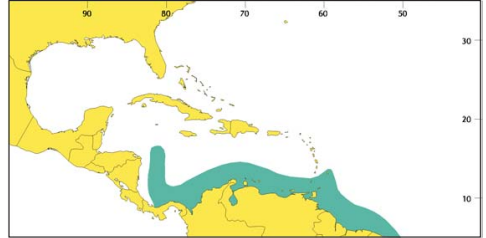
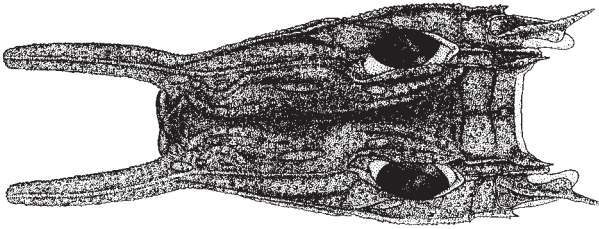
Small, to 19 cm standard length, commonly to 15 cm standard length. Two or 3 separate and distinct serrated ridges on mandible; when present, third ridge generally very low, and barely perceptible. A strong concavity on outer edge of perifacial rim of preopercle. Rostral exsertion spine present. Chin barbels predominantly 12 or 13, grouped in 5 clusters. Slope from 179 to 914 m average 390 m. Bottom temperatures 6.9 to 10.5°C, average 10°C. It is common to abundant in the trawl catch with royal red shrimp off the east coast of Florida and off the Mississippi River Delta in the Gulf of Mexico. A continental shelf species, with 1 exception - off Cay Sal Bank and the Tongue of the Ocean, Bahamas, and extends from Virginia south through the Gulf of Mexico to Campeche Bank, and from Honduras along the South American coast to Tobago. One record from off northern Brazil.



***Peristedion imberbe* Poey, 1861**

En - Tropical slender armoured searobin.

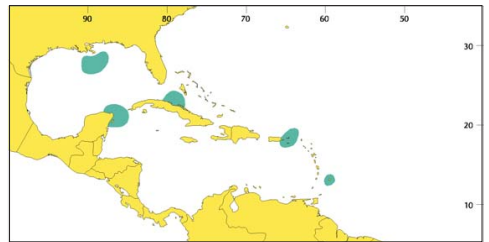
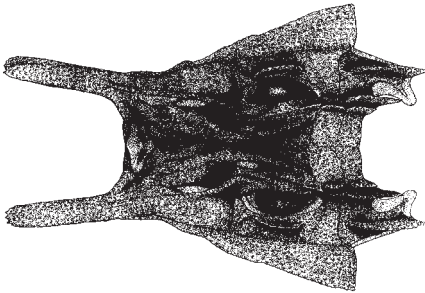
Maximum size to 18 cm standard length, commonly to 15 cm standard length. It ranges in depth from 137 to 457 m, averaging 316 m. Bottom temperatures ranged from 8.3 to 18.3°C, averaging 13.8°C. The species is found along the coast from Honduras south to Brazil, and insular in the lower Lesser Antilles.

***Peristedion longispatha* Goode and Bean, 1886**

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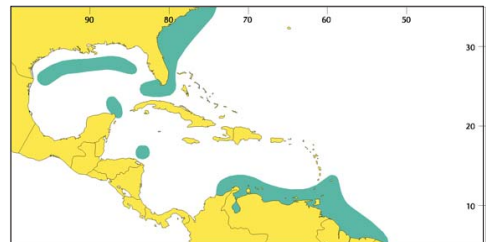
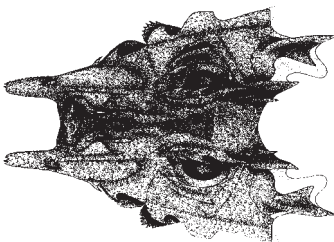
En - Widehead armoured searobin.

Maximum size to 18 cm standard length, commonly to 16 cm standard length. The species ranges in depth from 101 to 780 m, averaging 483 m. Bottom temperatures ranged from 9 to 11°C, average 10.3°C. The distribution is primarily Antillean, but it does occur in Gulf of Mexico off the Mississippi River Delta.

***Peristedion miniatum* Goode, 1880**

En - Boarhead armoured searobin (AFS: Armoured searobin).

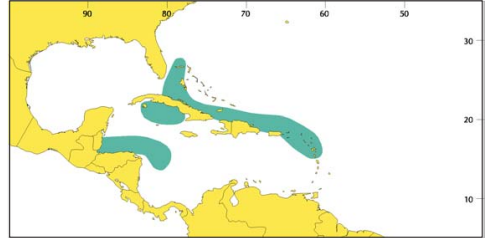
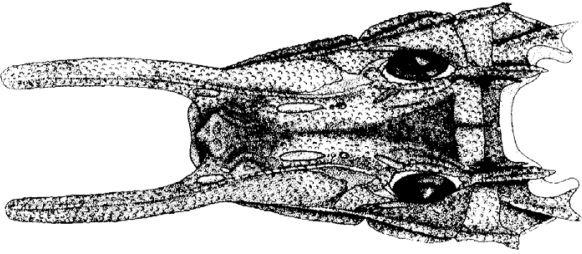
Maximum size to 30 cm standard length, commonly to 25 cm standard length. The species ranges in depth from 64 to 914 m, averaging 289 m. Bottom temperatures ranged from 10 to 17.8°C, averaging 12.9°C. It is found from Canada and Georges Bank south through the Gulf of Mexico, and from Honduras to Brazil, but excluding the Antilles. The variation in orbit size and head spination does not warrant distinguishing the southern population as a separate taxon.



***Peristedion* n. sp. "t"**

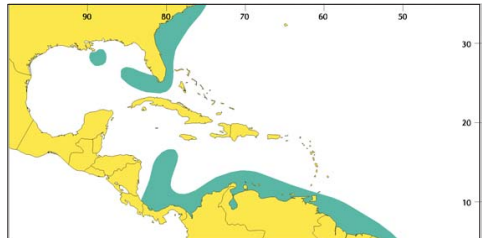
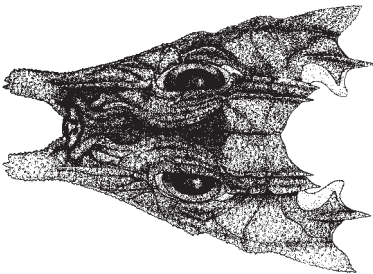
En - Antillean slender armoured searobin.

This undescribed species has a maximum size of 17 cm standard length, commonly to 15 cm standard length. It ranges from 219 to 549 m, averaging 375 m. Bottom temperatures at capture locations ranged from 10.5 to 19°C, averaging 15.3°C. Its distribution is Antillean occurring in the Florida Keys, Antilles, and Belize to Nicaragua. It is sympatric with the tropical slender armoured searobin off Honduras and Nicaragua, but is allopatric by depth.

***Peristedion thompsoni* Fowler, 1952**

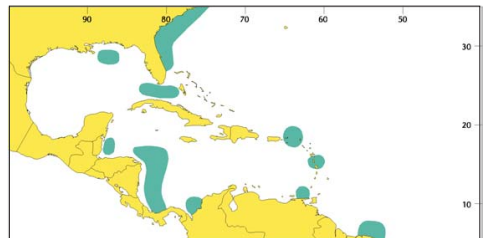
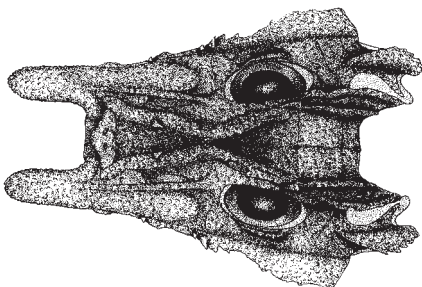
En - Rimspine armoured searobin (AFS: Rimspine searobin).

Maximum size to 25 cm standard length, commonly to 16 cm standard length. The species ranges in depth from 115 to 475 m, averaging 293 m. Bottom temperatures ranged from 7.8 to 15°C, averaging 10.9°C. The species *Peristedion schmitti* Teague is a junior synonym. It is found from North Carolina south around the Florida Keys and in the northern Gulf of Mexico; and from Honduras south to Brazil. It is a coastal species.

***Peristedion truncatum* (Günther, 1880)**

En - Black armoured searobin.

Maximum size to 17 cm standard length, commonly to 15 cm standard length. The species ranges in depth from 155 to 910 m, averaging 580 m. Bottom temperatures ranged from 7.3 to 10°C, averaging 8.9°C. *Peristedion spiniger* Longley and Hildebrand, 1950 is a junior synonym. It ranges from New Jersey south to Brazil including the Gulf of Mexico, Caribbean Sea, and Lesser Antilles.



***Peristedion unicuspis* Miller, 1967**

En - Enigma armoured searobin.

Small, maximum size to 16 cm total length. Known only from 4 specimens. The 2 type specimens were trawled in 530 m off Cay Sal Bank in the Straits of Florida and 2 from the Tongue of the Ocean in the Bahamas.

