

**Schroederichthys** Springer, 1966

SCYL Schroed

**Genus** : Schroederichthys Springer, 1966, Fish.Bull.U.S.Fish Wildl.Serv., 65(3):604

**Type Species** : Schroederichthys maculatus Springer, 1966, by original designation.

**Synonymy** : None.

**Field Marks** : Scyliorhinids with short and rounded snouts, no nasoral grooves, anterior nasal flaps small and not reaching mouth, labial furrows present on both jaws, short to moderately long, not reaching upper symphysis, dorsal fins equally large at midbases, caudal fin short, without enlarged denticles on dorsal margin, supraorbital crests present on cranium, colour pattern of spots and saddles present.

**Diagnostic Features** . Body not tadpole-shaped, moderately stout to very slender, and cylindrical or spindle-shaped, tapering moderately to considerably to caudal fin; body firm and thick skinned, with well-calcified dermal denticles; stomach not inflatable; tail rather long, length from vent to lower caudal origin about 0.9 to 1.4 times in snout-vent length. Head moderately depressed, narrowly rounded and not wedge-shaped in lateral view; head short, less than 1/5 of total length in adults; snout short, less than 3/4 of mouth width, thick, and flattened, bluntly pointed in lateral view; snout not expanded laterally, rounded-parabolic and slightly bell-shaped in dorsoventral view; ampullar pores not greatly enlarged on snout; nostrils enlarged, but with incurrent and excurrent apertures only slightly open to exterior; anterior nasal flaps formed as broad triangular or narrow attenuated lobes without barbels, well separated from each other and ending slightly anterior to mouth; internarial space about 0.8 to 1.2 times in nostril width; nasoral grooves absent; eyes dorsolateral on head, broad subocular ridges present below eyes; mouth angular or arched, moderately long, with lower symphysis somewhat behind upper so that upper teeth are well-exposed in ventral view; labial furrows present along both upper and lower jaws, these short to rather long and extending nearly to level of upper symphysis of mouth or ending well behind it; branchial region not greatly enlarged, distance from spiracles to fifth gill slits about 2/5 to 3/5 of head length; gill slits lateral on head. Two dorsal fins present, about equal-sized or with the second slightly larger than the first; origin of first dorsal varying from about over pelvic midbases to over or slightly behind their insertions; origin of second dorsal varying from over the anal midbase to about over the anal insertion; pectoral fins moderately large, their width slightly less to considerably greater than mouth width; inner margins of pelvic fins not fused over claspers in adult males; claspers moderately long, fairly thick, and distally pointed, extending about half of their lengths or slightly less behind the pelvic fin tips; anal fin small and not greatly elongated, slightly smaller to slightly larger than pelvic fins, subequal to slightly smaller than dorsal fins, base length subequal to about 1.3 times the second dorsal base; origin of anal far behind pelvic bases, and insertion separated from lower caudal origin by a broad space varying from 1.2 to over 2 times the anal base; caudal fin short and broad to moderately elongated, less than a fifth of total length in adults. No crests of denticles on the caudal margins; supraorbital crests present on cranium. Colour dark grey or brown to tan with a variegated colour pattern of dark and white spots, and dark to dusky saddles on the sides and dorsal surface.

**Remarks** : Springer (1966), originally proposed this genus for his two new dwarf South American Atlantic species S. maculatus and S. tenuis, which supposedly differed from other scyliorhinids in their extremely attenuated forms. Subsequently, Springer (1979) discovered that one of these species, S. tenuis grew to a relatively large size, and that its attenuateness was a juvenile character. The slender body of adult S. maculatus may be a juvenile characteristic retained in a dwarf adult, that is, a result of pedomorphosis. Also, two additional South American species of South American scyliorhinids formerly placed in Halaelurus (H. bivius and H. chilensis) were found by Springer to belong to this genus. In S. bivius at least, newly hatched individuals are as attenuate as adult S. maculatus.

Schroederichthys is close to Aulohalaelurus and Atelomycterus and needs to be critically compared with them.

**Key to Species :**

- 1a. Anterior nasal flaps broad and triangular
  - 2a. Dorsolateral surfaces with conspicuous dark saddles and numerous dark spots, white spots few or absent. Adults to at least 63 cm ..... **S. chilensis**
  - 2b. Dorsolateral surface with saddles only slightly darker than background or absent, white spots numerous. Adults to only 35 cm ..... **S. maculatus**
- 1b. Anterior nasal flaps narrow and lobate
  - 3a. Dorsolateral surface with dark saddles and numerous dark spots, which are scattered and do not outline the saddles; white spots usually present ..... **S. bivius**
  - 3b. Dorsolateral surface with dark saddles outlined by numerous dark spots; white spots usually absent ..... **S. tenuis**

**Schroederichthys bivius** (Smith, 1838)

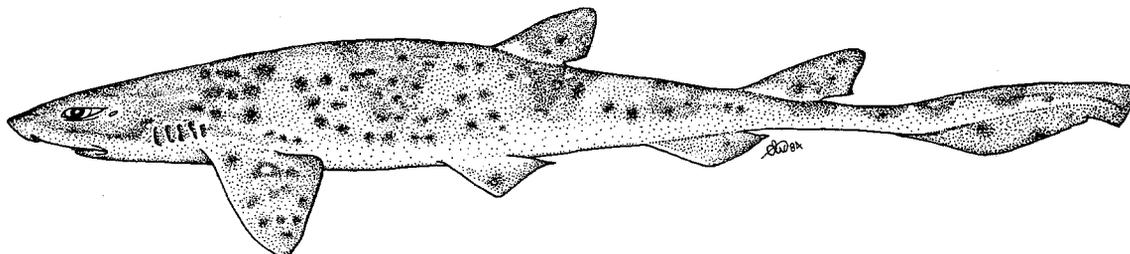
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Scyllium bivium Smith, 1837, Proc.Zool.Soc.Lond., 5:85 (nomen nudum); Smith, 1838, Ann.Mag.Nat.Hist., 1(1):73 (nomen nudum); Smith in Müller & Henle, 1838, Syst.Beschr.Plagiost., (pt. 1):8. Holotype: British Museum, Natural History, BMNH 1857.10.20, ca. 690 mm dried specimen. Type Locality: "Cape of Good Hope" (possibly near Cape Horn; see Springer, 1979:118).

**Synonymy** : None.

**Other Scientific Names Recently in Use** : Halaelurus bivius (Smith, in Müller & Henle, 1838).

**FAO Names** : En - Narrowmouthed catshark; Fr - Holbiche blanche; Sp - Pejegato bocachica.



**Field Marks**: A Schroederichthys with moderately slim body, narrow snout, and few large dark and small white spots.

**Diagnostic Features** : Trunk and tail fairly slender in adults but extremely attenuated in young. Snout narrowly rounded; anterior nasal flaps narrow and lobate. Mouth relatively narrow and long, especially in adult males. Colour pattern of 7 or 8 dark brown saddles on grey-brown dorsal surface, also relatively few, scattered large dark and small white spots, the dark spots not bordering the saddles. Adults to at least 70 cm.

**Geographical Distribution** : Western South Atlantic and eastern South Pacific, Argentina south to Straits of Magellan and north to central Chile.

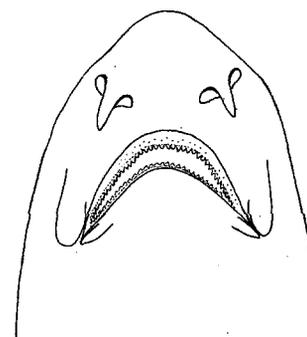
**Habitat and Biology** : A common inshore and offshore shark of the temperate South American continental shelf, found at depths of 14 to 78 m. Oviparous, probably with one egg per oviduct laid at a time. Sexual heterodonty, or dental sexual dimorphism, is strongly developed in this species, with adult males having teeth at least twice as high as comparably sized adult females as well as much longer and narrower mouths.

**Size** : Maximum about 70 cm; males maturing at about 53 cm; females at 40 cm.

**Interest to Fisheries** : Unknown.

**Literature** : Springer (1966, 1979); Gosztanyi (1973).

**Remarks** : Springer (1966, 1979) indicated that the type locality of this species, the Cape of Good Hope, is erroneous and suggested that it may have resulted either from transport of the stuffed holotype aboard a ship from South America to South Africa, or from a labelling error.



underside of head



**Schroederichthys chilensis** (Guichenot, 1848)

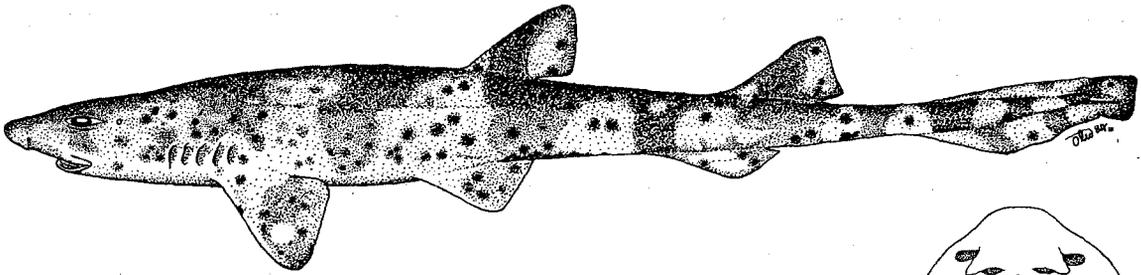
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Scyllium chilense Guichenot, in Gay, 1848, Hist.Fis.Polit.Chile, Paris, Zool., 2:362. Holotype: ?. Type Locality: Chile.

**Synonymy** : ? Scyllium brevicolle Philippi, 1887.

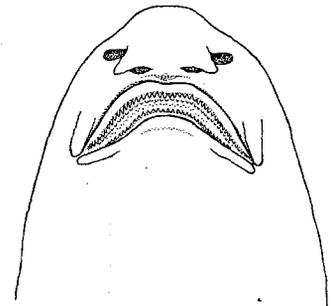
**Other Scientific Names Recently in Use :** Halaelurus chilensis (Guichenot, in Gay, 1848).

**FAO Names :** En - Redspotted catshark; Fr - Holbiche à taches rouges; Sp - Pintarroja chilena.



**Field Marks:** A Schroederichthys with moderately slim body, broad snout and numerous black spots that do not border saddles.

**Diagnostic Features :** Trunk and tail fairly slender in adults. Snout more broadly rounded; anterior nasal flaps broad and triangular; mouth relatively broad and wide. Colour pattern of 6 to 9 brown to blackish saddles on light brown to dark grey or brownish-black dorsal surface, with numerous blackish spots scattered on dorsolateral surface and not bordering the saddles; white spots sometimes present. Adults to at least 63 cm.



underside of head

**Geographical Distribution :** Eastern South Pacific: Peru and Chile.

**Habitat and Biology :** A common temperate inshore shark of the South American continental shelf, occurring on or near the bottom sometimes very close inshore in a few metres depth. Presumably oviparous.

**Size :** Maximum about 62 cm, adult males 56 to 62 cm.

**Interest to Fisheries :** Unknown.

**Literature :** Springer (1966, 1979); Kato, Springer & Wagner (1967).



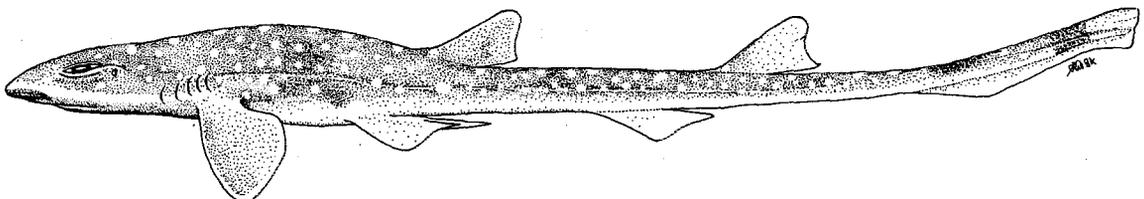
**Schroederichthys maculatus** Springer, 1966

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Schroederichthys maculatus, Springer, 1966, Fish. Bull.U.S.Fish Wildl.Serv., 65(3):605, figs 4C, 5, 7P, 9C, 16A, 17, 19. Holotype: U.S. National Museum of Natural History, USNM-185556, 328 mm, adult male. Type Locality: Caribbean Sea NNW of Cape Gracias a Dios, Honduras, 16° 39'N, 82°29'W, about 410 m depth.

**Synonymy :** None.

**FAO Names :** En - Narrowtail catshark; Fr - Holbiche petite queue; Sp - Pejegato rabo fino



**Field Marks :** A Schroederichthys with extremely slender body and white spots only.

**Diagnostic Features :** Trunk and tail extremely elongated in adults. Snout more broadly rounded; anterior nasal flaps broad and triangular; mouth relatively broad and wide. Colour pattern of 6 to 9 light brown saddles on back and tail, usually absent in adults, on tan to light grey dorsal surface, with numerous white spots scattered on dorsolateral surface and not bordering the saddles. Adults small, to about 35 cm.

**Geographical Distribution :** Western North Atlantic: Honduras and Nicaragua.

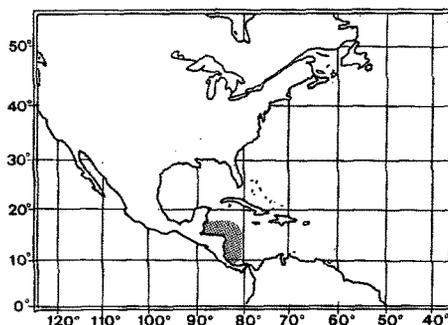
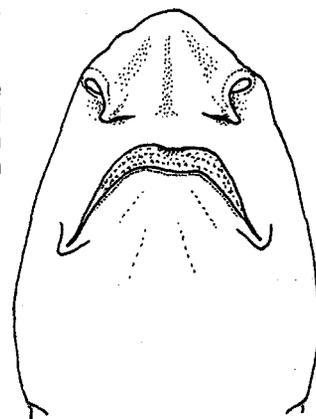
**Habitat and Biology :** A little-known deepwater tropical bottom catshark of the outer shelf and upper slope of Atlantic Central America, found at 190 to 410 m depth. It is thought to prefer bottom with fine white calcareous material. Oviparous, probably laying one egg per oviduct. Feeds on small bony fishes and cephalopods, with algae found in one specimen.

**Size :** Maximum 34 cm, adult males 28 to 33 cm, adult female 34 cm.

**Interest to Fisheries :** None at present.

**Literature :** Springer (1966, 1979).

**Remarks:** Springer (1979) noted that the attenuate proportions of adults of this species are very similar to those of its young. In contrast, the adults of the other three species of Schroederichthys are only moderately slender as adults, but the young at least of S. tenuis and S. bivius resemble all sizes of S. maculatus. This suggests that the present species is a pedomorphic dwarf, that has retained a juvenile morphology but becomes adult at a much smaller size than other Schroederichthys.



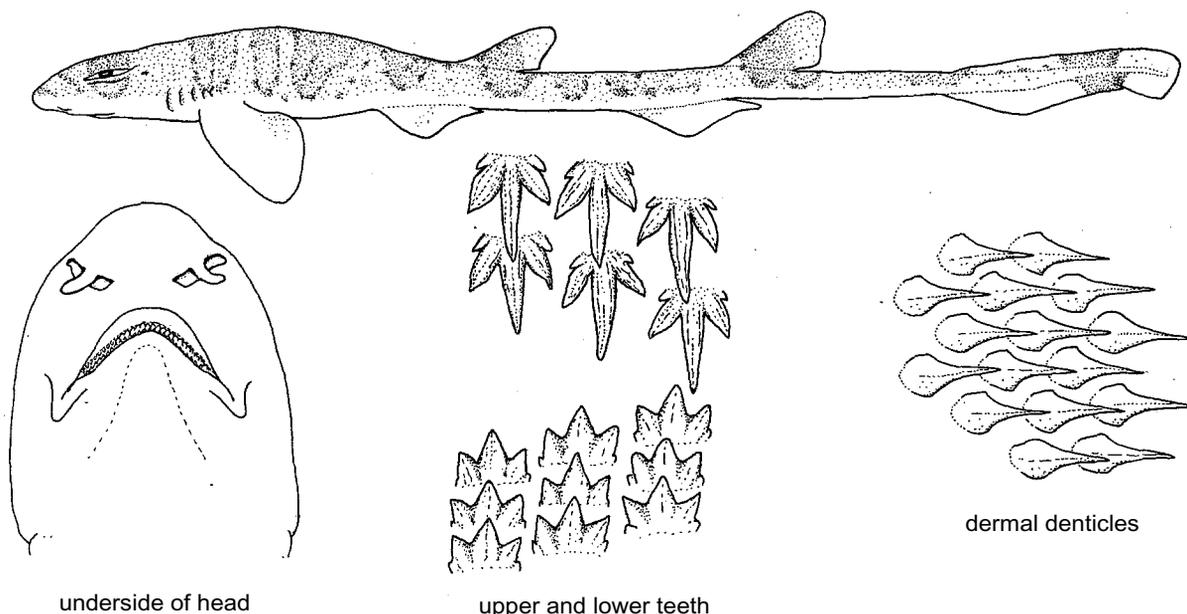
Schroederichthys tenuis Springer, 1966

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Schroederichthys tenuis Springer, 1966, Fish Bull. U.S. Fish Wildl. Serv., 65(3):606, figs 16B, 18. Holotype: U.S. National Museum of Natural History 188052, 230 mm, immature male. Type Locality: Off mouth of the Amazon River, Brazil, 01°49'N 46°48'W, in about 410 m depth.

**Synonymy :** None.

**FAO Names :** En - Slender catshark; Fr - Holbiche mannequin; Sp - Pejegato menudo.



underside of head

upper and lower teeth

dermal denticles

**Field Marks:** A Schroederichthys with fairly slender body (adults), broad snout and numerous small dark brown spots bordering saddles.

**Diagnostic Features :** Trunk and tail fairly slender in adults but extremely attenuated in young. Snout more broadly rounded; anterior nasal flaps narrow and lobate; mouth relatively broad and wide. Colour pattern of 7 or 8 brown saddles on light brown dorsal surface, with numerous small dark brown spots bordering saddles and scattered between them; no white spots. Adults to at least 70 cm.

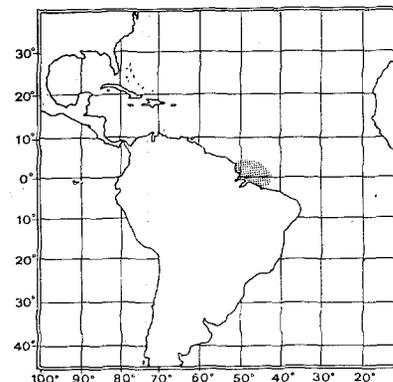
**Geographical Distribution :** Western Atlantic: Brazil (off Amazon River mouth).

**Habitat and Biology :** A little-known deepwater tropical catshark of the upper continental slope, found on or near the bottom at 410 m depth.

**Size :** Maximum 70 cm (adult).

**Interest to Fisheries:** None.

**Literature :** Springer (1966, 1979).



**Scyliorhinus** Blainville, 1816

SCYL Scyl

**Genus :** Subgenus Scyliorhinus Blainville; 1816 (Genus Squalus Linnaeus, 1758), Bull.Soc.Philomat.Paris, 8:121.

**Type Species :** "Scyliorhinus canicula Blainville", by subsequent designation of Gill (1862:407).

**Synonymy :** Subgenus Scyllium Cuvier, 1817 (Genus Squalus Linnaeus, 1758); Genus Scyllium Eichwald, 1819; Subgenus Scyliorhinus Blainville, 1825 (Genus Squalus Linnaeus, 1758); Genus Catulus Smith, 1837 (also Garman, 1913; junior homonym of Catulus Knipphof, 1759 in Insecta); "Pseudogenus" (= Subgenus) Alphascyllium Leigh-Sharpe, 1926 (Genus Scyllium Cuvier; 1817); "Pseudogenus" (= Subgenus) Betascyllium Leigh-Sharpe, 1926 (Genus Scyllium Cuvier, 1817); Genus Scylliorhynchus Nobre, 1935 (error); Genus Scylliorhynchus Nabre, 1935 (error).

**Field Marks :** Scyliorhinids without trilobate, barbeled anterior nasal flaps, labial furrows on lower jaw only, second dorsal much smaller than first.

**Diagnostic Features:** Body not tadpole-shaped, moderately stout to slender and cylindrical or spindle-shaped, tapering considerably to caudal fin; body firm and thick skinned, with well-calcified dermal denticles; stomach not inflatable; tail moderately long, length from vent to lower caudal origin between 3/5 to 3/4 of snout-vent length. Head slightly to moderately depressed, narrowly rounded and not wedge-shaped in lateral view; head short, less than 1/5 of total length in adults; snout short, less than 3/4 of mouth width, thick, and slightly flattened, bluntly pointed in lateral view; snout not expanded laterally, rounded-parabolic in dorsoventral view; ampullar pores not greatly enlarged on snout; nostrils not enlarged to moderately enlarged, with incurrent and excurrent apertures only slightly open to exterior; anterior nasal flaps more or less triangular, sometimes slightly elongated, without a prominent barbel, well separated from each other and ending somewhat anterior to mouth but close together and reaching it in S. canicula; internarial space 0.3 to 0.8 times in nostril width; nasoral grooves usually absent except S. canicula in which broad grooves are present; eyes dorsolateral on head, broad subocular ridges present below eyes; mouth angular or broadly arched, moderately long, with lower symphysis somewhat behind upper so that upper teeth are well-exposed in ventral view (except S. canicula, in which upper teeth are obscured by lower jaw); labial furrows present along lower jaw only, these short to moderately long; vestigial uppers occasionally present; branchial region not greatly enlarged, distance from spiracles to fifth gill slits 1/2 to 2/5 head length; gill slits lateral on head. Two dorsal fins present, with the second considerably smaller than the first; origin of first dorsal varying from over last half of pelvic bases to over pelvic free rear tips; origin of second dorsal over last third of anal base to slightly behind anal insertion; pectoral fins large, their width about as great or considerably greater than mouth width. Inner margins of pelvic fins more or less fused over claspers in adult males, forming a 'apron'; claspers short, relatively thick, and distally pointed or rounded, extending less than half their lengths behind the pelvic fin tips; anal fin moderately large but not greatly elongated, subequal to pelvic and first dorsal fins but much larger than second dorsal, its base length 1.3 to 2.4 times the second dorsal base; origin of anal well behind pelvic bases, and insertion separated from lower caudal origin by a space varying from half as long to slightly longer than the anal base; caudal fin short and fairly broad, between 1/4 to 1/5 to less than 1/5 of total length in adults. No crests of denticles on the caudal margins; supraorbital crests present on cranium. Colour pattern extremely variable, ranging from simple dark saddles, reticulating dark bars, or large dark spots on a light background to combinations of light and dark spots and saddles.

**Remarks :** The arrangement of this genus follows Springer (1979), which in turn follows Springer's earlier treatments of the genus (Springer, 1966; Springer & Sadowsky, 1970).

**Key to Species**

- 1a. Anterior nasal flaps greatly expanded and reaching mouth; shallow nasoral grooves present between nostrils and mouth ..... **S. canicula**
- 1b. Anterior nasal flaps not greatly expanded and falling somewhat anterior to mouth; no nasoral grooves
  - 2a. Colour pattern of black lines in a reticular pattern ..... **S. retifer**
  - 2b. Colour pattern variable, not in form of black lines in a reticular pattern
    - 3a. Colour pattern includes numerous small light spots uniformly distributed on sides and back. Black spots few or absent
      - 4a. A dwarf species, not exceeding 32 cm. Saddles obsolete in adults ..... **S. torrei**
      - 4b. A large species, exceeding 1 m. Saddles well developed in adults ..... **S. capensis**
    - 3b. Colour pattern variable, but with light spots, if present, confined to head, fins, or saddle marks, or combined with dark spots
      - 5a. Saddle marks inconspicuous or masked by spots
        - 6a. Small and large dark and sometimes white spots densely distributed over fins and body ..... **S. stellaris**
        - 6b. Large dark spots sparsely distributed on fins and body
          - 7a. Round dark brown spots on fins and body ..... **S. garmani**
          - 7b. Irregular black spots on fins and body..... **S. besnardi**
      - 5b. Saddle marks conspicuous
        - 8a. Numerous white spots present but confined to saddle marks ..... **S. hesperius**
        - 8b. Usually no white spots, but few and not confined to saddle marks when present
          - 9a. Saddle marks outlined by borders of black spots or broken black lines ..... **S. boa**
          - 9b. Saddle marks not outlined by black spots or lines
            - 10a. Ground colour dark with darker saddles but spots few or absent
              - 11a. Head broad, its width nearly equal to head length. Dorsolateral denticles lanceolate and small, skin not very rough ..... **S. meadi**
              - 11b. Head fairly narrow, width about 3/4 of head length. Dorsolateral denticles tricuspidate and large, skin very rough ..... **S. torazame**
            - 10b. Ground colour light with slightly darker saddles and numerous black spots
              - 12a. Anal base as long as or longer than interdorsal space ..... **S. cervigoni**
              - 12b. Anal base shorter than interdorsal space ..... **S. haeckelii**

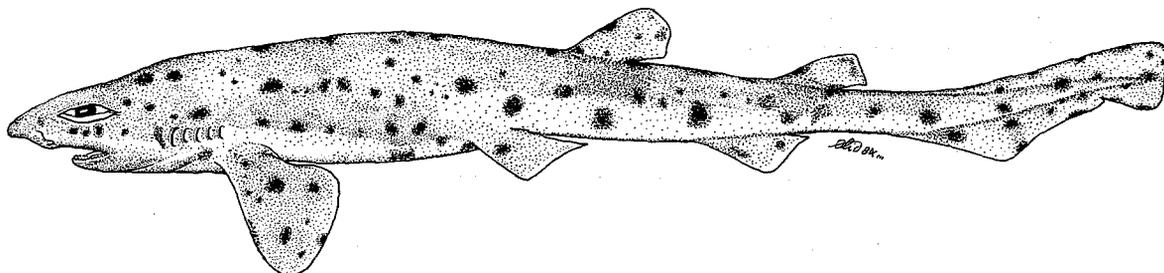
**Scylliorhinus besnardi** Springer & Sadowsky, 1970

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Scylliorhinus retifer besnardi Springer & Sadowsky, 1970, Proc.Biol.Soc.Wash., 83(7):95, fig. 2. Holotype: U.S. National Museum of Natural History, USNM 204376, 385 mm female. Type Locality: 33°26'S, 51°21'W, off Uruguay, western South Atlantic, 190 m depth.

**Synonymy:** None.

**FAO Names :** En - Polkadot catshark; Fr - Roussette polka; Sp - Alitán de lunares.



**Field Marks :** A fairly small and slender catshark with scattered, small to large, wide-spaced round black spots on sides and back but no saddles, with small anterior nasal flaps that end in front of mouth, no nasoral grooves, labial furrows on lower jaw only, and second dorsal fin much smaller than first.

**Diagnostic Features:** Head and body relatively deep, slender and fairly narrow; greatest width of head about 2/3 of head length; no nasoral grooves; anterior nasal flaps not expanded and falling short of mouth. First dorsal origin slightly behind pelvic insertions; second dorsal origin over last half of pelvic bases; interdorsal space greater than anal base. Denticles fairly large and erect, skin relatively rough. Colour pattern of sparse, wide-spaced, nearly round black spots, varying from smaller to much larger than eye pupil, sometimes with light centres; no white spots or prominent saddles. Size apparently small, to 47 cm.

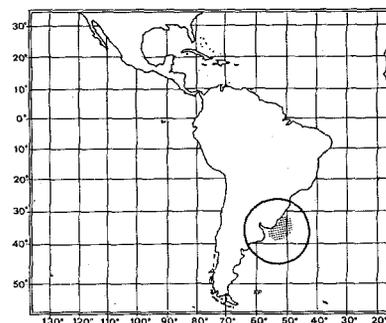
**Geographical Distribution :** Western South Atlantic: Northern Uruguay.

**Habitat and Biology :** A little-known bottom-dwelling shark found on the outer continental shelf at 140 to 190 m depth.

**Size :** Maximum 47 cm (adult males).

**Interest to Fisheries:** None.

**Literature :** Springer & Sadowsky (1970); Springer (1979).



**Scylliorhinus boa** Goode & Bean, 1896

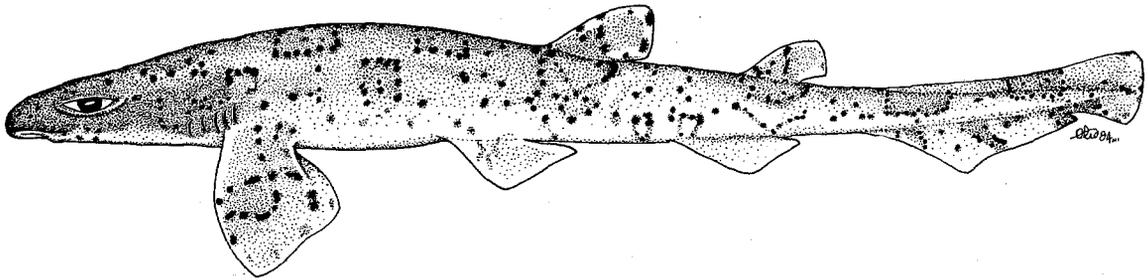
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Scylliorhinus boa Goode & Bean, 1896, Ocean.Ichthyol., Spec.Bull., 2, U.S.Nat.Mus., 17, pl. 2, fig. 6. Holotype: Museum of Comparative Zoology, Harvard, MCZ 1335, 150 mm immature male. Type Locality: Off Barbados, 366 m depth, western North Atlantic.

**Synonymy :** None.

**Other Scientific Names Recently in Use :** Scylliorhinus retifer boa Goode & Bean, 1896 (see Springer & Sadowsky, 1970).

**FAO Names:** En - Boa catshark; Fr - Roussette boa; Sp - Alitán boa.



**Field Marks :** A moderate-sized, fairly slender catshark with rows of small black spots that outline inconspicuous saddle and flank markings but with few or no spots inside the saddles, fairly large and slender, small anterior nasal flaps that do not reach mouth, no nasoral grooves, labial furrows on lower jaw only, second dorsal fin much smaller than first.

**Diagnostic Features:** Head and body relatively deep, slender and narrow; greatest width of head less than 2/3 of head length; no nasoral grooves; anterior nasal flaps not expanded and falling short of mouth. First dorsal origin slightly behind pelvic insertions; second dorsal origin over last half of pelvic bases; interdorsal space greater than anal base. Denticles fairly small, skin not very rough. Colour pattern of numerous small black spots about size of eye pupil or more, forming rectilinear outlines to indistinct grey saddles and flank markings that hardly contrast with the ground colour; spots sometimes forming reticulating rows, but with few or none inside saddle areas; sometimes a few white spots on dorsolateral surface. Size fairly small, to at least 54 cm.

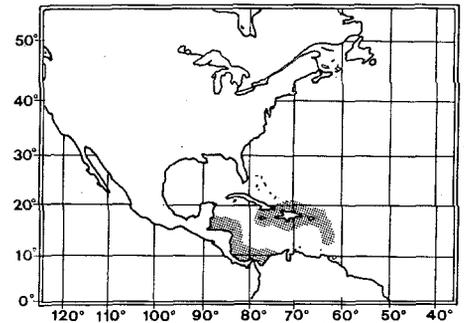
**Geographical Distribution :** Western North Atlantic: Caribbean Slope off Barbados, Lesser Antilles, Hispanola, Jamaica, and the continental slope from Honduras to Colombia.

**Habitat and Biology:** A little-known tropical deepwater catshark of the continental and insular slopes, on or near bottom, at 329 to 676 m depth. Presumably oviparous.

**Size :** Maximum at least 54 cm (adult male).

**Interest to Fisheries :** None at present.

**Literature :** Springer (1966, 1979); Springer & Sadowsky (1970).



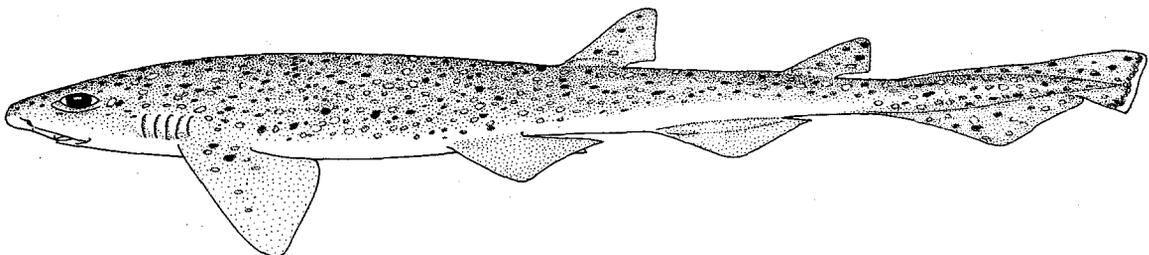
**Scylliorhinus canicula** (Linnaeus, 1758)

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Squalus canicula Linnaeus, 1758, Syst.Nat., ed. 10, 1:234. Holotype: Apparently none. Type Locality: "Habitat in Oceano Europae".

**Synonymy :** Squalus catulus Linnaeus, 1858; Squalus elegans Blainville, 1825; ? Scyllium spinacipellitum Vaillant, 1888; ? Scyllium acutidens Vaillant, 1888; Scylliorhinus canicula var. albomaculata Pietschmann, 1907; Catulus duhamelii Garman, 1913.

**FAO Names:** En - Small-spotted catshark; Fr - Petite roussette; Sp - Pintarroja.



**Field Marks** : A slender, dark-spotted catshark with greatly expanded anterior nasal flaps, reaching mouth and covering shallow nasoral grooves, labial furrows on lower jaw only, second dorsal fin much smaller than first.

**Diagnostic Features** : Head and body relatively deep, slender and narrow; greatest width of head less than 2/3 of head length. Shallow nasoral grooves present between excurrent apertures of nostrils and mouth; anterior nasal flaps broadly expanded medially and posteriorly, nearly meeting each other medially and extending to the mouth. First dorsal origin well behind pelvic insertions; second dorsal origin over anal insertion. Interdorsal space slightly greater than anal base. Denticles small, skin not extremely rough. Colour pattern of numerous small dark spots, usually about size of eye pupil; 8 or 9 dusky saddle marks sometimes present but often obscure or obsolete; scattered white spots sometimes present. Size moderate, to 100 cm.

**Geographical Distribution** : Eastern North Atlantic: Norway and British Isles to Mediterranean, Senegal, ? Ivory Coast.

**Habitat and Biology** : An abundant temperate bottom-dwelling catshark of the European continental shelves and uppermost slopes, on sandy, coralline algal, gravel or mud bottoms at depths from a few metres commonly down to 110 m and exceptionally to 400 m; sometimes occurs in midwater. Young sharks and hatchlings are found in shoaler water than adults, which often occur in unisexual schools. On the spawning grounds adult females show up first in early winter and preponderate in numbers until early spring, when adult males join them. In late summer adults of both sexes move into deep water where mating occurs.

Oviparous, laying eggs one per oviduct at a time. Spawning occurs in shallow water, often in sandy areas; egg-cases are often deposited on algal substrates, mostly subtidally but sometimes in the lower intertidal, and hatch in 5 to 11 months (most in 8 to 9 months). Eggs may be laid all year in shallow water but most are deposited from November to July, with local populations apparently showing differences in deposition time. A single egg is laid per oviduct at a time. Eggs vary in size according to locality and size of female. In Mediterranean waters, with smaller females than the eastern Atlantic, egg-cases are about 4 cm long by 2 cm wide, while sharks off the United Kingdom lay eggs 5 to 7 by 2 to 3 cm.

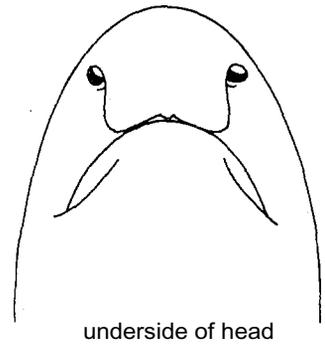
Feeds mostly on molluscs and crustaceans, especially whelks but also other gastropods; scallops, razor clams and other bivalves; small cephalopods; and hermit and swimming crabs, lobsters, slipper lobsters, and shrimp. Also eats polychaete worms. This shark takes a variety of small, mostly bottom-dwelling bony fishes such as gurnards, flatfish, and gobies, but also takes herring and pilchard, small gadoids like whiting and pouting, jacks and mackerel.

**Size** : Maximum recorded about 100 cm (British Isles and North Sea), maximum and size at maturity less in Mediterranean than elsewhere; Mediterranean males mature at 39 cm and reach 60 cm, females mature at 44 cm and reach at least 60 cm; size at hatching 9 to 10 cm.

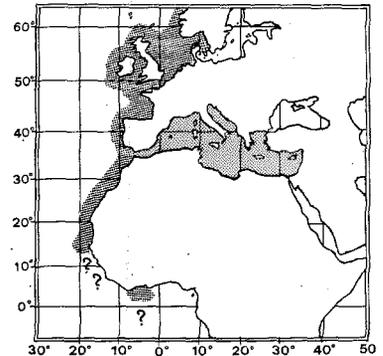
**Interest to Fisheries** : This is a moderately important commercial species in European waters, particularly around the British Isles. It is primarily taken by bottom trawls, but also fixed bottom nets and even pelagic trawls. It is utilized fresh and dried-salted for human consumption, also for oil and fishmeal.

**Literature** : Garman (1913); Tortonese (1956); Cadenat (1957); Wheeler (1969, 1978); Springer (1979); Compagno (1981).

**Remarks** : Several writers have pointed out that eastern Atlantic members of this species are considerably larger than Mediterranean sharks. Garman (1913) even went so far as to name a new species, *Catulus duhameli*, for Mediterranean *canicula*. This is generally not recognized by more recent writers, but still some populational differentiation of this shark apparently exists, which may eventually be expressed as subspecies.



underside of head



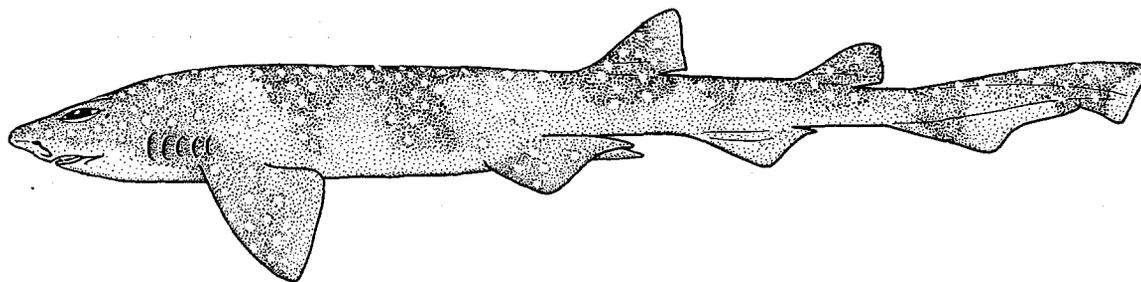
**Scyliorhinus capensis** (Smith, 1838)

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*Scylium capense* Smith, 1837, *Proc.Zool.Soc.Lond.*, 5:85 (*nomen nudum*); Smith, 1838, *Ann.Mag.Nat.Hist.*, 1(1):73 (*nomen nudum*); Smith, in Müller & Henle, 1838, *Syst.Beschr.Plagiost.*, pt. 1:11. Syntypes: Rijksmuseum van Natuurlijke Historie, Leiden, and British Museum (Natural History). Type Locality: Cape of Good Hope, South Africa.

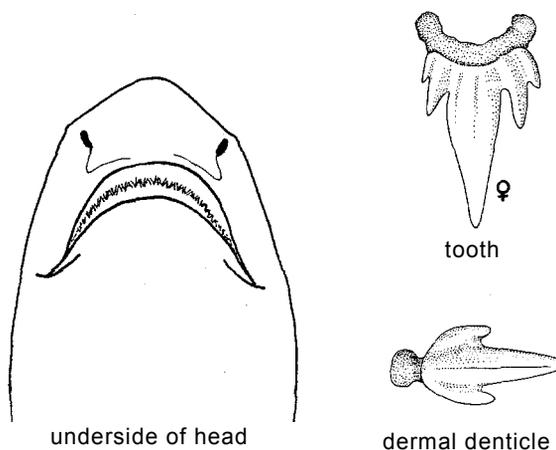
**Synonymy** : None.

**FAO Names:** En - Yellowspotted catshark; Fr - Roussette à taches jaunes; Sp - Alitán de manchas amarillas.



**Field Marks :** A fairly large and slender, bright yellow-spotted and grey-saddled catshark with small anterior nasal flaps that do not reach mouth, no nasoral grooves, labial furrows on lower jaw only, second dorsal fin much smaller than first.

**Diagnostic Features:** Head and body relatively deep, slender and narrow; greatest width of head less than 2/3 of head length; no nasoral grooves; anterior nasal flaps not expanded and falling just short of mouth. First dorsal origin somewhat behind pelvic insertions; second dorsal origin over pelvic insertions; interdorsal space somewhat greater than anal base. Denticles fairly large and erect, skin relatively rough. Colour pattern of numerous small bright yellow spots about size of eye pupil or more; 8 or 9 dusky grey saddle marks on back; no dark spots. Size large, to 1.2 m.



**Geographical Distribution :** Eastern South Atlantic and western Indian Ocean: South Africa (southwestern Cape Province east to Natal).

**Habitat and Biology :** A common inshore to offshore temperate catshark on the Cape coast of South Africa, uncommon to rare northward to Natal; depths recorded from 26 to 420 m, possibly deeper (420 m) off Natal than the south Cape (26 to 290 m) and perhaps showing tropical submergence.

Oviparous, laying one egg per oviduct at a time; egg cases about 8 cm long by 3 cm wide.

Feeds commonly on small bony fishes and crustaceans, also cephalopods.

**Size :** Maximum recorded 122 cm; males maturing between 66 and 78 cm and reaching at least 95 cm; females maturing between 68 and 70 cm and reaching over 85 cm; size at hatching below 30 to 31 cm (size of young with umbilical scars).

**Interest to Fisheries :** None at present, taken by commercial bottom trawls.

**Literature :** Fowler (1941); Smith (1949); Bass, D'Aubrey & Kistnasamy (1975); Springer (1979).

**Remarks:** This species has been recorded from India (Günther, 1870, Day, 1878; based on a stuffed specimen in the British Museum (Natural History)) and Pakistan (Quereshi, 1972). Bass, D'Aubrey & Kistnasamy (1975) noted that Day's (1878, fig. 190, no. 1) illustration of his Indian capensis differs from this species in its colour pattern and first dorsal position, and suggest that the Indian shark is a different (possibly undescribed) species. The writer, in a short trip to India in 1982, was unable to find any Scyliorhinus specimens in collections and in the field, but that hardly means that Indo-Pakistani Scyliorhinus do not exist.

