

Order ORECTOLOBIFORMES

GINGLYMOSTOMATIDAE

Nurse sharks (tawny sharks)

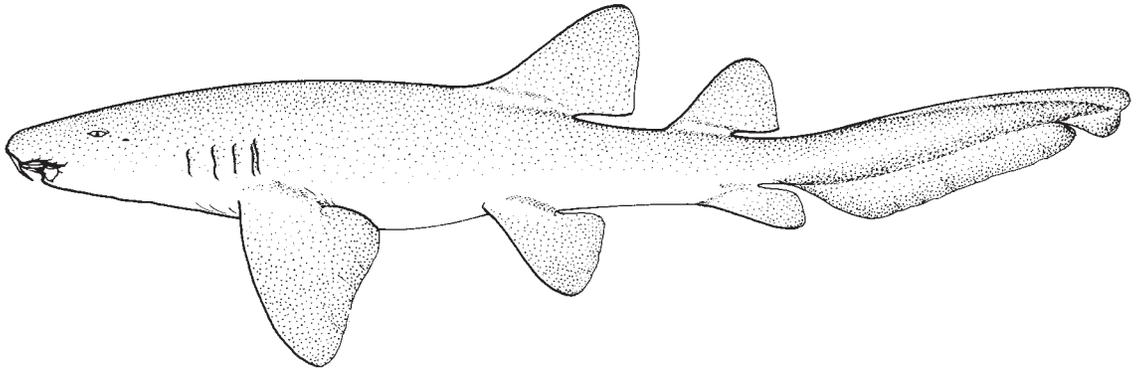
A single species occurring in the area.

Ginglymostoma cirratum (Bonnaterre, 1788)

GNC

Frequent synonyms / misidentifications: None / None.

FAO names: En - Nurse shark; Fr - Requin nourrice; Sp - Gata nodriza.



Diagnostic characters: A large shark. No nictitating lower eyelid; nostrils close to front of snout, **with long barbels and nasoral grooves connecting them with mouth**; snout very short, broad, and bluntly rounded; **mouth short, nearly transverse, and far forward on head, well in front of eyes**; teeth small, poorly differentiated in different regions of the mouth, with short medial cusps and large cusplets on sides of teeth; head with 5 small gill slits, the last 2 behind pectoral-fin origins and very close to each other; no gill rakers. Two dorsal fins, the base of the first dorsal fin over pelvic-fin bases, the second dorsal fin about 1/2 to 2/3 the size of first dorsal fin; anal fin present; caudal fin much less than half the total length, strongly asymmetrical, with a pronounced subterminal notch but with ventral lobe hardly developed. Caudal peduncle not strongly depressed, without keels; no precaudal pits. Intestinal valve of ring type. **Colour:** back yellow, yellow-green, or reddish brown, underside yellowish, dark spots and dorsal saddles in young.

Similar families occurring in the area

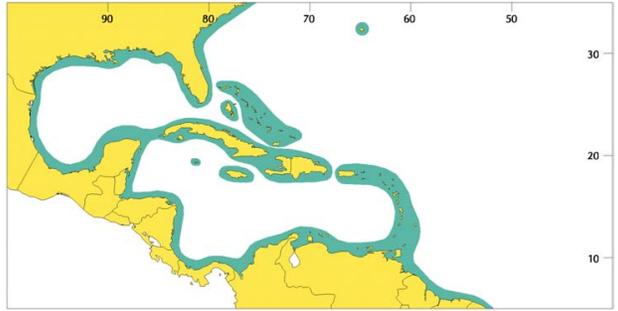
The combination of characters including nasoral grooves, barbels, anterior mouth, posterior portion of first dorsal fin, absence of caudal keels and precaudal pits, and asymmetrical caudal fin readily distinguishes this shark from all others in Area 31.

Size: Maximum total length said to be 430 cm but most less than 300 cm; size at birth about 27 to 29 cm; males maturing at about 210 cm and females maturing mostly between 230 and 240 cm.

Habitat, biology, and fisheries: Very common or formerly common inshore in waters from the intertidal down to 130 m. Found around mangrove keys, on rocky and coral reefs, and on sand flats. A sluggish social, nocturnal bottom dweller, sometimes seen mating in shallow water. Rests in favoured caves and crevices during the day and returns to these shelters repeatedly after feeding during the night. Ovoviviparous, with litters of 20 to 30 young. Feeds mostly on bottom invertebrates, including shrimps, crabs, lobsters, squid, octopi, sea urchins, marine snails, and bivalves, but also a variety of small bottom and pelagic bony fishes and occasionally stingrays. Fished in inshore waters throughout its range. Separate statistics for this species are not reported to FAO except by the USA, which reported 214 t caught in 1995. Caught on handlines, on longline gear, in gill nets, in fixed bottom nets, and bottom trawls, and also speared and caught with rod-and-reel. Meat marketed fresh or salted; the extremely thick and tough hides are used for leather; and the livers are used for liver oil. Normally inoffensive and permitting close approaches by divers, but may bite if provoked and sometimes bites without provocation. A popular shark for ecotouristic viewing by divers in the area, particularly in the Bahamas but also Belize, Turks and Caicos, and off Florida, USA. Kept for public display in many aquaria, and by private aquarists; important for the commercial aquarium trade. The nurse shark is vulnerable to overexploitation because of its shallow habitat, ready access to fisheries, and slow maturation (matures at 10 to 20 years old). It

may be declining in some parts of Area 31 due to overfishing, and needs protection particularly in breeding areas. Overfishing of this shark may be short-sighted as it probably is far more valuable live for ecotouristic diving than as fisheries products.

Distribution: Throughout the area including Bermuda and the Bahamas, extending northward to Rhode Island, USA (rare), and southward to southern Brazil including the Gulf of Mexico and the Caribbean Sea. Also found in the eastern Atlantic from France, Senegal and the Cape Verde Islands south to Gabon, and in the eastern Pacific from the Gulf of California to Peru.



References

- Bigelow, H. B. and W. C. Schroeder. 1948. Sharks. *In* *Fishes of the Western North Atlantic. Mem. Sears Found. Mar. Res.*, (1)1:56-576.
- Cadenat, J. and J. Blache. 1981. Requins de Méditerranée et d'Atlantique (plus particulièrement de la Côte Occidentale d'Afrique). *Ed. OSTROM, Faune Tropicale*, (21):330 p.
- Carrier, J. C. 1990. Growth and aging: Life history studies of the nurse shark. *In* S. H. Gruber, ed., *Discovering sharks. A volume honoring the work of Stewart Springer. Underw. Nat., Bull. American Littor. Soc.*, 19-20(4/1):68-69.
- Carrier, J. C., H. L. Pratt, Jr., and L. K. Martin. 1994. Group reproductive behaviors in free-living nurse sharks, *Ginglymostoma cirratum*. *Copeia*, 1994(3):646-656.
- Compagno, L. J. V. 1978. Ginglymostomatidae. *In* *FAO species identification sheets for fisheries purposes. Western Central Atlantic, Fishing Area 31 Volume V*, edited by W. Fischer. Rome, FAO (unpaginated).
- Compagno, L. J. V. 1984. FAO Species Catalogue. Vol. 4, Sharks of the World. An annotated and illustrated catalogue of shark species known to date. *FAO Fish. Synop.* (125) Vol.4,Pt.1:249 p.
- McEachran, J.D. and J. D. Fechhelm. 1998. *Fishes of the Gulf of Mexico, vol. 1, Myxiniiformes to Gasterosteiformes*. Austin, Texas, University of Texas Press, 1112 p.

RHINCODONTIDAE

Whale sharks

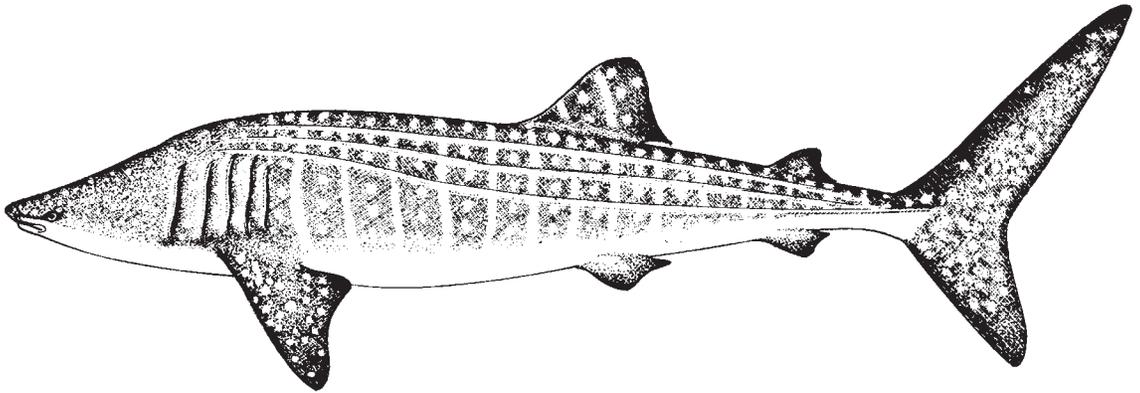
A single species in this family.

Rhincodon typus Smith, 1828

RHN

Frequent synonyms / misidentifications: *Rhiniodon typus* Smith, 1828 / None.

FAO names: En - Whale shark; Fr - Requin baleine; Sp - Tiburón ballena.



Diagnostic characters: A very large shark with cylindrical or moderately depressed body. **Head very broad and flattened**, with 5 large gill slits, posterior 3 over pectoral-fin bases; no dermal denticle or papillose gill rakers but **filter grids of transverse bars and lobes across the internal gill slits**; spiracles much smaller than eyes; nostrils with short, quadrate anterior nasal flaps, **minute barbels, and shallow nasoral grooves**; no nictitating eyelids; **snout extremely short, truncated**; mouth nearly subterminal, very wide, **transverse on front of head** and short, not reaching backward to eyes; **teeth very small and extremely numerous**, similar in both jaws, not blade-like and **with hooked cusps**. Two dorsal fins, the first with rear 1/3 of base over pelvic-fin bases, the second less than half the size of first; anal fin present; **caudal fin asymmetrical, crescentic, with a strong lower lobe but no subterminal notch**; caudal fin much less than half total length. Caudal peduncle depressed, **with a strong keel on each side continuing forward onto the back and over the gill slits as a low ridge and flanked by 2 additional ridges above it**; upper precaudal pit present. Supraorbital crests present on cranium, these laterally expanded. Valvular intestine of ring type. **Colour:** dark grey, reddish, or greenish grey above, **with white or yellow spots and transverse stripes**; white or yellowish below.

Similar families occurring in the area

The combination of characters such as the truncated snout, the transverse mouth in front of eyes, the numerous small teeth, the lateral ridges, the precaudal keels, and the colour pattern distinguishes the whale shark from all other sharks in the area.

Size: Maximum total length to at least 12 to 18 m; possibly to 21.4 m.

Habitat, biology, and fisheries: This huge pelagic filter feeder occurs singly or in schools, often at or near the surface, near shore or on the open sea. Normally ovoviviparous and occasionally oviparous, females found with about 300 young inside but young in large, football-sized cases have been found on the substrate. Feeds on small pelagic crustaceans, schooling fishes including anchovies, sardines, and even albacores, and squids. Often seen in a vertical position with head at or near the surface when feeding. Harmless and permitting close approach by divers; rarely butting small boats, possibly when excited by fish hooked from the boats, but more often struck by ships while basking at the surface. Taken only incidentally in the area, but of growing interest for targeted fisheries because of a major market for its flesh in the Orient. Captured as bycatch in floating gill nets, in fixed fish traps, sometimes in trawls, and often fished by harpoon; flesh utilized dried-salted and fresh for human consumption; liver processed for oil; fins for the oriental-fin trade; other parts probably also

used for fish meal and for human consumption. This shark is an increasingly popular subject of ecotouristic shark diving in the Indo-Pacific because it migrates close inshore, concentrates off reefs to feed during part of the year, and is readily accessible to touristic divers. This shark is listed on the IUCN Red List of Threatened Animals (data deficient) and was recently protected in the Philippines after targeted fisheries caused its depletion. It is also protected off Honduras and the USA.

Distribution: Circumglobal in all tropical and warm-temperate seas, oceanic and coastal. Widespread in Area 31.



References

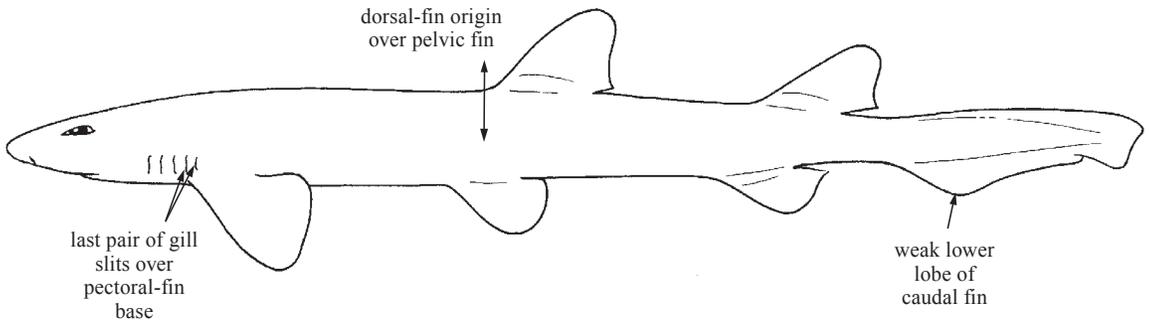
- Bigelow, H.B. and W.C. Schroeder. 1948. Sharks. In *Fishes of the Western North Atlantic. Mem. Sears Found. Mar. Res.* (1):1:56-576.
- Compagno, L.J. 1984. FAO Species Catalogue. Vol. 4, Sharks of the World. An annotated and illustrated catalogue of shark species known to date. *FAO Fisheries Synopsis*, (125) Vol.4Pt.1:249p.
- McEachran, J.D. and J.D. Fechehelm. 1998. *Fishes of the Gulf of Mexico, vol. 1, Myxiniiformes to Gasterosteiformes*. Austin, Texas, University of Texas Press, 1112 p.
- Wolfson, F.H. 1986. Occurrences of the whale shark, *Rhinodon typus* Smith. *Proc. 2nd. Int. Conf. Indo-Pacific Fishes*, 1986: 208-226.
- Wolfson, F.H. and G. Notarbartolo di Sciara. 1981. The whale shark, *Rhinodon typus* Smith, 1828: an annotated bibliography (Selachii Rhinodontidae). *Atti Soc. Ital. Sci. Nat. Museo Civ. Stor. Nat. Milano*, 122 (3-4):171-203.

Order CARCHARHINIFORMES

SCYLIORHINIDAE

Catsharks

Diagnostic characters: Small sharks with slender and elongated to moderately stout bodies. Head with 5 gill slits, the last 2 posterior to pectoral-fin origins; gill arches with or without small papillose rakers; nostrils with or without barbels and lacking deep nasoral or circumnarial grooves; eyes horizontally oval, elongated, with weakly differentiated nictitating lower eyelids delimited below by a variably developed subocular pouch; mouth moderately large, with rear corners behind front margins of eyes; labial furrows present or absent (present in species from the area); teeth very small, numerous, teeth near the centre of the mouth with a single medial cusp and usually 1 or more cusplets on each side, the rear teeth often comb-like. Two dorsal fins, the first dorsal fin originating over or posterior to pelvic-fin bases, the second dorsal fin smaller, as large, or larger than first dorsal fin, but never greatly reduced; anal fin usually considerably longer than second dorsal fin, and originating in advance of the second dorsal-fin origin; caudal fin strongly asymmetrical, with a subterminal notch, its lower lobe absent or only weakly indicated, its upper edge unrippled, sometimes with a denticulated crest; ventral caudal lobe usually weak or absent. Caudal peduncle not flattened dorso-ventrally, without lateral keels or precaudal pits. Intestine with a cork-screw-shaped spiral valve, with 5 to 22 turns. **Colour:** grey, brown, yellowish, or black, often with light or dark spots and dark blotches, bars, and saddles.



Habitat, biology, and fisheries: This is by far the largest family of sharks, with small to moderate-sized species (rarely surpassing 100 cm total length) from tropical and temperate latitudes. Catsharks range from the intertidal to depths greater than 2 000 m on continental or insular slopes, but in Area 31 they are mostly found on the continental slopes between 200 and 1 600 m (with a few *Scyliorhinus* species ranging on the continental shelves up to 37 m). They are generally poor swimmers and do not migrate over great distances. Most species live on or near the bottom. Reproduction usually oviparous (egg-laying), but ovoviviparous in a few species. These sharks feed chiefly on invertebrates and small fishes. Catsharks are not known to be utilized in Area 31, although they may be a minor bycatch of large, deep-fishing offshore trawlers. Elsewhere some species are moderately common and are regularly taken as bycatch in trawl fisheries, and are used for meat, fish meal and oil. Some catsharks are caught by sport anglers or viewed by ecotouristic divers, but not in Area 31. Some species of catsharks including *Scyliorhinus retifer* are hardy and are kept in public and private aquaria.

Similar families occurring in the area

The catsharks are easily distinguished from superficially similar families of sharks by the combination of characters such as their small size, the location of the last 2 gill slits behind the pectoral-fin origins, the posterior position of the first dorsal fin, the comparatively large anal fin, the strongly asymmetrical caudal fin, the absence of keels or precaudal pits on the caudal peduncle, and the presence of a spiral intestinal valve.

Key to the species of Scyliorhinidae occurring in the area

- 1a. Supraorbital crests present on cranium above eyes (Fig. 1a) → 2
- 1b. Supraorbital crest absent from cranium (Fig. 1b) → 9

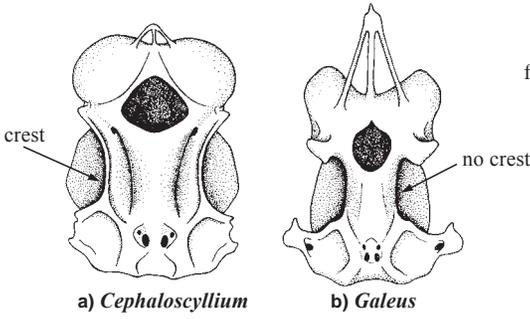


Fig. 1 cranium (dorsal view)

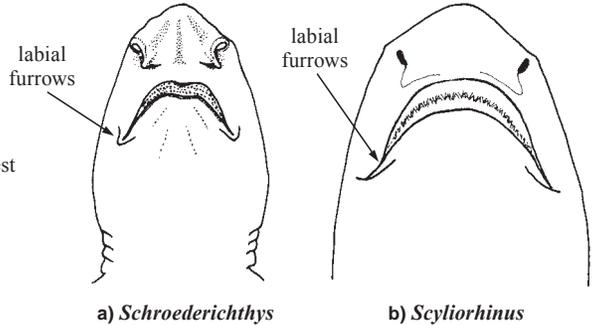


Fig. 2 ventral view of head

- 2a. Second dorsal fin about as large as first; labial furrows present on both jaws (Fig. 2a, 3) (*Schroederichthys*) → 3
- 2b. Second dorsal fin considerably smaller than first; lower labial furrows present, uppers absent (Fig. 2b, 4). (*Scyliorhinus*) → 4

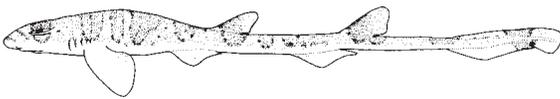


Fig. 3 *Schroederichthys tenuis*

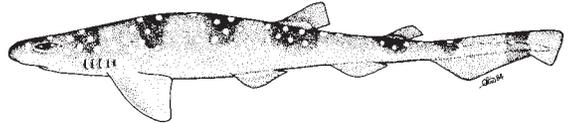
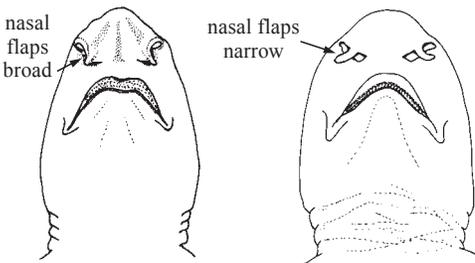


Fig. 4 *Scyliorhinus torrei*

- 3a. Anterior nasal flaps broad and triangular (Fig. 5a); dorsal saddles weakly defined on back, no dark spots; body covered with small white spots *Schroederichthys maculatus*
- 3b. Anterior nasal flaps narrow and lobate (Fig. 5b); dorsal saddles strongly marked and outlined by numerous dark spots; body usually without white spots. *Schroederichthys tenuis*



a) *Schroederichthys maculatus* b) *Schroederichthys tenuis*

Fig. 5 ventral view of head

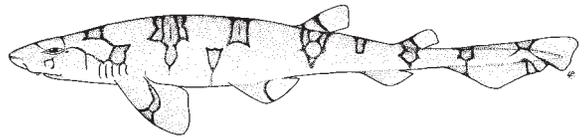


Fig. 6 *Scyliorhinus retifer*

- 4a. Colour pattern of black lines in a reticular pattern (Fig. 6) *Scyliorhinus retifer*
- 4b. Colour pattern variable, but not formed as reticular black lines → 5
- 5a. Numerous white spots present on back → 6
- 5b. Usually no light spots, or few. → 7

- 6a. Dark saddle marks not conspicuous, white spots scattered on back (Fig. 7) *Scyliorhinus torrei*
- 6b. Dark saddle marks conspicuous, white spots confined to saddle marks (Fig. 8)
 *Scyliorhinus hesperius*

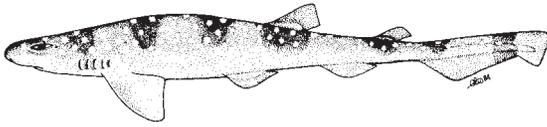


Fig. 7 *Scyliorhinus torrei*

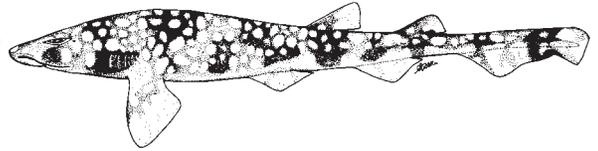


Fig. 8 *Scyliorhinus hesperius*

- 7a. Dark saddle marks outlined by borders of black spots or broken black lines (Fig. 9) *Scyliorhinus boa*
- 7b. Dark saddle marks not outlined by black spots or lines → 8



Fig. 9 *Scyliorhinus boa*

- 8a. Ground colour light with slightly darker saddle and numerous black spots (Fig. 10)
 *Scyliorhinus haeckelii*
- 8b. Ground colour dark with darker saddles but dark spots few or absent (Fig. 11) . . . *Scyliorhinus meadi*

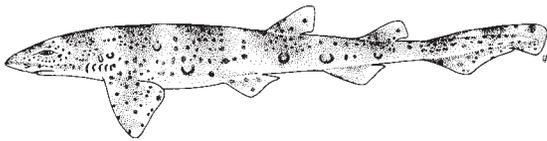


Fig. 10 *Scyliorhinus haeckelii*

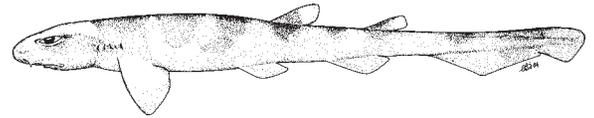


Fig. 11 *Scyliorhinus meadi*

- 9a. Head moderately or little-flattened, not spatulate, snout equal or usually less than mouth width; labial furrows shorter, not reaching upper symphysis (Fig. 12a, b) → 10
- 9b. Head broadly flattened and spatulate, snout elongated and usually greater than mouth width; labial furrows very long, uppers reaching upper symphysis (Fig. 12c) (*Apristurus*) → 14

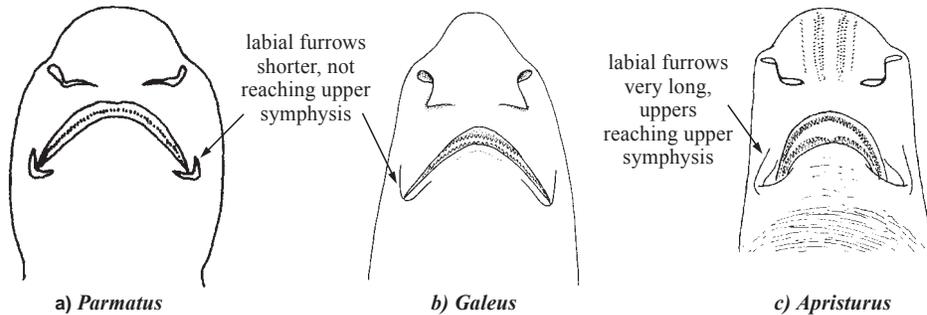


Fig. 12 ventral view of head

- 10a. Pectoral fins relatively small, width of their posterior margins usually smaller than mouth width; subocular ridges well-developed, eyes dorsolateral; body soft; colour plain, no pattern (Fig. 13)
 *Parmaturus campechensis*
- 10b. Pectoral fins relatively large, width of their posterior margins usually larger than mouth width; subocular ridges obsolete or nearly so, eyes lateral; body firm; colour pattern of blotches and spots often present (*Galeus*) → 11

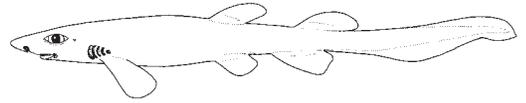


Fig. 13 *Parmaturus campechensis*

- 11a. Subcaudal crest present on ventral caudal margin; dorsolateral surface of body with longitudinal striped pattern (Fig. 14) *Galeus springeri*
- 11b. Subcaudal crest absent from ventral caudal margin; dorsolateral surface of body with marbled pattern of spots and saddles → 12

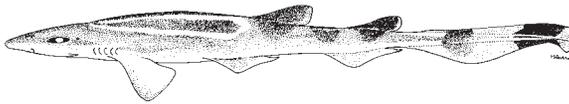


Fig. 14 *Galeus springeri*

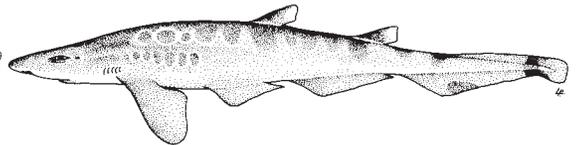


Fig. 15 *Galeus cadenati*

- 12a. Anal fin elongated, length of base usually equal or greater than 13% total length in males and 14% in females (Fig. 15) *Galeus cadenati*
- 12b. Anal fin shorter, length of base usually less than 14% total length → 13

- 13a. Usually 38 to 43 (mean 40.5) diplospondylous precaudal vertebrae; size smaller, mature at 27 to 33 cm (Fig. 16) *Galeus arae*
- 13b. Usually 41 to 48 (mean 44.1) diplospondylous precaudal vertebrae; size larger, mature at 33 to 46 cm (Fig. 17) *Galeus antillensis*

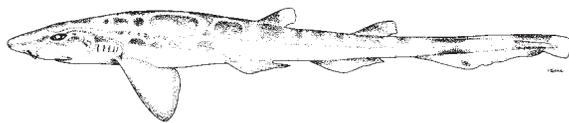


Fig. 16 *Galeus arae*

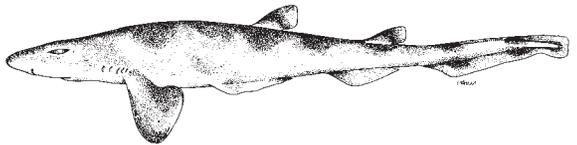


Fig. 17 *Galeus antillensis*

- 14a. First dorsal fin nearly or quite as large as second, 2/3 to equal its area, with its origin usually about opposite pelvic-fin midbases but more posterior and about opposite last third or fourth of pelvic-fin bases in a few species → 15
- 14b. First dorsal fin much smaller than second, about half its area or less, with its origin usually behind pelvic-fin insertions but over last fourth of pelvic-fin bases in some species → 16

- 15a. Caudal fin without a crest of enlarged denticles (Fig. 18) *Apristurus laurussonii*
 15b. Caudal fin with a crest of enlarged denticles (Fig. 19) *Apristurus profundorum*

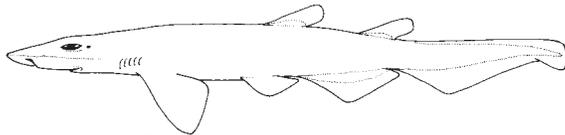


Fig. 18 *Apristurus laurussonii*

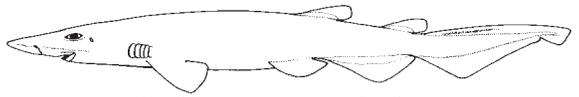


Fig. 19 *Apristurus profundorum*

- 16a. Origin of first dorsal fin somewhat in front of pelvic-fin insertions (Fig. 20) *Apristurus riveri*

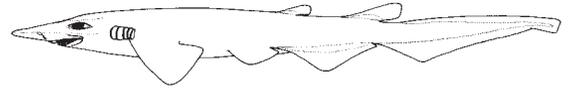


Fig. 20 *Apristurus riveri*

- 16b. Origin of first dorsal fin behind pelvic-fin insertions → 17

- 17a. Distance between pectoral and pelvic bases short, 6 to 9% of total length; anal-fin base 2.5 to 3 times fin height *Apristurus canutus*

- 17b. Distance between pectoral and pelvic bases longer, 10 to 14% of total length; anal-fin base 4 to 5 times fin height *Apristurus parvipinnis*

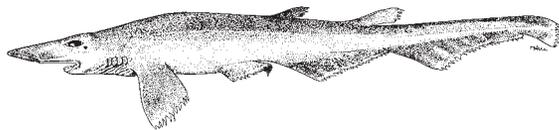


Fig. 21 *Apristurus canutus*

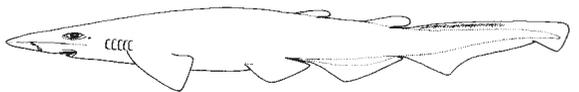


Fig. 22 *Apristurus parvipinnis*

List of species occurring in the area

The symbol  is given when species accounts are included.

-  *Apristurus canutus* Springer and Heemstra, in Springer, 1979.
-  *Apristurus laurussonii* (Saemundsson, 1922).
-  *Apristurus parvipinnis* Springer and Heemstra, in Springer, 1979.
-  *Apristurus profundorum* (Goode and Bean, 1896).
-  *Apristurus riveri* Bigelow and Schroeder, 1944.
-  *Galeus antillensis* Springer, 1979.
-  *Galeus arae* (Nichols, 1927).
-  *Galeus cadenati* Springer, 1966.
-  *Galeus springeri* Konstantinou and Cozzi, 1998.
-  *Parmaturus campechiensis* Springer, 1979.
-  *Schroederichthys maculatus* Springer, 1966.
-  *Schroederichthys tenuis* Springer, 1966.
-  *Scyliorhinus boa* Goode and Bean, 1896.
-  *Scyliorhinus haeckelii* (Mirando-Ribeiro, 1907).
-  *Scyliorhinus hesperius* Springer, 1966.
-  *Scyliorhinus meadi* Springer, 1966.
-  *Scyliorhinus retifer* (Garman, 1881).
-  *Scyliorhinus torrei* Howell Rivero, 1936.

References

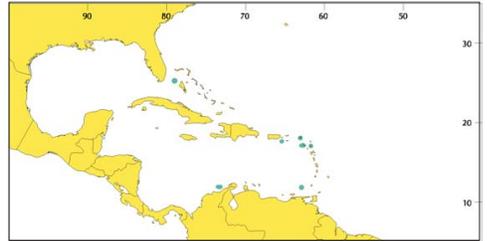
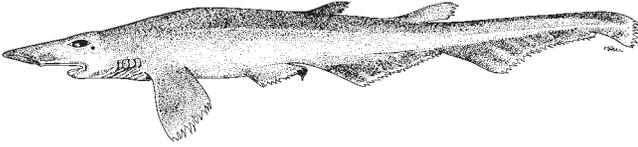
- Bigelow, H.B. and W.C. Schroeder. 1948. Sharks. In *Fishes of the Western North Atlantic. Mem. Sears Fnd. Mar. Res.*, (1)1:56-576.
- Compagno, L.J.V. 1978. Sharks. In *FAO species identification sheets for fisheries purposes. Western Central Atlantic, (Fishing Area 31)*, edited by W. Fischer. Vol. 5. Rome, FAO (unpaginated).
- Compagno, L.J.V. 1984. FAO Species Catalogue. Vol. 4, Sharks of the World. An annotated and illustrated catalogue of shark species known to date. *FAO Fish. Synop.*, (125)Vol.4Pt.2:251-655.
- Compagno, L. J. V. 1988. *Sharks of the Order Carcharhiniformes*. Princeton, New Jersey, Princeton University Press, 572p.
- Konstantinou, H. and J.R. Cozzi. 1998. *Galeus springeri*, a new species of sawtail catshark from the Caribbean Sea (Chondrichthyes, Scyliorhinidae). *Copeia*, (1):151-158.
- Konstantinou, H., J.D. McEachran, and J.B. Woolley. 2000. The systematics and reproductive biology of the *Galeus arae* subspecific complex (Chondrichthyes, Scyliorhinidae). *Env. Biol. Fishes*, 57(2):117-129.
- Soto, J.M.R. 2001. *Galeus minicaronei* sp. nov. (Carcharhiniformes: Scyliorhinidae), a new species of sawtail catshark from southern Brazil. *Mare Magnum*, 1(1):11-18.
- Soto, J.M.R. 2001. *Schroederichthys saurisqualus* sp. nov. (Carcharhiniformes: Scyliorhinidae), a new species of catshark from southern Brazil, with further data on *Schroederichthys* species. *Mare Magnum*, 1(1):37-50.
- Springer, S. 1966. A review of Western Atlantic cat sharks, Scyliorhinidae, with descriptions of a new genus and five new species. *Fish. Bull.*, 65:581-624.
- Springer, S. 1979. A revision of the catsharks, family Scyliorhinidae. NOAA Tech. Rep., *NMFS Circ.*, (422):1-152.

Apristurus canutus Springer and Heemstra, 1979

CSA

En - Hoary catshark; **Fr** - Holbiche grise; **Sp** - Pejegato cano.

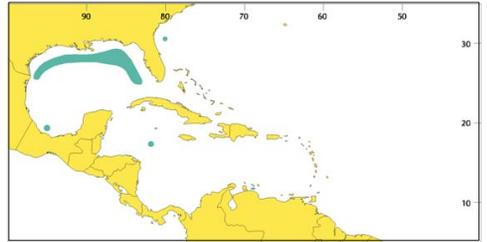
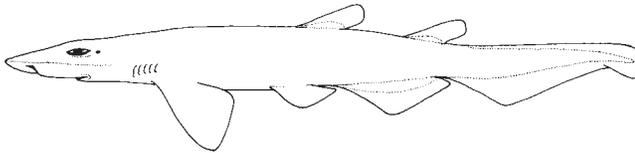
Maximum total length to 46 cm. Occurs on the upper and middle continental slopes on or near the bottom at 521 to 915 m. Biology essentially unknown. As presently known confined to the area from near Cay Sal Bank, Straits of Florida, Leeward Islands off Antigua and Anguilla, west of the Virgin Islands, Netherlands Antilles, Caribbean coast of Colombia, and Venezuela.

*Apristurus laurussonii* (Saemundsson, 1922)

APQ

En - Iceland catshark; **Fr** - Roussette d'Islande; **Sp** - Pejegato islándico.

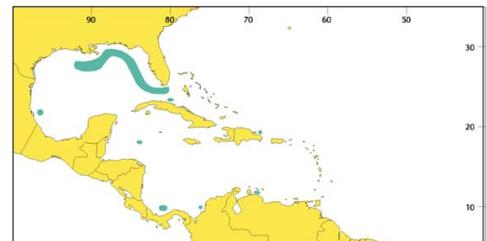
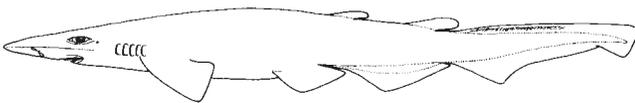
Maximum total length to 68 cm. Occurs on the upper and middle continental slopes on or near the bottom at 560 to 1 464 m. Biology essentially unknown, relatively common. Western Atlantic, Massachusetts, Delaware, and northern Gulf of Mexico, USA (Florida, Louisiana, Mississippi, Alabama, Texas), Mexico, Honduras, and Venezuela. Eastern North Atlantic, Iceland, southwestern Ireland, Canary Islands, Madeira, nominal from Indian Ocean seamounts.

*Apristurus parvipinnis* Springer and Heemstra, 1979

APK

En - Smallfin catshark; **Fr** - Holbiche petites ailes; **Sp** - Pejegato mocho.

Maximum total length to at least 52 cm. Occurs on the upper and middle continental slopes on or near the bottom at 622 to 1 135 m. Biology essentially unknown, relatively common. As presently known possibly confined to the area, to USA (northeastern Gulf of Mexico off Florida, Texas, Louisiana, Mississippi, Alabama), Mexico (Gulf of Campeche), Honduras, Caribbean Panama and Colombia, Suriname, and off French Guiana. Nominal records from Indian Ocean are of uncertain validity.

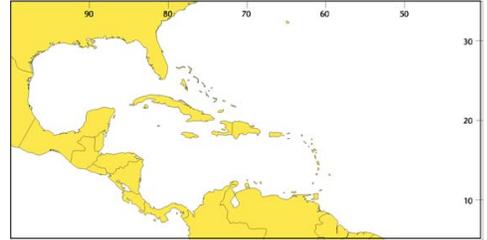
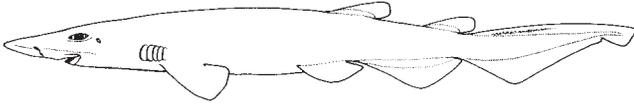


Apristurus profundorum (Goode and Bean, 1896)

APP

En - Deepwater catshark; **Fr** - Holbiche papoila; **Sp** - Pejegato abisal.

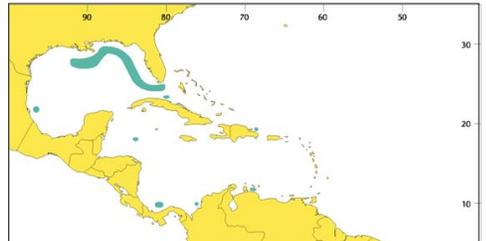
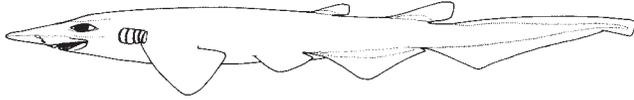
Maximum total length to at least 51 cm. Occurs on the continental slopes on or near the bottom at 1 300 to 1 600 m. Biology essentially unknown. Interest to fisheries none at present. Peripheral to the area off Delaware Bay, possibly in eastern Atlantic. Nominal records from Indian Ocean of uncertain validity.

***Apristurus riveri*** Bigelow and Schroeder, 1944

CSV

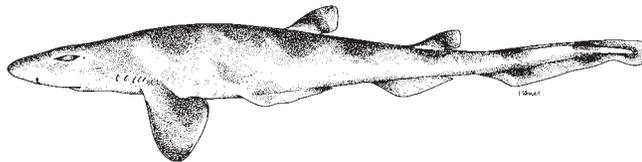
En - Broadgill catshark; **Fr** - Holbiche grandes oreilles; **Sp** - Pejegato agallón.

Maximum total length to 46 cm. Occurs on the upper and middle continental slopes on or near the bottom at 732 to 1 461 m. Development oviparous. Interest to fisheries none at present. Confined to the area, off Cuba, the northern Gulf of Mexico off the USA (Florida, Mississippi, Alabama), Mexico, Honduras, Panama, Colombia, Venezuela, and Dominican Republic.

***Galeus antillensis*** Springer, 1979

En - Antilles sawtail catshark.

Maximum total length about 46 cm. Occurs on the upper insular slopes on or near the bottom at 293 to 658 m. Reproduction oviparous. No known fisheries at present. Endemic to Area 31, in the Straits of Florida and the Caribbean from Hispaniola, Puerto Rico, Jamaica, and many of the Leeward Islands of the Caribbean southward to Martinique. Originally proposed as a subspecies of *G. arae*, but apparently a separate species.

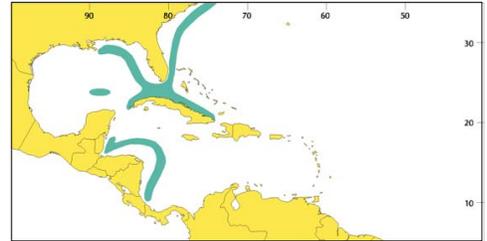
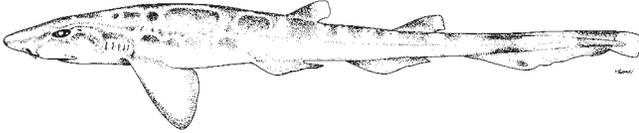


Galeus arae (Nichols, 1927)

GAA

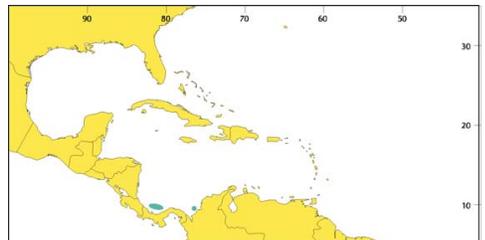
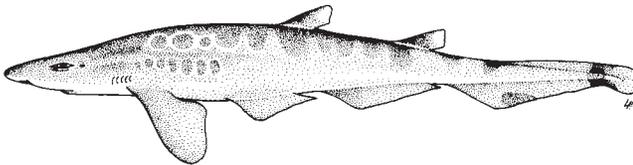
En - Roughtail catshark (AFS: Marbled cat shark); **Fr** - Chien à queue rude; **Sp** - Pintarroja rabolija.

Maximum total length about 36 cm. A common small deep-water shark. Occurs on the upper continental and insular slopes on or near bottom at 292 to 732 m. Reproduction oviparous, eats mostly deep-water shrimp. No known fisheries at present, probably discarded bycatch of deep-water demersal fisheries. Virtually confined to Area 31, with two separate populations: a northern one from the Atlantic and Gulf of Mexico coasts of the USA (North Carolina to Florida and the Mississippi Delta), Mexico (northern Yucatán), and the northern Coast of Cuba; and a southern one from the Caribbean coast off Belize, Honduras, Nicaragua, Costa Rica, and adjacent islands.

***Galeus cadenati*** Springer, 1966

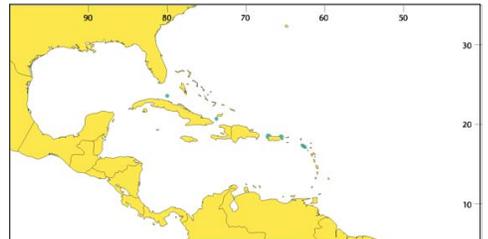
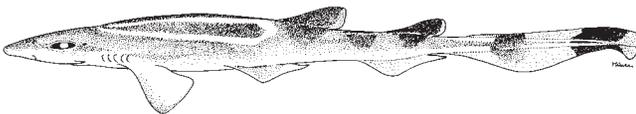
En - Longfin sawtail catshark.

Maximum about 35 cm. Occurs on the upper continental slopes on or near bottom at 439 to 548 m. Biology little-known, reproduction oviparous. No known fisheries at present, possibly discarded bycatch of deepwater demersal fisheries. Only known from Area 31, off the Caribbean coasts of Panama and Colombia. Sometimes ranked as a subspecies of *G. arae*, but apparently a separate species.

***Galeus springeri*** Konstantinou and Cozzi, 1998

En - Striped sawtail catshark.

Maximum total length about 44 cm. Occurs on the upper continental slopes on or near the bottom at 457 to 699 m. Biology little-known, reproduction oviparous. No known fisheries at present. Only known from the area, from the northern coast of Cuba, Bahamas, Puerto Rico, and the Leeward Islands. Formerly identified as *G. arae* or *G. antillensis*, but apparently a separate species.

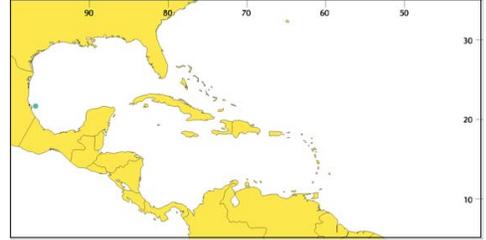
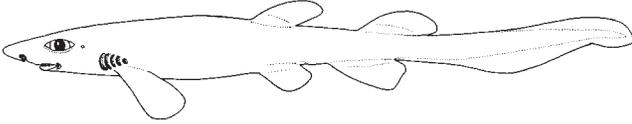


Parmaturus campechiensis Springer, 1979

PAH

En - Campeche catshark; **Fr** - Holbiche campêchoise; **Sp** - Pejegato campechano.

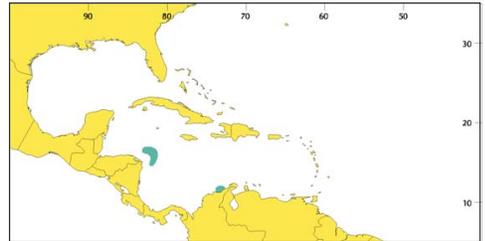
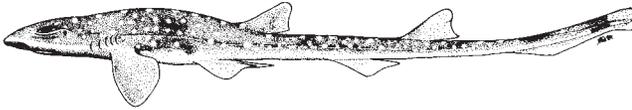
Maximum total length at least 16 cm and probably larger. Occurs on the middle slope at 1 097 m depth. Biology unknown. Interest to fisheries none at present. Confined to the area, off Mexico in the Bay of Campeche, Gulf of Mexico.

***Schroederichthys maculatus*** Springer, 1966

SHU

En - Narrowtail catshark; **Fr** - Holbiche petite queue; **Sp** - Pejegato rabo fino.

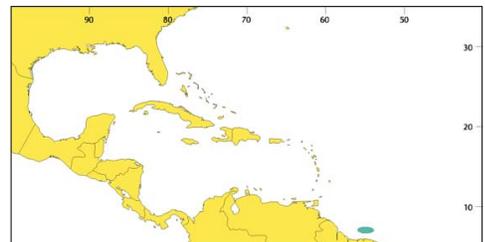
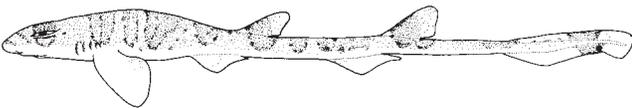
Maximum total length 34 cm. Occurs on the outer shelf and upper slope at 190 to 410 m depth. Reproduction oviparous, feeds on small bony fishes and cephalopods. Interest to fisheries none at present. Confined to the area, off Honduras and Nicaragua.

***Schroederichthys tenuis*** Springer, 1966

SHN

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

Maximum total length 43 cm. Occurs on the outer shelf and upper slope at 72 to 450 m depth. Development oviparous, feeds on small bony fishes, possibly other small sharks, crustaceans, cephalopods, gastropods, sponges, cephalopods, and foraminifera. Interest to fisheries none at present. Western Atlantic, Suriname, and north-central Brazil.

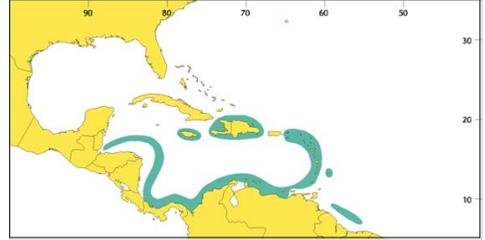
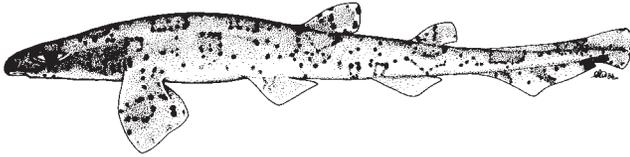


Scyliorhinus boa Goode and Bean, 1896

SYA

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

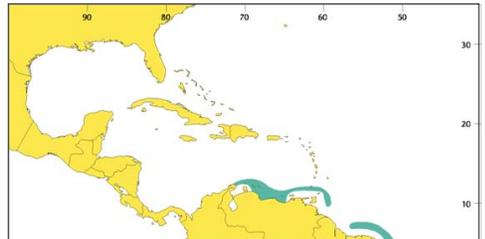
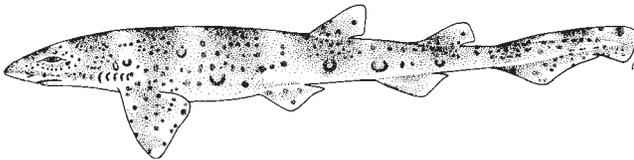
Maximum total length at least 54 cm. Occurs on the upper continental and insular slopes on or near the bottom at 229 to 676 m. Biology little-known. Interest to fisheries none. Caribbean off Barbados, Hispanola, Jamaica, Leeward Islands, Windward Islands, Nicaragua, Honduras, Panama, Colombia, Venezuela, Suriname.

***Scyliorhinus haeckelii*** (Miranda-Ribeiro, 1907)

SYH

En - Freckled catshark; **Fr** - Roussette taches de son; **Sp** - Alitán pecoso.

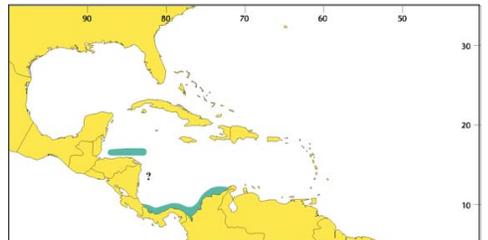
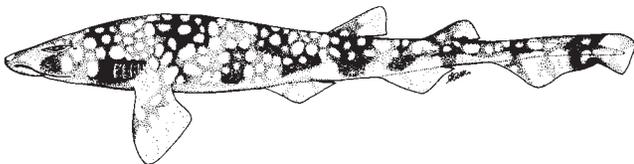
Maximum total length at least 50 cm. Occurs on the lower continental shelf and upper slope on or near the bottom at depths of 37 to 439 m. Development oviparous. Interest to fisheries none. Western Atlantic off Venezuela, Suriname, French Guiana, Brazil, and Uruguay.

***Scyliorhinus hesperius*** Springer, 1966

SYU

En - Whitesaddled catshark; **Fr** - Roussette selle blanche; **Sp** - Alitán ensillado.

Maximum total length at least 47 cm. Occurs on the upper continental slope on or near the bottom at depths of 274 to 457 m. Biology virtually unknown. Interest to fisheries none. Known only from the area, off Honduras, Panama, and Colombia.

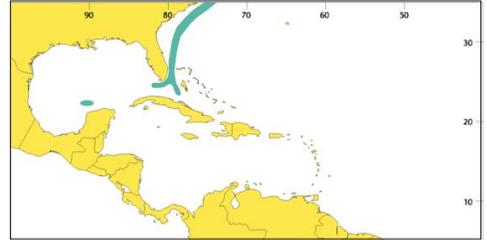
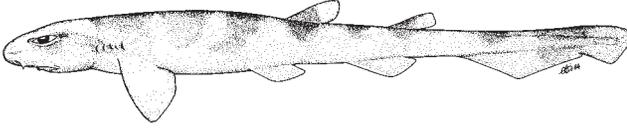


Scyliorhinus meadi Springer, 1966

SYM

En - Blotched catshark; **Fr** - Roussette cloquée; **Sp** - Alitán pintarrajo.

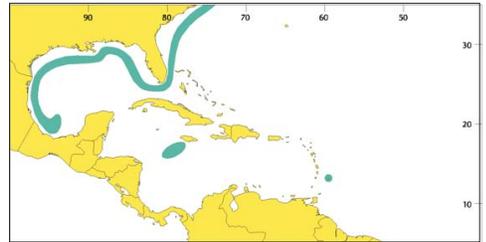
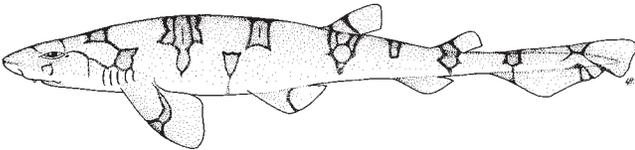
Maximum total length at least 49 cm. Occurs on the upper continental slope on or near the bottom at depths of 329 to 548 m. Biology virtually unknown. Interest to fisheries none. Known only from the area, off the USA (North Carolina south to Florida), in the Santaren Channel between Cuba and the Bahamas Bank, and Mexico (Gulf of Mexico and northern Yucatán Peninsula).

***Scyliorhinus retifer*** (Garman, 1881)

SYF

En - Chain catshark (AFS: Chain dogfish); **Fr** - Roussette maille; **Sp** - Alitán mallero.

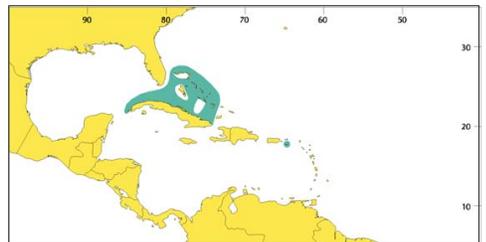
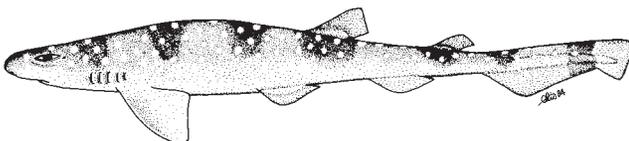
Maximum total length 47 cm. Occurs on the outer continental shelf and upper slope on or near the bottom at depths of 73 to 754 m. In the northern part of its range it occurs in shallow water but is a deep-water shark in the tropics. Reproduction oviparous, feeds on cephalopods, bony fishes, crustaceans, and polychaetes. A common catshark, but spottily distributed in its range. Interest to fisheries none, probably discarded bycatch of demersal fisheries. Western north Atlantic from the USA (Massachusetts to Florida, northern Gulf of Mexico), Mexico (Campeche Gulf), Barbados, Caribbean between Jamaica and Honduras, Nicaragua.

***Scyliorhinus torrei*** Howell Rivero, 1936

SYI

En - Dwarf catshark; **Fr** - Roussette naine; **Sp** - Alitán enano.

Maximum total length 32 cm. Occurs on the upper slope on or near the bottom at depths of 229 to 550 m, mostly below 366 m. Biology virtually unknown. Interest to fisheries none. Localized in the area from the USA (southern Florida), the Bahamas, northern Cuba, and the Virgin Islands.



PROSCYLLIIDAE

Finback (ribbontail catsharks)

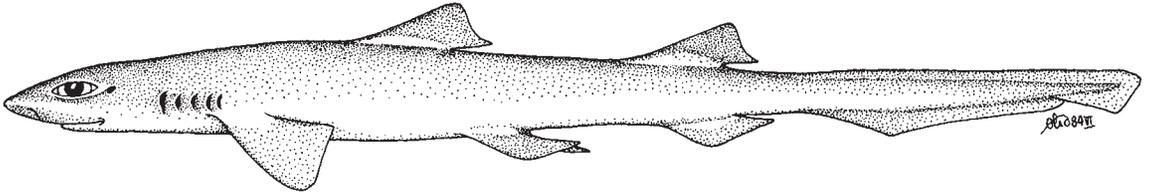
A single species occurring in the area.

Eridacnis barbouri (Bigelow and Schroeder, 1944)

PEB

Frequent synonyms / misidentifications: None / None.

FAO names: **En** - Cuban ribbontail catshark; **Fr** - Requin chat cubain; **Sp** - Tollo coludo cubano.



Diagnostic characters: A very small shark. Head with 5 small gill slits, the last 2 over pectoral-fin bases; very short **dermal gill rakers (not dermal-denticle rakers) present on internal gill slits**; nostrils without barbels or nasoral grooves; **nictitating lower eyelids present, weakly differentiated externally, delimited below the eye by shallow subocular pouches**; snout moderately long, narrowly rounded, or subtriangular; mouth moderately wide and long, reaching past front ends of eyes, triangular in shape; **teeth very small and numerous, similar in both jaws and not blade-like, with a needle-like primary cusp and usually 2 or more cusplets, becoming comb-like in rear of mouth**; anterior teeth of upper jaw smaller than lateral teeth and not separated from them by small intermediate teeth. Two dorsal fins, **the first dorsal-fin base just ahead of pelvic-fin base, the second dorsal fin about as large as first**; anal fin present; caudal fin much less than half the total length, but relatively narrow and elongated, asymmetrical, with lower lobe hardly developed; subterminal notch present. Caudal peduncle compressed, without keels or precaudal pits. Intestinal valve of spiral type. **Colour:** greyish or tan above, sometimes lighter below, caudal fin with obscure transverse bands.

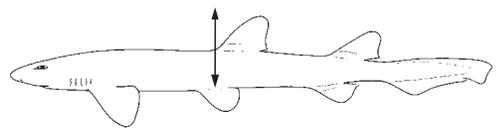
Similar families occurring in the area

Scyliorhinidae: first dorsal fin over or behind pelvic-fin bases.

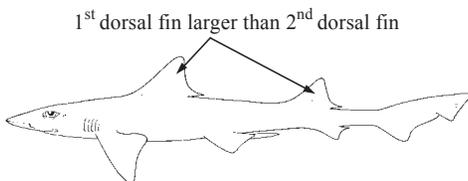
Triakidae (genus *Mustelus*): no dermal gill rakers; teeth mostly with no cusps (or poorly differentiated ones), no cusplets, and flattened crowns, not comb-like at rear of mouth; first dorsal fin somewhat larger than second dorsal fin; caudal fin not elongated.

Carcharhinidae: nictitating lower eyelid inside aperture of eyes; teeth larger and blade-like, not comb-like at rear of mouth; caudal fin with a strong lower lobe; precaudal pits present.

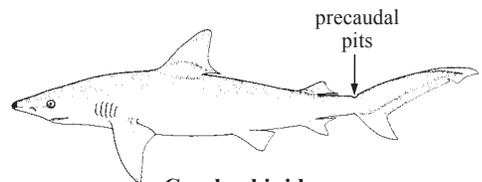
Other shark families: no nictitating lower eyelids.



Scyliorhinidae



Triakidae

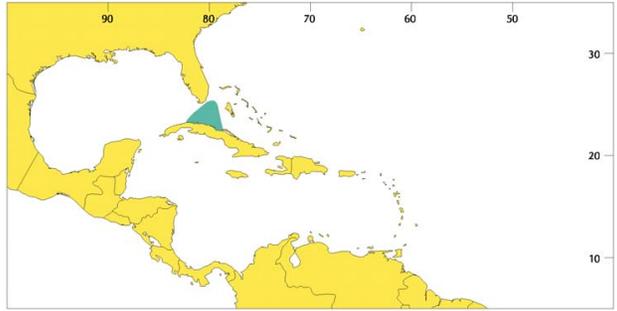


Carcharhinidae

Size: Maximum total length about 34 cm; size at birth near 10 cm; females maturing at about 28 cm and males at 27 cm.

Habitat, biology, and fisheries: A localized but common deep-water shark that occurs on or near the bottom on the continental slopes at depths of 430 to 613 m. Ovoviviparous. Not commercially fished.

Distribution: Occurs in the Florida Straits region from southern Florida to Cuba. Endemic to the area.



References

- Bigelow, H.B. and W.C. Schroeder. 1948. Chapter three, Sharks. In *Fishes of the Western North Atlantic. Mem. Sears Found. Mar. Res.*, (1)1:56-576.
- Compagno, L.J.V. 1978. Proscylliidae. In *FAO species identification sheets for fisheries purposes. Western Central Atlantic, (Fishing Area 31)*, edited by W. Fischer. Vol. 5. Rome, FAO (unpaginated).
- Compagno, L.J.V. 1984. FAO Species Catalogue. Vol. 4, Sharks of the World. An annotated and illustrated catalogue of shark species known to date. *FAO Fisheries Synopsis*, (125) Vol.4 Pt. 2:251-655.
- Compagno, L.J.V. 1988. *Sharks of the Order Carcharhiniformes*. Princeton, New Jersey, Princeton University Press, 572 p.