

- 23b Mouth long and large, expanded in front of eyes and with dental bands enlarged. First dorsal as large as second, not extending anteriorly as a ridge and originating about over pelvic midbases
- 24a. Body stout and strongly tapering to head. Lateral trunk denticles very sparse on body, not overlapping. Nostrils with circular, broad incurrent and excurrent apertures. Anal fin broadly rounded, caudal fin very narrow. Tips of dorsal fins whitish **A. manis**
- 24b. Body slender and not strongly tapering to head. Lateral trunk denticles more close-set on body, nearly overlapping. Nostrils with elongate-oval, narrow incurrent and excurrent apertures. Anal fin subangular, caudal fin broader. Tips of dorsal fins plain **A. profundorum**

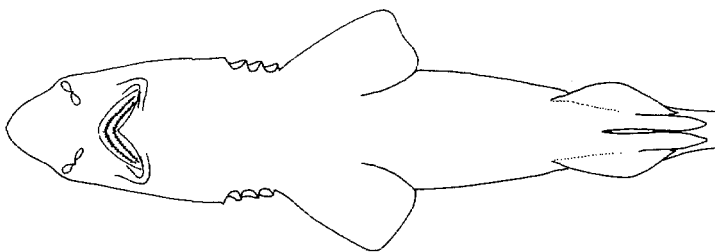
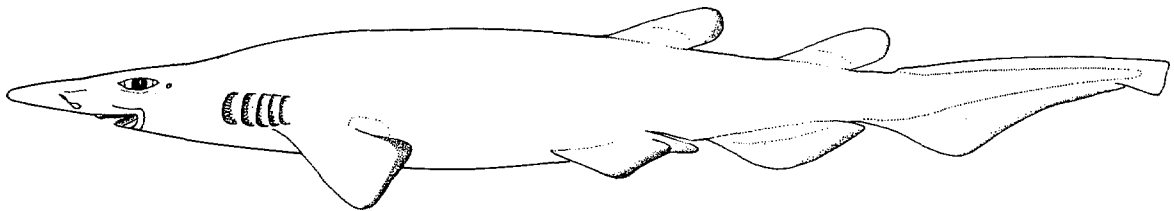
Apristurus atlanticus (Koefoed, 1932)

SCYL Aprist 1

Scylliorhinus atlanticus Koefoed, 1927, Rep.Sci.Res."Michael Sars"N.Atl.deep-sea Exped., 1910, 4(1):18; pl. 3, fig. 3. Holotype: Zoological Museum, Oslo, Norway, ZMO, about 250 mm total length. Type Locality: 28°08'N, 13°35'W, 1365 m depth off Canary Islands.

Synonymy : None.

FAO Names . En - Atlantic ghost catshark; Fr - Holbiche atlantique; Sp - Pejegato atlantico.



partial ventral view



dermal denticles

Field Marks : An Apristurus with unusually large eyes, 5% of total length.

Diagnostic Features : Body rather slender, trunk slightly tapering toward head. Snout moderately long, and broad, preoral snout about 9% of total length; gill slits of moderate size, about half the eye length; gill septa incised but not pleated, without projecting medial lobes; eyes rather large, about 5% of total length; mouth probably short and broadly arched, with dental bands moderately expanded and with lower ones falling well behind uppers; mouth and labial furrows about under eyes; labial folds possibly little enlarged, with lower folds diagonal to body axis; mouth and teeth enlarged in males. Interdorsal space about 1.6 times first dorsal base, slightly less than preorbital snout; first dorsal fin slightly smaller in area than second, bases about equally long; origin of first dorsal about opposite last fourth of pelvic bases; second dorsal insertion about opposite anal insertion; pectoral fins rather small, anterior margins about 12% of total length; inner margins long, nearly length of pectoral bases; interspace between pectoral and pelvic bases short, slightly less than preorbital length and about 10% of total length; pelvic fins moderately high



holotype, after Koefoed

and angular; anal fin short, fairly low, and angular, about 3.5 times as long as high, its base about equal to prespiracular space and 14% of total length; caudal fin fairly long and narrow, presence or absence of supracaudal crest uncertain (see remarks). Lateral trunk denticles of body may have elevated crowns, giving the skin a feltlike or fuzzy texture. Colour brown, with conspicuous dark posterior margins on precaudal fin and dark gill septa. Adult size uncertain.

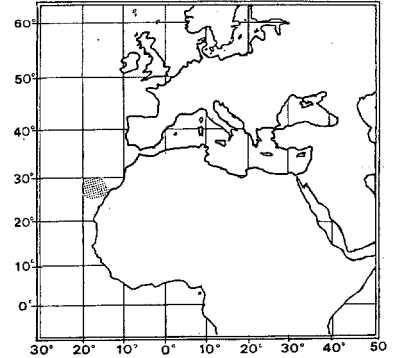
Geographical Distribution : Known with certainty only from the type locality.

Habitat and Biology : A poorly known deepwater catshark, trawled from yellow mud bottom of the Atlantic continental slope.

Size: Maximum known 25+ cm.

Interest to Fisheries: None.

Literature : Koefoed (1932); Springer (1979).



Remarks : This species is recognized following Springer (1979), but its validity needs to be confirmed by collection of more material. The writer examined several specimens of a small Apristurus in the Institut für Seefischerei, Hamburg ichthyological collections, from very deep water (usually 1500 m or more) on offshore banks in the northeastern Atlantic north of the British Isles. Their most striking characters are their lead-grey coloration, elevated, Deania-like lateral trunk denticles that give their skin a fuzzy texture, relatively large eyes (nearly 4% of total length in adults), slender bodies, relatively narrow snouts, small nostrils with the internarial at least 1.5 times the nostril width, large, equal-sized dorsal fins with a short interdorsal space hardly longer than the first dorsal base, and relatively small size (adults being between 40 and 50 cm long). These may belong to the present species or a new one. If distinct, A. atlanticus apparently differs from them in having a more posterior first dorsal fin origin, darker coloration, and mouth not expanded anterior to eyes.

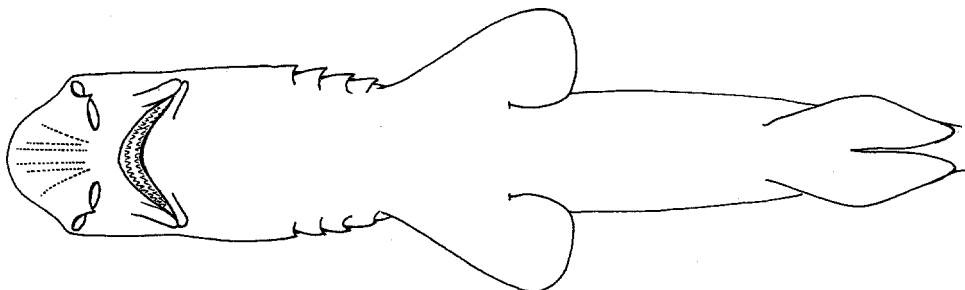
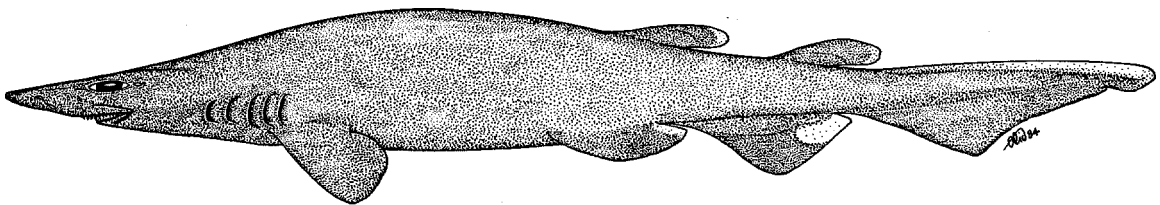
Apristurus brunneus (Gilbert, 1892)

SCYL Aprist 2

Catulus brunneus Gilbert, 1892, Proc.U.S.Nat.Mus., 14(880):542. Holotype: U.S. National Museum of Natural History, USNM, 51708, 500 mm, gravid female. Type Locality: 32°49'N, 117°29'W, 556 m depth off La Jolla, California.

Synonymy : None.

FAO Names : En - Brown catshark; Fr - Holbiche brune; Sp - Pejegato marrón.



partial ventral view

Field Marks : See diagnostic features and key to species.

Diagnostic Features : Body relatively slender, trunk slightly tapering toward head. Snout moderately long, rather broad, and bell-shaped, preoral snout about 7% of total length; gill slits moderately large, the longest about equal to eye length; gill septa more or less incised, not pleated and without projecting medial lobes; eyes rather small in adults, about 2.5% of total length; nostrils broad, their width about equal to internarial space; incurrent and excurrent apertures moderately large and transversely oval, anterior nasal flaps fairly long; mouth moderately long, not greatly enlarged, and broadly arched, with dental bands slightly expanded and with lower ones falling just behind uppers; mouth and labial furrows under eyes; labial folds not enlarged, with lowers diagonal to body axis; mouth and teeth not greatly enlarged in males. Interdorsal space equal or slightly greater than first dorsal base, slightly less than preorbital snout; first dorsal fin about as large as second, bases about equally long; origin of first dorsal slightly anterior to pelvic midbases; second dorsal insertion in front of anal insertion; pectoral fins rather small, anterior margins about 12% of total length; inner margins long, nearly length of pectoral bases; interspace between pectoral and pelvic bases moderately long, about equal to prebranchial length and about 16% of total length in adults; pelvic fins fairly high and broadly rounded; anal fin fairly short, high, and angular, slightly more than 2.5 times as long as high, its base slightly greater than prepiracular space and 13% of total length in adults; caudal fin rather broad, without a crest of enlarged denticles on dorsal margin. Lateral trunk denticles with crowns somewhat elevated, body surface with a feltlike or fuzzy texture. Colour dark brown, with conspicuous light posterior margins on fins. Adults moderately large, 42 to 69 cm.

Geographical Distribution : Eastern Pacific: British Columbia, Canada, to northern Baja California, Mexico, probably south to Panama, Ecuador and Peru.

Habitat and Biology : A little-known, common deepwater bottom shark from the outer continental shelf and upper slope from 33 to 950 m depth, also well off the bottom.

Oviparous, laying a single egg per oviduct at a time; egg cases about 5 cm long and 2.5 wide, with long tendrils. Incubation period of eggs possibly about 1 year. In Canadian waters, females carry egg cases from February to August.

Eats primarily small true shrimps, but also euphausiid shrimps, squids, and small fishes.

Attempts have been made to keep this small harmless shark in captivity, without notable success (up to two weeks).

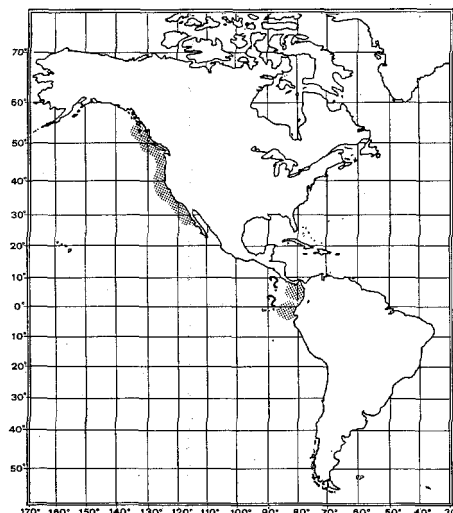
Size: Maximum 68 cm, males adolescent at about 50 cm, adults males 49 to 57 cm, adult females 42 to 49+ cm, size of young at hatching about 7 cm.

Interest to Fisheries : Commonly taken in deeper bottom trawl hauls, but not utilized at present.

Literature : Cox (1963); Kato, Springer & Wagner (1967); Miller & Lea (1972); Hart (1973); Jones & Geen (1977); Springer (1979).

Remarks : Until relatively recently all *Apristurus* caught north of Baja California in the eastern North Pacific were referred to this species. Apart from *A. kampa* and a possibly new species of heavy-bodied, *kampa*-like *Apristurus* from off California, the rather large number of specimens of *Apristurus brunneus* in the collections of the California Academy of Sciences and elsewhere in the western North Pacific may represent more than one species of *brunneus*-like catsharks. The writer has examined the holotype of *A. brunneus* and compared it to available 'brunneus' material, and suspects that an additional species, with smaller, flat, smooth denticles, a much longer, lower anal and caudal fin, lower pelvic fins, smaller gills, narrower snout, larger pectoral fins, and less expanded dental bands is present in this material. Whether this is identical to *A. nasutus* or some other species, or is new, remains to be seen.

The above illustration is based on drawings of the holotype of this species by the writer.



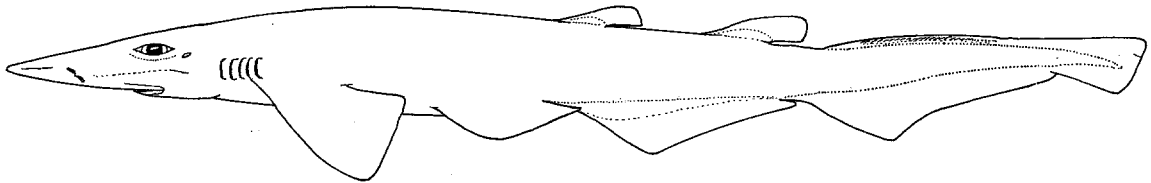
Apristurus canutus Springer & Heemstra, 1979

SCYL Aprist 3

Apristurus canutus Springer & Heemstra, in Springer, 1979, *NOAA Tech.Rep.NMFS Circ.*, (422):16, figs 10 to 13. Holotype: U.S. National Museum of Natural History, USNM 2061-76, 455 mm adult female. Type Locality: 18°18'N, 63°23'W, Leeward Islands near Anguilla in 687 m depth, western North Atlantic.

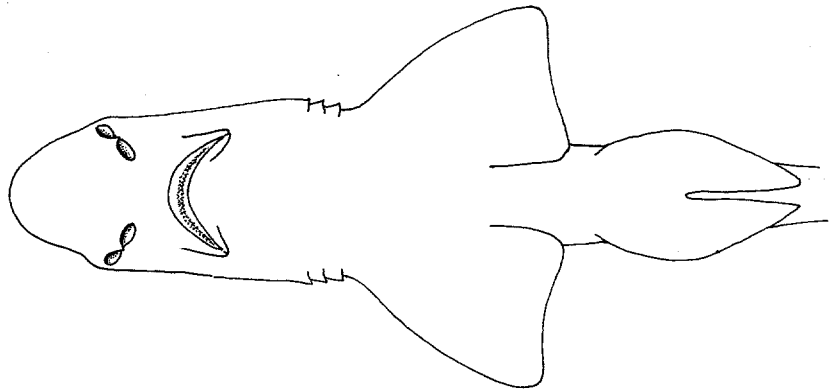
Synonymy : None.

FAO Names : En - Hoary catshark; Fr - Holbiche grise; Sp - Pejegato cano.



Field Marks : One of several *Apristurus* with first dorsal fin half the size of second. For other characters see diagnostic features and key to species.

Diagnostic Features: Body relatively slender, trunk slightly tapering toward head. Snout long, broad, and bell-shaped, preoral snout about 9 to 10% of total length; gill slits small, much less than eye length; gill septa somewhat incised, without pleats or projecting medial lobes; eyes moderately large in adults, between 3 to 4% of total length; nostrils fairly broad, their width about 1.3 in internarial space; incurrent and excurrent apertures moderately large and oval, anterior nasal flaps elongated and triangular; mouth fairly short, moderate-sized and broadly arched, with dental bands hardly expanded and with lower ones falling slightly behind uppers; mouth and labial furrows under eyes; labial folds not enlarged, with lowers diagonal to body axis; mouth and teeth enlarged in males. Interdorsal space about two times greater than first dorsal base, about 2/3 of preorbital snout; first dorsal fin about half the size of second, base of first about 3/5 of that of second; origin of first dorsal somewhat behind pelvic insertions; second dorsal insertion well in front of anal insertion; pectoral fins fairly large, anterior margins about 11 to 14% of total length; inner margins long, nearly the length of pectoral bases; interspace between pectoral and pelvic bases short, somewhat less than preorbital length and about 7 to 9% of total length in adults; pelvic fins fairly high and broadly rounded; anal fin long, fairly high, and angular, between 2.5 and 3 times as long as high, its base about equal to, or slightly greater than prebranchial space and 18 to 22% of total length in adults; caudal fin fairly broad, with a slightly developed, poorly differentiated crest of enlarged denticles on dorsal margin. Lateral trunk denticles with crowns very small, flat and close-set, body surface almost silky-smooth and not with a feltlike or fuzzy texture. Colour dark grey with blackish fin margins. Adults moderately large, 40 to 46 cm.



partial ventral view

Geographical Distribution : Western North Atlantic: Leeward Islands off Antigua and Anguilla.

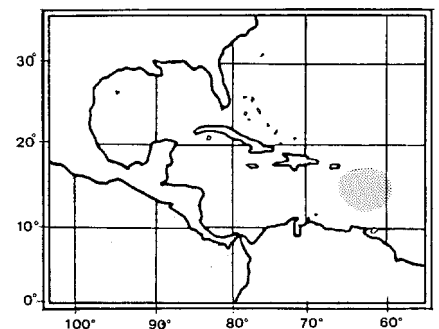
Habitat and Biology : A little-known deepwater bottom shark found on the insular slopes off the Leeward Islands at depth of 687 to 840 m.

Size : Females adult at 39.5 to 45.5 cm, males adult at 42.8 cm.

Interest to Fisheries : None at present.

Literature : Springer (1979).

Remarks : The writer examined the holotype and other material of this species. The above illustration is based on his drawings of the holotype.



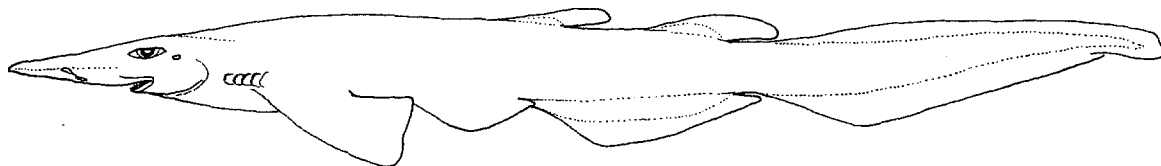
Apristurus herklotsi (Fowler, 1934.)

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Pentanchus herklotsi Fowler, 1934, *Proc. Acad. Nat. Sci. Philad.*, 85:238, fig. 3. Holotype: U.S. National Museum of Natural History, USNM, 93134, 312 mm total length, immature female. Type Locality: 9°37'N, 121°12.5'E, Cagayan Island, Jolo Sea, The Philippines.

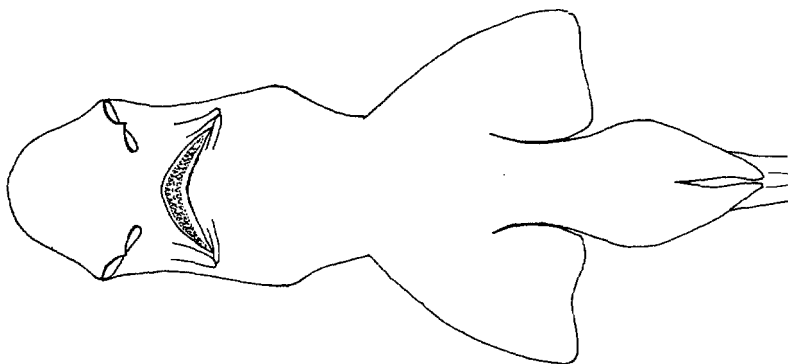
Synonymy : None, but see account of Pentanchus profundicolus.

FAO Names : En - Longfin catshark; Fr - Holbiche à longues nageoires; Sp - Pejegato aletón.



Field Marks : An Apristurus with an unusually short abdomen, long narrow caudal fin without a crest of denticles, a very long low anal fin, and second dorsal fin about half the length of first.

Diagnostic Features : Body relatively slender, trunk slightly tapering toward head. Snout moderately long, broad, and bell-shaped, preoral snout about 9% of total length; gill slits very small, much less than eye length; gill septa somewhat incised but without pleats or projecting medial lobes; eyes rather small, about 3% of total length; nostrils broad, their width about 1.2 times in internarial space; incurrent and



partial ventral view

and excurrent apertures very narrow and almost slitlike, anterior nasal flap low and angular; mouth fairly short, large, and broadly arched, with dental bands little expanded but with lower ones falling well behind uppers; mouth and labial furrows extending partly in front of eyes; labial folds somewhat enlarged, with lower nearly transverse to body axis. Interdorsal space slightly greater than first dorsal base, about half of preorbital snout; first dorsal fin about a third as large as the second, base of first about half that of second; origin of first dorsal slightly anterior to pelvic insertions; second dorsal insertion well in front of anal insertion; pectoral fins rather large, anterior margins about 14% of total length; inner margins long, nearly the length of pectoral bases; interspace between pectoral and pelvic bases extremely short, about half of preoral snout and about 6% of total length; pelvic fins fairly high and broadly rounded; anal fin very long, fairly high, and rounded-angular, nearly five times as long as high, its base about equal to prebranchial space and 19% of total length; caudal fin rather long and narrow, without a crest of enlarged denticles on dorsal margin. Lateral trunk denticles with crowns flat and close-set, body surface fairly smooth and not with a feltlike or fuzzy texture. Colour brownish without conspicuous markings. Adult size unknown.

Geographical Distribution : Known only from the type locality.

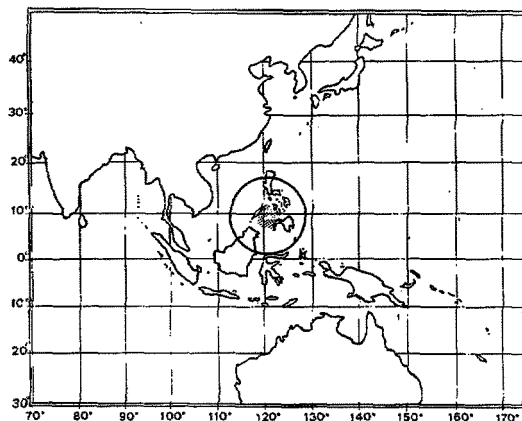
Habitat and Biology : A poorly known deepwater bottom shark, known only from the holotype (Cagayan Island, Jolo Sea, The Philippines).

Size: Maximum 31 + cm (immature female holotype).

Interest to Fisheries : None.

Literature : Fowler (1934); Springer (1979).

Remarks : The writer has examined the holotype, a distinctive species closest to the single dorsal-finned Pentanchus profundicolus and possibly identical to it. The above illustration is based on the writer's drawings of the holotype.



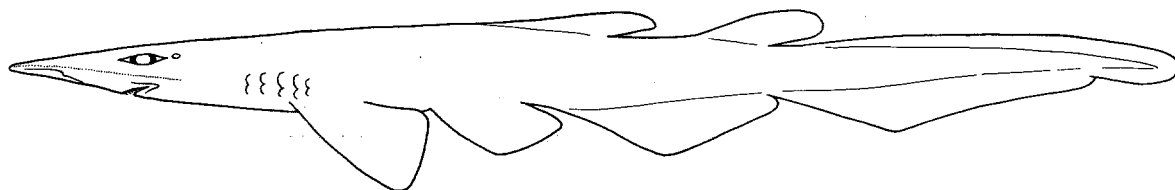
Apristurus indicus (Brauer, 1906)

SCYL April 5

Scylliorhinus indicus Brauer, 1906, Deutsch.Tiefs.Exped.Valdivia, Tiefs.Fisch., 15:8, pl. 14, fig. 1. Lectotype: Zoologisches Museum an der Humboldt-universität zu Berlin, ZMB 22424, 336 mm female, designated by Springer (1979:19). Type Locality: 02 59'N, 4706'E, off coast of Somalia, Indian Ocean.

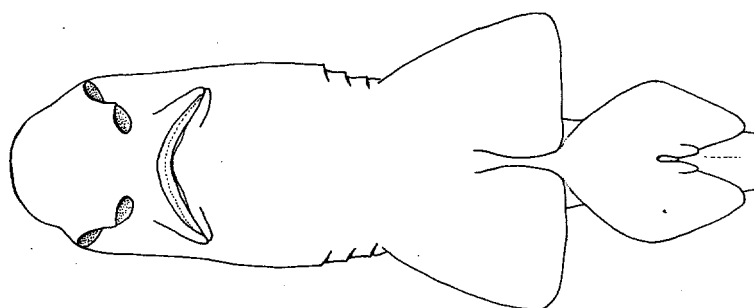
Synonymy : None.

FAO Names : En - Smallbelly catshark; Fr - Holbiche artouca; Sp - Pejegato Indico.



Field Marks: An *Apristurus* with first dorsal base expanded anteriorly as a long low ridge, and without a caudal crest.

Diagnostic Features: Body relatively slender, trunk slightly tapering toward head. Snout rather long, very broad, and bell-shaped, preoral snout about 9 to 10% of total length; gill slits moderately small, about 1/2 to 2/3 of eye length; gill septa not incised, with or without short, projecting medial lobes; eyes small, between 2 and 3% of total length; nostrils large, their width about equal to internarial space; incurrent and excurrent apertures fairly large and oval, anterior nasal flaps expanded and angular; mouth short, large, and very broadly arched, with dental bands hardly expanded and with lower ones falling just behind uppers; mouth and labial furrows extending below eyes; labial folds not enlarged, with lowers diagonal to body axis. Interdorsal space about 2/3 of first dorsal base and preorbital snout; first dorsal fin about two-thirds of area of second, but first dorsal base elongated anteriorly as a low ridge and nearly twice the length of second dorsal base; origin of first dorsal extending slightly anterior to pelvic midbases; second dorsal insertion slightly in front of anal insertion; pectoral fins rather large, anterior margins about 13% of total length; inner margins long, nearly the length of pectoral bases; interspace between pectoral and pelvic bases very short, about 2/3 of preorbital snout and about 7% of total length; pelvic fins very high and broadly rounded; anal fin very long, high, and angular, nearly 4 times as long as high, its base about equal to prebranchial space and 16 to 20% of total length; caudal fin very long and narrow, without a crest of enlarged denticles on dorsal margin. Lateral trunk denticles with crowns close-set and fairly flat, body surface smooth and not with a feltlike or fuzzy texture. Colour brownish or blackish. Adults size unknown.



partial ventral view

Geographical Distribution : Western Indian Ocean: Somalia, Gulf of Aden, Oman; possibly also eastern South Atlantic off Namibia and South Africa.

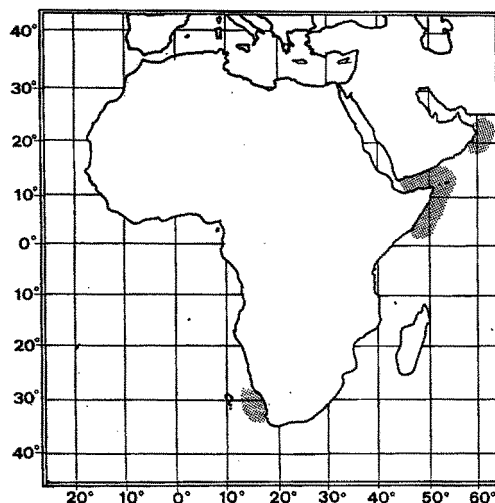
Habitat and Biology : A little-known deepwater bottom catshark, from the East African continental slopes at 1289 to 1840 m depth.

Size : Maximum 34+ cm (immatures).

Interest to Fisheries: None.

Literature : Springer (1979).

Remarks : Characters of the diagnosis above are taken in part from a specimen of this species examined by the writer in the British Museum (Natural History), BMNH 1939.5.24.6, 22.7 cm immature female, Gulf of Aden at 1061 to 1080 m depth, as well as from Springer (1979).



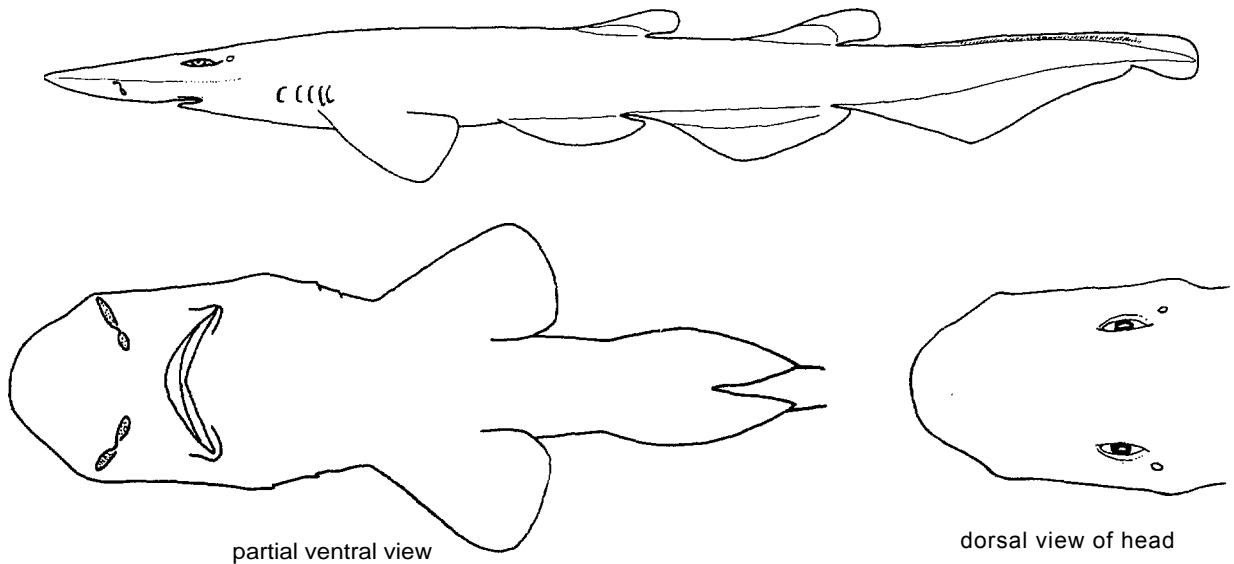
Apristurus investigatoris (Misra, 1962)

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Pentanchus (*Parapristurus*) *investigatoris* Misra, 1962, *Proc.All-India Congr.Zool.*, 1(2):636, pl. 1. Holotype: Zoological Survey of India, ZSI-F 1, 627/2, 242 mm female. Type Locality: 11°46'N, 93°10'E, Andaman Sea.

Synonymy : None.

FAO Names : En - Broadnose catshark; Fr - Holbiche platnez; Sp - Pejegato ñato.



Field Marks : An *Apristurus* with the first dorsal base elongated anteriorly as a low ridge, and a moderately well-developed caudal crest of denticles.

Diagnostic Features : Body relatively slender, trunk slightly tapering toward head. Snout long, broad, and bell-shaped, preoral snout about 11% of total length; gill slits small, about half of eye length; gill septa incised, without pleats or projecting medial lobes; eyes small, about 2.5% of total length; nostrils very broad, their width about equal to internarial space; incurrent apertures of nostrils fairly narrow and almost slitlike, anterior nasal flaps very low and rounded; mouth short, moderately large, and very broadly arched, with dental bands hardly expanded and with lower ones falling well behind uppers; mouth and labial furrows extending slightly in front of eyes; labial folds not enlarged, with lowers diagonal to body axis. Interdorsal space equal to or slightly less than first dorsal base, about 3/4 of preorbital snout; first dorsal fin about 3/4 as large as second, but first dorsal base with an anterior ridgelike elongation and about 1.5 times the length of second dorsal base; origin of first expanded anteriorly to over first fourth of pelvic bases; second dorsal insertion slightly in front of anal insertion; pectoral fins moderately large, about 13% of total length; inner margins long, nearly the length of pectoral bases; interspace between pectoral and pelvic bases short, about 2/3 of preorbital length and about 7% of total length; Pelvic fins fairly low and broadly rounded; anal fin long, rather high, and rounded-angular, almost 4 times as long as high, its base almost equal to prebranchial space and 17% of total length; caudal fin rather broad, with a well-developed crest of enlarged denticles on dorsal margin. Lateral trunk denticles with crowns close-set and somewhat elevated, giving body a rough surface. Colour medium brown. Adult size unknown.

Geographical Distribution : Known only from the type locality (holotype only), in the Andaman Sea.

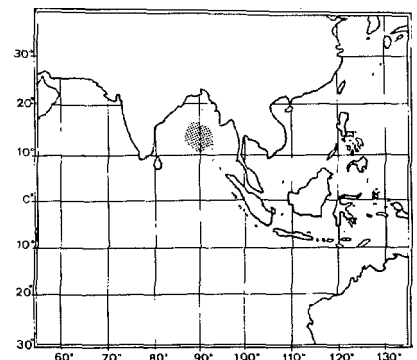
Habitat and Biology : A deepwater bottom shark, from the eastern Indian ocean continental slope at 1040 m depth.

Size : Maximum 26 + cm (presumably immature at this size).

Interest to Fisheries : None at present.

Literature : Misra (1962); Springer (1979).

Remarks : Diagnostic characters and the above illustration are from the holotype, examined by the writer in Calcutta in 1982. The species is very much like *A. indicus* in its general shape



and long first dorsal base, but differs from a similar-sized specimen of that species in having smaller pectoral fins, narrower nostrils, much lower pelvic fins, a much shorter, broader caudal fin, possibly a slightly longer abdomen, and apparently a well-developed supracaudal crest.

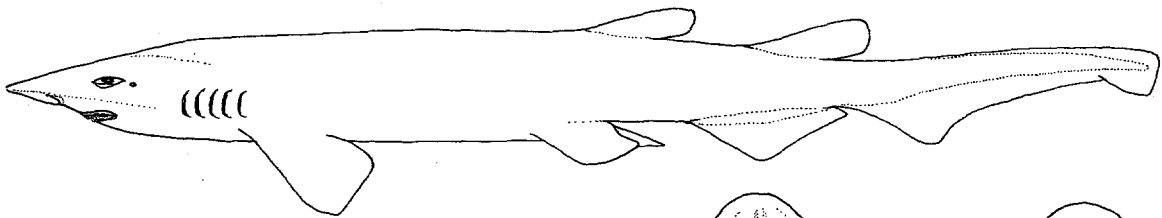
Apristurus japonicus Nakaya, 1975

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Apristurus japonicus Nakaya, 1975, *Mem.Fac.Fish.Hokkaido Univ.*, 23(1):24, figs 10-11. Holotype: Hokkaido University Laboratory of Marine Zoology, HUMZ 40082, 697 mm adult male. Type Locality: Cape Daito, Chiba Prefecture, Honshu, Japan, western Pacific.

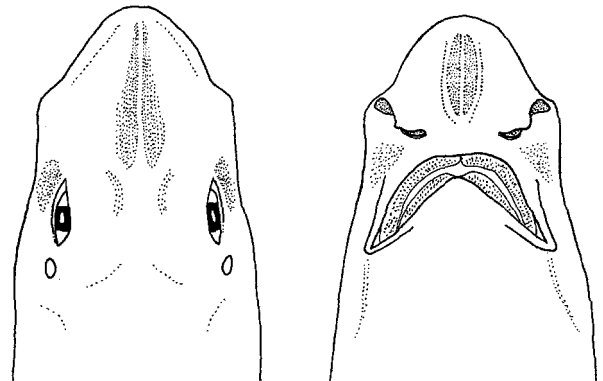
Synonymy : None

FAO Names : En - Japanese catshark; Fr - Holbiche japonnaise; Sp - Pejegato japonés.



Field Marks : An *Apristurus* with an extremely long abdomen and short snout.

Diagnostic Features : Body relatively slender, trunk slightly tapering toward head. Snout moderately long, broad, and bell-shaped, preoral snout about 7 to 8% of total length; gill slits moderately large, somewhat longer than eye length; gill septa not incised or pleated, with or without short projecting medial lobes; eyes rather small in adults, about 2.4 to 3% of total length; nostrils fairly broad, their width about 1.4 times in internarial space; incurrent and excurrent apertures narrow and oval, anterior nasal flaps broadly triangular; mouth long, large, and broadly arched, with dental bands prominently expanded and with lower ones falling well behind uppers; mouth and labial furrows extending well in front of eyes; labial folds not greatly enlarged, with lowers diagonal to body axis; teeth not greatly enlarged in males, but with slenderer cusps. Interdorsal space slightly less than 1.5 times first dorsal base, subequal to preorbital snout; first dorsal fin about two-thirds as large as second, bases about equally long; origin of first dorsal over last half of pelvic bases; second dorsal insertion in front of anal insertion; pectoral fins moderate-sized, anterior margins about 11 to 14% of total length; inner margins long, nearly the length of pectoral bases; interspace between pectoral and pelvic bases long, almost equal to prepectoral length and about 16% of total length in adults; pelvic fins high and broadly rounded; anal fin moderately long, high and rounded, between 2.5 and 3 times as long as high, its base somewhat greater than prespiracular space and 13 to 15% of total length in adults. Lateral trunk denticles of body with crowns wide-spaced, fairly flat. Colour blackish-brown. Adults large, 63 to 71 cm.



dorsal view of head

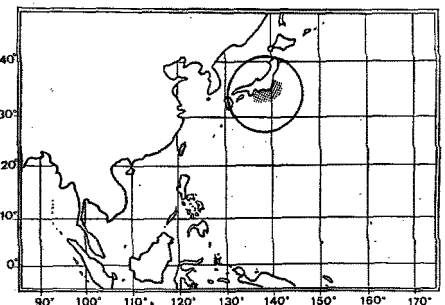
underside of head

Geographical Distribution : Known only from off Chiba Prefecture, Honshu, Japan.

Habitat and Biology : An abundant deepwater bottom shark off Chiba Prefecture, but biology little-known. Oviparous.

Size : Adult females reach at least 63 cm, adult males 65 to 71 cm.

Interest to Fisheries: Commonly taken by trawl off the type locality, and possibly utilized for oil, human consumption and fish-meal or fish cakes locally.



Literature : Nakaya (1975); Springer (1979).

Remarks : Data from Nakaya (1975); this species was not examined by the writer.

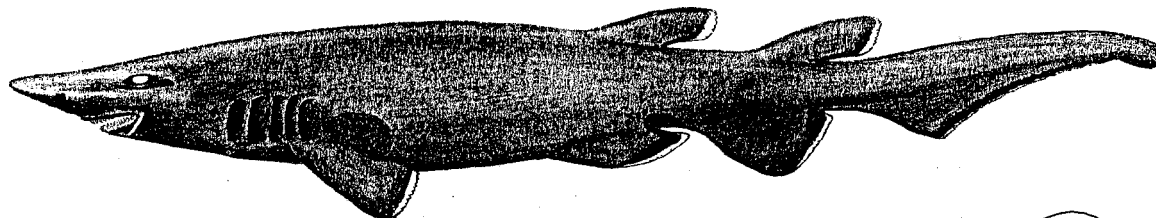
Apristurus kampa Taylor, 1972

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Apristurus kampa Taylor, 1972, *Copeia*, 1972(1):71, figs 1, 3A, 4-5. Holotype: Scripps Institution of Oceanography, SIO 70-278, 335 mm immature female. Type Locality: 27° 22.4' to 27° 10.1'N, 111° 10.1' to 111° 29.6'W, central Gulf of California, Mexico in 1830 to 1888 m depth.

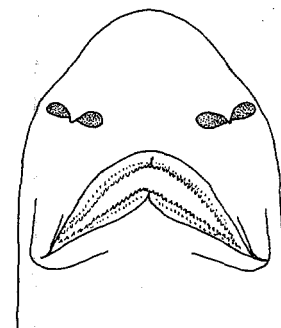
Synonymy : None.

FAO Names : En - Longnose catshark; Fr - Holbiche tapir; Sp - Pejegato trompudo.



Field Marks: An *Apristurus* with a broad internarial space, very large gill slits, a very high rounded anal fin, and conspicuous white margins on the fins.

Diagnostic Features: Body moderately slender to rather stout, trunk strongly tapering toward head. Snout moderately long, broad, and bell-shaped, preoral snout about 8% of total length; gill slits very large, somewhat greater than eye length; gill septa without projecting medial lobes; eyes rather small in adults, about 3% of total length; nostrils narrow, their width about 1.5 to 1.8 times in internarial space; incurrent and excurrent apertures enlarged and oval, anterior nasal flaps elongated and triangular; mouth long, large, and broadly arched, with dental bands prominently expanded and with lower ones falling well behind uppers; mouth and labial furrows extending well in front of eyes; labial folds somewhat enlarged, with lower nearly transverse to body axis; mouth and teeth enlarged in males. Interdorsal space equal to, or slightly greater than first dorsal base, slightly less than preorbital snout. First dorsal fin about as large as second, bases about equally long; origin of first dorsal slightly anterior to pelvic midbases; second dorsal insertion behind anal insertion; pectoral fins rather small, anterior margins about 10 to 12% of total length; inner margins long, nearly length of pectoral bases; interspace between pectoral and pelvic bases moderately long, slightly less than prebranchial length and about 16% of total length in adults; pelvic fins high and broadly rounded; anal fin short, high, and rounded, slightly more than twice as long as high, its base about equal to prespiracular space and 12% of total length in adults; caudal fin rather broad, without a crest of enlarged denticles on dorsal margin. Lateral trunk denticles of body with crowns fairly flat and close-set, surface fairly smooth and not with a feltlike or fuzzy texture. Colour blackish, with conspicuous white posterior margins on precaudal fins. Adults moderately large, adult female 52 cm.



Geographical Distribution : Eastern North Pacific: Central and southern California, USA and Gulf of California, Mexico.

Habitat and Biology : A little-known deepwater bottom shark of the eastern Pacific upper continental slope down to 1888 m depth. Oviparous, with a single egg laid per oviduct.

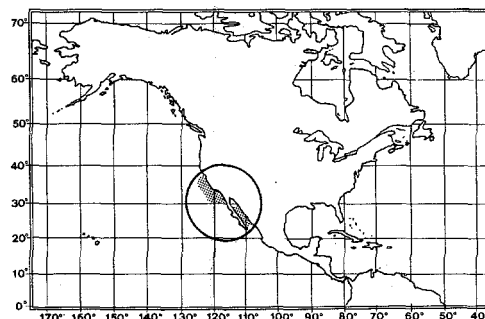
Size : Adult females to at least 52 cm.

Interest to Fisheries : None. Incidentally taken in deep trawls and sablefish traps off California.

Literature : Taylor (1972); Springer (1979).

Remarks : Taylor (1972) recorded a second specimen of this species from the Galapagos Islands, but this appears to be another species of uncertain identity (Springer, 1979). The writer has examined adult specimens of a catshark from the Galapagos and Peru that may be an undescribed species if it is not the adult of *A. stenseni*; I have not examined Taylor's Galapagos specimen, but from its account and illustration in Taylor (1972) this juvenile shark (SIO 70 to 299, 201 mm immature male) may very likely be conspecific with the aforementioned adults. It has narrow nostrils and a broad internarial space as in *A. kampa* and several other related species.

Recently, several specimens of true *A. kampa* have been collected in deepwater trawl hauls and sablefish traps off central and southern California. In addition to these, there may be a related undescribed species rather like the distinctive, heavy-bodied, big-finned *kampa*, with smaller gill openings and other distinguishing features.



Springer (1979) distinguished this species from other *Apristurus* by its short anal fin (approached by several species, especially *A. spongiceps*), with "...its rear tip separated from, origin of lower caudal lobe by a distance greater than half the length of the eye opening." Examination of California specimens of *kampae* indicates that the ventral caudal origin is just behind the anal base insertion in this species as in other members of the genus, but that the preventral margin of the caudal fin is indented just behind its origin (also found to a greater or lesser extent in several other species of *Apristurus*). However, this species is readily distinguished from all other *Apristurus* by the character combination given above. It resembles *A. riveri* in its very wide gill slits, but differs from that species in numerous features.

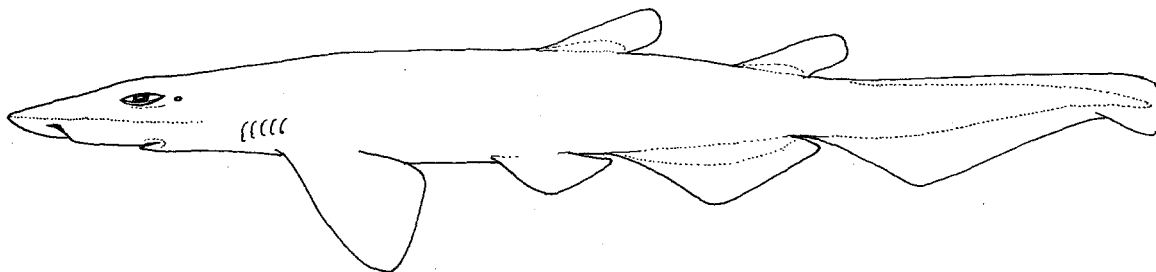
Apristurus laurussoni (Saemundsson, 1922)

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Scyllium laurussoni Saemundsson, 1922, *Vidensk.Medd.Dan.Naturhist.Foren.Kbh.*, 74:73, pl. 4, fig. 2, pl. 5, fig. 4. Holotype: Natural History Museum, Reykjavik, Iceland, NHMR, 673 mm female. Type Locality: Near Vestmannaeyjar Island, southern Iceland, 560 m.

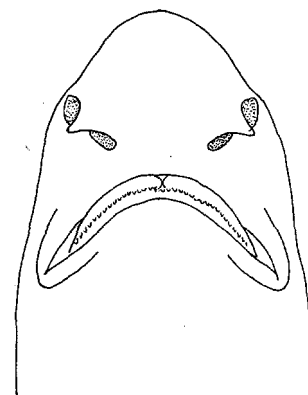
Synonymy : None.

FAO Names : En - Iceland catshark; Fr - Roussette d'Islande; Sp - Pejegato islndico.



Field Marks : See diagnostic features and key to species.

Diagnostic Features : Body relatively slender, trunk slightly tapering toward head. Snout moderately long, broad, and bell-shaped, preoral snout about 7 to 8% of total length; gill slits short, less than eye length; gill septa without projecting medial lobes or pleats, somewhat incised; eyes rather small in adults, about 3% of total length. Nostrils fairly broad, their width about 1.4 times in internarial space; incurrent and excurrent apertures large and oval, anterior nasal flaps long and angular; mouth long, moderately large, and broadly arched, with dental bands somewhat expanded and with lower ones falling well behind uppers; mouth and labial furrows about opposite eyes; labial folds somewhat enlarged, with lower diagonal to body axis; mouth and teeth not greatly enlarged in males. Interdorsal space somewhat greater than first dorsal base, slightly less than preorbital snout; first dorsal fin about as large as second, bases about equally long; origin of first dorsal slightly anterior to pelvic midbases; second dorsal insertion about opposite anal insertion; anal fin short, fairly high, and angular, slightly more than three times as long as high, its base somewhat greater than prespiracular space and 14 to 17% of total length in adults; pectoral fins small, anterior margins about 12 to 13% of total length; inner margins long, about length of pectoral bases; interspace between pectoral and pelvic bases short, slightly less than prebranchial length and about 11% of total length in adults; pelvic fins high and broadly rounded; caudal fin fairly broad, without a dorsal crest of enlarged denticles. Lateral trunk denticles of body with crowns fairly flat and closely imbricated, surface fairly smooth and without a feltlike or fuzzy texture. Colour dark brown, without light-margined dorsal fins. Adults large, to 68 cm.



underside of head

Geographical Distribution : Western North Atlantic: Massachusetts, Delaware, northern Gulf of Mexico. Eastern North Atlantic: Iceland, southwestern Ireland, Canary Islands.

Habitat and Biology : A little-known deepwater catshark, apparently fairly common on the upper continental slopes, on or near bottom at 560 to 1462 m depth. Presumably oviparous.

Size : Maximum about 68 cm, adult male 68 cm, adult female 67 cm.

Interest to Fisheries : None at present.

Literature : Springer (1966, 1979).

