Order CARCHARHINIFORMES

Deepwater Catsharks

Family PENTANCHIDAE

Smith 1912

Apriosturus Garman 1913

a-, Greek privative, i.e., without; pristis, from pristes (Gr.), sawyer (but here meaning saw); oura (Gr.), tail, referring to absence of saw-toothed crest of enlarged dermal denticles along upper edge of caudal fin as found in the closely related Pristurus (=Galeus)

Apriosturus albisoma Nakaya & Sérét 1999 albus (L.), white; soma (Gr.), body, referring to its whitish color

Apriosturus amplices Sasahara, Sato & Nakaya 2008 amplus (L.), large; ceps (New Latin), head, 21.8-25.5% TL

Apriosturus aphyodes Nakaya & Stehmann 1998 Greek for whitish, referring to its pale-gray coloration

Apriosturus australis Sato, Nakaya & Yorozu 2008 Latin for southern, referring to its distribution in the southern hemisphere around Australia

Apriosturus breviventris Kawauchi, Weigmann & Nakaya 2014 brevis (L.), short; ventralis (L.), of the belly, referring to its short abdomen

Apriosturus bruneus (Gilbert 1892) M edieval Latin for brown, referring to its “uniform warm brown” color above and below

Apriosturus bucephalus White, Last & Pogonoski 2008 bu- (L.), prefix meaning large; cephalus (Latinized Gr.), head, referring to its large, broad head

Apriosturus canutus Springer & Heemstra 1979 Latin for hoary (gray or ash-colored), referring to its dark-gray coloration (with minute white spots underneath denticles)

Apriosturus exsanguis Nakaya, Sato & Stewart 1999 ex (L.), out of; sanguis (L.), blood, i.e., bloodless or lifeless, referring to its characteristic pale coloration and flaccid body

Apriosturus fedorovi Dolganov 1983 in honor of ichthyologist Vladimir Vladimirovich Fedorov (1939–2011), Zoological Institute, Russian Academy of Sciences (Saint Petersburg), the first to collect this shark

Apriosturus gattieri Sato, Stewart & Nakaya 2013 in honor of J.A.F. (Jack) Garrick (1928–2018), “pioneer” New Zealand shark biologist, the first to recognize this genus from New Zealand waters; he also “generously” shared his notes on this species with the authors

Apriosturus gibbosus Meng, Chu & Li 1985 Latin for very crooked or humbbacked, referring to its convex dorsal outline

Apriosturus herklotsi (Fowler 1934) in honor of British botanist-ornithologist Geoffrey Alton Craig Herklots (1902–1996), University of Hong Kong, “with many fond memories of the China Sea and Java”

Apriosturus indicus (Brauer 1906) -icus (L.), belonging to: referring to type locality in Indian Ocean off Somalia and Gulf of Aden

Apriosturus internatus Deng, Xiong & Zhan 1988 Latin for growing among or between, allusion not explained nor evident

Apriosturus investigatoris (Misra 1962) -is, Latin genitive singular of: HMS Investigator station in Andaman Sea, where holotype was collected

Apriosturus japonicus Nakaya 1975 -icus (L.), belonging to: Japan, known only from the northwest Pacific off Chiba Prefecture, Honshu, Japan

Apriosturus kampae Taylor 1972 in honor of Elizabeth Kampa Boden (1922–1986), Scripps Institution of Oceanography, chief scientist aboard the research vessel Argos, from which holotype was collected

Apriosturus laurussonii (Saemundsson 1922) in honor of Saemundsson's friend Gisli Lárusson (1865–1935), goldsmith, watchmaker, farmer and nature enthusiast, for his "long and invaluable support of the study of Icelandic fishes, and for carefully encouraging the skillful fishermen of Vestmannæyjar Island [near type locality]" (translation)

Apriosturus longicephalus Nakaya 1975 longus (L.), long; cephalus (Latinized Gr.), headed, about ¼ of total length

Apriosturus macrohynchus (Tanaka 1909) macro-, from makros (Gr.), long or large; rhynchus (Latinized Gr.), snouted, referring to its long, acutely pointed snout

Apriosturus macrostomus Chu, Meng & Li 1985 macro-, from makros (Gr.), long or large; stomus (Latinized Gr.), mouthed, allusion not explained, perhaps referring to having the widest mouth among its South China Sea congeners

Apriosturus manis (Springer 1979) Latin for ghost or shade of the departed, referring to its grayish-white color

Apriosturus manocheriani Cordova & Ebert 2021 in honor of Greg Manocherian (b. 1967), American real estate developer, investor and philanthropist, for his “strong commitment to and passion for shark conservation and research”

Apriosturus melanoasper Iglésias, Nakaya & Stehmann 2004 melanos (Gr.), black; asper (L.), rough, referring to black body color and rough skin

Apriosturus microps (Gilchrist 1922) -micro-, from mikros (Gr.), small; ops (Gr.), eye, described as having the smallest eyes in its original genus, Scyliorhinus (Scyliorhinidae)

Apriosturus microtytgeus Meng, Chu & Li 1996 -micro-, from mikros (Gr.), small; pterygion, diminutive of pteryx (Gr.), wing or fin, referring to
Asymbolus galacticus Séré & Last 2008 from the Greek galaktikos, milky, referring to its striking color pattern with numerous milky white patches that resemble the Milky Way

Asymbolus occiduus Last, Gomon & Gledhill 1999 Latin for western (of the setting sun), referring to its western distribution in Australian seas

Asymbolus pallidus Last, Gomon & Gledhill 1999 Latin for ash or wan, referring to its wan body color, distinctively paler than congeners

Asymbolus parvus Compagno, Stevens & Last 1999 Latin for small, referring to its small relative size within the genus

Asymbolus rubiginosus Last, Gomon & Gledhill 1999 Latin for rusty, referring to its body coloration

Asymbolus submaculatus Compagno, Stevens & Last 1999 sub (L.), under; maculatus (L.), spotted, referring to spots on undersurface in slightly more of half of the types

Asymbolus vincenti (Zietz 1908) etymology not explained, probably named for Gulf St. Vincent, where Kangaroo Island (south coast of Australia), type locality, is situated

Bythaelurus Compago 1988

bythos (Gr.), depths of the sea, referring to its deepwater habitat; ailouros (Gr.), cat, probably an allusion to the vernacular “catshark,” so named for its cat-like eyes

Bythaelurus alcockii (Garman 1913) in honor of physician-naturalist Alfred William Alcock (1859–1933), who noted the distinctiveness of this species in 1896

Bythaelurus bachi Weigmann, Ebert, Clerkin, Stehmann & Naylor 2016 in honor of Johann Sebastian Bach (1685–1750), a “musical genius and one of the greatest composers of all time” (so named because the senior author admires Bach and not for any Bach-like feature the shark might possess, Simon Weigmann, pers. comm.) [see also B. vivaldi]

Bythaelurus canescens (Günther 1878) Latin for hoary gray, referring to its “uniform greyish” coloration (presumably in spirits since this shark is brown in life)

Bythaelurus clevai (Séré 1987) in honor of Régis Cléva, biologist, Muséum National d’Histoire Naturelle (Paris), who collected holotype

Bythaelurus dawsoni (Springer 1971) in honor of Elliot W. Dawson (b. 1930), National Museum of New Zealand (now Museum of New Zealand Te Papa Tongarewa), who brought the first specimens to Springer’s attention

Bythaelurus giddingsi McCosker, Long & Baldwin 2012 in honor of Al Giddings (b. 1937), American undersea filmmaker, naturalist, and friend

Bythaelurus hispidus (Alcock 1891) Latin for bristly, referring to its skin being covered with minute stony tricuspid spines

Bythaelurus immaculatus (Chu & Meng 1982) im-, from in (L.), not; maculatus (L.), spotted, referring to its lack of markings

Bythaelurus incanus Last & Stevens 2008 Latin for quite gray, referring to its body and fin coloration

Bythaelurus lutarius (Springer & D’Aubrey 1972) Latin for “of the mud,” referring to its habitat on or just above muddy bottoms at 338–766 m
Bythaelurus naylori Ebert & Clerkin 2015 in honor of Gavin Naylor, College of Charleston (Charleston, South Carolina, USA), for contributions and innovative molecular research into the higher classification of chondrichthians and for his support of the junior author’s work in the Southwest Indian Ridge of the southwestern Indian Ocean.

Bythaelurus stewarti Weigmann, Kaschner & Thiel 2018 in honor of the late Rob Stewart (1979–2017), Canadian filmmaker and shark conservationist, who “inspired the second author and stimulated her interest in sharks” (he died from hypoxia while diving off Islamorada, Florida, USA).

Bythaelurus tenuiceps Weigmann, Kaschner & Thiel 2015 tenuis (L), slender; cephalus (Latinized Gr.), headed but treated as a noun (head), referring to its “remarkably” narrow head and snout.

Bythaelurus vivaldi Weigmann & Kaschner 2017 in honor of Antonio Vivaldi (1678–1741), a “genius composer” of the Baroque era, to express its relationship to B. bachi, named after “sublime genius” Johann Sebastian Bach.

Cephalus Bigelow & Schroeder 1941 cephalus, from kephale (Gr.), head, referring to its expanded, flattened and rounded head; ailouros (Gr.), cat, probably an allusion to the vernacular “catshark,” so named for its cat-like eyes.

Cephalus cephalus (Gilbert 1892) from kephale (Gr.), head, allusion not explained, probably referring to its expanded, flattened and rounded head, “much wider” and with larger pores compared with the similar Parmatetus xanthurus, its presumed congener at the time.

Figaro Whitley 1928 presumably named for the eponymous barber in various dramas (e.g., The Mriage of Figaro), allusion not explained nor evident.

Figaro boardmani (Whitley 1928) in honor of friend and colleague William Boardman (1906–1963), Assistant Ornithologist, Australian Museum (Sydney), who collected holotype from a trawler.

Figaro striatus Gledhill, Last & White 2008 Latin for grooved or furrowed (authors say “striped,” referring to its striped color pattern.

Galeus Rafinesque 1810
galeus, from gaiæos, a small shark or dogfish per Aristotle (sometimes translated as weasel, possibly referring to pointed snouts, swift movements and/or rapacious feeding behavior of smaller predatory sharks 1).

Galeus antillensis Springer 1979 -ensis, Latin suffix denoting place: the Antilles, or West Indies, where Leeward Islands, type locality, is situated.

Galeus aare (Nichols 1927) of Ara, motor yacht owned by William K. Vanderbilt II (1878–1944), wealthy collector of natural history and marine specimens, from which holotype was collected.

Galeus atlanticus Milian 1888 -icus (L.), belonging to: eastern Atlantic Ocean, where it occurs.


Galeus cadenati Springer 1966 in honor of French ichthyologist Jean Cadenat (1908–1992), Director, Marine Biological Section of the Institut Français d’Afrique Noire (Gorée, Senegal), who described the similar G. polli in 1959.

Galeus corriganae White, Mana & Naylor 2016 in honor of Australian molecular geneticist Shannon Corrigan (b. 1982), “whose extensive molecular population and phylogenetic work on sharks has contributed toward an improved understanding of their alpha taxonomy and phylogenetic relationships” (she also captured some of the molecular data used in this description).

Galeus eastmani (Jordan & Snyder 1904) patronym not identified, probably in honor of American geologist and paleontologist Charles Rochester Eastman (1868–1918), a specialist in fossil fishes.

Galeus gracilis Compagno & Stevens 1993 Latin for thin or slender, referring to its firm, slender body.

Galeus longirostris Tachikawa & Taniuchi 1987 longus (L.), long; rostris (Gr.), nose, referring to its “considerably longer” snout compared with congeners known at the time.

Galeus melastomus Rafinesque 1810 melas (Gr.), black; stoma (Gr.), mouth, referring to color inside of mouth (common in congeners but quickly lost after preservation).

Galeus mincarii Soto 2001 in honor of ichthyologist M. Michael Mincarone (b. 1971), for his extensive work and tireless dedication as collections manager of the Museu Oceanográfico do Vale do Itajaí (Brazil).

Galeus murinus (Collett 1904) Latin for mouse-gray, possibly referring to its mouse-like “uniformly gray” color.

Galeus nipponensis Nakaya 1975 -ensis, Latin suffix denoting place: Nippon, or Japan (known only from Japanese waters).

Galeus piperus Springer & Wagner 1966 Latin for peppered, referring to black dots all over body and tail.

Galeus polli Cadenat 1959 in honor of Belgian ichthyologist M. A. Mincarone (b. 1971), for his “extensive work and tireless dedication” as collections manager of the Museu Oceanográfico do Vale do Itajaí (Brazil).

Galeus priapus Séret & Last 2008 named for Priapos, Greek god of reproduction, referring to its long claspers.

Galeus sauteri (Jordan & Richardson 1909) in honor of German businessman and entomologist Hans Sauter (1871–1943), who collected holotype at a Taiwan fish market.


Galeus springeri Springer 1966 in honor of Greek ichthyologist Constantinos Cozzi (1914–1998) for his important contributions to ichthyology.

Halaelurus Gill 1862 halos (Gr.), sea; ailouros (Gr.), cat, probably an allusion to the vernacular “catshark,” so named for its cat-like eyes.

Halaelurus boesemani Springer & D’Aubrey 1972 in honor of Marinus Boeseman (1916–2006), curator of fishes at the Rijksmuseum van Natuurlijke Historie (Leiden, Netherlands), for his “important” contributions to ichthyology.

Halaelurus buergeri (Miiller & Henle 1838) in honor of German physi-
cian-biologist Heinrich Bürger (ca. 1804–1858), who collected and illustrated Japanese flora and fauna and apparently collected holotype of this species

*Halaelurus lineatus* Bass, D'Aubrey & Kistnasamy 1975 Latin for lined, referring to its 13 pairs of narrow dark-brown stripes

*Halaelurus maculosus* White, Last & Stevens 2007 Latin for speckled, referring to speckling of small dark spots over dorsal and lateral surfaces of body

*Halaelurus natalensis* (Regan 1904) -ensis, Latin suffix denoting place: the coast of Natal, South Africa, type locality

*Halaelurus qagga* (Alcock 1899) etymology not explained, possibly referring to shark’s narrow vertical bars, similar to those of the zebra, *qagga*

*Halaelurus sellus* White, Last & Stevens 2007 from *sella* (L.), saddle, referring to dark saddles on head and body

**Haploblepharus**

*Garman 1913*

haplo (Gr.), single or simple; blepharon (Gr.), eyelid, referring to simple structure of lower eyelid, which closes against upper eyelid to protect the eye

*Haploblepharus edwardsii* (Schinz 1822) in honor of English naturalist George Edwards (1694–1773), known as the “father of British ornithology,” who was the first to illustrate this shark, in 1760

*Haploblepharus fuscus* Smith 1950 Latin for dusky, dark or swarthy, probably referring to its overall drab-brown coloration

*Haploblepharus kistnasamyi* Human & Compagno 2006 in honor of Nat Kistnasamy (b. 1938), Oceanographic Research Institute (Durban, South Africa), for “outstanding efforts and pioneering work” in the systematics and taxonomy of the chondrichthyan fauna of southern Africa

*Haploblepharus pictus* (Müller & Henle 1838) Latin for painted or colored, probably referring to its variegated color pattern

**Holohalaelurus**

*Fowler 1934*

holos (Gr.), whole or entire, i.e., being a form of *Halaeurus* without any labial folds or grooves in the mouth

*Holohalaelurus favus* Human 2006 Latin for honeycomb, referring to the color pattern of fresh specimens

*Holohalaelurus grennian* Human 2006 from the old English *grennian*, grin, referring to its wide, broadly arched mouth and relatively large
dentition, which resembles an ominous grin’
Holohalaelurus melanostigma (Norman 1939) melanos (Gr.), black; stigma (Gr.), mark or spot, probably referring to dark-colored spots on dorsal surface
Holohalaelurus punctatus (Gilchrist 1914) ktit for spotted, referring to dense covering of small brown spots on dorsal surface
Holohalaelurus regani (Gilchrist 1922) in honor of English ichthyologist Charles Tate Regan (1878–1943), Natural History Museum (London), who described many South African fishes
Parmaturus Garman 1906
parma (L.), from parme (Gr.), small shield; oura (Gr.), tail, presumably referring to upper edge of caudal fin armed with modified scales per Garman
Parmaturus albimarginatus Séret & Last 2007 albus (L.), white; marginatus (L.), bordered, referring to broad white margins on posterior fins
Parmaturus albipenis Séret & Last 2007 albus (L.), white; penis (L.), copulatory organ, referring to white claspers, which contrast strongly against dark brownish body coloration
Parmaturus angeliæ Soares, Carvalho, Schwingel & Gadig 2019 in honor of the fourth author’s granddaughter, Angela
Parmaturus bigus Séret & Last 2007 atin for beige, referring to general plain and pale yellow-brown coloration
Parmaturus campechiensis Springer 1979 -ensis, atin suffix denoting place: Bay of Campeche, Gulf of Mexico, type locality
 Parmaturus lanatus Séret & Last 2007 Latin for “soft like wool,” referring to the velvety feel of its skin
Parmaturus macmillani Hardy 1985 in honor of ichthyologist Peter McMillan (b. 1955, note Latinization of “Mc” to “Mac”), who collected “many examples of undescribed or poorly known marine fish and invertebrate species” from deep waters off New Zealand
Parmaturus melanobranchus (Chan 1966) melanos (Gr.), black; brancho (Gr.), gill, referring to blackish color on gill septa
Parmaturus nigripalatum Fahmi & Ebert 2018 nigra (L.), black or dark; palatum (L.), palate, referring to distinctive blackish color of roof of mouth
Parmaturus pilosus Garman 1906 Latin for hairy, allusion not explained, perhaps referring to its “minute, velvety” scales
Parmaturus xaniurus (Gilbert 1892) xanion (Gr.), comb for carding wool; urus (Latinized Gr.), tailed, referring to crest-like row of tooth-like projections along upper edge of caudal fin

Pentanchus Smith & Radcliffe 1912
Pentanchus profundicolus Smith & Radcliffe 1912 profundus (L.), deep; -colus (L.), dwelling in, referring to deepwater habitat (holotype taken at 1070 m)
