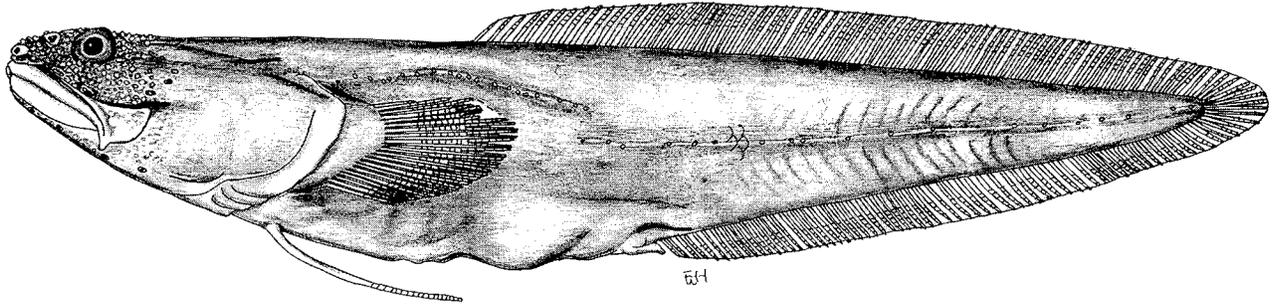


Order OPHIDIIFORMES

Viviparous (or Livebearing) Brotulas
Family **BYTHITIDAE**

Gill 1861



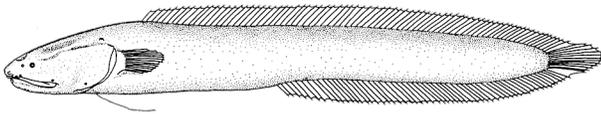
Anacanthobythites platycephalus, holotype, 106.5 mm SL. Illustration by Elaine Heemstra. From: Anderson, M. E. 2008. A new genus with two new species of live-bearing brotulas (Teleostei: Ophidiiformes: Bythitidae) from southern Australia. *Species Diversity* 13 (2–3): 149–156.

Acarobythites

Machida 2000

acaro, from *akarēs* (ἀκαρής), tiny, referring to its small size (up to 25.2 mm SL); *Bythites*, type genus of family

Acarobythites larsonae Machida 2000 in honor of Helen Larson, Curator of Fishes, Museum and Art Gallery of the Northern Territory (Darwin, Australia), who “kindly” sent bythitid and ophidiid specimens to Machida for study



Acarobythites larsonae, holotype, 25.2 mm SL. From: Machida, Y. 2000. A new bythitid genus and species, *Acarobythites larsonae*, from shallow rocky reefs off northern Australia (Pisces, Ophidiiformes, Bythitidae). *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* 16: 123–126.

Anacanthobythites

Anderson 2008

an- (ἀν), privative (i.e., not); *acanthus* (L.), from *ákantha* (ἀκανθα), thorn or spine, referring to lack of developed gill rakers on first branchial arch; *Bythites*, type genus of family

Anacanthobythites platycephalus Anderson 2008 *platýs* (πλατύς), flat; *cephalus*, from *kephalé* (κεφαλή), head, referring to its depressed head

Anacanthobythites tasmaniensis Anderson 2008 *-ensis*, Latin suffix denoting place: Tasmania, Australia, type locality

Aphyonus

Günther 1878

aphya, from *aphýē* (ἀφύη), small fry (i.e., a small or translucent fish), possibly referring to its transparent, colorless skin; *onus*, presumably a Latinization of *onos* (ὄνος), donkey or ass (*asellus* in Latin), a name dating to Aristotle for an unidentified gadiform fish, possibly *Phycis*



First-published image of *Aphyonus gelatinosus*. Illustration by Robert Mintern. From: Günther, A. 1887. Report on the deep-sea fishes collected by H. M. S. Challenger during the years 1873–76. Report on the Scientific Results of the Voyage of H. M. S. Challenger 22 (57): i-kv + 1–268, Pls. 1–66.

blennoides (Gadidae)¹ but often applied to *Merluccius merluccius* (Merlucciidae) and hence used several times by Günther as a suffix for superficially similar (e.g., hake-like) fishes

Aphyonus gelatinosus Günther 1878 Latin for gelatinous or jelly-like, referring to “thin, scaleless, loose” skin, forming a “large loose bag” on upper anterior body, “which during life is probably filled and distended with mucus”

Barathronus

Goode & Bean 1886

báratheron (βάραθρον), a bottomless pit or abyss (in Greek mythology, the Barathron was a deep pit at Athens into which living and executed criminals were cast), referring to deep-sea habitat of *B. bicolor*; *onus*, presumably a Latinization of *onos* (ὄνος), donkey or ass (*asellus* in Latin), a name dating to Aristotle for an unidentified gadiform fish, possibly *Phycis blennoides* (Gadidae)¹ but often applied to *Merluccius merluccius* (Merlucciidae) and often used as a suffix for superficially similar (e.g., hake-like) fishes

Barathronus affinis Brauer 1906 Latin for related, allusion not explained, perhaps referring to its affinity to *B. diaphanus*, described in the same monograph

Barathronus algrahami Nielsen, Pogonoski & Appleyard 2019 in honor of Alastair Graham (b. 1964), collection manager at CSIRO (Australia’s Commonwealth Scientific and Industrial Research Organisation), for assistance with loans of specimens and data

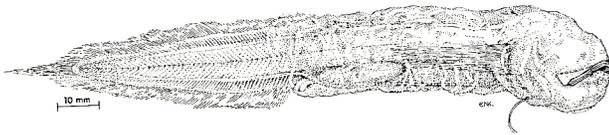
Barathronus bicolor Goode & Bean 1886 *bi-*, from *bis* (L.), twice, i.e., two-colored, referring to yellowish white color with a broad vertical band of black from origin of ventral nearly to vent, and another similar and narrower band above it upon each side

Barathronus bruuni Nielsen 1969 in honor of the research vessel *Anton Bruun*, which collected holotype

Barathronus diaphanus Brauer 1906 from *diaphanés* (διαφανής), translucent, presumably referring to how its blood vessels can be seen through the skin

Barathronus linsi Nielsen, Mincarone & Di Dario 2015 in honor of

¹ Why a donkey or ass? At least four explanations have been mentioned but no one knows for sure. (1) The color of Hake *Merluccius merluccius* (Merlucciidae)—grayish-white color above, white below—is like that of an ass (Varro, 1471, *De lingua Latina*). (2) The Haddock *Melanogrammus aeglefinus* (Gadidae) is as sluggish as a donkey (Varro, citing Oppian). (3) The dark mark on the shoulder of the Haddock is said to resemble the dark stripe over the withers of an ass (Yarrell, 1836, *History of British Fishes*, vol. 2). (4) In ancient times, gadiform fishes were carried to market on the backs of asses (Day, 1882, *Fishes of Great Britain and Ireland*).



Barathronus pacificus, holotype, 128 mm SL. From: Nielsen, J. G. and R. J. Eagle. Descriptions of a new species of *Barathronus* (Pisces, Aphyonidae) and four specimens of *Sciadon* sp. from the eastern Pacific. *Journal of the Fisheries Research Board of Canada* 31 (6): 1067–1072, 2 pls. 138–144.

Jorge Eduardo Lins de Oliveira, Universidade Federal do Rio Grande do Norte, for his lifelong commitment to the understanding of the marine biodiversity of northeastern Brazil

***Barathronus maculatus* Shcherbachev 1976** Latin for spotted, referring to “distinctly visible” (translation) spots along median line of body

***Barathronus multidentis* Nielsen 1984** *multi-* (L.), many; *dens*, tooth, referring to higher number of fangs on vomer (11) and palatines (8–11 on each) compared to any congener known at the time

***Barathronus pacificus* Nielsen & Eagle 1974** *-icus* (L.), belonging to: the northeastern Pacific, where it occurs

***Barathronus parfaiti* (Vaillant 1888)** in honor of J. Parfait, captain of the *Talisman*, French research vessel that collected holotype

***Barathronus roulei* Nielsen 2019** in honor of French zoologist Louis Roule (1861–1942), who reported this species as *B. parfaiti* in 1915 and 1916

Bellottia Giglioli 1883

-ia (L. suffix), belonging to: “good friend” Cristoforo Bellotti (1823–1919), “a modest but distinguished ichthyologist” (translation) who brought specimens of *B. apoda* to Giglioli’s attention

***Bellottia apoda* Giglioli 1883** *a-* (ἀ-), privative, i.e., without; *poda*, from *podós* (ποδός), genitive of *poús* (πούς), foot (homologous to the ventral fin), referring to absence of ventral fins

***Bellottia armiger* (Smith & Radcliffe 1913)** *arma* (L.), weapons; *-iger* (L.), to have or bear, referring to “opercle armed with a slender spine” and “margin of preopercle armed with 5 or 6 spines”

***Bellottia cryptica* Nielsen, Ross & Cohen 2009** Latin for hidden or secret, referring to how it is concealed within crevices in its complex habitat, provided by tubeworms or deep-sea corals

***Bellottia galathea* Nielsen & Møller 2008** in honor of the Danish *Galathea* 3 expedition, which circumnavigated the world in 2006–2007 and caught new and rare deep-sea ophidiiform fishes from the Solomon Sea, including this one

***Bellottia robusta* Nielsen, Ross & Cohen 2009** Latin for of oak or oaken and, by extension, hard, firm or solid (but often used by ichthyologists to mean fat or stout), referring to its short, deep body



Bellottia robusta, holotype, male. 62 mm SL. Photo by Geert Brovad. From: Nielsen, J. G., S. W. Ross and D. M. Cohen. 2009. Atlantic occurrence of the genus *Bellottia* (Teleostei, Bythitidae) with two new species from the Western North Atlantic. *Zootaxa* 2018: 45–57.

Bidenichthys Barnard 1934

named for C. Leo Biden, described elsewhere as a “knowledgeable angler,” who collected one of the types of *B. capensis* and “to whom the South African Museum is indebted for many specimens and much information”; *ichthys* (ἰχθύς), fish

***Bidenichthys capensis* Barnard 1934** *-ensis*, Latin suffix denoting place:



Bidenichthys okamotoi, holotype, male, 187 mm SL. Photo by Marcus A. Krag. From: Møller, P. R., W. Schwarzhans, H. Lauridsen and J. G. Nielsen. 2022. *Bidenichthys okamotoi*, a new species of the Bythitidae (Ophidiiformes, Teleostei) from the Koko Seamount, Central North Pacific. *Journal of Marine Science and Engineering* 9 (12) [for 2021]: 1–14.

the Cape, presumably referring to type locality at Still Bay, near Cape Town, South Africa

***Bidenichthys consobrinus* (Hutton 1876)** Latin for cousin, allusion not explained, perhaps referring to its relationship with one or more species in *Dinematichthys* (Dinematichthyidae), its presumed genus at the time

***Bidenichthys okamotoi* Møller, Schwarzhans, Lauridsen & Nielsen 2022** in honor of Makoto Okamoto, Seikai National Fisheries Research Institute (Nagasaki, Japan), who collected types, for his many contributions to Pacific ichthyology

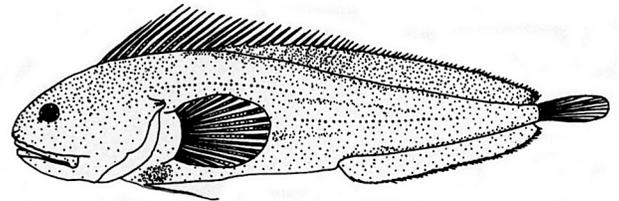
***Bidenichthys paxtoni* (Nielsen & Cohen 1986)** in honor of American-born Australian ichthyologist John R. Paxton (1938–2023), Australian Museum (Sydney), for his many contributions to ichthyology, both in research and curating

***Bidenichthys slartibartfasti* (Paulin 1995)** in honor of Slartibartfast, a designer of fjords in the first and third books of Douglas Adams’ “Hitchhiker’s Guide to the Galaxy” series, alluding to its distribution in the Fiordland region of New Zealand

Brosmodorsalis Paulin & Roberts 1989

brosmo-, referring to its placement in the subfamily Bromsophycinae (now considered polyphyletic); *dorsalis* (L.), of the back, referring to two dorsal-fin characters: origin well anterior to posterior margin of operculum, and anterior rays free of membrane

***Brosmodorsalis persicinus* Paulin & Roberts 1989** *-inus* (L.), adjectival suffix: *persica* (L.), peach, referring to its body coloration in life

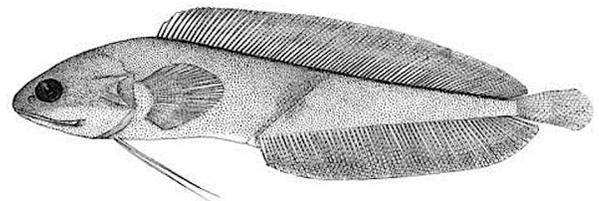


Brosmodorsalis persicinus, paratype, 48 mm SL. From: Paulin, C. D. and C. D. Roberts. 1989. A new genus and species of bythitid fish (Teleostei: Ophidiiformes) from New Zealand. *Journal of Natural History* 23 (2): 355–361.

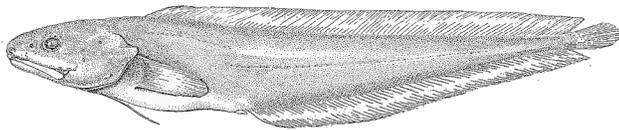
Brosmophyciops Schultz 1960

ōps (ὤψ), eye or face (i.e., appearance), similar to *Brosmophycis*

***Brosmophyciops pautzkei* Schultz 1960** in honor of Schultz’ former student Clarence F. Pautzke (1907–1971), chief biologist in the Game Department of the State of Washington, who was at Bikini Atoll (western Pacific) in 1946 and 1947 when holotype was collected



Brosmophyciops pautzkei, holotype, 53.8 mm SL. Illustration by Aime W. Awl. From: Schultz, L. P., W. M. Chapman, E. A. Lachner and L. P. Woods. 1960. Fishes of the Marshall and Marianas islands. Vol. 2. Families from Mullidae through Stromateidae. *Bulletin of the United States National Museum* 202 (2): i–ix + 1–438, Pls. 75–123.



Possibly first-published image of *Brosmophycis marginata* (114 years after its description), male, 102 mm SL. From: Nielsen, J. G., A. Jespersen and O. Munk. 1968. Spermatophores in Ophidioida (Pisces, Percomorpha). Galathea Report 9: 239-254, Pls. 13-15.

Brosmophycis Gill 1861

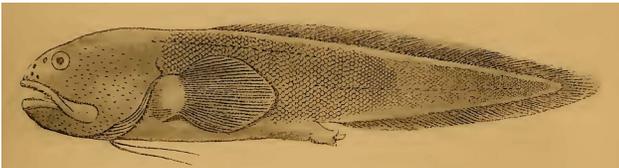
a “union” of some of the features of the gadiform genera
Brosmius (= *Brosme*, Lotidae) and *Phycis* (Gadidae)

***Brosmophycis marginata* (Ayes 1854)** Latin for edged or bordered, referring to bright rose-red edge on fins

Bythites Reinhardt 1835

bythitēs (βυθίτης), dweller of the deep, referring to occurrence of what Reinhardt would later name *B. fuscus* at “great depths” (name proposed without included species)

***Bythites fuscus* Reinhardt 1837** Latin for dark or dusky, referring to its black-brown coloration



Bythites fuscus. From: Reinhardt, J. C. H. 1837. Ichthyologische bidrag til den Grønlandske fauna. Indledning, indeholdende tillæg og forandringer i den fabriciske fortegnelse paa Grønlandske hvirveldyr. Det Kongelige Danske videnskaberne selskabs naturvidenskabelige og matematiske ahandling 7: 83-196, Pls. 1-8.

***Bythites gerdæ* Nielsen & Cohen 1973** in honor of the research vessel *Gerda* (Mote Marine Laboratory, Miami, Florida, USA), from which holotype was collected

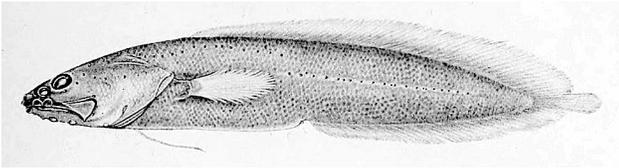
***Bythites islandicus* Nielsen & Cohen 1973** *-icus* (L.), belonging to: Ísland, referring to type locality off southeast coast of Iceland

Calamopteryx Böhlke & Cohen 1966

calamus (L.), reed; *ptéryx* (πτέρυξ), fin, allusion not explained, presumably referring to elongated radials of pectoral fin of *C. goslinei*

***Calamopteryx goslinei* Böhlke & Cohen 1966** in honor of American ichthyologist William A. Gosline (1915-2002), University of Michigan, for his contributions to the knowledge of ophidioid fishes

***Calamopteryx jeb* Cohen 1973** coined from the initials of James E. Böhlke (1930-1982), Academy of Natural Sciences of Philadelphia, “noted” ichthyologist and co-describer of the genus *Calamopteryx*

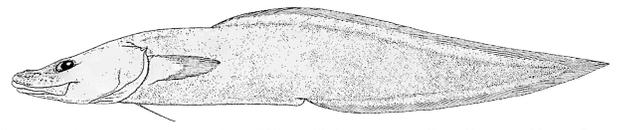


Calamopteryx jeb, holotype, 53.2 mm SL. Illustration by Mildred H. Carrington. From: Cohen, D. M. 1973. Viviparous ophidioid fish genus *Calamopteryx*: new species from western Atlantic and Galapagos. Proceedings of the Biological Society of Washington 86 (28): 339-350.

***Calamopteryx robinsorum* Cohen 1973** *-orum* (L.), commemorative suffix, plural: in honor of Catherine H. and C. Richard (1928-2020) Robins, for their contributions to the taxonomy of western Atlantic species

Cataetix Günther 1887

etymology not explained; per Jordan & Evermann (1898)², it means *kataí* (καταί), at the bottom, and *týxis* (τύξις), a find, literally, “a find from the bottom,” probably referring to bathydemersal habitat of *C. messieri*



Cataetix chthamalarhynchus, holotype, 353 mm SL. Illustration by Keiko Hiratsuka Moore. From: Cohen, D. M. 1981. New and rare ophidiiform fishes from the eastern Atlantic: Canary Islands to the Cape of Good Hope. Proceedings of the Biological Society of Washington 94 (4): 1085-1103.

***Cataetix alleni* (Byrne 1906)** in honor of Byrne’s friend, British marine biologist Edward Johnson Allen (1866-1942), Director of the Marine Biological Association of the United Kingdom, under whose auspices type was collected

***Cataetix bruuni* (Nielsen & Nybelin 1963)** in honor of Danish oceanographer and ichthyologist Anton Frederick Bruun (1901-1961), scientific leader of expedition that collected holotype in 1946

***Cataetix chthamalarhynchus* Cohen 1981** *chthamalós* (χθαμαλός), flat or on the ground (Cohen says “low”); *rhynchus*, from *rhýnchos* (ρύγχος), snout, referring to its strongly depressed snout

***Cataetix hawaiiensis* Gosline 1954** *-ensis*, Latin suffix denoting place: Island of Hawai’i, killed by the eruption of Mauna Loa in 1950

***Cataetix laticeps* Koefoed 1927** *latus* (L.), broad or wide; *-iceps* (Neo-Latin), headed, referring to its flattened head, “broader than high”

***Cataetix lepidogenys* (Smith & Radcliffe 1913)** *lepidós* (λεπίδος), genitive of *lepis* (λεπίς), scale; *génys* (γένυς), jaw (usually the cheek or lower jaw in ichthyology), referring to presence of scales on cheek (as well as opercle and top of head)

***Cataetix messieri* (Günther 1878)** of the Messier Strait (Patagonia, Chile), type locality

***Cataetix nielseni* Balushkin & Prokofiev 2005** in honor of Danish ichthyologist Jørgen G. Nielsen (b. 1932), Zoological Museum of Copenhagen, a “who made a considerable contribution to the study of fish systematics, including the order Ophidiiformes” (translation)

***Cataetix platyrhynchus* Machida 1984** *platýs* (πλατύς), flat; *rhynchus*, from *rhýnchos* (ρύγχος), snout, referring to its “strongly depressed” snout

***Cataetix rubrirostris* Gilbert 1890** *ruber* (L.), red; *rostris*, Neo-Latin scientific adjective of *rostrum* (L.), snout, flushed with a dark ruby red in life

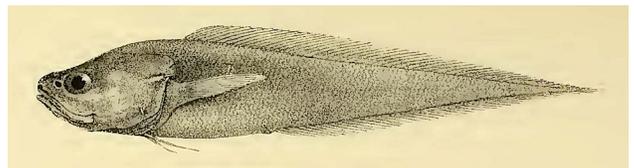
***Cataetix simus* Garman 1899** Latin for blunt-nosed, referring to its “very broad and bluntly rounded” snout

Diplacanthopoma Günther 1887

diplo-, from *diplóos* (διπλόος) or *diploús* (διπλοῦς), twofold or double; *acanthus* (L.), from *ákantha* (ἀκανθα), thorn or spine; *póma* (πῶμα), lid or cover, referring to two spines on operculum of *D. brachysoma*, one pointing backwards, the other downwards

***Diplacanthopoma brachysoma* Günther 1887** *brachýs* (βραχύς), short; *sóma* (σῶμα), body, referring to its elongate, compressed body

***Diplacanthopoma brunneum* Smith & Radcliffe 1913** Medieval Latin for brown, referring to its “Broccoli brown” body color in alcohol



Diplacanthopoma brachysoma. Illustration by Robert Mintern. See *Aphyonius gelatinosus* caption for source.

² Jordan, D. S. and B. W. Evermann. 1898. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America north of the Isthmus of Panama. Part III. Bulletin of the United States National Museum No. 47: i-xxiv + 2183a-3136.

***Diplacanthopoma japonicum* (Steindachner & Döderlein 1887)** -icum (L.), belonging to: Japan, referring to type locality, Sagami Sea, off Tokyo, Japan

***Diplacanthopoma jordani* Garman 1899** in honor of American ichthyologist David Starr Jordan (1851–1931), “in token of a hearty appreciation of his work in North American Ichthyology”

***Diplacanthopoma kreffti* Cohen & Nielsen 2002** in honor of German ichthyologist Gerhard Krefft (1912–1993), Institut für Seefischerei (Hamburg), friend and colleague, “who fished and studied deep sea fishes with a passion”

***Diplacanthopoma nigripinne* Gilchrist & von Bonde 1924** *nigri-*, from *niger* (L.), black; *pinne*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to fins “darker” than brownish body [originally spelled *nigripinnis*; emended to agree with neuter genus]

***Diplacanthopoma raniceps* Alcock 1898** *rana* (L.), frog; *-iceps* (Neo-Latin), headed, referring to its “broad frog-like head and snout”

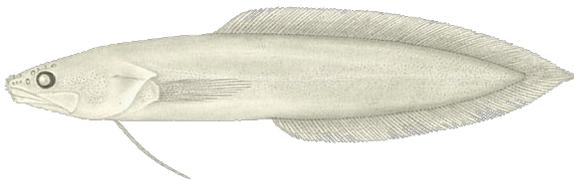
***Diplacanthopoma riversandersoni* Alcock 1895** in honor of Adam Rivers Steele Anderson (1863–1924), captain and surgeon-naturalist of the Royal Indian Marine Survey steamer *Investigator*, which collected holotype

Ematops

Schwarzahns & Nielsen 2011

emata, from *ichthyémata* (ἰχθυήματα), fish scales; *óps* (ὄψ), eye, referring to unique partial covering of eye by head scales, not known in any other living ophidiiform fish

***Ematops randalli* (Cohen & Wourms 1976)** in honor of American ichthyologist John E. Randall (1924–2020), Bishop Museum (Honolulu), who helped collect holotype and sent it to the authors, along with notes on life coloration and a color transparency



Ematops randalli, paratype, female, 35.8 mm SL. Illustration by Keiko Hiratsuka Moore. From: Cohen, D. M. and J. P. Wourms. 1976. *Microbrotula randalli*, a new viviparous ophidioid fish from Samoa and New Hebrides, whose embryos bear trophotaeniae. Proceedings of the Biological Society of Washington v. 89 (no. 5): 81-98.

Grammonus

Gill 1896

etymology not explained, perhaps *grammé* (γραμμή), line or stroke of the pen, referring to interrupted lateral line of *G. ater*; *onus*, presumably a Latinization of *onos* (ὄνος), donkey or ass (*asellus* in Latin), a name dating to Aristotle for an unidentified gadiform fish, possibly *Phycis blennoides* (Gadidae)³ but often applied to *Merluccius merluccius* (Merlucciidae) and often used as a suffix for superficially similar (e.g., hake-like) fishes

***Grammonus ater* (Risso 1810)** Latin for black, referring to its ebony black (“noir d’ébène”) color on a background of purplish red

***Grammonus claudei* (Torre y Huerta 1930)** in honor of French engineer (and inventor of neon lighting) Georges Claude (1870–1960), who inadvertently discovered this reef-cave fish in Matanzas Bay, Cuba, when pumping cool seawater up from the depths to convert into electricity via a process called “ocean thermal energy conversion”

***Grammonus diagrammus* (Heller & Snodgrass 1903)** *dia-*, from *dýo* (δύο), two; *grammus*, scientific Neo-Latin derived from *grammé* (γραμμή), line or stroke of the pen, referring to two lateral lines on each side, overlapping for a fourth of their lengths

***Grammonus longhursti* (Cohen 1964)** in honor of British-born Canadian oceanographer Alan Reece Longhurst (1925–2023), who collected holotype



Grammonus yunokawai, holotype, 98 mm SL, at a cave 20 m deep. Photo by Kyo Yunokawa, for whom it is named. From: Nielsen, J. G. 2007. *Grammonus yunokawai* (Ophidiiformes: Bythitidae), a new marine cavefish from the Ryukyu Islands. Ichthyological Research 54: 374–379.

***Grammonus minutus* Nielsen & Prokofiev 2010** Latin for small, referring to short length (32–55 mm SL) at which males attain sexual maturity

***Grammonus nagaredai* Randall & Hughes 2008** in honor of Bronson Nagareda (b. 1976), who collected holotype and provided a series of photographs taken in his aquarium

***Grammonus opisthodon* Smith 1934** *óπισθεν* (ὀπισθεν), behind; *odon*, from *odoús* (ὀδοός), tooth, allusion not explained nor evident

***Grammonus robustus* Smith & Radcliffe 1913** Latin for of oak or oaken and, by extension, hard, firm or solid (but often used by ichthyologists to mean fat or stout), probably referring to its “short, deep” body

***Grammonus thielei* Nielsen & Cohen 2004** in honor of Austrian underwater photographer Werner Thiele (b. 1966), the first to photograph and capture this species

***Grammonus waikiki* (Cohen 1964)** named for Waikiki reef, Oahu Island, Hawai‘i, type locality

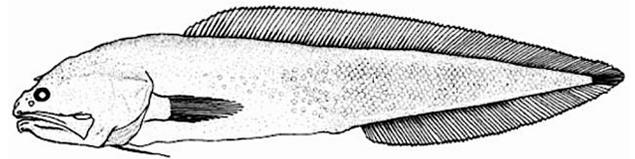
***Grammonus yunokawai* Nielsen 2007** in honor of Kyo Yunokawa, Ieshima Diving Center (Okinawa, Japan), who photographed and caught (by hand in the back of the cave in absolute darkness) the only known specimen

Hastatobythites

Machida 1997

hastatus (L.), armed with a spear, referring to spines on frontal and mesethmoid; *Bythites*, type genus of family

***Hastatobythites arafurensis* Machida 1997** *-ensis*, Latin suffix denoting place: Arafura Sea, western Pacific, type locality



Hastatobythites arafurensis, holotype, male, 51.6 mm SL. From: Machida, Y. 1997. *Hastatobythites arafurensis*, a new bythitid genus and species from Australia (Bythitidae, Ophidiiformes). Ichthyological Research 44 (4): 385–388.

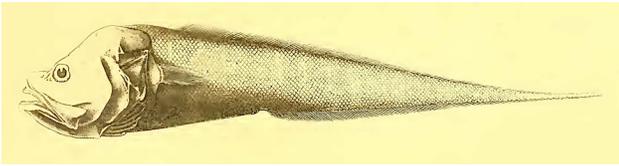
Hepthocara

Alcock 1892

hepthós (ἑφθός), boiled, seethed or languid; *cara*, from *kára* (κάρα), head, allusion not explained, perhaps referring in some way to “wafer-like” cranial bones and/or head of *H. simum*, covered with “delicate scaleless skin, which in life, owing to an extraordinary storage in and beneath it of mucus, forms a uniformly thick velvety cap”

***Hepthocara crassiceps* Smith & Radcliffe 1913** *crassus* (L.), thick, fat or stout; *-iceps* (Neo-Latin), headed, referring to its “very large, broad, and deep” head

***Hepthocara simum* Alcock 1892** Latin for flat- or pug-nosed, referring to its “small snub snout,” not overhanging the jaws



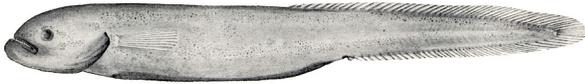
Hephthocara simum. From: Alcock, A. W. 1892. Natural history notes from H. M. Indian marine survey steamer "Investigator," Lieut. G. S. Gunn, R. N., commanding. Series II, No. 5. On the bathyal fishes collected during the season of 1891-92. *Annals and Magazine of Natural History* (Series 6) 10 (59): 345–365, Pl. 18.

Leucobrotula

Koefoed 1952

leuco, from *leukós* (λευκός), white, presumably referring to colorless body (with exceptions of mouth, gill membranes and peritoneum, which are blue-black); *brotula*, placed in Brotulidae at time of description

***Leucobrotula adipata* Koefoed 1952** Latin for fatty or greasy, referring to "stratum of oil globules" beneath its scaleless skin



Leucobrotula adipata, holotype. Illustration by Thorolv Rasmussen. From: Koefoed, E. 1952. Zeomorphi, Percomorphi, Plectognathi from the "Michael Sars" North Atlantic deep-sea expedition 1910. *Scientific Results of the Michael Sars North Atlantic Deep-Sea Expedition 1910* v. 4 (pt 2, no. 2): 1–27, Pls. 1–3.

Lucifuga

Poey 1858

luci-, from *lux* (L.), light or brightness; *fugio* (L.), to flee, fly or take flight, referring to subterranean (and therefore lightless) habitat of *L. dentata* and *L. subterranea*, i.e., to flee from light

***Lucifuga dentata* Poey 1858** Latin for toothed, referring to its longer teeth and the presence of palatine teeth compared to *L. subterranea*

***Lucifuga gibarensis* Hernández, Møller, Casane & García-Machado 2020** -ensis, Latin suffix denoting place: village of Gibara, northern Holguin province, Cuba, where the three caves inhabited by this species are located

***Lucifuga inopinata* Cohen & McCosker 1998** Latin for unexpected, referring to unexpected find of a *Lucifuga* in the Galapagos, and that it brought the relationships between it and related genera into question (John E. McCosker, pers. comm.)

***Lucifuga lucayana* Møller, Schwarzhans, Iliffe & Nielsen 2006** -ana (L.), belonging to: the Lucayan Indians, who inhabited the Bahamas for more than 2000 years, before they were eliminated by European invaders; their name is reflected in the type locality, Lucayan Caverns (Grand Bahama Island), which they used as a graveyard

***Lucifuga simile* Nalbant 1981** Latin for similar, referring to its intermediate features between *L. dentatus* and *L. subterraneus*

***Lucifuga spelaotes* Cohen & Robins 1970** Greek (σπηλαιώτης) for cave or cavern dweller, referring to its occurrence in anchialine caves of the Bahamas

***Lucifuga subterranea* Poey 1858** Latin for underground, referring to its occurrence in anchialine caves of Cuba



Lucifuga gibarensis, 45.0 mm SL, male. From: Hernández, D., P. R. Møller, D. Casane and E. García-Machado. 2020. A new species of the cave-fish genus *Lucifuga* (Ophidiiformes, Bythitidae), from eastern Cuba. *ZooKeys* 946: 17–35.



Megacataetox niki, holotype, 460 mm SL. Photo by Joseph L. Russo. See *Cataetox chthamalarhynchus* caption for source.

Megacataetox

Prokofiev 2005

mégas (μέγας), large or great, referring to its size, much larger than any other *Cataetox*, its original genus (Artem Prokofiev, pers. comm.)

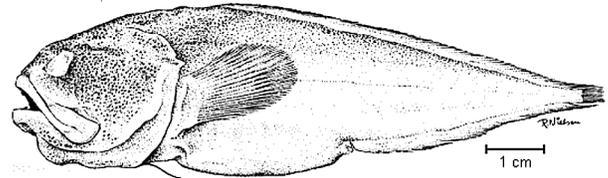
***Megacataetox niki* (Cohen 1981)** in honor of ichthyologist Nikolai Vasil'evich Parin (1932–2012), Russian Academy of Sciences, who made specimens available to Cohen and reviewed his manuscript

Melodichthys

Nielsen & Cohen 1986

Melodie, fishing vessel that collected holotype; *ichthýs* (ἰχθύς), fish

***Melodichthys hadrocephalus* Nielsen & Cohen 1986** bulk-headed, from *hadrós* (ἄδρός), bulky, and *kephalē* (κεφαλή), head, referring to its robust head, ~1/3 of SL



Melodichthys hadrocephalus, holotype, 97 mm SL. Illustration by R. Nielsen. From: Nielsen, J. G. and D. M. Cohen. 1986. *Melodichthys*, a new genus with two new species of upper bathyal bythitids (Pisces, Ophidiiformes). *Cybiurn* 10 (4): 381–387.

Meteoria

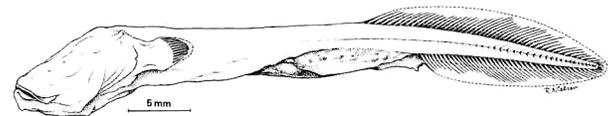
Nielsen 1969

-ia (L. suffix), belonging to: the German research vessel *Meteor*, which collected holotype

***Meteoria erythropros* Nielsen 1969** *erythrós* (ἐρυθρός), red; *óps* (ὄψ), eye, referring to reddish tissue surrounding the eyes

***Meteoria longidorsalis* Nielsen 2016** *longus* (L.), long; *dorsalis* (L.), of the back, referring to longer dorsal-fin base compared with *M. erythropros*

***Meteoria pauciradiatus* (Nielsen 1997)** *paucus* (L.), few or scanty; *radiatus* (L.), rayed, referring to relatively few fin rays compared with *Parasciadonus brevibrachium*, its presumed congener at the time



Meteoria pauciradiatus, holotype, female. Illustration by R. Nielsen. From: Nielsen, J. G. 1997. Deepwater ophidiiform fishes from off New Caledonia with six new species. In: B. Séret (ed.) *Résultats des Campagnes MUSORSTOM*, v. 17. *Mémoires du Muséum National d'Histoire Naturelle*, Paris (N. S.) (Série A) Zoologie 174: 51–82.

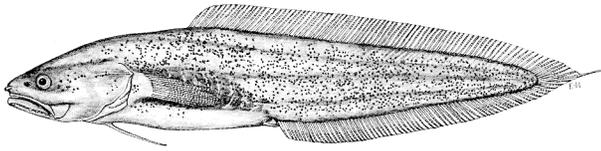
Microbrotula

Gosline 1953

micro-, from *mikrós* (μικρός), small, presumably referring to small size of *M. rubra* (up to 46.2 mm SL) and *M. nigra* (= *Grammonus waikiki*, 62.5 mm SL); *brotula*, then placed in the family Brotulidae

***Microbrotula andersoni* Schwarzhans & Nielsen 2011** in honor of M. Eric Anderson, South African Institute for Aquatic Biodiversity, for his contributions to the knowledge of the genus *Microbrotula*

***Microbrotula bentleyi* Anderson 2005** in honor of Andrew Charles Bentley (Port Elizabeth, South Africa, now Collection Manager, University of Kansas Biodiversity Institute & Natural History Museum), for



Microbrotula punicea, holotype, 43.3 mm SL. Illustration by Elaine Heemstra. From: Anderson, M. E. 2007. Two new *Microbrotula* (Teleostei: Ophidiiformes: Bythitidae) from the southwestern Pacific Ocean with a revised key to the species. *Species Diversity* 12 (1): 1–8.

his enthusiasm and help in the development of a program on western Indian Ocean fishes, and for collecting holotype

***Microbrotula geraldalleni* Schwarzhans & Nielsen 2012** in honor of American-born Australian ichthyologist Gerald R. Allen (b. 1942), Western Australia Museum (Perth), for his “outstanding” contribution to the knowledge of fishes from the Indo-West Pacific and his many years of support of the senior author

***Microbrotula greenfieldi* Anderson 2007** in honor of ichthyologist David W. Greenfield (b. 1940), for numerous contributions to the systematics, conservation, behavior, and ecology of fishes (he also helped collect holotype)

***Microbrotula hamata* Schwarzhans & Nielsen 2011** authors incorrectly say name is derived from the Latin *hamatus* and describe it as a noun in apposition meaning “hook,” referring to forward-curved spine at lower angle of preopercle, but actually it’s a feminine adjective meaning “hooked”; despite the error, name needs to be treated as a noun because the authors declare it as a noun

***Microbrotula punicea* Anderson 2007** Latin for pink or reddish, referring to its color in life

***Microbrotula queenslandica* Anderson 2005** *-ica* (L.), belonging to: Queensland, Australia, where types were collected from the Great Barrier Reef

***Microbrotula rubra* Gosline 1953** Latin for red, referring to its translucent pinkish-red color in life

Nybelinella

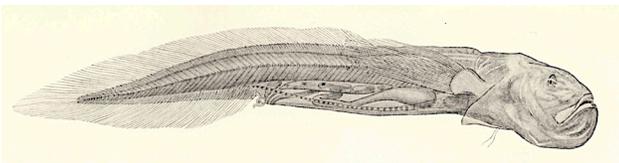
Nielsen 1972

-ella (L.), diminutive connoting endearment: in honor of Swedish ichthyologist Orvar Nybelin (1892–1982), who described *N. erikssoni* in 1957, and who “kindly placed” his specimens at Nielsen’s disposal [replacement name for *Nybelinia* Nielsen 1969, preoccupied by *Nybelinia* Poche 1925 in tapeworms]

***Nybelinella brevianalis* Nielsen 2017** *brevis* (L.), short; *analis* (L.), anal, referring to its shorter anal fin compared to congeners

***Nybelinella brevidorsalis* Shcherbachev 1976** *brevis* (L.), short; *dorsalis* (L.), of the back, referring to fewer dorsal-fin rays than *N. erikssoni*

***Nybelinella erikssoni* (Nybelin 1957)** in honor of John Eriksson, surgeon aboard the Swedish ship *Albatross*, which collected holotype, for “excellent assistance in the preservation of material obtained during our trawlings and who contributed in many other respects to the biological collection work”



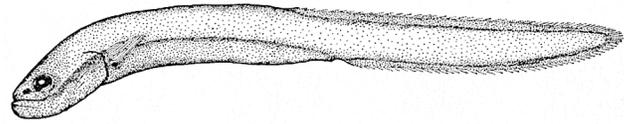
Nybelinella erikssoni, holotype, female, 78 mm SL. Illustration by U. Brauns. From: Nybelin, O. 1957. Deep-sea bottom fishes. Reports of the Swedish Deep-Sea Expedition 1947-1948 v. 2 (Zool.) (fasc. 3) (art. 20): 247–345, Pls. 1–7.

Parabrotula

Zugmayer 1911

pará (παρά), near, referring to its presumed affinity with *Brotula* (Ophidiidae), but without scales

***Parabrotula plagiophthalma* Zugmayer 1911** side-eyed, from *plágios*



Parabrotula tanseimaru, holotype, female, 49.5mm SL. From: Miya, M. and J. G. Nielsen. 1991. A new species of the deep-sea fish genus *Parabrotula* (Parabrotulidae) from Sagami Bay with notes on its biology. *Japanese Journal of Ichthyology* 38 (1): 1–5.

(πλάγιος), sideways or oblique, and *ophthalmós* (ὀφθαλμός), eye, referring to its elliptical eyes, obliquely positioned on the head [originally spelled *plagiophthalma*; emended to agree with feminine genus]

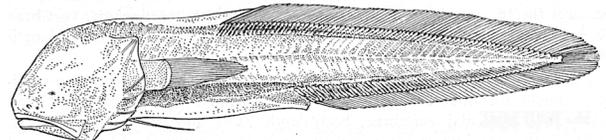
***Parabrotula tanseimaru* Miya & Nielsen 1991** named for the research vessel *Tansei Maru*, University of Tokyo (which collected holotype), for her contributions to the biology of midwater fishes in Sagami Bay, Japan (where this species occurs)

Paraphyonus

Nielsen 2015

pará (παρά), near or beside, similar to *Aphyonus*

***Paraphyonus bolini* (Nielsen 1974)** in honor of American marine biologist Rolf L. Bolin (1901–1973), Hopkins Marine Station (Pacific Grove, California, USA), who collected holotype



Paraphyonus bolini, holotype, 59 mm SL. From: Nielsen, J. G. 1974. *Aphyonus bolini*, a new deep sea fish from the South China Sea (Pisces, Ophidioidae, Aphyonidae). *Steenstrupia* 3 (16): 179–182.

***Paraphyonus brevidorsalis* (Nielsen 1969)** *brevis* (L.), short; *dorsalis* (L.), of the back, referring to shorter dorsal fin compared with *Aphyonus gelatinosus*, its presumed congener at the time

***Paraphyonus iselini* Nielsen 2015** in honor of the research vessel *Columbus Iselin*, which collected a number of deep-sea aphyonids, including holotype of this one

***Paraphyonus merretti* Nielsen 2015** in honor of British ichthyologist Nigel R. Merrett (b. 1940), formerly with the Natural History Museum (London), for providing Nielsen with a “rich supply” of aphyonid fishes caught during various R/V *Discovery* cruises

***Paraphyonus rassi* (Nielsen 1975)** in honor of Russian ichthyologist Teodor Saulovich Rass (1904–2001), who loaned Nielsen specimens from the 14th cruise of the research vessel *Academik Kurchatov* and other Soviet expeditions

***Paraphyonus solomonensis* (Nielsen & Møller 2008)** *-ensis*, Latin suffix denoting place: Solomon Sea, Pacific Ocean, type locality

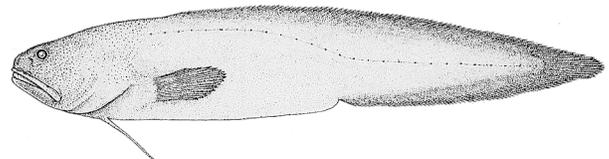
Parasaccogaster

Nielsen, Schwarzhans & Cohen 2012

pará (παρά), near or beside, similar to *Saccogaster*

***Parasaccogaster melanomycter* (Cohen 1981)** *mélanos* (μέλανος), genitive of *mélas* (μέλας), black; *myktér* (μυκτήρ), nostril, referring to nasal capsule lined with “sooty black pigment”

***Parasaccogaster normae* (Cohen & Nielsen 1972)** in honor of Peruvian ichthyologist Norma Chirichigno Fonseca (b. 1929), who independently



Parasaccogaster normae, holotype, 140 mm SL. Illustration by Keiko H. Moore. From: Cohen, D. M. and J. G. Nielsen. 1972. A review of the viviparous ophidioid fishes of the genus *Saccogaster*. *Proceedings of the Biological Society of Washington* 85 (39): 445–467.

identified this fish as undescribed and “graciously” placed her specimens at the authors’ disposal

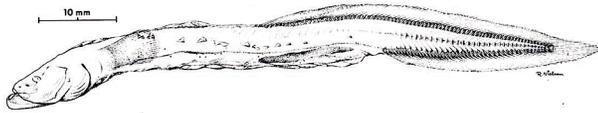
***Parasaccogaster rhamphidognatha* (Cohen 1987)** hook-jawed, from *rhamphidós* (ραμφιδός), hook, and *gnáthos* (γνάθος), jaw, referring to hook-like projection on maxillary

Parasciadonus

Nielsen 1984

pará (παρά), near or beside, most closely related to *Sciadonus*

***Parasciadonus brevibrachium* Nielsen 1984** *brevis* (L.), short; *brachium*, from *bracchium* (L.), forearm, referring to its short pectoral peduncle



Parasciadonus brevibrachium, holotype, 72 mm SL. Illustration by R. Nielsen. From: Nielsen, J. G. 1984. *Parasciadonus brevibrachium* n. gen. et sp.—an abyssal aphyonid from the central Atlantic (Pisces, Ophidiiformes). *Cybiurn* 8 (1): 39–44.

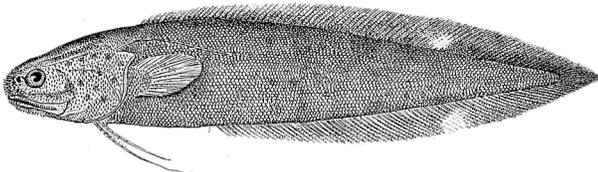
Petrotyx

Heller & Snodgrass 1903

etymology not explained, perhaps *petrosus* (L.), rocky, referring to rock-crevice habitat of *P. hopkinsi*; *týxis* (τύξις), a find (literally, “a find from the rocks”), or perhaps used as a shorthand for *Cataetyx*, said to be a related genus

***Petrotyx hopkinsi* Heller & Snodgrass 1903** in honor of philanthropist Timothy Hopkins (1859–1936) of Menlo Park, California, USA, who funded expedition that collected holotype

***Petrotyx sanguineus* (Meek & Hildebrand 1928)** Latin for blood-red, referring to its dark-red coloration in life



Petrotyx sanguineus, holotype. From: Meek, S. E. and S. F. Hildebrand. 1928. The marine fishes of Panama. Part III. Field Museum of Natural History, Publications, Zoological Series 15 (249): xxv–xxxix + 709–1045, Pls. 72–102.

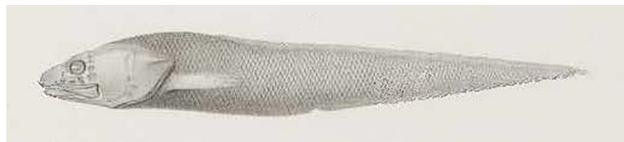
Pseudonus

Garman 1899

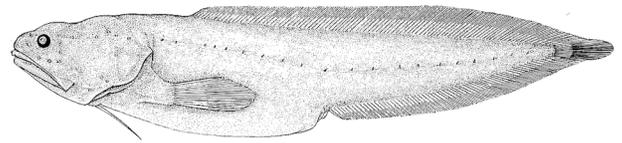
pseudo-, from *pseudēs* (ψεύδης), false; *onus*, presumably a Latinization of *onos* (ὄνος), donkey or ass (*asellus* in Latin), a name dating to Aristotle for an unidentified gadiform fish, possibly *Phycis blennoides* (Gadidae)¹ but often applied to *Merluccius merluccius* (Merlucciidae) and often used as a suffix for superficially similar (e.g., hake-like) fishes, or perhaps an abridgement of *Mixonus* (= *Bathyonus*), i.e., its head “like that of *Mixonus* [not italicized in original] in some respects, but more elongate,” i.e., although similar to *Mixonus*, such an appearance is false

***Pseudonus acutus* Garman 1899** Latin for sharp or pointed, allusion not explained, perhaps referring to “strong” opercular spine

***Pseudonus squamiceps* (Lloyd 1907)** *squamis*, Neo-Latin scientific adjective of *squama* (L.), scale; *-ceps* (Neo-Latin), headed, differing from known presumed congeners in *Diplacanthopoma* by having scales on head “as far forward as the posterior limit of the eyes and on the opercles and sides of the head as far forward as a line dropped vertically from the posterior border of the eyes”



Pseudonus acutus. Illustration by Andreas Magnus Westergren. From: Garman, S. 1899. The Fishes. In: Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer “Albatross,” during 1891, Lieut. Commander Z. L. Tanner, U.S.N., commanding. Memoirs of the Museum of Comparative Zoology 24. Text: 1–431, Atlas: Pls. 1–85 + A–M.



Saccogaster parva, holotype, 58 mm S. Illustration by Keiko H. Moore. See *Parasaccogaster normae* caption for source.

Saccogaster

Alcock 1889

saccus (L.), sack or bag; *gastēr* (γαστήρ), belly or stomach, referring to large, inflated abdomen of *S. maculata*

***Saccogaster brayae* Nielsen, Schwarzhans & Cohen 2012** in honor of Dianne Bray, Senior Collections Manager, Vertebrate Zoology, Museums Victoria (Australia), for her support with material for the authors’ revision of the genus

***Saccogaster hawaii* Cohen & Nielsen 1972** named for its occurrence off Maui in the Hawaiian Islands

***Saccogaster horrida* Nielsen, Schwarzhans & Cohen 2012** Latin for bristly or rough (authors say “horrifying”), referring to spines and bony ridges above its eyes

***Saccogaster maculata* Alcock 1889** Latin for spotted, referring to minute white spots along its sides

***Saccogaster nikoliviae* Nielsen, Schwarzhans & Cohen 2012** in honor of two of the first author’s grandchildren, Nikolaj and Olivia

***Saccogaster parva* Cohen & Nielsen 1972** Latin for small, at 58 mm SL, the smallest member of the genus known at the time

***Saccogaster staigeri* Cohen & Nielsen 1972** in honor of marine biologist Jon C. Staiger, who first called this species to the authors’ attention

***Saccogaster tuberculata* (Chan 1966)** Latin for warty or tuberculate, referring to tube-like sensory openings on head

Sciadonus

Garman 1899

sciado-, from *skiádos* (σκιάδος), genitive of *skiás* (σκιάς), canopy or umbrella, allusion not explained, perhaps referring to entire forehead of *S. pedicellaris*, “filled with mucus, which possibly may be utilized in the production of light” (subsequent researchers have not found light-producing tissue); *onus*, presumably a Latinization of *onos* (ὄνος), donkey or ass (*asellus* in Latin), a name dating to Aristotle for an unidentified gadiform fish, possibly *Phycis blennoides* (Gadidae)¹ but often applied to *Merluccius merluccius* (Merlucciidae) and often used as a suffix for superficially similar (e.g., hake-like) fishes

***Sciadonus alphacrucis* Melo, Gomes, Møller & Nielsen 2021** *-is*, Latin genitive singular of: Brazilian research vessel *Alpha Crucis*, from which holotype was collected

***Sciadonus cryptophthalmus* (Zugmayer 1911)** *crypto-*, from *kryptós* (κρυπτός), hidden; *ophthalmós* (ὀφθαλμός), eye, referring to its eye, which appear as tiny black dots well below surface of head

***Sciadonus jonassoni* (Nybelin 1957)** in honor of Axel Jonasson (1903–?), chief mechanic and trawling master aboard the Swedish ship *Albatross*, which collected holotype, who had “*inter alia* the responsibility for the practical part of our trawlings and to whom we are indebted for a very good piece of work in this as well as other respects”

***Sciadonus longiventralis* Nielsen 2018** *longus* (L.), long; *ventralis* (L.), of the belly, referring to its long ventral (or pelvic) fins



First-published image of *Sciadonus cryptophthalmus*. Illustration by Emma Kissling. From: Zugmayer, E. 1911. Poissons provenant des campagnes du yacht Princesse-Alice (1901–1910). Résultats des campagnes scientifiques accomplies sur son yacht par Albert 1er Monaco. Fasc. 35: 1–174, Pls. 1–6.

***Sciadonus pedicellaris* Garman 1899** genitive singular of *pedicellus* (L.), small foot or stalk, referring, to its “pedicellate” (with a bony stalk or pedicel) pectoral fins

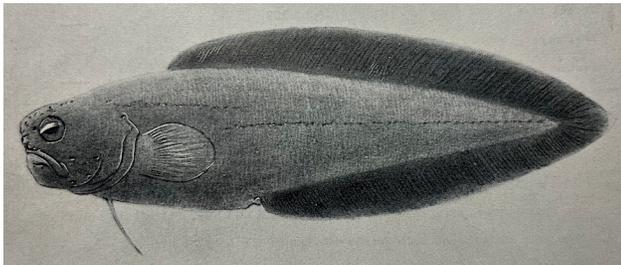
***Sciadonus robinsi* Nielsen 2018** in honor of C. Richard Robins (1928–2020), formerly University of Miami, and his son Robert H. Robins, Ichthyology Collection Manager, Florida Museum of Natural History, who together over the past 50 years “generously” sent Nielsen numerous ophidiiform specimens [preferably spelled *robinsorum* since name honors more than one person, but ICZN 32.5.1 forbids such a correction]

Stygnobrotula

Böhlke 1957

stygnós (στυγνός), surly, morose or sullen, referring to its “surly or sour-faced appearance”; *Brotula*, type genus of family (placed in Brotulidae at time of description)

***Stygnobrotula latebricola* Böhlke 1957** *latebra* (L.), a hiding place; *-cola* (L.), dweller or inhabitant, “one that dwells in lurking-places,” presumably referring to habitat where holotype was captured, a coral head rising from white sand in 10.6 m of slightly murky water



Stygnobrotula latebricola, holotype, 70.5 mm TL. Illustration by Steven P. Gigliotti. From: Böhlke, J. E. 1957. A new shallow-water brotulid fish from the Great Bahama Bank. *Notulae Naturae* (Philadelphia) 295: 1–8.

Thermichthys

Nielsen & Cohen 2005

thermós (θερμός), hot, referring to hydrothermal vents along the Galapagos Rift Zone, type locality; *ichthýs* (ἰχθύς), fish [replacement name for *Gerhardia* Nielsen & Cohen 2002, preoccupied in beetles]

***Thermichthys hollisi* (Cohen, Rosenblatt & Moser 1990)** in honor of “expert” Alvin submersible pilot Ralph Hollis (1932–2013), who “finally captured this elusive fish”



Thermichthys hollisi, holotype, 304 mm SL. From: Cohen, D. M., R. H. Rosenblatt and H. G. Moser. 1990. Biology and description of a bythitid fish from deep-sea thermal vents in the tropical eastern Pacific. *Deep-Sea Research* 37 (2): 267–283.



Timorichthys disjunctus, holotype, 39 mm SL. Photo by Markus Krag. From: Nielsen, J. G. and W. Schwarzhans. 2011. A new genus and species of Bythitidae (Teleostei: Ophidiiformes) from northwestern Australia. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* 27: 143–146.

Timorichthys

Nielsen & Schwarzhans 2011

named for Timor Sea, off coast of northwestern Australia, type locality of *T. disjunctus*; *ichthýs* (ἰχθύς), fish

***Timorichthys angustus* Nielsen, Okamoto & Schwarzhans 2013** Latin for narrow, referring to its narrow interorbital width compared to *T. disjunctus*

***Timorichthys disjunctus* Nielsen & Schwarzhans 2011** Latin for separated or distant, referring to position of anus midway between tip of snout and origin of anal fin

Tuamotuichthys

Møller, Schwarzhans & Nielsen 2004

named for Tuamotu Archipelago, South Pacific Ocean, type locality of *B. bispinosus*; *ichthýs* (ἰχθύς), fish

***Tuamotuichthys bispinosus* Møller, Schwarzhans & Nielsen 2004** *bi-*, from *bis* (L.), twice; *spinosus* (L.), thorny, referring to two opercular spines

***Tuamotuichthys marshallensis* Nielsen, Schwarzhans, Møller & Randall 2006** *-ensis*, Latin suffix denoting place: Marshall Islands, type locality

***Tuamotuichthys schwarzhansi* Nielsen & Møller 2008** in honor of Werner Schwarzhans, retired oil geologist turned ichthyologist-paleontologist (University of Copenhagen, Natural History Museum), for his “great” contributions to ophidiiform taxonomy



Tuamotuichthys marshallensis, holotype, female, 120 mm SL. Photo by Tyson R. Roberts. From: Nielsen, J. G., W. Schwarzhans, P. R. Møller and J. E. Randall. 2006. *Tuamotuichthys marshallensis*, a new species of fish (Ophidiiformes, Bythitidae) from the Marshall Islands. *Steenstrupia* 29 (2): 169–173.