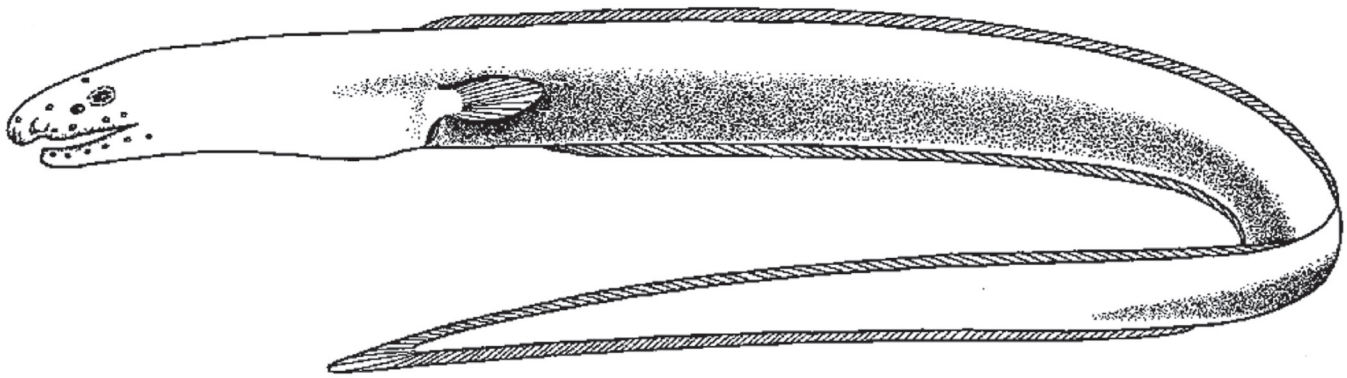
Order ANGUILLIFORMES

Cutthroat Eels

Family **SYNAPHOBRANCHIDAE**

Johnson 1862



Dysomma fuscoventralis, paratype, 165 mm TL. From: Karrer, C. and W. Klausewitz. 1982. Tiefenwasser- und Tiefseefische aus dem Roten Meer. II. *Dysomma fuscoventralis* n. sp., ein Tiefsee-Aal aus dem zentralen Roten Meer (Teleostei: Anguilliformes: Synaphobranchidae: Dysomminae). Senckenbergiana Biologica 62 (4/6) (for 1981): 199–203.

Pugnose Parasitic Eel

Subfamily SIMENCHELYINAE

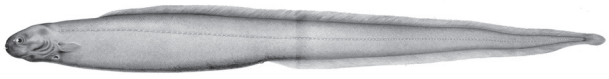
Gill 1879

Simenchelys

Gill 1879

simus (L.), flat- or pug-nosed, referring to short, blunt snout; *énchelys* (ἔγχελυς), eel

***Simenchelys parasitica* Gill 1879** Latin for parasitic, referring to its presumed parasitic behavior (Gill reported specimens burrowing into the flesh of a halibut)[1]



Possibly first-published image of *Simenchelys parasitica*. From: Collett, R. 1896. Poissons provenant des campagnes du Yacht "L'Hirondelle" (1885–1888). Résultats des campagnes scientifiques accomplies sur son yacht par Albert I, Prince Souverain de Monaco. Résultats des campagnes scientifiques du Prince de Monaco. Fasc. 10: i–viii + 1–198, Pls. 1–6. [Vertical band across middle of body is the page gutter of the printed volume.]

Arrowtooth Eels or Mustard Eels

Subfamily ILYOPHINAE

Jordan & Davis 1891

Atractodenchelys brevitrunca, holotype, 509 mm TL. Arrows indicate origins of dorsal fin (above) and anal fin (below). From: Vo, Q. V. and H.-C. Ho. 2020. A new species of *Atractodenchelys* (Synaphobranchidae, Anguilliformes) from Vietnam. Zootaxa 4742 (3): 588–594.

[1] This parasitic behavior has been confirmed. For example, two *S. parasitica* were discovered inside the heart of a Shortfin Mako Shark *Isurus oxyrinchus*, where they had lived and fed for some time. The eels had apparently burrowed through the gills or throat, entered the circulatory system, and then made their way to the heart. See: Caira, J. N., G. W. Benz, J. Borucinska, and N. E. Kohler. 1997. Pugnose eels, *Simenchelys parasiticus* (Synaphobranchidae) from the heart of a shortfin mako, *Isurus oxyrinchus* (Lamnidae). Environmental Biology of Fishes 49: 139–144.

Atractodenchelys

Robins & Robins 1970

átraktos (ἄτρακτος), arrow, and *od-*, from *odoús* (ὀδούς), tooth, referring to distinctive triangular vomerine teeth of this and related genera; *énchelys* (ἔγχελυς), eel

***Atractodenchelys brevitrunca* Vo & Ho 2020** *brevis* (L.), short; *truncus* (L.), trunk (but treated here as an adjective, trunked), referring to relatively short trunk, usually shorter (but sometimes equal to or slightly longer) than head length

***Atractodenchelys phrix* Robins & Robins 1970** *phrix* (φρίξ), ruffling or ripple, referring to its plicate snout

***Atractodenchelys robinsorum* Karmovskaya 2003** *-orum* (L.), commemorative suffix, plural: in honor of Catherine H. and C. Richard Robins (1928–2020), "renowned American ichthyologists, investigators of synaphobranchid eels"

Branchenchelys

Tighe & Kodeeswaran 2025

bránchia (βράγχια), gills, referring to enlarged gill chamber and hypertrophied gill filaments; *énchelys* (ἔγχελυς), eel

***Branchenchelys megacephala* Tighe & Kodeeswaran 2025** big-headed, from *mégas* (μέγας), large or great, and *kephalḗ* (κεφαλή), head, referring to its relatively large head compared with other ilyophine genera

Branchenchelys megacephala, paratype, 168 mm TL. Photo by Raveendhiran Ravinesh. From: Tighe, K. A., and P. Kodeeswaran. 2025. A new genus and species of ilyophine eel (Anguilliformes: Synaphobranchidae: Ilyophinae) from the Arabian Sea, western Indian Ocean. Zootaxa 5722 (4): 555–569.

Dysomma

Alcock 1889

dys- (δυς-), prefix indicating something negative or unfavorable; *ómma* (ὄμμα), eye, referring to minute eyes of *D. bucephalus*, concealed beneath skin

***Dysomma achiropteryx* Prokofiev 2019** *a-*, privative, i.e., without; *cheír* or *cheirós* (χείρ, genitive χειρός), hand (homologous to the pectoral fin); *ptéryx* (πτέρυξ), wing or fin, referring to absence of pectoral fins

***Dysomma alticorpus* Fricke, Golani, Appelbaum-Golani & Zajonz 2018** *altus* (L.), high; *corpus* (L.), body, referring to its relatively high body

***Dysomma anguillare* Barnard 1923** Latin for eel-like, referring to more elongate shape compared with D. *bunocephalus*

***Dysomma brachygnathos* Ho & Tighe 2018** *brachýs* (βραχύς), short; *gnáthos* (γνάθος), jaw, referring to its shorter lower jaw compared with congeners

***Dysomma brevirostre* (Facciolà 1887)** *brevis* (L.), short; *rostre,* Neo-Latin scientific adjective (neuter) of *rostrum* (L.), snout, referring to its blunt, bulbous snout

***Dysomma bucephalus* Alcock 1889** *bouképhalos* (βουκέφαλος), bull-headed, from *boûs* (βοῦς), bull, and *kephalḗ* (κεφαλή), head, metaphorically used to mean big, referring to "posteriorly deep and much inflated" head, its length (measured to gill opening) nearly ¼ TL

***Dysomma bussarawiti* Prokofiev 2019** in honor of marine biologist Somchai Bussarawit, Phuket Marine Biological Centre, Thailand, who made holotype available to Prokofiev

***Dysomma dolichosomatum* Karrer 1983** long-bodied, from *dolichós* (δολιχός), long, and *somatum*, from *sōmatikós* (σωματικός), bodily, referring to its more elongated body compared with *D. polycatodon*

***Dysomma formosa* Ho & Tighe 2018** named for Formosa, historical name of Taiwan, referring to type locality in South China Sea, off Donggang, southwestern Taiwan

***Dysomma fuscoventralis* Karrer & Klausewitz 1982** *fuscus* (L.), dusky, dark or swarthy; *ventralis*, genitive of *venter* (L.), belly, referring to dark coloration of abdominal area

***Dysomma goslinei* Robins & Robins 1976** in honor of the authors' colleague, American ichthyologist William A. Gosline (1915–2002), University of Michigan

***Dysomma intermedium* Vo & Ho 2024** Latin for intermediate, referring to "intermediate status of the trunk length and many characters that are shared with other congeners"

***Dysomma longirostrum* Chen & Mok 2001** *longus* (L.), long; *rostrum* (L.), snout, referring to its "exceptionally long" snout (4.6% of TL)

***Dysomma melanurum* Chen & Weng 1967** black-tailed, from *mélanos* (μέλανος), genitive of *mélas* (μέλας), black, and *ourá* (οὐρά), tail, referring to its dark-brown caudal fin

***Dysomma muciparus* (Alcock 1891)** *muci-*, from *mucus* (L.), secretion from the nose; *-parus*, from *pario* (L.), bring forth, denoting production, referring to skin "enveloped in thick, very tenacious mucus"

***Dysomma opisthoproctus* Chen & Mok 1995** *opistho-*, from *ópisthen* (ὄπισθεν), behind; *prōktós* (πρωκτός), anus, referring to posteriorly positioned anus (1.5 times head length behind pectoral-fin base)

***Dysomma phuketense* Prokofiev 2019** *-ense*, Latin suffix denoting place: Andaman Sea off Phuket Island, Thailand, type locality [originally spelled *phuketensis*; emended to agree with neuter gender of *Dysomma*]

***Dysomma polycatodon* Karrer 1983** *polý* (πολύ), many; *cata*, from *katá* (κατά), beneath, below or under; *odon*, from *odoús* (ὀδούς), tooth, referring to continuous series of 21–23 smaller teeth behind canines on lower jaw, longer and stronger than counterparts on upper jaw

***Dysomma robinsorum* Ho & Tighe 2018** *-orum* (L.), commemorative suffix, plural: in honor of Catherine H. and C. Richard Robins (1928–2020), for their "enormous" contribution to eel systematics

***Dysomma taiwanense* Ho, Smith & Tighe 2015** *-ense*, Latin suffix denoting place: off Taiwan, type locality

***Dysomma tridens* Robins, Böhlke & Robins 1989** Latin for a fork with three tines, referring to three premaxillary teeth, shaped like an inverted V or isosceles triangle, which project below tip of fleshy snout

Dysommina

Ginsburg 1951

diminutive of *Dysomma*, presumably alluding to the similarity between the two genera

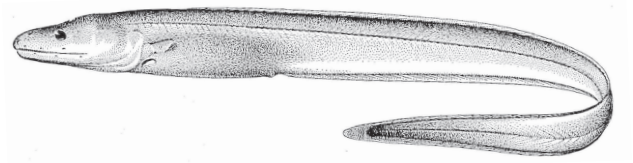
***Dysommina brevis* Vo & Ho 2024** Latin for short, referring to its relatively short trunk compared with *D. orientalis* and *D. rugosa*

***Dysommina orientalis* Tighe, Ho & Hatooka 2018** Latin for eastern, referring to type locality in the Far East off Taiwan and Japan

***Dysommina proboscideus* (Lea 1913)** Latin for having a proboscis, referring to snout produced into a long filament (known only from a leptocephalus)

***Dysommina pygmaea* Tighe & Pogonoski 2025** feminized form of *pygmaeus*, from *pygmaîos* (πυγμαῖος), small or dwarfish, referring to small size of adults (up to 169 mm TL) [an adjective but authors treat it as a noun]

***Dysommina rugosa* Ginsburg 1951** Latin for wrinkled or shriveled, referring to its fleshy, papillose snout



First-published image of *Dysommina rugosa*. Illustration by William Sackston Atkinson. From: Böhlke, J. E. and C. L. Hubbs. 1951. *Dysommina rugosa*, an apodal fish from the North Atlantic, representing a distinct family. Stanford Ichthyological Bulletin 4 (1): 7–10. [Böhlke & Hubbs were about to publish a description of this eel (to be named for David Starr Jordan) when Ginsburg's description appeared first; they used Ginsburg's name in their paper, with "notably" different conclusions about the eel.]

Ilyophis

Gilbert 1891

ilýs (ἰλύς), mud, presumably referring to soft or silty bottom habitat of *I. brunneus*; *óphis* (ὄφις), serpent, referring to the snake-like shape of an eel

***Ilyophis arx* Robins 1976** Latin for castle, named for ichthyologist Peter H. J. Castle (1934–1999), Victoria University (Wellington, New Zealand), who "laid the foundations of modern work on synaphobranchid eels"

***Ilyophis blachei* Saldanha & Merrett 1982** in honor of French ichthyologist and "good friend" Jacques Blache (1922–1994), for his valuable contributions to anguilliform taxonomy

***Ilyophis brunneus* Gilbert 1891** Medieval Latin for brown, referring to its body coloration

***Ilyophis maclainei* Tighe, Smith & Merrett 2024** in honor of colleague James Maclaine, Senior Curator of Fishes, Natural History Museum, United Kingdom, for his "dedication to the collections under his care and especially his hard work in incorporating the collections of the Institute of Oceanographic Sciences/National Oceanography Centre into the Natural History Museum, United Kingdom

Ilyophis arx, holotype, female, 447 mm TL. From: Robins, C. H. and C. R. Robins. 1976. New genera and species of dysommine and synaphobranchine eels (Synaphobranchidae) with an analysis of the Dysomminae. Proceedings of the Academy of Natural Sciences of Philadelphia 127: 249–280.

***Ilyophis nigeli* Shcherbachev & Sulak 1997** in honor of British ichthyologist Nigel R. Merrett (b. 1940), for his "substantial contributions" to the knowledge of *Ilyophis* and other synaphobranchid eels

***Ilyophis robinsae* Sulak & Shcherbachev 1997** in honor of ichthyologist and sculptor Catherine H. Robins (wife of ichthyologist C. Richard Robins), for her "substantial contributions" to the knowledge of synaphobranchid eels

***Ilyophis saldanhai* Karmovskaya & Parin 1999** in honor of the late Luiz Saldanha (1937–1997), Portuguese ichthyologist and friend, for "substantial" (translation) contributions to anguilliform studies

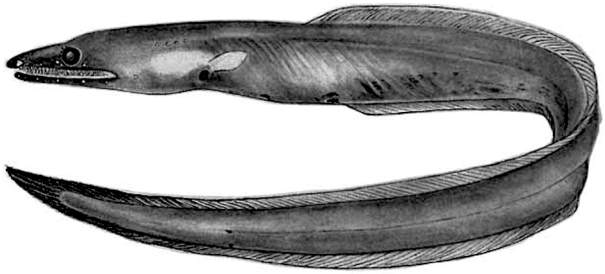
***Ilyophis singularis* Tashiro & Chen 2022** Latin for unique, referring to its "singularly unique" characteristics (e.g., "remarkably" low number of vertebrae, 116–118 in total)

Linkenchelys

Smith 1989

Link, named for the Johnson-Sea Link submersible, which collected type specimens; *énchelys* (ἔγχελυς), eel

***Linkenchelys multipora* Smith 1989** *multus* (L.), many; *pora*, from *póros* (πόρος), pore, referring to its relatively numerous lateral-line pores



Linkenchelys multipora, holotype, 82 mm TL. Illustration by Mary H. Fuges. From: Smith, D. G. 1989. Family Chlopsidae. *In*: Böhlke, E. B. (ed.). Fishes of the Western North Atlantic. Orders Anguilliformes and Saccopharyngiformes. Memoir of the Sears Foundation of Marine Research. Part 9. Vol. 1. xvii + 655 pp.

Meadia

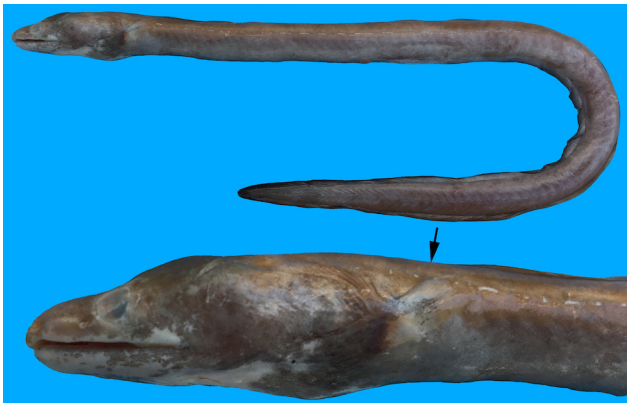
Böhlke 1951

-ia (L. suffix), pertaining to: patronym not identified but almost certainly in honor of Böhlke's frequent collaborator and Stanford University colleague, Giles W. Mead (1928–2003)

***Meadia abyssalis* (Kamohara 1938)** Latin for of the deep sea, presumably referring to its benthopelagic (100–329 m) habitat [note: abyssal usually refers to water deeper than 4000 m, but this eel apparently does not occur that deep]

***Meadia minor* Vo & Ho 2021** Latin for rather small, referring to its small adult body size (reaching 330 mm TL) compared with congeners, as well as most members of Ilyophinae

***Meadia roseni* Mok, Lee & Chan 1991** in honor of the late Donn Eric Rosen (1929–1986), American Museum of Natural History, for his "tremendous contribution" to fish systematics



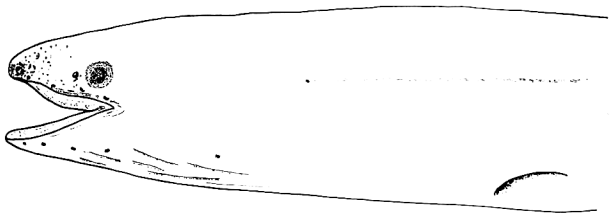
Meadia minor, paratype, 316 mm TL. Arrow points to dorsal-fin origin. From: Vo, Q. V., H.-C. Ho, H. V. Dao and H. H. T. Tran. 2021. A new arrowtooth eel of genus *Meadia* (Synaphobranchidae: Ilyophinae) from Vietnam, South China Sea. Zootaxa 4952 (1): 181–191.

Thermobiotes

Geistdoerfer 1991

thermós (θερμός), hot; *biotḗ* (βιοτή), means of living, referring to its living at a deep-sea hydrothermal vent

***Thermobiotes mytilogeiton* Geistdoerfer 1991** *mýtilos* (μύτιλος), hornless (said of a goat), but used by zoologists to refer to sea mussels; *geítōn* (γείτων), neighbor, referring to its living among sea snails (*Alviniconcha*)



Thermobiotes mytilogeiton, holotype, 247 mm TL. From: Geistdoerfer, P. 1991. Ichthyofaune associée à l'hydrothermalisme océanique et description de *Thermobiotes mytilogeiton*, nouveau genre et nouvelle espèce de Synaphobranchidae (Pisces, Anguilliformes) de l'Océan Pacifique. Comptes Rendus de l'Académie des Sciences Paris, Série III (Sciences de la Vie): 312 (3): 91–97.

Cutthroat Eels

Subfamily SYNAPHOBRANCHINAE

Johnson 1862

Diastobranchus

Barnard 1923

diastolḗ (διαστολή), a splitting or division; *branchus*, from *bránchia* (βράγχια), gills, referring to separated gill openings (unlike united gill openings of *Synaphobranchus*)

***Diastobranchus capensis* Barnard 1923** *-ensis*, Latin suffix denoting place: the cape (Cape Point, South Africa), type locality

First-published image of *Diastobranchus capensis*. From: Barnard, K. H. 1925. A monograph of the marine fishes of South Africa. Part 1. (Amphioxus, Cyclostomata, Elasmobranchii, and Teleostei—Isospondyli to Heterosomata). Annals of the South African Museum 21 (pt 1): 1–418, Pls. 1–17.

Haptenchelys

Robins & Martin 1976

haptō (ἅπτω), to join or fasten, referring to its status as a link between nominal families (now subfamilies) Dysomminae (=Ilyophinae) and Synaphobranchinae; *énchelys* (ἔγχελυς), eel

***Haptenchelys parviocularis* Tashiro & Shinohara 2014** *parvus* (L.), little; *ocularis* (L.), of the eye, referring to eyes much smaller than gill-slit aperture

***Haptenchelys texis* Robins & Martin 1976** *tḗxis* (τῆξις), wasting away or dissolution, referring to dissolution of artificial boundaries between what was once regarded as two families (see genus)

Haptenchelys parviocularis, holotype, 833 mm TL. Arrow points to dorsal-fin origin. From: Tashiro, F. and G. Shinohara. 2015. A new species of deep-sea synaphobranchid eel, *Haptenchelys parviocularis* (Anguilliformes: Synaphobranchidae), from Japan. Ichthyological Research 62 (2): 115–121. [Name dates to electronic version published in 2014.]

Histiobranchus australis. From: Regan, C. T. 1913. The Antarctic fishes of the Scottish National Antarctic Expedition. Transactions of the Royal Society of Edinburgh 49 (pt 2, no. 2): 229–292, Pls. 1–11.

Histiobranchus

Gill 1883

histíon (ιστίον), sail (i.e., dorsal fin); *branchus*, from *bránchia* (βράγχια), gills, referring to anterior insertion of dorsal fin, commencing above or immediately behind pectoral fins

***Histiobranchus australis* (Regan 1913)** Latin for southern, referring to its occurrence in the Southern Hemisphere

***Histiobranchus bathybius* (Günther 1877)** *bathýs* (βαθύς), deep; *bíos* (βίος), life, referring to its deep-sea habitat

***Histiobranchus bruuni* Castle 1964** in honor of Danish oceanographer and ichthyologist Anton Frederick Bruun (1901–1961), whose 1937 work "forms an invaluable basis of our knowledge of the family Synaphobranchidae and whose interest in this study was interrupted by his untimely death"

Synaphobranchus

Johnson 1862

synaptós (συναπτός), joined together or united; *branchus*, from *bránchia* (βράγχια), gills, referring to gill openings of *S. kaupii* externally united into a single slit

***Synaphobranchus affinis* Günther 1877** Latin for related, referring to similarity to *S. brevidorsalis*

***Synaphobranchus brevidorsalis* Günther 1887** *brevis* (L.), short; *dorsalis* (L.), of the back, presumably referring to how dorsal fin commences so far behind vent that distance between its origin and vent equals length of head

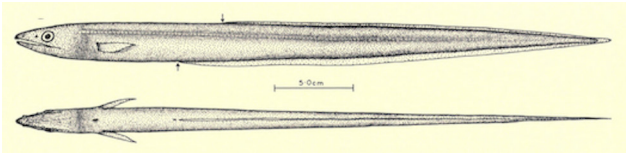
***Synaphobranchus calvus* Melo 2007** Latin for bald, referring to absence of scales on head

***Synaphobranchus dolichorhynchus* Lea 1913** long-snouted, from *dolichós* (δολιχός), long, and *rhýnchos* (ῥύγχος), snout, referring to snout of leptocephalus, the point of which is "elongated into a proboscis"

***Synaphobranchus kaupii* Johnson 1862** in honor of German naturalist Johann Jacob Kaup (1803–1873), "who has well studied this order of fishes" (Kaup wrote first major treatise on eels in 1856)

***Synaphobranchus oligolepis* Ho, Hong & Chen 2018** *olígos* (ὀλίγος), few or scanty; *lepís* (λεπίς), scale, referring to most parts of head and abdomen naked, except for scaled patch on cheek behind eyes

***Synaphobranchus oregoni* Castle 1960** in honor of the U.S. Fish and Wildlife Service research vessel *Oregon*, which collected holotype



Synaphobranchus oregoni, holotype, 380 mm TL. Arrows indicate origins of dorsal and anal fins. From: Castle, P. H. J. 1960. Two eels of the genus *Synaphobranchus* from the Gulf of Mexico. Fieldiana Zoology 39 (35): 387–398.