Order LOPHIIFORMES (part 1 of 2)

Suborder LOPHOIDEI

Family LOPHIIDAE Goosefishes
4 genera · 30 species

Lophiodes Goode & Bean 1896
-oides, having the form of: related to Lophius

Lophiodes beroe Caruso 1981
named for Beroe, a sea-nymph in Greek mythology, daughter of Oceanus and Tethys, allusion (if any) not explained nor evident

Lophiodes bruchius Caruso 1981
from the depths of the sea, allusion not explained, described from 10 specimens collected at 274-340 m

Lophiodes caulinaris (Garman 1899)
caulis, stalk or stem; naris, nostril, allusion not explained, probably referring to flattened, stalk-like bulbs (olfactory organs) lying near the nostrils (Caruso [1981] says name derives from cauda, tail, and lineola, line, referring to line of white spots on caudal fin, but we reject this translation and explanation)

Lophiodes endoi Ho & Shao 2008
in honor of Hiromitsu Endo (b. 1964), Kochi University (Japan), for “excellent” work in ichthyology, his friendship, and for supplying specimens to the authors

Lophiodes fimbriatus Saruwatari & Mochizuki 1985
fringed or bordered with hairs, referring to slender and branched tendrils on both dorsal and ventral surfaces of body

Lophiodes gracilimanus (Alcock 1899)
gracilis, slender; manus, hand, referring to narrower pectoral fin compared to L. indicus (=Lophiostoma setigerus)

Lophiodes insidiator (Regan 1921)
ambusher or lurker, allusion not explained but almost certainly referring to how it feeds by resting on the ocean floor while attracting small fishes and crustaceans with its “lure”

Lophiodes iwamotoi Ho, Séret & Shao 2011
in honor of Tomio Iwamoto (b. 1939), California Academy of Sciences, for his contributions to deep-sea fish studies, especially the macrourids

Lophiodes kempi (Norman 1935)
in honor of marine biologist Stanley Wells Kemp (1882-1945), Director of Research of the Discovery Expedition, during which type was collected

Lophiodes lugubris (Alcock 1894)
mournful or dark, presumably referring to color in spirits, “very dark sepia mottled with black”

Lophiodes maculatus Ho, Séret & Shao 2011
spotted, referring to many small black spots on dorsal surface of body

Lophiodes micaanthus (Gilbert 1905)
mecon, less, smaller or fewer; acanthus, thorn or spine, allusion not explained, perhaps referring to “second group of dorsal spines represented by a single very weak spine shorter than pupil, with sometimes the rudiment of a second”

Lophiodes monodi (Le Danaois 1971)
in honor of French naturalist and explorer Théodore Monod (1902-2000), founder and director of Institut Français d’Afrique Noire (now Institut Fondamental d’Afrique Noire), for his friendship and the kindness he always showed towards the author’s work

Lophiodes mutilus (Alcock 1894)
maimed, cut off or cut short, allusion not explained, perhaps referring to “rudimentary” structure of second part of spinous dorsal fin

Lophiodes naresi (Günther 1880)
patronym not identified but probably in honor of George Strong Nares (1831-1915), British naval officer and captain of the Challenger expedition (1872-1876), during which type was collected; name may also commemorate type locality, Nares Harbor, Admiralty Islands, named after Capt. Nares
**Lophiodes reticulatus** Caruso & Suttkus 1979
net-like, referring to reticular pattern on body, pectoral fins, and dorsal surface of head

**Lophiodes spilurus** (Garman 1899)
spilo, spot; oura, tail, referring to 3-4 transverse series of white or pale spots on caudal fin

**Lophiodes triradiatus** (Lloyd 1909)
tri-, three; radiatus, rayed, allusion not explained, perhaps referring to three free cephalic dorsal-fin spines only, without any post-cephalic dorsal-fin spines

**Lophiomus** Gill 1883
proposed to separate this genus from *Lophius* based on fewer vertebrae but meaning of -omus is unclear; Jordan & Evermann (1898) posit that it derives from *omus* shoulder, “in apparent allusion to the trifid humeral spine,” a character mentioned by Gill in 1878 but in reference to *Lophius americanus* (then known as *L. piscatorius*)

**Lophiomus setigerus** (Vahl 1797)
seta, bristle; -iger, to bear, referring to numerous sharp spines on dorsal and lateral surfaces of head

**Lophius** Linnaeus 1758
crest or mane, ancient name of *L. piscatorius*, presumably referring to dorsal fin with three tentacle-like spines on head and three smaller ones behind it, forming a continuous fin

**Lophius americanus** Valenciennes 1837
American, the northwest Atlantic counterpart of the northeast Atlantic *L. piscatorius*

**Lophius budegassa** Spinola 1807
from *budegassa*, its local name along the Gulf of Genoa, Italy, on the Mediterranean Sea

**Lophius gastrophysus** Miranda Ribeiro 1915
gastro, abdomen; physus, bladder, referring to distended abdomen of young specimens compared to non-distended abdomen of young *L. piscatorius* that Miranda Ribeiro examined, which are otherwise very similar as adults (note: all anglerfishes have distensible stomachs)

**Lophius litulon** (Jordan 1902)
litos, plain; oulon, gums, referring to lack of “peculiar” mouth markings of *Lophiomus setigerus*, its presumed congener at the time

**Lophius piscatorius** Linnaeus 1758
pertaining to an angler, referring to first spine of dorsal fin modified into an angling apparatus (illicium) that bears a bulb-like or fleshy “bait” (esca) to attract fish prey to its cavernous mouth

**Lophius vaillanti** Regan 1903
in honor of Léon Vaillant (1834-1914), zoologist, Muséum national d’Histoire naturelle (Paris), who examined his museum’s specimens for Regan and confirmed they were distinct from *L. piscatorius*
Lophius vomerinus Valenciennes 1837
vomerine, referring to lack of teeth on vomer (perhaps lost to age according to later studies)

Sladenia Regan 1908
-val, belonging to: British echinoderm biologist Percy Sladen (1849-1900), whose Percy Sladen Memorial Trust funded Indian Ocean expedition during which type of S. gardineri was collected

Sladenia gardineri Regan 1908
in honor of British zoologist John Stanley Gardiner (1872-1946), who collected many species of Indian Ocean fishes for the British Museum, including type of this one

Sladenia remiger Smith & Radcliffe 1912
remus, ear; -iger, to bear, allusion not explained but clearly referring to paddle-like pectoral fins (common to all Sladenia)

Sladenia shaefersi Caruso & Bullis 1976
in honor of Edward A. Schaefers, former chief of the Exploratory Fishing and Gear Research Branch of the former Bureau of Commercial Fisheries, for his “outstanding” contributions to marine science [Caruso & Bullis misspelled the name (minus the “c”) but this spelling stands]

Sladenia zhui Ni, Wu & Li 2012
in honor of Zhu Yuan-Ding (1896-1986), former president of Shanghai Ocean University and director of the East China Sea Fisheries Research Institute, for “outstanding” contributions to fisheries education and science, especially the ichthyology of China

Suborder ANTENNARIOIDEI

Family ANTENNARIIDAE Frogfishes
15 genera · 51 species

Subfamily Antennariinae

Abantennarius Schultz 1957
-ab-, from or away, referring to gill opening “remote from or away from” usual position near base of pectoral fin; antennarius, an antennariid anglerfish

Abantennarius analis (Schultz 1957)
anal, referring to location of gill opening at origin of anal fin

Abantennarius bermudensis (Schultz 1957)
-ensis, suffix denoting place: Bermuda, type locality (occurs in western Atlantic from Bermuda and the Bahamas to coastal Colombia and Venezuela, including Yucatán Peninsula, Belize, Haiti, Puerto Rico, and Bonaire)

Abantennarius coccineus (Lesson 1831)
scarlet, referring to bright-red coloration (but highly variable, sometimes tan, brown, yellow, orange, gray, or black)

Abantennarius dorehensis (Bleeker 1859)
-ensis, suffix denoting place: Doreh Bay (Dorei), Irian Barat New Guinea, type locality (occurs in Indo-West Pacific from East Africa to Ryukyu Islands and Taiwan, and the Philippines, Indonesia, northwestern Australia, and Papua New Guinea)

Abantennarius drombus (Jordan & Evermann 1903)
etymology not explained; Jordan used the same word for a genus of Filipino gobies, Drombus, in 1905, and did not explain its meaning in that case either

Abantennarius duescus (Snyder 1904)
duo, two; escu, esca (fleshy “bait” to attract fish prey), allusion not explained, presumably referring to two escae, a proper one (first dorsal-fin spine), followed by a more slender dorsal spine with a club-like tip that looks like an esca

Abantennarius nummifer (Goviuer 1817)
nammus, coin; fero, to bear, presumably referring to large round brown spot at dorsal-fin at the 8th and 9th rays

Abantennarius rosaceus (Smith & Radcliffe 1912)
ros, described as having a salmon ground color in alcohol

Abantennarius sanguineus (Gill 1863)
blood red, referring to coloration in life (but highly variable, sometimes cream, yellow, yellow-brown, orange, reddish-brown, brown, lavender, or purple)

Antennarius Daudin 1816
-ius, pertaining to: antenna (i.e., tentacle or feeler), referring to first dorsal-fin spine developed as a small rostral tentacle, which it uses as a “bait” to catch fish [name coined by French naturalist Philibert Commerçon (also spelled Commerson, 1727-1773); made available by Daudin in an encyclopedia entry]
Antennarius biocellatus (Cuvier 1817)
bi-, two; _ocellatus_, having little eyes, referring to two ocelli, one at posterior dorsal-fin base, and a second (often absent or present on only one side of body) at caudal-fin base

*Antennarius commerson* (Anonymous 1798)
in honor of French naturalist Philibert Commerson (also spelled Commerson, 1727-1773), whose notes provided the descriptive material for Lacépède, who proposed a vernacular name for this species, “Lophie commerson,” in 1798, which was then latinized in an anonymous book review later that year, from whence the name dates (and not from Latrielle 1804, as often reported) [treated as noun in apposition, without the patronymic “i”]

Antennarius hispidus (Bloch & Schneider 1801)
bristly, referring to close-set, bifurcate spinules on skin

Antennarius indicus Schultz 1964
Indian, referring to Vizagapatam, India, type locality (occurs in western Indian Ocean from East Africa and Persian Gulf east to India and Sri Lanka)

Antennarius maculatus (Desjardins 1840)
spotted, referring to numerous brown-to-black circular spots of various sizes on body

Antennarius multiocellatus (Valenciennes 1837)
multi-, many; _ocellatus_, with eye-like spots, referring to numerous black ocelli (besides other streaks and dark spots) on sides

Antennarius pardalis (Valenciennes 1837)
like a leopard, described as having numerous black spots and ocelli on a red body

Antennarius pauciradiatus Schultz 1957
pauci-, few; _radiatus_, rayed, referring to 8-10 pectoral-fin rays, compared to the similar _Fowleriichthys radiosus_ (13-14) and _F. ocellatus_ (11-13), its presumed congeners at the time

Antennarius pictus (Shaw 1794)
painted, described as having a brown body with yellowish blotches margined with red

Antennarius randalli Allen 1970
in honor of ichthyologist John E. Randall (1924-2020), Bishop Museum (Honolulu), who made it possible for Allen to participate in the Easter Island (type locality) expedition of 1969

Antennarius scaber (Cuvier 1817)
rough, referring to short and stiff spinules on skin, giving it a shagreen-like surface

Antennarius striatus (Shaw 1794)
striped or streaked, referring to numerous black streaks all over body
Antennatus Schultz 1957
-atus, provided with: antenna (tentacle or feeler), presumably referring to “simple tentacle at tip of first dorsal spine”

Antennatus flagellatus Ohnishi, Iwata & Hiramatsu 1997
whip, referring to long illicium (>40% SL)

Antennatus linearis Randall & Holcom 2001
lined, referring to “striking” pattern of curving dark lines on head and body

Antennatus strigatus (Gill 1863)
striped or streaked, referring to black stripes (i.e., irregular bars) on body downward from back

Antennatus tuberosus (Cuvier 1817)
covered with lumps or tumors, presumably referring to series of tubercles on eyebrow and along back

Fowlerichthys Barbour 1941
in honor of ichthyologist Henry Weed Fowler (1878-1965), Academy of Natural Sciences of Philadelphia, who provided specimen that Barbour named *F. floridanus* (=*F. radiosus*); ichthys, fish

Fowlerichthys avalonis (Jordan & Starks 1907)
-genitive singular of: Avalon Bay, Santa Catalina Island, off southern California (USA), type locality

Fowlerichthys ocellatus (Bloch & Schneider 1801)
having eye-like spots, referring to 2-3 ocelli, one basidorsal, one about mid-body, and one (sometimes absent) centered on caudal fin

Fowlerichthys radiosus (Garman 1896)
rayed, presumably referring to “much longer” first dorsal-fin ray compared to the similar *Antennarius tigris* (=*A. striatus*), its presumed congener at the time

Fowlerichthys scriptissimus (Jordan 1902)
much written over, referring to body “everywhere covered with narrow straightish, parallel, dark brown lines running in different directions on different parts of the body”

Histrio Fischer 1813
presumably tautonomous with *Lophius histrio* Linnaeus 1758 (Fischer did not indicate species)

Histrio histrio (Linnaeus 1758)
harlequin, allusion not explained, perhaps referring to its gaudy appearance, with head, body and fins covered with numerous cutaneous appendages and variable color pattern, including streaks, spots and lines

Nudiantennarius Schultz 1957
-nus, bare or naked, referring to “naked skin or almost naked skin with only microscopic sized embedded denticles scattered on head and body”; antennarius, an antennariid anglerfish

Nudiantennarius subteres (Smith & Radcliffe 1912)
-sub-, less than or somewhat; teres, terete (cylindrical or slightly tapering), allusion not explained, perhaps referring to body shape

Subfamily Histiophryninae

Allenichthys Pietsch 1984
in honor of Gerald R. Allen (b. 1942), Western Australia Museum (Perth), for his many contributions to tropical ichthyology, and for his assistance in making possible a revision of Australian antennariids

Allenichthys glauerti (Whitley 1944)
patronym not identified, possibly in honor of paleontologist Ludwig Glauert (1879-1963), Curator, Western Australian Museum (Perth), who collected paratype; name may also honor “Misses B. and U. Glauert,” who collected holotype

Echinophryne McCulloch & Waite 1918
echinos, spiny, referring to skin of *E. crassispina* “thickly beset with large, upstanding, bifurcate spinules”; phryne, toad, a common suffix for lophiiform genera, possibly dating to Aristotle and Cicero, who called anglerfishes “fishing-frogs” and “sea-frogs,” respectively, presumably referring to their frog- or toad-like appearance (what’s more, some early naturalists believed that antennariids were anuran amphibians)

Echinophryne crassispina McCulloch & Waite 1918
crassus, fat or stout; spina, spine, referring to “comparatively thick” first (anterior) dorsal spine

Echinophryne mitchelli (Morton 1897)
patronym not identified, possibly in honor of John Mitchell (1848-1928), Scottish-born Australian schoolteacher, paleontologist, and frequent contributor to *Proceedings of the Linnean Society of New South Wales*; although Morton published the description under his own name, it may have been written by ichthyologist James Douglas Ogilby (per Saunders, *Discovery of Australia’s Fishes*, p. 409), whose boss at the Australian Museum, Robert Etheridge, Jr., frequently collaborated with Mitchell
**Echinophryne reynoldsi** Pietsch & Kuiter 1984
in honor of Lewis C. Reynolds of Melbourne, Australia, who collected type and provided “invaluable” collecting assistance to the junior author

**Histiothryne Gill 1863**
histion, sail, allusion not explained, presumably referring to long soft portion of dorsal fin, connecting to outermost rays of caudal fin; phryne, toad, a common suffix for lophiiform genera, possibly dating to Aristotle and Cicero, who called anglerfishes “fishing-frogs” and “sea-frogs,” respectively, presumably referring to their frog- or toad-like appearance (what’s more, some early naturalists believed that antennariids were anuran amphibians)

**Histiothryne bougainvilli** (Valenciennes 1837)
in honor of French naval officer Hyacinthe Yves Philippe Potentien de Bougainville (1781-1846), who collected type

**Histiothryne cryptacanthus** (Weber 1913)
cryptus, hidden; acanthus, thorn or spine, referring to third dorsal spine completely hidden under skin, pressed against the head and back so that it does not protrude

**Histiothryne maggiewalker** Arnold & Pietsch 2011
in honor of philanthropist Margaret “Maggie” Walker (b. 1953), for her service and dedication to science and education at the University of Washington and the Burke Museum of Natural History and Culture (both in Seattle, USA) [presumably a noun in apposition, without the matronymic “ae”]

**Histiothryne narungga** Arnold & Pietsch 2018
named for the Narungga (also known as Narangga and Nharangga), a tribe of Indigenous Australians whose traditional lands included the Yorke Peninsula of South Australia, where type locality (Gulf St Vincent) is situated

**Histiothryne pogonia** Arnold 2012
bearded, referring to bearded appearance formed by cutaneous cirri on ventrolateral margins of head [originally spelled pogonius, an adjective, but emended to pogonia since genus is feminine]

**Histiothryne psychedelica** Pietsch, Arnold & Hall 2009
psychedelic (psyche, mind; delein, to manifest), relating to or denoting drugs (especially LSD) that produce hallucinations and apparent expansion of consciousness, and to art and other graphic displays inspired by these drugs, referring to unique pigment pattern of swirling concentric rings and stripes that cover head, body and fins

**Kuiterichthys Pietsch 1984**
in honor of underwater photographer Rudolf “Rudie” Kuiter (b. 1943), for his contributions to the ichthyology of Australia, his generosity in providing specimens, and for many “excellent” photographs of antennariids of this region; ichthys, fish

**Kuiterichthys furcipilis** (Cuvier 1817)
furcatus, forked; pilus, hair, referring to hair-like bifurcate dermal spinules covering body

**Kuiterichthys pietschi** Arnold 2013
in honor of Theodore W. Pietsch (b. 1945), University of Washington (Seattle, USA), for his many contributions to the evolutionary biology of lophiiform fishes, and for his dedication to guiding and inspiring future generations of ichthyologists

**Lophiocharon Whitley 1933**
etymology not explained, presumably Lophius, type genus of order, perhaps used here as a general word for anglerfish, and Charon, the ferryman who carried the souls of the dead over the river Styx (if so, allusion not evident)

**Lophiocharon hutchinsi** Pietsch 2004
in honor of Barry Hutchins (b. 1946), Curator of Fishes, Western Australian Museum (Perth), for providing most of the material on which this species is based, and for his many contributions to Australian ichthyology

**Lophiocharon lithinostomus** (Jordan & Richardson 1908)
lithinis, marbled (like stone); stomus, mouth, referring to “tongue and inside of throat marbled like front of chin and trunk”

**Lophiocharon trisignatus** (Richardson 1844)
tri-, three; signatus, marked, referring to three dark spots on sides (on some specimens)

**Phyllophryne Pietsch 1984**
phyllon, leaf, referring to numerous, scattered, leaf-shaped cutaneous appendages on head and body; phryne, toad, a common suffix for lophiiform genera, possibly dating to Aristotle and Cicero, who called anglerfishes “fishing-frogs” and “sea-frogs,” respectively, presumably referring to their frog- or toad-like appearance (what’s more, some early naturalists believed that antennariids were anuran amphibians)

**Phyllophryne scortea** (McCulloch & Waite 1918)
leathery, referring to its skin, described as “leathery, without spines but closely covered with minute dermal tubercles”

**Porophryne Arnold, Harcourt & Pietsch 2014**
pore, pored, referring to naked, black, spots on head and body of most specimens (like the oscula of sponges), as well as
its primary microhabitat within sponge (*Porifera*) beds; *phryne*, toad, a common suffix for lophiiform genera, possibly dating to Aristotle and Cicero, who called anglerfishes “fishing-frogs” and “sea-frogs,” respectively, presumably referring to their frog- or toad-like appearance (what’s more, some early naturalists believed that antennariids were anuran amphibians)

*Porophryne erythrodactylus* Arnold, Harcourt & Pietsch 2014

*erythros*, red; *dactylus*, fingers, reference to conspicuous red pigmentation on tips of pectoral-fin rays and along distal margins of some or all other fins

*Rhycherus* Ogilby 1907

Greek for ragged, referring to “shaggy appearance due to the crowded cutaneous appendages” of *R. wilchi* and *R. bifurcatus* (both = *filamentosus*)

*Rhycherus filamentosus* (Castelnau 1872)

*filamentosus*, presumably referring to long illicium, described as a “long, thin, tentaculated spine, having on each side a slender, filiform, bifid tentacle”

*Rhycherus gloveri* Pietsch 1984

in honor of John Glover (1933-1992), Curator of Fishes, South Australian Museum (Adelaide), for his many contributions to Australian ichthyology and for making material available for revisionary studies of Australian frogfishes

*Tathicarpus* Ogilby 1907

*tathe*, to stretch or extend; *carpus*, wrist, referring to “enormous elongation of the carpal bones, which gives to the pectoral limb very much the appearance of the foreleg of a frog”

*Tathicarpus butleri* Ogilby 1907

in honor of “Dr. Graham Butler,” who discovered this frogfish (which was caught by local fishermen while netting among coral and seaweed), possibly A. Graham Butler (1872-1949), a physician and medical historian who practiced in Gladstone (Queensland, Australia), about 100 km from type locality

**Family TETRABRACHIIDAE**

*Dibrachichthys* Pietsch, Johnson & Arnold 2009

di-, two and *brachium*, arm, referring to two pectoral fins, one on each side, in contrast to “double” pectoral fins of *Tetrabrachium ocellatum*; *ichthys*, fish

*Dibrachichthys melanurus* Pietsch, Johnson & Arnold 2009

*melanos*, black; *oura*, tail, referring to conspicuous back bar across base of caudal fin

*Tetrabrachium* Günther 1880

tetra, four; *brachium*, arm, referring to pectoral fins with the upper portion detached, creating the impression of having two pectoral fins per side

*Tetrabrachium ocellatum* Günther 1880

*ocellate* (with eye-like spots), referring to numerous white ocelli-like markings on upper half of body, extending onto dorsal fin

**Family LOPHICHTHYIDAE** Arafura Frogfish

*Lophichthys* Boeseman 1964

*lophius*, ancient name of *Lophius piscatorius* (Lophiidae), referring to its goosefish-like appearance and possible affinity with that family; *ichthys*, fish

*Lophichthys boschmai* Boeseman 1964

in honor of Hilbrand Boschma (1893-1976), Dutch zoologist and director of the Rijksmuseum of Natural History in Leiden, who “expertly guided the first steps of so many zoological taxonomists,” including Boeseman

**Family BRACHIONICHTHYIDAE** Handfishes or Warty Anglers

5 genera · 14 species

*Brachionichthys* Bleeker 1854

*brachium*, arm, allusion not explained, probably referring to arm-like pectoral fin; *ichthys*, fish

*Brachionichthys australis* Last, Gledhill & Holmes 2007

southern, referring to its widespread temperate distribution (Western Australia, New South Wales, Victoria, Queensland, and Tasmania)

*Brachionichthys hirsutus* (Lacepède 1804)

hairy, referring to skin “dotted with very small blackish spines” or “prickles” (translation)
Brachiopsilus Last & Gledhill 2009  
*brachium*, arm; *psilos*, bare or smooth, referring to smooth surfaces of body and arm-like pectoral fins  

Brachiopsilus dianthus Last & Gledhill 2009  
pink carnation, referring to pinkish-red body  

Brachiopsilus dosseus Last & Gledhill 2009  
humpback or hunchback, referring to pronounced fleshy hump on back between snout and second dorsal fin  

Brachiopsilus ziebelli Last & Gledhill 2009  
in honor of Alan Ziebell, a professional diver who hand-collected some of the first specimens while fishing for abalone; these specimens were initially displayed in his home aquarium and later donated to the authors for research  

Pezichthys Last & Gledhill 2009  
*pezo*, walking, referring to their ability to walk on the sea floor using their hand-like pelvic fins and arm-like pectoral fins; *ichthys*, fish  

Pezichthys amplispinus Last & Gledhill 2009  
*amplus*, large; *spina*, thorn or spine, referring to dense covering of long dermal spinules over its skin  

Pezichthys compressus Last & Gledhill 2009  
compressed, referring to laterally flattened body shape  

Pezichthys  eltanini Last & Gledhill 2009  
in honor of the Polar Research Vessel *Eltanin*, which was used between 1962 and 1979 to survey Antarctic waters and nearby temperate seas, and from which type was collected in 1968  

Pezichthys macropinnis Last & Gledhill 2009  
*macro-*, large; *pinna*, fin, referring to tall dorsal and anal fins  

Pezichthys nigrocilium Last & Gledhill 2009  
*niger*, black; *cilium*, eyelash, referring to dark, eyelash-like markings above each orbit  

Sympterichthys Gill 1878  
*symphysis*, grown together, referring to first dorsal spine connected with second, and third dorsal spine with soft dorsal fin, by an incised membrane; *ichthys*, fish  

Sympterichthys moultoni Last & Gledhill 2009  
in honor of Peter Moulton, fisheries biologist with the Victorian Institute of Marine Science (now the Marine and Freshwater Resources Institute), whose interest in temperate Australian fishes led to the collection of the first specimen of this species, as well as many specimens of hitherto poorly known handfishes  

Sympterichthys unipennis (Cuvier 1817)  
*uni-*, one; *pennis*, fin, referring to a single membrane connected first, second and third dorsal spines  

Thymichthys Last & Gledhill 2009  
*thymos*, warty excrescence, referring to warty protuberances on skin; *ichthys*, fish  

Thymichthys politus (Richardson 1844)  
polished, allusion not explained, presumably referring to its skin, “perfectly smooth to the touch,” and/or “shining” reddish-brown color “after long maceration in spirits”  

Thymichthys verrucosus (McCulloch & Waite 1918)  
covered with verrucae, or warts, referring to smooth skin covered in minute warts, lacking spinules  

Suborder CHAUNACOIDEI  

Family CHAUNACIDAE Coffinfishes or Sea Toads  
2 genera - 29 species  

Chaunacops Garman 1899  
*ops*, appearance, proposed as a subgenus of *Chaunax* with a compressed body and a high nape  

Chaunacops coloratus (Garman 1899)  
colored, described as “deep rose” in life, “tinted with blue to blackish around the angles of the mouth and on the orbit around the eye”  

Chaunacops melanostomus (Caruso 1989)  
*melanos*, black; *stomus*, mouth, referring to black pigment lining inside of mouth  

Chaunacops roseus (Barbour 1941)  
rosy, referring to coloration in life, described as having rosy-red top of head (including chin) and a “rose and lavender” tongue and buccal cavity
Chaunacops spinosus Ho & McGrouther 2015
spiny, referring to body being densely covered by fine spinules

Chaunax Lowe 1846
one who gapes (from chanos, gape or open mouth), referring to “very large and wide” mouth

Chaunax abei Le Danois 1978
in honor of ichthyologist Tokiharu Abe (1911-1996), Zoological Institute of Tokyo University, who collected type

Chaunax africanus Ho & Last 2013
African, referring to regional locality of the types (Mozambique), and how its decorated color pattern is reminiscent of some strikingly colored African animals, such as the giraffe

Chaunax apus Lloyd 1909
a-, without; pous, foot, referring to pelvic fins “represented by minute rudiments”

Chaunax atimovatae Ho & Ma 2016
named for Atimo Vatae (Malagasy for “deep south”), trawler from Fort Dauphin (now Tôlanaro, Madagascar), from which many Madagascan specimens were collected, including type of this one

Chaunax brachysomus Ho, Kawai & Satria 2015
brachys, short; soma, bodied, referring to relatively short and stout body

Chaunax breviradius Le Danois 1978
brevis, short; radius, ray, referring to shorter third ray and basal stem of first (occipital) dorsal fin compared to C. abei

Chaunax endeavouri Whitley 1929
in honor of the F.I.S. Endeavour, Australian fisheries survey vessel, from which type was collected in 1913 (ship was responsible for collecting many of Australia’s continental shelf fishes in the early 20th century before it, along with all hands, was lost at sea in 1914)

Chaunax fimbriatus Hilgendorf 1879
fringed, referring to cirri that encircle body in a closed line from sides of tail to beneath gill opening, and above pectoral fin to middle of chin near interorbital space

Chaunax flammeus Le Danois 1979
proposed as a subspecies of the dark-colored C. umbrinus but with a “vivid” (translation) bright-pinkish color in life (fading in alcohol)

Chaunax flavomaculatus Ho, Roberts & Stewart 2013
flavus, yellow; maculatus, spotted, referring to large yellow spots on a pinkish background dorsally when fresh (uniformly creamy white in alcohol)

Chaunax gomoni Ho, Kawai & Satria 2015
in honor of Martin F. Gomon (b. 1945), senior curator of fishes, Museum Victoria (Melbourne, Australia), for his “great” contribution to fish taxonomy and for his long-term friendship with the authors

Chaunax heemstraorum Ho & Ma 2016
-orum, commemorative suffix, plural: in honor of ichthyologists Phillip C. (1941-2019) and Elaine Heemstra, South African Institute for Aquatic Biodiversity (SAIAB), who offered "great hospitality and assistance" when the senior author worked in the SAIAB fish collection
Chaunax hollemani Ho & Ma 2016
in honor of Wouter Holleman, Research Associate, South African Institute for Aquatic Biodiversity, for his contributions to fish taxonomy

Chaunax latipunctatus Le Danois 1984
*lati*us, broad or wide; *punctatus*, spotted, referring to large dark spots on upper body of some specimens, becoming more cloudy on the sides

Chaunax muleus Ho, Roberts & Stewart 2013
Latin for a red shoe, referring to distinct deep-red ventral surface of outer half of pectoral and pelvic fins and ventral surface of anal and caudal fins in fresh specimens

Chaunax multilepis Ho, Meleppura & Bineesh 2016
*multi*- , many; *lepis*, scale, referring to four neuromasts on lower preopercular series of lateral line, compared with typically three neuromasts in all other members of the *C. abei* species group

Chaunax nebulosus Ho & Last 2013
cloudy, referring to diffuse grayish-green color pattern overlain dorsally with five black spots

Chaunax nudiventer Ho & Shao 2010
*nudus*, bare or naked; *ventris*, belly, referring to largely naked area on abdomen

Chaunax penicillatus McCulloch 1915
having the form of a painter's brush or pencil (i.e., ending in a tuft of fine hairs), presumably referring to “densely fimbriated” rostral tentacles

Chaunax pictus Lowe 1846
painted, the “whole fish above bright orange, beautifully rosy at the flanks and sides, and with the fins and lips vermilion; on the belly it is nearly white or pale, suffused with flesh-colour or rosy, and with the ventral or anal fins deeper vermilion”

Chaunax reticulatus Ho, Roberts & Stewart 2013
net-like, referring to netted color pattern of body

Chaunax russatus Ho, Roberts & Stewart 2013
clothed in red, referring to uniform bright-red color of body and fins

Chaunax stigmaeus Fowler 1946
speckled, referring to entire back, sides and upper surfaces “marked or specked with innumerable and variable small dark olive markings,” extending on to dorsal-, caudal- and pectoral-fin rays

Chaunax suttkusi Caruso 1989
in honor of Royal D. Suttkus (1929-2009), for his many contributions to ichthyology, especially the extensive collection of fishes he built during his career at Tulane University (New Orleans, Louisiana, USA)

Chaunax umbrinus Gilbert 1905
dark or shady, referring to dark-gray upper body, “mottled and blotched with darker shades”

Suborder OGCOCEPHALOIDEI

Family OGCOCEPHALIDAE Batfishes
10 genera · 92 species

Coelophrys Brauer 1902
*coelo*- , hollow; *ophrys*, brow, referring to illicial cavity on forehead of *C. brevicaudatus*

Coelophrys arca Smith & Radcliffe 1912
box, referring to box-shaped head

Coelophrys bradburyae Endo & Shinohara 1999
in honor of zoologist Margaret G. Bradbury (1927-2010), San Francisco State University (California, USA), for her “considerable” contributions to the systematics of the family Ogcocephalidae

Coelophrys brevicaudata Brauer 1902
*brevi*- , short; *caudatus*, tailed, referring to short, laterally compressed caudal fin

Coelophrys brevipes Smith & Radcliffe 1912
*brevi*- , short; *pes*, foot, presumably referring to “small” ventral fins slightly more than ⅓ length of pectorals

Coelophrys micropus (Alcock 1891)
micro*- , small; *pous*, foot, referring to “minute” ventral fins

Coelophrys mollis Smith & Radcliffe 1912
soft, allusion not explained, perhaps referring to “edentulous” palate and tongue
**Coelophrys oblonga** Smith & Radcliffe 1912
oblong (somewhat long), allusion not explained, perhaps referring to head shape, “narrow, elongate, not disk-like” as in the “typical *Dibranchus*”

**Dibranchus Peters 1876**
di-, two; branchus, gill, referring to having gills on only the second and third arches (fourth arch without gill filaments)

**Dibranchus accinctus** Bradbury 1999
well-armed, referring to its “long tough” spines, presumably the “long spines” on large tubercles on dorsal margins of orbits

**Dibranchus atlanticus** Peters 1876
-icus, belonging to: described from the eastern Atlantic of western Africa (but also occurring in the western Atlantic from Canada to Brazil)

**Dibranchus cracens** Bradbury, McCosker & Long 1999
neat or tidy, referring to its “firm, trim body and regularity of size and distribution of tubercles”

**Dibranchus discors** Bradbury, McCosker & Long 1999
unlike or different, referring to “aberrant” shape of head (e.g., extremely narrow interorbital space and narrow mouth with enlarged eyes) and different proportions of illicial bone (high and narrow instead of low and broad when viewed frontally) compared to congers

**Dibranchus erinaceus** (Garman 1899)
hedgehog, allusion not explained, presumably referring to “harsh” spines on tubercular scales of disk and tail

**Dibranchus hystrig** Garman 1899
porcupine, allusion not explained, possibly referring to tubercular scales on disk and tail, or, more specifically, to long, recurved spines on tail and long and curved spines on suboperculum

**Dibranchus japonicus** Amaoka & Toyoshima 1981
Japanese, referring to waters off Iwate Prefecture, Japan, type locality (also occurs off Australia and South Africa)

**Dibranchus nudi** (Garman 1899)
nudus, bare or naked, referring to absence of vomerine teeth

**Dibranchus sparsus** (Garman 1899)
spckled or spotted, allusion not explained, perhaps referring to “rather faint and ill defined spots of light brown somewhat closely placed over the disk”

**Dibranchus spinosus** (Garman 1899)
spiny, presumably referring to “much smaller but much more numerous spines” on disc compared to *D. erinaceus* (described in same publication)

**Dibranchus spongiosa** (Gilbert 1890)
spongy, referring to “soft, spongy texture” of body

**Dibranchus tremendus** Bradbury 1999
something to be trembled at, referring to its “giant size” (190 mm SL) and “terrific spines”

**Halicmetus Alcock 1891**
etymology not explained, perhaps referring in some way to its relation to and/or similarity with *Halieutaea*

**Halicmetus drypus** Ho & Last 2018
named for the pink plant genus *Drypis* of the tribe Drypideae, family Caryophyllaceae, referring to this batfish’s pinkish-yellow background in life

**Halicmetus marmoratus** Weber 1913
marbled, proposed as a variety (subspecies) of *H. ruber* with irregular, brown spots all over body, some of which join to form larger spots

**Halicmetus niger** Ho, Endo & Sakamaki 2008
black, referring to uniform gray-to-black color of body, peritoneum and pharynx

**Halicmetus odysseus** Prokofiev 2020
named for the *Odyssey* (latinized as *Odyssey*), Soviet research vessel from which holotype was collected in 1984

**Halicmetus reticulatus** Smith & Radcliffe 1912
net-like, referring to light olive-brown color in alcohol, “crossed by narrow light-colored reticulating lines, bars, and spots”

**Halicmetus ruber** Alcock 1891
red, referring to uniform light-pink color in life
Halieutaea Valenciennes 1837
from halieutes, Greek for angler or fisherman, referring to how it feeds by resting on the ocean floor while attracting small fishes and crustaceans with its “bait”

Halieutaea brevicauda Ogilby 1910
brevis, short; cauda, tail, referring to shorter caudal fin compared to H. stellata

Halieutaea coccinea Alcock 1889
scarlet, described as having a “bright pink” back and “dark crimson” belly in life

Halieutaea dromedaria Prokofiev 2019
like a one-humped camel or dromedary, referring to arched dorsal contour of its back

Halieutaea fitzsimonsi (Gilchrist & Thompson 1916)
in honor of Frederick William Fitzsimons (1870-1951), Irish-born South African naturalist and Director of Port Elizabeth Museum and Snake Park (now Bayworld Snake Park), who “procured” several new fish species for his museum, including type of this one

Halieutaea fumosa Alcock 1894
smoky, referring to “smoky blue” upper body color

Halieutaea hancocki Regan 1908
in honor of Lieut. Hancock, Royal Navy (forename not given), First Lieutenant of HMS Sealark, from which type was collected

Halieutaea indica Annandale & Jenkins 1910
Indian, presumably referring to type locality, Bay of Bengal, off Orissa coast, India (occurs in Indo-West Pacific from South Africa, Seychelles and Madagascar east to Philippines and New Guinea, north to southern Japan, south to northern Australia)

Halieutaea nigra Alcock 1891
black, referring to uniform blue-black body color, with “jet-black vermicular” lines

Halieutaea retifera Gilbert 1905
rete, net; fera, to carry or bear, referring to “coarsely reticulating reddish brown lines” on upper body

Halieutaea stellata (Vahl 1797)
stellata, covered with stars, referring to stellate (star-shaped) spiny tubercles on upper body

Halieutopsis Garman 1899
opsis, appearance, its “Outlines resembling Halieutaea”

Halieutopsis andriashevi Bradbury 1988
in honor of Anatoly Petrovich Andriashev (1910-2009), “whose contributions to deep-sea ichthyology are legion”; he first recognized this batfish as new, “kindly” made it available to Bradbury for study, and for 20 years “waited patiently for the results”

Halieutopsis bathyoreos Bradbury 1988
bathy, deep; oreos, mountain, referring to Horizon Guyot, central North Pacific Ocean (type locality), the first batfish known from a seamount

Halieutopsis galatea Bradbury 1988
sea nymph, in honor of the Danish research vessel Galathea, which secured type during the Danish Deep-Sea Expedition
Halieutopsis inerorum Bradbury 1988
-orum, commemorative suffix, plural: in honor of biologist Robert F. Inger (1920-2019), Field Museum of Natural History, and in memory of the late Mary Lee Inger, for “friendship and wise counsel through the years”

Halieutopsis margaretae Ho & Shao 2007
in honor of zoologist Margaret G. Bradbury (1927-2010), San Francisco State University (California, USA), for her “enormous” contribution to our knowledge of batfishes

Halieutopsis nasuta (Alcock 1891)
large-nosed, referring to “broadly expanded snout-bones project[ing] far beyond the deep semicircular cavity which lies beneath them” [Incertae sedis in Ogcocephalidae; holotype in poor condition and never collected since]

Halieutopsis nudiventer (Lloyd 1909)
nudus, bare or naked; venter, belly, referring to absence of spines on lower surface of disk and tail [type lost during WW2; taxonomic status uncertain]

Halieutopsis simula (Smith & Radcliffe 1912)
diminutive of simus, snub-nosed, referring to “moderate” rostrum, “projecting beyond jaws, the anterior margin bent downward until the tentacular aperture is barely equal to diameter of eye, its height being about one-half its width”

Halieutopsis stellifera (Smith & Radcliffe 1912)
stellus, star, fero, to bear, i.e., star-bearing, referring to dorsal surface covered with stellate (star-shaped) tubercles, each capped with a long, slender spine

Halieutopsis tumifrons Garman 1899
tumis, a swelling; frons, front, referring to “considerably swollen” edges on suboperculum and forward, especially below the eyes

Halieutopsis vermicularis Smith & Radcliffe 1912
vermiculate (worm-shaped), referring to olive vermiculations on olive-gray body

Malthopsis Alcock 1891
opsis, appearance, i.e., similar to Malthe (=Ogcocephalus) but with only two (vs. 2½) gills on each side

Malthopsis annulifera Tanaka 1908
annulus, ring; fero, to bear, referring to three pairs of blackish rings or eye-like spots on disk
Malthopsis apis Ho & Last 2021
Latin for bee, referring to small, pointed rostral spine and large orbit which together resemble the head of a honeybee

Malthopsis arrietty Ho 2020
named after the miniature character of the 2010 Japanese animated fantasy film *Arrietty the Borrower* (Japan) or *The Secret World of Arrietty* (North America), referring to its miniature size (up to 54 mm SL)

Malthopsis asperata Ho, Roberts & Shao 2013
rough, referring to a prominent spine with many asperities (spinules) on each buckler

Malthopsis australicana Ho 2013
*auss*-, south, referring to southern Africa, where type locality (off Mozambique) is situated (also known from off South Africa and Madagascar)

Malthopsis bradburyae Ho 2013
in honor of the late Margaret G. Bradbury (1927-2010), San Francisco State University (California, USA), for her “great” contribution to our knowledge of batfishes, and for her friendship

Malthopsis bulla Ho & Last 2021
Latin for knob, referring to flattened bucklers covering entire body

Malthopsis formosa Ho & Koeda 2019
Formosa, old name of Taiwan, only known area of occurrence in northern South China Sea

Malthopsis gigas Ho & Shao 2010
giant, largest member of genus, reaching 136.4 mm SL

Malthopsis gnomata Bradbury 1998
gnome-like, referring to its “diminutive size yet grotesque appearance”

Malthopsis jordani Gilbert 1905
in honor of ichthyologist David Starr Jordan (1851-1931), who, with Barton Warren Evermann, supervised the U.S. Fish Commission steamer *Albatross* expedition to the Hawaiian Islands, during which type was collected

Malthopsis kobayashii Tanaka 1916
in honor of Mansaku Kobayashi of Yokkaichi, Mie Prefecture, Japan, who collected type

Malthopsis lutea Alcock 1891
yellow, referring to pinkish-yellow color in life

Malthopsis mcgrourtheri Ho & Last 2021
in honor of Mark McGrouther (b. 1958), former collection manager of the Australian Museum (Sydney), for his “great” contribution in assisting the authors’ studies and his friendship

Malthopsis mitrigera Gilbert & Cramer 1897
*mitri*-, etymology not explained, perhaps *miter* (liturgical headdress worn by bishops and abbots), and *-iger*, to bear, referring to vertical projection in front of head [Gilbert 1905 emended spelling from “*mitriger*” to “*mitrigera*” without explanation; the latter spelling is currently in use]

Malthopsis oculata Ho & Last 2021
eyed, referring to “unusually” large orbit

Malthopsis parva Ho, Roberts & Shao 2013
small, referring to small adult size, the largest (mature) specimen reaching 46.4 mm SL

Malthopsis provocator Whitley 1961
Latin for challenger, named for M.V. *Challenge*, from which holotype was trawled

Malthopsis retifera Ho, Prokofiev & Shao 2009
*rete*, net; *fera*, to carry or bear, referring to reticular color pattern on dorsal surface

Malthopsis tetrabulla Ho & Last 2021
tetra, four; *bulla*, knob, referring to four prominent bucklers on posterior portion of skull

Malthopsis tiarella Jordan 1902
diminutive of *tiara*, a decorative headband (e.g., diadem), presumably referring to three rows of spines on edge of head

Malthopsis velutina Ho 2020
velvety, referring to body covered with fine bucklers and prickles, forming a velvet-like integument

Ogcocephalus Fischer 1813
*ogkos*, hook; *cephalus*, head, referring to pointed rostral process on produced snout of *O. vespertilio*

Ogcocephalus corniger Bradbury 1980
*cornis*, horn; *-iger*, to bear, referring to long, upturned rostrum
Ogcocephalus cubifrons (Richardson 1836)
cubus, cube; frons, forehead, referring to square or “cubical” shape of head

Ogcocephalus darwini Hubbs 1958
in honor of naturalist Charles Darwin (1809-1882), in celebration of the 100th anniversary of the publication of his *On the Origin of Species*, and “in view of the circumstance that Darwin's most significant observations on insular endemism were made at the Galapagos Islands,” type locality

Ogcocephalus declivirostris Bradbury 1980
decrivis, sloping; rostrum, snout, referring to downward-sloping snout

Ogcocephalus nasutus (Cuvier 1829)
long-nosed, referring to pointed snout with a well-developed horn (but variable in length, ranging from a short knob to a thick-based cone to long and finger-like projection) [amusingly, its common name, Shortnose Batfish, is opposite its scientific name]

Ogcocephalus notatus (Valenciennes 1837)
marked, described as having 3-4 small, round, black spots, placed on each side of opercular spine (contemporary accounts indicate that this batfish has 1-7 paired clusters of dark, pale-edged spots along disc edge, sometimes with dark rings on top surface and sides of tail)

Ogcocephalus pantostictus Bradbury 1980
panto, all; stiktos, spotted, referring to overall spotted color pattern

Ogcocephalus parvus Longley & Hildebrand 1940
small, referring to small size, up to 10 cm TL (type specimen 7.8 cm)

Ogcocephalus porrectus Garman 1899
projected, referring to longer rostrum compared to the similar *O. vespertilio*

Ogcocephalus pumilus Bradbury 1980
dwarfish, diminutive or little, referring to “diminutive size and grotesque appearance”

Solocisquama Bradbury 1999
solox, coarse or bristly; squama, scaled, referring to scales in the form of spiny tubercles

Daleutes Jordan & Evermann 1896
zale, surge of the sea, allusion not explained but possibly referring to how *Z. elater*, more common in moderate depths not close to shore, was described from a specimen in Mazatlan Harbor (Sinaloa, México), perhaps washed closer to shore during a storm surge; [ artículo], Greek for angler or fisherman, referring to how it feeds, like all batfishes, by resting on the ocean floor while attracting small fishes and crustaceans with its “bait”

Zalieutes elater (Jordan & Gilbert 1882)
according to Jordan & Evermann (1898), named for resemblance of its ocelli to eye-like spots on back of the Central and North American click beetle *Elater* (now *Alaus*) *oculatus*

Zalieutes mcgintyi (Fowler 1952)
in honor of Paul L. McGinty (1906-1985), who operated, along with his brother Thomas L. McGinty (1907-1986), the yacht from which type was collected