# The ETYFish Project

v. 3.0 - 3 June 2024

# Order LOPHIIFORMES (part 2 of 2)

#### **Suborder CERATIOIDEI**

Taxonomic note: names based on morphology refer to mature females unless otherwise indicated.

# Family CAULOPHRYNIDAE Fanfins

2 genera · 5 species

#### Caulophryne Goode & Bean 1896

*caulis*, stem, referring to illicium supported by a stem-like base; *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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Caulophryne bacescui Mihai-Bardan 1982

in honor of zoologist Mihai C. Băcescu (1908-1999), Museum of Natural History in Bucharest, who took part in the 1965 cruise during which type was collected; he also read the manuscript and provided "guidance"

#### Caulophryne jordani Goode & Bean 1896

in honor of David Starr Jordan (1851-1931), president of Leland Stanford Junior University (now Stanford University, California, USA), "one of the most learned and productive of ichthyologists"

# Caulophryne pelagica (Brauer 1902)

pelagios, of the open sea, presumably referring to its bathypelagic type locality (collected at 2500 m, but usually captured at 900-1750 m)

#### Caulophryne polynema Regan 1930

poly, many; nema, thread, allusion not explained, presumably referring to numerous filaments along illicium and/or hundreds of thin filaments on head and body

#### Robia Pietsch 1979

-ia, belonging to: Bruce H. Robison (better known to his friends as "Robie"), Monterey Bay Aquarium Research Institute (California, USA), for his contributions to our knowledge of midwater fishes

# Robia legula Pietsch 1979

collector or gatherer, referring to the "extraordinary collecting abilities" of this anglerfish (presumably referring to its long illicium, 268.3% of SL) and how type was collected (an opening-closing trawl)

# Family NEOCERATIIDAE Spiny Seadevil

#### Neoceratias Pappenheim 1914

neo-, new, i.e., a new kind ceratiid-like anglerfish (Pappenheim was unsure of its systematic position but believed it was most similar to the Ceratiidae)

# Neoceratias spinifer Pappenheim 1914

spina, spine; fero, to bear, referring to long, hinged, needle-like teeth mounted outside the jaws

# Family MELANOCETIDAE Black Seadevils

1 genus · 6 species

#### Melanocetus Günther 1864

melanos, black, referring to uniform deep-black color (including inside of mouth, abdominal sac and stomach); cetus, large sea creature (usually referring to a whale)

# Melanocetus eustalus Pietsch & Van Duzer 1980

well-equipped, referring to its "enormous" esca

# Melanocetus johnsonii Günther 1864

in honor of English naturalist James Yate Johnson (1820-1900), who discovered and presented type

## Melanocetus murrayi Günther 1887

in honor of John Murray (1841-1914, later the founder of modern oceanography), of the HMS *Challenger*, which secured type

# Melanocetus niger Regan 1925

black, allusion not explained, presumably referring to uniform deep-black color (characteristic of the genus)

## Melanocetus polyactis Regan 1925

*poly*, many; *actis*, ray, referring to more numerous dorsal-fin rays compared to the similar *M. niger* (described in the same publication)

#### Melanocetus rossi Balushkin & Fedorov 1981

in honor of James Clark Ross (1800-1862), an "outstanding polar captain, and researcher of the Arctic and Antarctic" (translation), for whom Ross Sea, Antarctica (where only known specimen was collected), was named

# Family HIMANTOLOPHIDAE Footballfishes

1 genus · 23 species

# Himantolophus Reinhardt 1837

himantos, leather strap, thong or leash; lophus, crest or tuft, allusion not explained, presumably referring to thick, leathery illicium of H. groenlandicus

## Himantolophus albinares Maul 1961

albus, white; nares, nostril, referring to white "oval, papilla-like bulges on which the nostrils are placed"

# Himantolophus appelii (Clarke 1878)

in honor of "Mr. Appel" of Hokitika, New Zealand (no other information available), who collected type, sent it to Clarke, and "kindly allowed" him to "figure and describe" it

#### Himantolophus azurlucens Beebe & Crane 1947

azure, French for blue; elucens, shining out, referring to "patches of brilliant turquoise blue luminescence on body and fins"

#### Himantolophus borealis Kharin 1984

northern, allusion not explained, possibly referring to the western North Pacific, only known area of occurrence

#### Himantolophus brevirostris (Regan 1925)

brevis, short; rostris, snout, referring to shorter rostral projection compared to most congeners then placed in Rhynchoceratias (=Himantolophus)

# Himantolophus compressus (Osório 1909)

compressed, described as having a laterally compressed body that tapers from pectoral fins to the tail

#### Himantolophus cornifer Bertelsen & Krefft 1988

cornis, horn; fero, to bear, referring to antler-like escal appendages

# Himantolophus crinitus Bertelsen & Krefft 1988

hairy, referring to hairy appearance of illicium due to greater number of appendages

#### Himantolophus danae Regan & Trewavas 1932

in honor of the Danish fishery research vessel Dana, from which type was collected

# Himantolophus groenlandicus Reinhardt 1837

-icus, belonging to: Greenland, where type was found washed ashore near Godthåb (now called Nuuk)

# Himantolophus kalami Rajeeshkumar, Pietsch & Saravanane 2022

in honor of A. P. J. Abdul Kalam (1931-2015), an "eminent aerospace scientist and former President of India, for his many contributions to the field of space research and India's missile technology. He was very keen in encouraging students and greatly motivated them with his inspiring books and speeches."

# Himantolophus litoceras Stewart & Pietsch 2010

litos, simple or plain; ceras, horn, referring to lack of lateral branching or filaments on distal escal appendages

# Himantolophus macroceras Bertelsen & Krefft 1988

macro-, large; ceras, horn, referring to extreme size of its antler-shaped escal appendages

#### Himantolophus macroceratoides Bertelsen & Krefft 1988

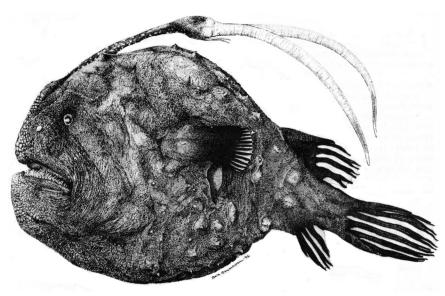
-oides, having the form of: referring to "close similarity" to H. macroceras

# Himantolophus mauli Bertelsen & Krefft 1988

in honor of ichthyologist-taxidermist Günther Edmund Maul (1909-1997), Museu Municipal do Funchal (Portugal), for his "detailed and exact description of the holotype [reported as *H. compressus* in 1961] and his many other valuable contributions to the study of the ceratioid fishes"

# Himantolophus melanolophus Bertelsen & Krefft 1988

melano-, black; lophus, crest, referring to black escal appendages



Himantolophus mauli. From: Bertelsen, E. and G. Krefft. 1988. The ceratioid family Himantolophidae (Pisces, Lophiiformes). Steenstrupia v. 14 (no. 2): 9-89.

## Himantolophus multifurcatus Bertelsen & Krefft 1988

multi-, many; furcatus, forked, referring to 2-3 branches of its light-guiding escal appendage

#### Himantolophus nigricornis Bertelsen & Krefft 1988

nigri-, black; cornis, horn, referring to black escal appendages

# Himantolophus paucifilosus Bertelsen & Krefft 1988

paucus, few; filosus, thread-like or filamentous, referring to absent anterior escal appendage (compared to present on other members of *H. groenlandicus* species group)

## Himantolophus pseudalbinares Bertelsen & Krefft 1988

pseudo-, false, i.e., although this species may closely resemble H. albinares, such an appearance is false

#### Himantolophus rostratus (Regan 1925)

beaked, referring to "prominent" rostral projection

# Himantolophus sagamius (Tanaka 1918)

-ius, adjectival suffix: Sagami Sea, Japan, type locality (also recorded from off Hawaiian Islands, Indonesia, New Guinea, and along west coast of Americas from California to Ecuador and Chile)

#### Himantolophus stewarti Pietsch & Kenaley 2011

in honor of Andrew Stewart (b. 1958), Department of Fishes, National Museum of New Zealand, for his years of service to the world ichthyological community and for his many published contributions to ichthyology

# Family DICERATIIDAE Double Anglers

2 genera · 7 species

# **Bufoceratias Whitley 1931**

bufo, toad, allusion not explained (possibly a variation on phryne, toad, a common suffix for lophiiform genera), replacement name for Phrynichthys Pietschmann 1926, preoccupied by Phrynichthys Agassiz 1846 (=Synanceia Bloch & Schneider 1801, Scorpaenoidei: Synanceiidae), itself a replacement for Bufichthys Swainson 1839 (perhaps Whitley was evoking the former Bufichthys in the current name); Ceratias, then placed in the family Ceratiidae

# Bufoceratias microcephalus Ho, Kawai & Amaoka 2016

micro-, small; cephalus, head, referring to relatively small head compared to that of congeners

## Bufoceratias shaoi Pietsch, Ho & Chen 2004

in honor of Shao Kwang-Tsao (b. 1951), Research Fellow of the Institute of Zoology, Academic Sinica, Taiwan, for his many contributions to fishery science and ichthyology of Taiwan

# Bufoceratias thele (Uwate 1979)

Greek for nipple, referring to nipple-shaped terminal papilla of esca

# Bufoceratias wedli (Pietschmann 1926)

in honor (per Pietschmann 1930) of Austrian-American philanthropist and textile importer Anton Wedl (1864-

1929), who provided much humanitarian assistance to the University of Vienna and its students and teachers after WW1 to "alleviate hardship and deprivation," and who showed a "lively and active interest" in the university's natural history museum, where Pietschmann worked

#### Diceratias Günther 1887

di-, two, proposed as a subgenus of Ceratias with two (instead of one) cephalic spines

# Diceratias bispinosus (Günther 1887)

bi-, two; spinosus, spiny, referring to two cephalic spines (second spine is rudimentary, situated immediately behind the first)

#### Diceratias pileatus Uwate 1979

capped, referring to bulbous terminal papilla on distal tip of esca

## Diceratias trilobus Balushkin & Fedorov 1986

tri-, three; lobus, lobe, referring to three-lobed form of esca

# Family ONEIRODIDAE Dreamers

16 genera · 71 species

#### Bertella Pietsch 1973

-ella, diminutive connoting endearment: in honor of Danish ichthyologist Erik Bertelsen (1912-1993), curator of the DANA-Collections, for his contributions to our knowledge of ceratioid fishes

#### Bertella idiomorpha Pietsch 1973

idios, distinct or peculiar; morpha, form or shape, referring to distinct structure of hyomandibular bone, unique among oneirodids in having a single head

#### Chaenophryne Regan 1925

chaeno-, gape, allusion not explained, perhaps referring to large mouth of *C. longiceps*; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Chaenophryne draco Beebe 1932

dragon, allusion not explained nor evident

## Chaenophryne longiceps Regan 1925

longus, long; ceps, head, referring to its "long" head, with decurved profile

# Chaenophryne melanorhabdus Regan & Trewavas 1932

melanos, black; rhabdos, rod, presumably referring to tentacle-like appendage on escal bulb

## Chaenophryne quasiramifera Pietsch 2007

quasi-, simulating or appearing as if, referring to its C. ramifera-like esca

# Chaenophryne ramifera Regan & Trewavas 1932

*ramus*, branch or antler; *fero*, to carry or bear, presumably referring to anterior tentacle on illicium, which extends down nearly to base of stem, and then emerges as a free appendage that curves around and nearly touches escal bulb

## Chirophryne Regan & Trewavas 1932

cheiros, hand, referring to "rather long" pectoral-fin lobe; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Chirophryne xenolophus Regan & Trewavas 1932

*xenos*, strange or foreign (i.e., different); *lophus*, crest or tuft, presumably referring to structure of translucent escal bulb (e.g., containing a rounded pigmented glandular organ, and a short, curved, tapering anterior appendage connected to bulb via a thin membrane)

# Ctenochirichthys Regan & Trewavas 1932

ctenos, comb and cheiros, hand, referring to long pectoral fin, with 24-27 (actually 28-30) comb-like rays along dorsal margin; ichthys, fish

## Ctenochirichthys longimanus Regan & Trewavas 1932

*longus*, long; *manus*, hand, referring to long pectoral fin, with 24-27 (actually 28-30) rays along its dorsal margin, more than any other ceratioid

# Danaphryne Bertelsen 1951

Dana, Danish fishery research vessel from which type of *D. nigrifilis* was collected; *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 (also, some early naturalists believed that

antennariids were anuran amphibians)

# Danaphryne nigrifilis (Regan & Trewavas 1932)

nigri-, black; filum, thread, referring to pair of "stout tapering filaments, black with white ends" at end of esca

#### Dermatias Smith & Radcliffe 1912

one who has skin, referring to its skin, "naked, very loose, and soft"

## Dermatias platynogaster Smith & Radcliffe 1912

platyno, to make broad; gaster, stomach, presumably referring to "ventral surface greatly decurved, the very large stomach hanging down like a great pouch"

## Dolopichthys Garman 1899

dolops or dolopos, ambusher, allusion not explained but almost certainly referring to how it feeds by resting on the ocean floor while attracting prey with its "lure"; ichthys, fish

#### Dolopichthys allector Garman 1899

an enticer, allusion not explained but almost certainly referring to how it feeds by resting on the ocean floor while enticing prey with its "lure"

## Dolopichthys danae Regan 1926

in honor of the Danish fishery research vessel Dana, from which type was collected

# Dolopichthys dinema Pietsch 1972

di-, two; nema, thread, referring to two long, thread-like filaments on dorsal midline of escal bulb

# Dolopichthys jubatus Regan & Trewavas 1932

jubate, i.e., fringed with long pendent hairs like a mane, allusion not explained, perhaps referring to escal bulb with a "compressed posterior appendage, which is emarginated distally"

#### Dolopichthys karsteni Leipertz & Pietsch 1987

in honor of Karsten E. Hartel (b. 1944), curator of fish collection at Harvard's Museum of Comparative Zoology (MCZ), for his interest in deep-sea fishes, and for his dedicated service to ichthyologists everywhere as manager of the MCZ fish collection

#### Dolopichthys longicornis Parr 1927

longus, long; cornis, horn, referring to longer illicium compared to D. analogus (=Microlophichthys microlophus)

#### Dolopichthys pullatus Regan & Trewavas 1932

clothed in dark garments, allusion not explained, presumably referring to uniform black coloration of body

# Leptacanthichthys Regan & Trewavas 1932

*leptos*, slender and *acanthus*, thorn or spine, referring to "long and slender" articular spines; *ichthys*, fish (Pietsch 2009 is incorrect in stating that name refers to the "unusually thin, delicate illicium")

#### Leptacanthichthys gracilispinis (Regan 1925)

gracilis, slender; spinis, spine, referring to "slender" articular spines (those at articulation of lower jaw)

## Lophodolos Lloyd 1909

*lophus*, crest or tuft (esca, the "lure"); *dolos*, deceit or guile, describing (per Pietsch 2009) a "deceitful little fish that beguiles its prey with a baited illicium mounted on top of the head"

# Lophodolos acanthognathus Regan 1925

*acanthus*, thorn or spine; *gnathus*, jaw, allusion not explained, perhaps referring to quadrate bone, symphysis of lower jaw, and posterior-most extent of lower jaw all forming extremely long, sharp spines (characteristic of the genus)

# Lophodolos indicus Lloyd 1909

Indian, referring to type locality off Trevancore, India, in Laccadive Sea, Indian Ocean (occurs circumglobally in tropical and subtropical seas, including Hawaiian islands, but excluding western Atlantic)

# Microlophichthys Regan & Trewavas 1932

micro-, small; lophus, crest or tuft, referring to short illicium of M. microlophus, 1/8 length of fish or less; ichthys, fish [original description did not designate type species after 1930 (ICZN Art. 13b), so name technically dates to Burton 1933 (entry in Zoological Record), but "Regan & Trewavas" appears to be in prevailing usage]

# Microlophichthys andracanthus Bertelsen 1951

andros, male, described from a single adult male (and females yet to be discovered); acanthus, thorn or spine, referring to lateral series of spines on sides of dorsal margin of upper denticular

# Microlophichthys microlophus (Regan 1925)

micro-, small; lophus, crest or tuft, referring to shorter illicium compared to Dolopichthys (now Oneirodes) anisacanthus, its presumed congener at the time

## Oneirodes Lütken 1871

dream-like, allusion not explained, perhaps referring to small eyes almost covered by skin (per Jordan & Evermann 1898); according to Pietsch (2009), name implies a "fish so strange and marvelous that it could only be imagined in the dark of the night during a state of unconsciousness"

#### Oneirodes acanthias (Gilbert 1915)

spiny or prickly thing, presumably referring to "strong outwardly directed" spine at angle of preopercle

#### Oneirodes alius Seigel & Pietsch 1978

Latin for another, referring to the "seemingly never-ending number of new forms being discovered within Oneirodes"

#### Oneirodes amaokai Ho & Kawai 2016

in honor of Kunio Amaoka, Hokkaido University, for his numerous contributions to ichthyology

#### Oneirodes anisacanthus (Regan 1925)

a-, not; isos, equal; acanthus, thorn or spine, allusion not explained, perhaps referring to unequal lengths of articular spines (per Pietsch 1974)

## Oneirodes basili Pietsch 1974

in honor of ichthyologist Basil Nafpaktitis (1929-2015), University of Southern California (USA), for "encouragement and guidance as major professor and friend"

# Oneirodes bradburyae Grey 1957

in honor of Margaret G. Bradbury (1927-2010), San Francisco State University (California, USA), who prepared figure of type specimen

## Oneirodes bulbosus Chapman 1939

bulbous, referring to "nearly bulb-shaped" body

#### Oneirodes carlsbergi (Regan & Trewavas 1932)

in honor of the Carlsberg Foundation, which financed the Dana fishery research cruise that collected type

# Oneirodes clarkei Swinney & Pietsch 1988

in honor of malacologist Malcolm R. Clarke (1930-2015), Marine Biological Association of the United Kingdom, for his contributions to the methodology of sampling midwater organisms, one of which was used to capture type

# Oneirodes cordifer Prokofiev 2014

cordis, heart; fero, to bear, referring to heart-shaped suboperculum

# Oneirodes cristatus (Regan & Trewavas 1932)

crested, allusion not explained, presumably referring to its large, laterally compressed and scalloped anterior escal appendage (per Pietsch 1974)

#### Oneirodes dicromischus Pietsch 1974

dicro-, forked; mischus, stalk or pedical, referring to forked anterior escal appendage

# Oneirodes epithales Orr 1991

Greek for nightmare, allusion not explained in original description; "The picture of a fish drifting along dreamily, lighting the deep-sea world with a little light was a nice fancy. But the fact that the little light was attracting innocent prey that were to be engulfed by a massive mouth full of sharp teeth seemed nightmarish. Hence, the name" (James Wilder Orr, pers. comm.)

#### Oneirodes eschrichtii Lütken 1871

in honor of Daniel Frederik Eschricht (1798-1863), Danish physician, physiologist and naturalist, for his "enduring zeal and versatile interest in collecting material for information about our High Nordic wildlife" (translation), including receipt of this species from Carl Peter Holboell (see *Ceratias holboelli*, Ceratiidae), and its preservation, in 1845

#### Oneirodes flagellifer (Regan & Trewavas 1932)

flagellum, whip; fero, to bear, referring to a tapering posterior filament, as long as illicium, at end of escal bulb

# Oneirodes formosanus Ho & Shao 2019

-anus, belonging to: Formosa, former name of Taiwan, known only from holotype collected from northeastern Taiwan off Daxi at 400-500 m

#### Oneirodes haplonema Stewart & Pietsch 1998

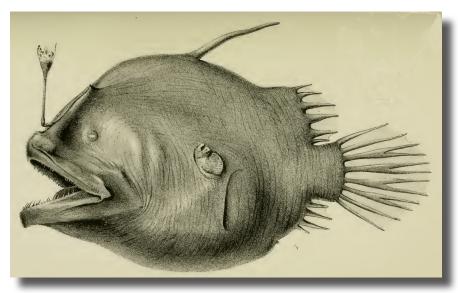
haplos, single or simple; nema, thread, referring to single unpaired medial escal appendage

# Oneirodes heteronema (Regan & Trewavas 1932)

hetero-, different; nema, thread, presumably referring to posterior filament of escal bulb with two pairs of short branches, different from the unbranched filaments of O. anisacanthus

# Oneirodes kreffti Pietsch 1974

in honor of Gerhard Krefft (1912-1993), Institut für Seefischerei (Hamburg), for his many "valuable" contribu-



Oneirodes eschrichtii. From: Lütken, D. F. 1871. Oneirodes eschrichtii Ltk. en ny gronlandsk Tudsefisk. Oversigt over det Kongelige Danske videnskabernes selskabs forhandlinge 1871 (2): 56-74+ 9-17, Pl. 2.

# tions to ichthyology

#### Oneirodes luetkeni (Regan 1925)

in memory of Danish zoologist Christian Frederik Lütken (1827-1901), who "greatly advanced the knowledge of oceanic fishes"

# Oneirodes macronema (Regan & Trewavas 1932)

macro-, long; nema, thread, referring to "very long" distal filament of esca bulb

# Oneirodes macrosteus Pietsch 1974

macro-, long; osteus, bone, referring to elongate shape of subopercular bone

# Oneirodes melanocauda Bertelsen 1951

*melano*-, black; *cauda*, tail, referring to black pigment on tips of longest caudal-fin rays of larval females (adults not yet known)

# Oneirodes micronema Grobecker 1978

micro-, small; nema, thread, referring to short escal appendages

# Oneirodes mirus (Regan & Trewavas 1932)

weird or wonderful, allusion not explained, perhaps referring to esca, with long and multi-branched appendages

# Oneirodes myrionemus Pietsch 1974

myrios, numberless; nema, thread, referring to numerous highly filamentous medial appendages of the esca

## Oneirodes notius Pietsch 1974

southern, referring to its distribution, restricted to the Southern Ocean

#### Oneirodes parapietschi Prokofiev 2014

para-, near, referring to resemblance to O. pietschi

# Oneirodes pietschi Ho & Shao 2004

in honor of Theodore W. Pietsch (b. 1945), University of Washington (Seattle, USA), for his many contributions to our knowledge of ceratioid anglerfishes

#### Oneirodes plagionema Pietsch & Seigel 1980

plagios, oblique; nema, thread, referring to oblique, anteroventrally directed escal appendage

# Oneirodes posti Bertelsen & Grobecker 1980

in honor of Alfred Post (b. 1935), Institut für Seefischerei (Hamburg), for his contributions to deep-sea ichthyology and for providing holotype

# Oneirodes pterurus Pietsch & Seigel 1980

pterus, wing; oura, tail, referring to wing-like posterior escal appendage

#### Oneirodes quadrinema Ho, Kawai & Amaoka 2016

quadri-, four; nema, thread or appendage, referring to four main branches on medial escal appendage

## Oneirodes rosenblatti Pietsch 1974

in honor of Richard H. Rosenblatt (1930-2014), Scripps Institution of Oceanography, for his many contributions to ichthyology and for his help in making Pietsch's revision of *Oneirodes* possible

# Oneirodes sabex Pietsch & Seigel 1980

acronym formed from the initial letters of the name "Southeast Asian Bioluminescence Expedition," for "important ichthyological contribution made by those involved" in 1975 (including the collection of many *Oneirodes* specimens)

# Oneirodes sanjeevani Rajeeshkumar 2017

in honor of V. N. Sanjeevan, former Director of the Centre for Marine Living Resources and Ecology (Kochi, Kerala, India); "The effort he and his team have made in exploring the seas around India and the Indian Ocean sector of the Southern Ocean represents an immense contribution toward the formulation of ecosystem management strategies, including the deep sea and distant water fishery policies."

# Oneirodes schistonema Pietsch & Seigel 1980

schistos, divided; nema, thread, referring to divided anterior and posterior escal appendages

#### Oneirodes schmidti (Regan & Trewavas 1932)

in honor of Danish biologist Johannes Schmidt (1877-1933), who led the *Dana* fishery research cruise that collected type

## Oneirodes sipharum Prokofiev 2014

Latin for pennant, referring to appearance of long anterior process of esca

#### Oneirodes theodoritissieri Belloc 1938

in honor of French jurist and politician Théodore Tissier (1866-1944), Chairman of the Board of Directors of the Office scientifique et technique des Pêches Maritimes (OSTPM); type was collected from *President Théodore Tissier*, the first research vessel commissioned (1933) by the French Merchant Navy for the OSTPM

## Oneirodes thompsoni (Schultz 1934)

in honor of fishery biologist William Francis Thompson (1888-1965), Director of the International Fisheries Commission and Chairman of the Department of Fisheries, University of Washington (Seattle, USA, where he was Schultz'supervisor)

# Oneirodes thysanema Pietsch & Seigel 1980

thysanos, fringe; nema, thread, referring to numerous filaments fringing the anterior escal appendage

# Pentherichthys Regan & Trewavas 1932

penthos, sad or mournful, allusion not explained, perhaps referring to black body color (as illustrated in Pietsch 2009) and/or to black melanophores embedded within rays of caudal fin; ichthys, fish

# Pentherichthys atratus (Regan & Trewavas 1932)

clothed in black, allusion not explained, perhaps referring to black body color (as illustrated in Pietsch 2009); name could also refer to black melanophores embedded within rays of caudal fin

# Phyllorhinichthys Pietsch 1969

phyllon, leaf and rhinos, nose, referring to pair of large, fleshy, leaf-like appendages on each side of snout of P. micractis; ichthys, fish

## Phyllorhinichthys balushkini Pietsch 2004

in honor of ichthyologist Arkadii Vladimirovich Balushkin (1948-2021), Russian Academy of Sciences, for his "many contributions to science and for his service to the world ichthyological community as director of the Laboratory of Ichthyology and curator of Russia's premier collection of fishes" (he also made specimens available and provided hospitality during Pietsch's visit to St. Petersburg, Russia)

# Phyllorhinichthys micractis Pietsch 1969

micro-, small; actis, ray, referring to extremely short illicial bone

# Puck Pietsch 1978

Puck, taken from Germanic folklore, a "minor order of mischievous devils, sprites, goblins or demons; a devilish trickster, allusion not explained; per Theodore W. Pietsch (pers. comm), it is a "devil" because it belongs to a group of meso- and bathypelagic fishes commonly referred to as "black devils" or "black sea-devils," and it's "mischievous" and a "trickster" because it "lies in wait in the pitch-black of the deep-sea luring its prey with a bioluminescent bait"

#### Puck pinnata Pietsch 1978

plumed or winged, referring to its narrow, elongate pectoral fins

#### Spiniphryne Bertelsen 1951

spina, spine, presumably referring to "spinulous skin" of S. gladisfenae; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

## Spiniphryne duhameli Pietsch & Baldwin 2006

in honor of Guy Duhamel (b. 1953), Muséum national d'Histoire naturelle (MNHN, Paris), for his "many contributions to science and for his service to the world ichthyological community as curator of the MNHN fish collection"

## Spiniphryne gladisfenae (Beebe 1932)

etymology not explained but almost certainly named for *Gladisfen*, a tugboat from New York harbor that Beebe used as his research ship during deep-sea dives off Bermuda, whereupon type was collected

# Tyrannophryne Regan & Trewavas 1932

tyrannus, tyrant, allusion not explained but almost certainly referring to its "very large oblique mouth" and long jaws; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Tyrannophryne pugnax Regan & Trewavas 1932

pugnacious, allusion not explained but almost certainly referring to its "very large oblique mouth" and long jaws

# Family THAUMATICHTHYIDAE Wolftrap Anglers

2 genera · 9 species

## Lasiognathus Regan 1925

lasios, bearded; gnathus, jaw, allusion not explained, perhaps referring to bearded appearance of numerous long teeth of upper jaw

# Lasiognathus amphirhamphus Pietsch 2005

amphi-, on both sides or double; rhamphus, hook, referring to two bony, hook-like denticles on esca

#### Lasiognathus beebei Regan & Trewavas 1932

in honor of naturalist and explorer William Beebe (1877-1962), New York Zoological Society, who collected and illustrated type

# Lasiognathus dinema Pietsch & Sutton 2015

di-, two; nema, thread, referring to two elongate, thread-like prolongations emerging anteriorly from bases of escal hooks

## Lasiognathus intermedius Bertelsen & Pietsch 1996

referring to intermediate position of its escal characters between L. beebei and those of L. saccostoma and L. waltoni

# Lasiognathus saccostoma Regan 1925

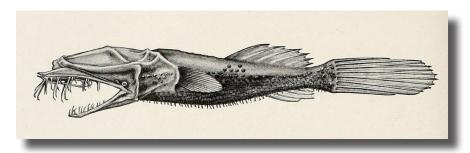
sakkos, bag, pouch or pocket; stoma, mouth, referring to premaxillaries connected with head by a wide membrane, forming a membranous pouch (the "trap" of wolftrap) in which prey is held prior to swallowing

# Lasiognathus waltoni Nolan & Rosenblatt 1975

in honor of Izaac (also spelled Isaac) Walton (c. 1593-1683), an "avid lover of the piscatorial pastime and author of the well known" *Compleat Angler* (1653), i.e., an anglerfish named after a famous angler

# Thaumatichthys Smith & Radcliffe 1912

thauma, wonder or marvel; ichthys, fish, referring to the "Highly divergent" and "remarkable" morphology of *T. pagidostomus* (e.g, head as nearly as long as rest of body, illicium with bioluminescent esca inside mouth, and "cavernous, elastic" mouth that serves as a trap into which food is "lured and dispatched"), making it an "extraordinary fish"



Thaumatichthys pagidostomus. From: Smith, H. M. and L. Radcliffe. 1912. Description of a new family of pediculate fishes from Celebes. [Scientific results of the Philippine cruise of the Fisheries steamer "Albatross," 1907-1910. No. 20.]. Proceedings of the United States National Museum v. 42 (no. 1917): 579-581, Pl. 72.

## Thaumatichthys axeli (Bruun 1953)

patronym not identified but almost certainly in honor of Prince Axel Christian Georg of Denmark (1888-1964), who served in the Royal Danish Navy and was a keen sailor and fisherman; he also wrote the foreword to the volume in which the fish was named

#### Thaumatichthys binghami Parr 1927

in honor of businessman Harry Payne Bingham (1887-1955), who directed expedition that collected type and founded the Bingham Oceanographic Collection at Yale University

# Thaumatichthys pagidostomus Smith & Radcliffe 1912

*pagido*, trap or snare; *stomus*, mouth, referring to its premaxillary, which, with long hooked teeth, and its ability to flip up and down to enclose a much shorter lower jaw, forms a cage-like compartment to hold prey before swallowing, somewhat like that of the carnivorous Venus Flytrap plant, *Dionaea muscipula* 

# Family CENTROPHRYNIDAE Prickly Seadevil

# Centrophryne Regan & Trewavas 1932

kentron, thorn or spine, referring to prickly skin of females; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Centrophryne spinulosa Regan & Trewavas 1932

having minute spines of spinules, referring to spiny (prickly) skin of females

# Family CERATIIDAE Warty Seadevils

2 genera · 4 species

#### Ceratias Krøyer 1845

one that has horns, referring to esca projecting from snout

#### Ceratias holboelli Krøyer 1845

in honor of Carl Peter Holboell (1795-1856), an officer in the Danish Royal Navy, Greenland colonial officer, and explorer of Greenlandic fauna, who collected type (Holboell died when his brig disappeared without a trace between Greenland and Denmark)

#### Ceratias tentaculatus (Norman 1930)

tentacule, feeler, i.e., small tentacle; -atus, provided with, presumably referring to two "small and almost transparent" tentacles close to small brown ring on tip of escal bulb

# Ceratias uranoscopus Murray 1877

urano, sky; scopus, watcher, referring to very small eyes "placed high up on the middle of the head"

## Cryptopsaras Gill 1883

kryptos, hidden or secret; psarus, fisherman, referring to tiny illicial bone (the fisherman's rod), almost totally hidden within tissue of esca

#### Cryptopsaras couesii Gill 1883

in honor of the "eminent" ornithologist Elliot Coues (1842-1899, pronounced "cows")

# Family GIGANTACTINIDAE Whipnose Anglers

2 genera · 25 species

## Gigantactis Brauer 1902

gigantos, giant; actis, ray, referring to unusually long first dorsal-fin spine (illicium) of G. vanhoeffeni

## Gigantactis balushkini Kharin 1984

in honor of ichthyologist Arkadii Vladimirovich Balushkin (1948-2021), Russian Academy of Sciences, who codescribed *Melanocetus rossi* (Melanocetidae) in 1981

# Gigantactis cheni Ho & Shao 2019

in honor of Din-Moo Chen, an "excellent" fisherman who collected most specimens for the authors' studies, including type series of this species and that of *Oneirodes formosanus* (Oneirodidae)

## Gigantactis elsmani Bertelsen, Pietsch & Lavenberg 1981

in honor of the late Kai L. Elsman, whose "superb illustrations have added immeasurably" to he authors' revision of the family

# Gigantactis gargantua Bertelsen, Pietsch & Lavenberg 1981

Gargantua, a "gigantic king" and hero of a satirical romance written by Rabelais in 1535, referring to this angler's

size (408 mm SL), the largest member of the genus (now eclipsed by a 435-mm specimen of *G. elsmani*, Theodore Pietsch, pers. comm.)

# Gigantactis gibbsi Bertelsen, Pietsch & Lavenberg 1981

in honor of Robert H. Gibbs, Jr. (1929-1988), U.S. National Museum, for his many contributions to deepsea biology

#### Gigantactis golovani Bertelsen, Pietsch & Lavenberg 1981

in honor of George Golovan, Institute of Oceanology of the Academy of Sciences of the USSR, for making his "large and valuable" collections of ceratioids available to the authors

# Gigantactis gracilicauda Regan 1925

gracilis, slender; cauda, tail, referring to "long and slender" caudal peduncle

#### Gigantactis herwigi Bertelsen, Pietsch & Lavenberg 1981

named after the German research vessel *Walther Herwig*, used during numerous expeditions since 1966 to collect an "outstandingly rich resource" of deepsea fishes, including the holotype of *G. herwigi* as well as nearly all *Gigantactis* material catalogued at the Institute für Seefischerei (Hamburg)

# Gigantactis ios Bertelsen, Pietsch & Lavenberg 1981

acronym formed from the initial letters of the Institute of Oceanographic Sciences (Surrey, England), in recognition of important ichthyological contributions made by colleagues at that institution

#### Gigantactis kreffti Bertelsen, Pietsch & Lavenberg 1981

in honor of Gerhard Krefft (1912-1993), Institute für Seefischerei (Hamburg); "his interest and energy have established an important ichthyological resource that has immensely expanded our knowledge of the deep-sea fauna"

#### Gigantactis longicauda Bertelsen & Pietsch 2002

longus, long; cauda, tail, referring to deeply cleft caudal fin and elongate caudal-fin rays

#### Gigantactis longicirra Waterman 1939

*longus*, long; *cirra* (*cirrus*), curl or tendril, allusion not explained but clearly referring to 20 slender filaments at end of escal bulb, which are 60-300% as long as the bulb itself

# Gigantactis macronema Regan 1925

macro-, long; nema, thread, referring to illicium of type specimen, "four times as long as fish"

# Gigantactis meadi Bertelsen, Pietsch & Lavenberg 1981

in honor of ichthyologist Giles W. Mead (1928-2003), for his many contributions to ichthyology, but also for his service as Chief Scientist on cruise during which type was collected

## Gigantactis microdontis Bertelsen, Pietsch & Lavenberg 1981

micro-, small; odontis, tooth, referring to "exceptionally small" dentary teeth

#### Gigantactis microphthalmus (Regan & Trewavas 1932)

micro-, small; ophthalmus, eye, referring to its small eyes [based on a single metamorphosed male, provisionally included here]

# Gigantactis paresca Rickle 2024

par, Latin for pair; esca, Latin for bait, referring to the pair of baited appendages on the lure

# Gigantactis paxtoni Bertelsen, Pietsch & Lavenberg 1981

in honor of John R. Paxton (b. 1938), Australian Museum (Sydney), for his contributions to deepsea ichthyology, and for providing most of the material on which this species is based

# Gigantactis perlatus Beebe & Crane 1947

pearly, referring to pearl-like nodules covering escal bulb

# Gigantactis savagei Bertelsen, Pietsch & Lavenberg 1981

in honor of herpetologist Jay M. Savage (b. 1928), University of Southern California, for his service as principal investigator of grants from the National Science Foundation in support of Ecological Studies of Midwater Fishes in and about Southern California Borderland Region (1960-1970)

# Gigantactis vanhoeffeni Brauer 1902

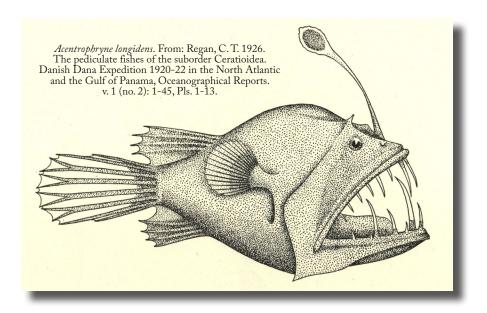
in honor of German zoologist Ernst Vanhöffen (1858-1918), who studied medusa jellies aboard the research vessel *Valdivia*, the first German expedition to explore the deep sea, during which type was collected

# Gigantactis watermani Bertelsen, Pietsch & Lavenberg 1981

in honor of biologist Talbot Howe Waterman (1914-2010), Yale University (Connecticut, USA), for his "outstanding" contribution to our knowledge of the anatomy of *Gigantactis* 

# Rhynchactis Regan 1925

rhynchos, snout; actis, ray, referring to first dorsal-fin spine (illicium) inserted above snout tip of R. leptonema



#### Rhynchactis leptonema Regan 1925

leptos, slender; nema, thread, referring to long, slender, whip-like illicium

## Rhynchactis macrothrix Bertelsen & Pietsch 1998

macro-, long; thrix, hairs, referring to relatively long secondary filaments of illicium

#### Rhynchactis microthrix Bertelsen & Pietsch 1998

micro-, small; thrix, hairs, referring to fine, hair-like secondary filaments of illicium

# Family LINOPHRYNIDAE Leftvents

7 genera/subgenera · 27 species

# Acentrophryne Regan 1926

*a*-, without and *kentron*, thorn or spine, referring to absence of preopercular spine; *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 (also, some early naturalists believed that antennariids were anuran amphibians)

#### Acentrophryne dolichonema Pietsch & Shimazaki 2005

dolichos, long; nema, thread, referring to long, filamentous, distal escal appendage

# Acentrophryne longidens Regan 1926

longus, long; dens, teeth, referring to long and "very strong" teeth on both jaws

## Borophryne Regan 1925

boros, devouring or gluttonous, allusion not explained, perhaps referring to huge head and mouth; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Borophryne apogon Regan 1925

a-, without; pogon, beard, like Linophryne but without the hyoid barbel

# Haplophryne Regan 1912

haplo-, single or simple, allusion not explained, perhaps referring to type of *H. mollis*, a tiny larval male "without nasal papilla"; *phryne*, toad, a common suffix for lophiiform genera, possibly dating to Aristotle and Cicero, who called angler-fishes "fishing-frogs" and "sea-frogs," respectively, presumably referring to their frog- or toad-like appearance (also, some early naturalists believed that antennariids were anuran amphibians)

# Haplophryne mollis (Brauer 1902)

soft, described from a larval male, with "soft, thick, unpigmented" skin (translation)

#### Linophryne Collett 1886

*linos*, net, allusion not explained, perhaps referring to distended abdominal cavity of *L. lucifer* forming a sac, suspended from the trunk, which, in type specimen, contained a scopeloid fish, i.e., the "net" where the angler stores his catch;

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 (also, some early naturalists believed that antennariids were anuran amphibians)

#### Subgenus Linophryne

#### Linophryne algibarbata Waterman 1939

algi- (algae), seaweed; barbata, bearded, allusion not explained but clearly referring to seaweed- or kelp-like appearance of long and multi-branched hyoid barbel

# Linophryne arcturi (Beebe 1926)

in honor of the Arcturus Oceanographic Expedition of the New York Zoological Society, during which holotype was collected

# Linophryne argyresca Regan & Trewavas 1932

argyreus, silvery; esca, bait, referring to large, oblong, internally silver distal prolongation of escal bulb

## Linophryne bicornis Parr 1927

bi-, two; cornis, horn, referring to "simple, rather thick, hornlike" filament on each side of escal bulb

# Linophryne bipennata Bertelsen 1982

bi-, two; pennata, feathered, referring to pair of feather-like filaments on escal bulb

#### Linophryne coronata Parr 1927

crowned, allusion not explained, presumably referring to illicium and escal bulb, "surmounted by a broad median ridge, posteriorly carrying a short, thick pair of filaments and anteriorly produced into a thick tubercle carrying a similar, backwardly directed pair of filaments at its end"

#### Linophryne escaramosa Bertelsen 1982

esca, bait or lure; ramosa, full of branches, referring to 6-7 long, branched filaments on each side of escal bulb

#### Linophryne lucifer Collett 1886

*lux*, light; *fero*, to bear, referring to the hyoid barbel that Collett suspected was phosphorescent in life (he was correct, but the proper descriptor is bioluminescent)

#### Linophryne macrodon Regan 1925

macro-, long or large; odon, tooth, presumably referring to large and widely spaced teeth, some of them forming fangs (a characteristic of the genus)

# Linophryne maderensis Maul 1961

-ensis, suffix denoting place: Off Madeira, eastern Atlantic, only known area of occurrence

# Linophryne polypogon Regan 1925

poly, many; pogon, beard, referring to hyoid barbel with "about 16 equal branches arising together from the short basal part"

# Linophryne racemifera Regan & Trewavas 1932

racem, the stalk of cluster of grapes or berries; fera, to bear or carry, referring to ~10 long-branched filaments on each side of escal bulb

# Linophryne sexfilis Bertelsen 1973

sex, six; filum, thread, referring to cylindrical distal projection of escal bulb, divided distally into six simple, tapering filaments"

#### Linophryne trewavasae Bertelsen 1978

in honor of Ethelwynn Trewavas (1900-1993), British Museum (Natural History), for her "fundamental" contribution to our knowledge of the classification of ceratioids

# Subgenus Rhizophryne Bertelsen 1982

*rhiza*, root, referring to many-branched, root-like hyoid barbel; *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 (also, some early naturalists believed that antennariids were anuran amphibians)

# Linophryne andersoni Gon 1992

in honor of in honor of M. Eric Anderson, J. L. B. Smith Institute of Ichthyology (now South African Institute for Aquatic Biodiversity), for his contributions to deepsea ichthyology

## Linophryne arborifera Regan 1925

arbor, tree; fera, to bear or carry, referring to "much branched" hyoid barbel

#### Linophryne brevibarbata Beebe 1932

*brevis*, short; *barbata*, bearded, referring to hyoid barbel with "three short, stout branches, each lined with five to eight blunt, finger-like processes, not extendible"

## Linophryne densiramus Imai 1941

densus, thick; ramus, branch, presumably referring to "arboreal" hyoid barbel, branched almost at the base, with each branch carrying 5-8 subbranches

## Linophryne parini Bertelsen 1980

patronym not identified but almost certainly in honor of ichthyologist Nikolai Vasil'evich Parin (1932-2012), Russian Academy of Sciences, presumably a member of the *Fiolent* cruise during which type was collected (and who may have made that specimen available to Bertelsen)

# Linophryne pennibarbata Bertelsen 1980

*penna*, feather; *barbata*, bearded, presumably referring to posterior branch of hyoid barbel, laterally compressed with a series of side branches along its edge, somewhat in the form of a feather

#### Subgenus Stephanophryne Bertelsen 1982

stephanos, crown, referring to crown-like pattern of its escal appendages; 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 (also, some early naturalists believed that antennariids were anuran amphibians)

#### Linophryne indica (Brauer 1902)

Indian, presumably referring to type locality, east of Seychelles, Indian Ocean (occurs in Indo-Pacific from Seychelles east to Hawaiian Islands and Gulf of Panama, north to Taiwan and southern Japan, south to northern Australia)

# Linophryne quinqueramosa Beebe & Crane 1947

quinque, five; ramosus, branched, referring to hyoid barbel with five long tentacles "so close together that their bases touch"

#### Photocorynus Regan 1925

photo-, light; koryne, club, referring to bioluminescent sac at end of short, club-like illicium

## Photocorynus spiniceps Regan 1925

spini-, spine; ceps, head, referring to highly developed sphenotic spines on head of mature females