

# The *ETYFish* Project

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COMMENTS: 

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## 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 albinare*s Maul 1961**

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

***Himantolophus appeli* (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 esca 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 esca appendages

***Himantolophus macroceras* Bertelsen & Krefft 1988**

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

***Himantolophus macroceratoides* Bertelsen & Krefft 1988**

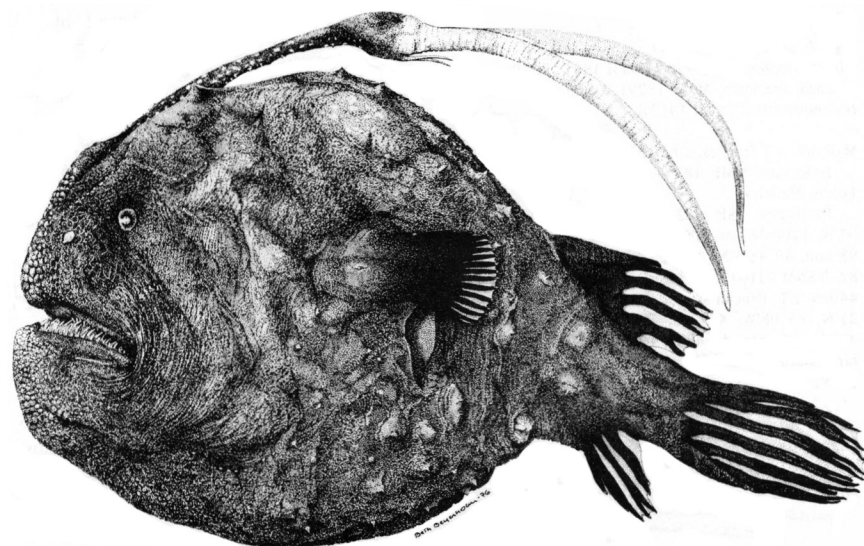
*-oides*, having the form of: referring to “close similarity” to *H. macroceras*

***Himantolophus maui* 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 esca appendages



*Himantolophus maui*. 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 esca appendage

***Himantolophus nigricornis* Bertelsen & Krefft 1988**

*nigri-*, black; *cornis*, horn, referring to black esca appendages

***Himantolophus paucifilosus* Bertelsen & Krefft 1988**

*paucus*, few; *filosus*, thread-like or filamentous, referring to absent anterior esca 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

***Bufoferatias* 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

***Bufoferatias microcephalus* Ho, Kawai & Amaoka 2016**

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

***Bufoferatias 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

***Bufoferatias thele* (Uwate 1979)**

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

***Bufoferatias 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 WWI 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 esca 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 esca bulb

***Chiophryne* 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)

***Chiophryne xenolophus* Regan & Trewavas 1932**

*xenos*, strange or foreign (i.e., different); *lophus*, crest or tuft, presumably referring to structure of translucent esca 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 esca bulb

***Dolopichthys jubatus* Regan & Trewavas 1932**

jubate, i.e., fringed with long pendent hairs like a mane, allusion not explained, perhaps referring to esca 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**

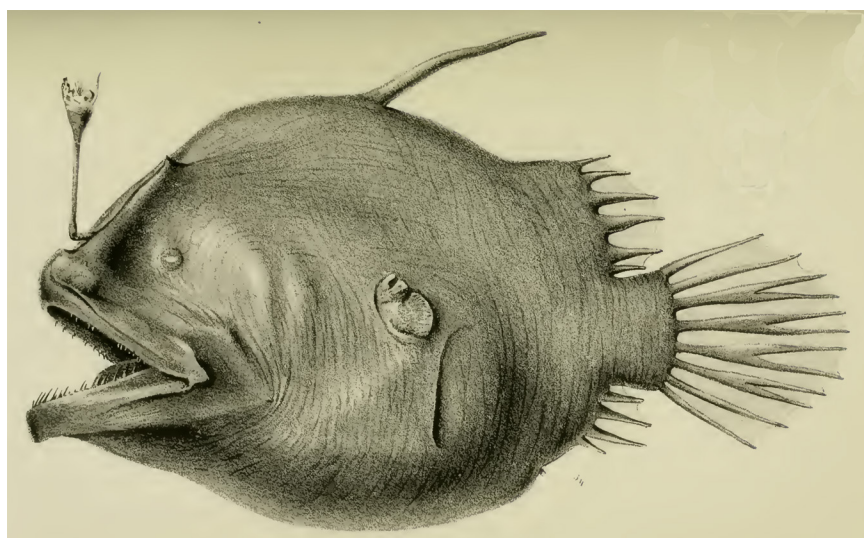
*haplos*, single or simple; *nema*, thread, referring to single unpaired medial escal appendage

**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. *Øversigt over det Kongelige Danske videnskabernes selskabs forhandlinger* 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 esca 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 esca 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 esca appendage

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

*quadri-*, four; *nema*, thread or appendage, referring to four main branches on medial esca 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 esca 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 esca 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 esca hooks

***Lasiognathus intermedius* Bertelsen & Pietsch 1996**

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

***Lasiognathus saccostoma* Regan 1925**

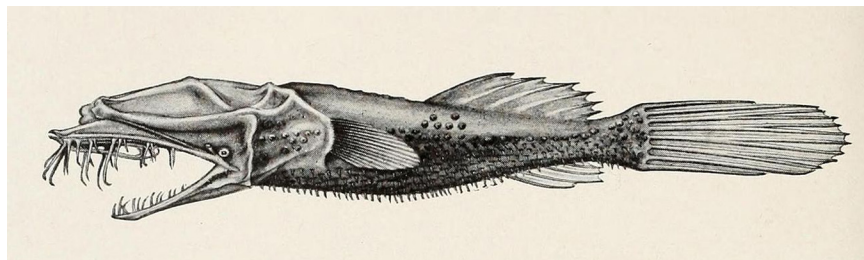
*sakkos*, bag, pouch or pocket; *stoma*, mouth, referring to premaxillaries connected with head by a wide membrane, forming a membranous pouch (the “trap” of wolftrap) in which prey is held prior to swallowing

***Lasiognathus waltoni* Nolan & Rosenblatt 1975**

in honor of Izaak (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

***Thaumatoichthys* 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”



*Thaumatoichthys 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.

***Thaumaticthys 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

***Thaumaticthys 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

***Thaumaticthys 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 esca 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 · 24 species

***Gigantactis* Brauer 1902**

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

***Gigantactis balushkini* Kharin 1984**

in honor of ichthyologist Arkadii Vladimirovich Balushkin (1948-2021), Russian Academy of Sciences, who co-described *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. Elsmann, whose “superb illustrations have added immeasurably” to the 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. elsmanni*, 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 krefftii* 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 esca 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 micropthalmus* (Regan & Trewavas 1932)**

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

***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 esca 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**

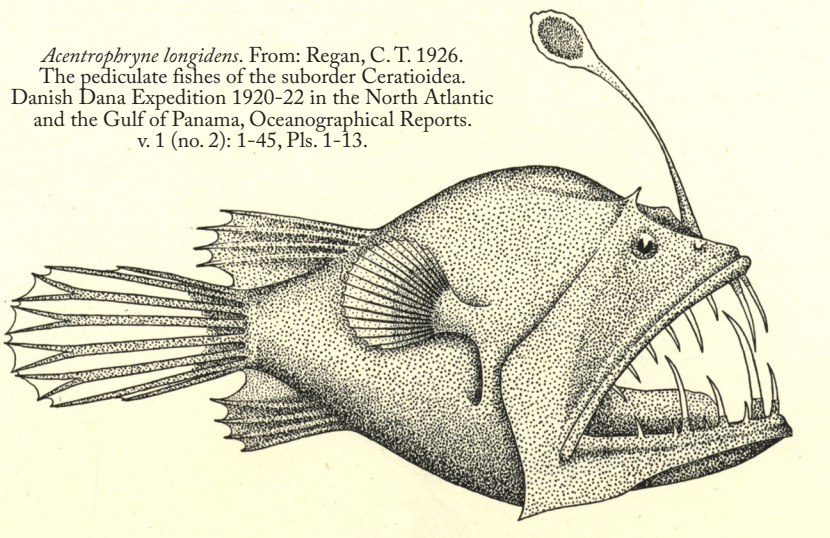
in honor of biologist Talbot Howe Waterman (1914-2010), Yale University (Connecticut, USA), for his “outstanding” contribution to our knowledge of the anatomy of *Gigantactis*

***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 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)

***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 esca bulb

**Linophryne bicornis Parr 1927**

*bi-*, two; *cornis*, horn, referring to “simple, rather thick, hornlike” filament on each side of esca bulb

**Linophryne bipennata Bertelsen 1982**

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

**Linophryne coronata Parr 1927**

crowned, allusion not explained, presumably referring to illicium and esca 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 esca 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 esca bulb

**Linophryne sexfillis Bertelsen 1973**

*sex*, six; *filum*, thread, referring to cylindrical distal projection of esca 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 esca 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