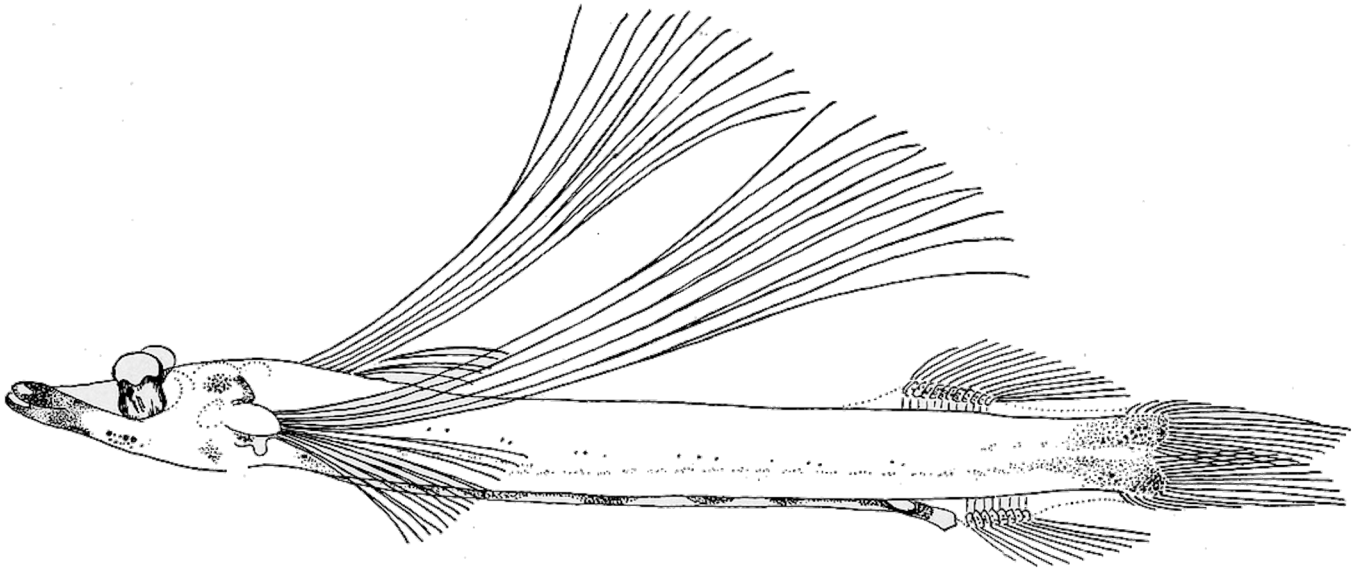
Order ARGENTINIFORMES

Barreleyes or Spookfishes

Family **OPISTHOPROCTIDAE**

Schmidt 1918



Dolichopteroides binocularis, holotype, 85 mm SL. From: Beebe, W. 1932. Nineteen new species and four post-larval deep-sea fish. Zoologica, Scientific Contributions of the New York Zoological Society 13 (4): 47–107.

Bathylychnops

Cohen 1958

bathýs (Gr. βαθύς), deep, referring to bathypelagic habitat; *lýchnos* (Gr. λύχνος), lamp, and *ṓps* (Gr. ὤψ), eye, referring to photophore and two other patches of "luminous tissue" projecting from a black sac on eyes of *B. exilis*

***Bathylychnops brachyrhynchus* (Parr 1937)** short-snouted, from *brachýs* (Gr. βραχύς), short, and *rhýnchos* (Gr. ῥύγχος), snout, referring to its "broad and short" snout

***Bathylychnops chilensis* Parin, Belyanina & Evseenko 2009** *-ensis*, Latin suffix denoting place: near the coast of Chile in the southeastern Pacific, type locality

***Bathylychnops exilis* Cohen 1958** Latin for thin or slender, referring to its elongate, laterally compressed body

Bathylychnops exilis, reconstruction of holotype, ~216 mm SL. From: Cohen, D. M. 1958. *Bathylychnops exilis*, a new genus and species of argentinoid fish from the North Pacific. Stanford Ichthyological Bulletin 7 (3): 47–52.

Dolichopteroides

Parin, Belyanina & Evseenko 2009

-oides, Neo-Latin from *eĭdos* (Gr. εἶδος), form or shape: referring to previous placement of *D. binocularis* in *Dolichopteryx*

***Dolichopteroides binocularis* (Beebe 1932)** *bini* (L.), two by two; *ocularis* (L.), of the eye, i.e., binocular (having two eyes), referring to its "telescope" eyes, which "rest in a great depression on the head, the upper part being covered with perfectly transparent tissue"

Dolichopteryx

Brauer 1901

dolichós (Gr. δολιχός), long; *pterýx* (Gr. πτέρυξ), wing or fin, referring to very long pectoral and ventral fins of *D. anascopa*

***Dolichopteryx anascopa* Brauer 1901** *aná* (Gr. ἀνά), up; *scopa*, presumably borrowed from *tēleskópos* (Gr. τηλέσκοπος), i.e., upward-looking, referring to its tubular eyes, which protrude upwards and forwards

***Dolichopteryx andriashevi* Parin, Belyanina & Evseenko 2009** in memory of the "recently deceased outstanding" Russian ichthyologist Anatolii Petrovich Andriashev (1910–2009), who made a "large" contribution to the study of fishes of the World Ocean

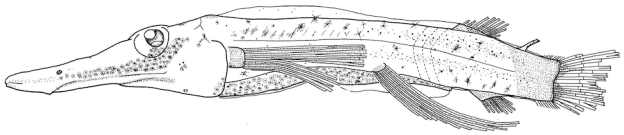
***Dolichopteryx longipes* (Vaillant 1888)** *longus* (L.), long; *pes* (L.), foot, referring to long ventral fins

***Dolichopteryx nigripes* Prokofiev 2020** *niger* (L.), dark or black; *pes* (L.), foot, referring to black pigmentation of ventral fins

***Dolichopteryx parini* Kobyliansky & Fedorov 2001** in honor of ichthyologist Nikolai Vasil'evich Parin (1932–2012), P. P. Shirov Institute of Oceanology, Russian Academy of Sciences

***Dolichopteryx pseudolongipes* Fukui, Kitagawa & Parin 2008** *pseudo-*, from *pseúdēs* (Gr. ψεύδης), false, i.e., although this species may superficially resemble *D. longipes*, such an appearance is false

***Dolichopteryx rostrata* Fukui & Kitagawa 2006** Latin for beaked, referring to its elongate snout



Dolichopteryx rostrata, holotype, 66.2 mm SL. From: Fukui, A. and Y. Kitagawa. 2006. *Dolichopteryx rostrata*, a new species of spookfish (Argentinoidea: Opisthoproctidae) from the eastern North Atlantic Ocean. Ichthyological Research 53 (1): 7–12.

***Dolichopteryx trunovi* Parin 2005** in honor of Russian ichthyologist Ivan Andreevich Trunov (1936–2005), Atlantic Research Institute of Fisheries and Oceanography, who reported this species, based on insufficient material, as *D. anascopa* in 1997

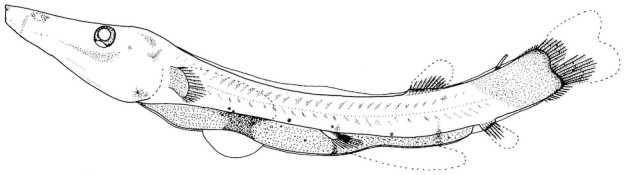
***Dolichopteryx vityazi* Parin, Belyanina & Evseenko 2009** in honor of the "famous motor ship" R/V *Vityaz* (also spelled *Vitiaz*), from which the first author caught holotype on the ship's 26th cruise 50 years ago

Duolentops

Prokofiev 2020

duo (L.), two; *lens* (L.), lentil; *ṓps* (Gr. ὦψ), eye, referring to lenticular subscleral thickening under lens of eye

***Duolentops minuscula* (Fukui & Kitagawa 2006)** Latin for rather small, referring to body size compared with congeners in *Dolichopteryx* (original genus)



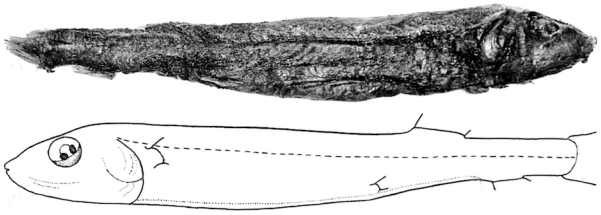
Duplentops minuscula, holotype, 55.7mm SL. From: Fukui, A. and Y. Kitagawa. 2006. *Dolichopteryx minuscula*, a new species of spookfish (Argentinoidei: Opisthoproctidae) from the Indo-West Pacific. Ichthyological Research 53 (2): 113–120.

Ioichthys

Parin 2004

io-, named for the Institute of Oceanology, Russian Academy of Sciences (abbreviated IO), where Parin worked; *ichthýs* (Gr. ἰχθύς), fish

***Ioichthys kashkini* Parin 2004** in honor of Russian ichthyologist Nikita Ivanovich Kashkin, who took part in many expeditions on vessels of the Acoustics Institute of Oceanography in the 1960s through 1980s, significantly contributing to the ecological study of mesopelagic species, and who collected holotype of this species



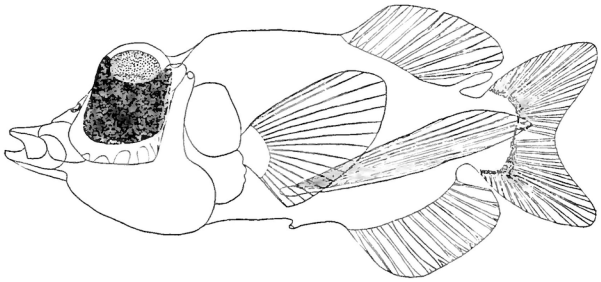
Ioichthys kashkini, holotype, 232 mm SL, photograph and contour drawing. From: Parin, N. V. 2004. A new mesopelagic fish *Ioichthys kashkini* Parin, gen. et sp. nova (Opisthoproctidae) from the northwestern part of the Indian Ocean. Voprosy Ikhtiologii 44 (4): 437–440. [In English: Journal of Ichthyology 44 (7):485–488.]

Macropinna

Chapman 1939

macro-, from *makrós* (Gr. μακρός), long or large; *pinna* (L.), fin, referring to large pectoral fins, with fine and long rays that reach middle of anal fin

***Macropinna microstoma* Chapman 1939** *micro-*, from *mikrós* (Gr. μικρός), small; *stóma* (Gr. στόμα), mouth, referring to its "extremely small gape, not reaching more than a third of the way to the eye"



Macropinna microstoma, holotype, 39.5 mm SL. From: Chapman, W. M. 1939. Eleven new species and three new genera of oceanic fishes collected by the International Fisheries Commission from the northeastern Pacific. Proceedings of the United States National Museum 86 (3062): 501–542.

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

Monacoa

Whitley 1943

etymology not explained but almost certainly referring to the Principality of Monaco, where the research expedition that collected *M. grimaldii* had originated

***Monacoa grimaldii* (Zugmayer 1911)** in honor of Albert Honoré Charles Grimaldi (1848–1922), Albert I, Prince of Monaco, who founded his principality's Institut Océanographique, which published this fish's description

***Monacoa griseus* Poulsen, Sado, Hahn, Byrkjedal, Moku & Miya 2016** Medieval Latin for gray, referring to uniform grayish anterior part of sole (reflecting organ), lacking distinct patterns of pigmentation

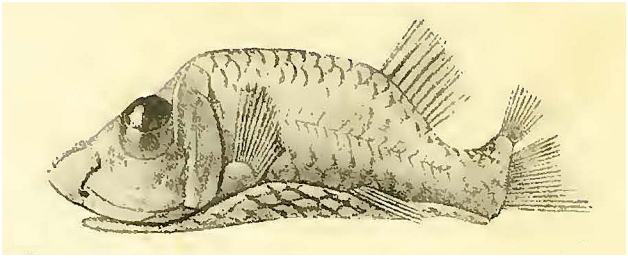
***Monacoa niger* Poulsen, Sado, Hahn, Byrkjedal, Moku & Miya 2016** Latin for dark or black, referring to black streak of pigmentation on sole (reflecting organ)

Opisthoproctus

Vaillant 1888

ópisthen (Gr. ὄπισθεν), behind; *prōktós* (Gr. πρωκτός), anus, referring to posterior placement of anal fin, directly under caudal fin

***Opisthoproctus soleatus* Vaillant 1888** *-atus* (L.), provided with: *solea* (L.), sole, referring to elongate forward-projecting flattening on underside of abdomen (called a "sole reflecting organ"), serving as a reflector for a rectal bioluminescent light organ



Opisthoproctus soleatus. From: Vaillant, L. L. 1888. Expéditions scientifiques du "Travailleur" et du "Talisman" pendant les années 1880, 1881, 1882, 1883. Poissons. Paris. 1–406, Pls. 1–28.

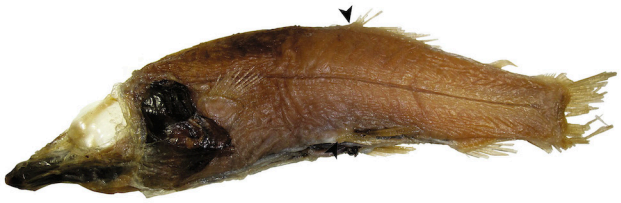
Rhynchohyalus

Barnard 1925

rhýnchos (Gr. ῥύγχος), snout; *hyálinos* (Gr. ὑάλινος), of crystal (here meaning transparent), referring to long, rounded and transparent snout of *R. natalensis* [replacement name for *Hyalorhynchus* Gilchrist & von Bonde 1924, preoccupied by *Hyalorhynchus* Ogilby 1910 in fishes]

***Rhynchohyalus natalensis* (Gilchrist & von Bonde 1924)** *-ensis*, Latin suffix denoting place: type locality erroneously given as Natal, South Africa (correct type locality is off Table Bay, South Africa)

***Rhynchohyalus parbevs* Prokofiev & Kukuev 2020** a combination of the first letters (par+b+evs) of the last names of three Russian ichthyologists who collaborated on a 2009 revision of "long-body" barreleyes: Nikolai Vasil'evich Parin (1932–2012), Tat'yana Nikolaevna Belyanina and Sergei Afanas'evich Evseenko (1949–2020)



Rhynchohyalus parbevs, holotype, 155 mm SL. Arrows point to beginnings of dorsal and ventral fins. From: Prokofiev, A. M. and E. I. Kukuev. 2020. A new species of *Rhynchohyalus* from the southeastern Pacific Ocean with notes on *R. natalensis* (Opisthoproctidae). Journal of Ichthyology 60 (4): 513–519.

Winteria

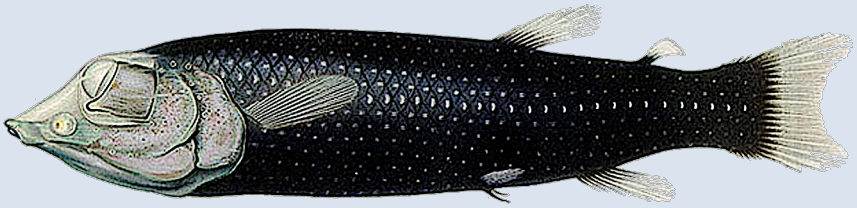
Brauer 1901

-ia (L. suffix), belonging to: Fritz Winter (1878–1917), scientific illustrator on the Valdivia Expedition (1888–1899) to subantarctic seas, who illustrated this species and many others

***Winteria telescopa* Brauer 1901** *tēleskópos* (Gr. τηλέσκοπος), far-seeing, referring to its massive, egg-shaped, forwardly directed eyes

In praise of Fritz Winter (1878–1917)

With its massive, egg-shaped, forwardly directed eyes, it's easy to see why the bathypelagic and circumglobal Binocular Fish *Winteria telescopa* received its specific name. What's lesser known about the genus is how it received its generic name. Most modern-day references do not explain the meaning of the name *Winteria*. Was it named after someone named Winter? If so, who? And why?



Fritz Winter's illustration of *Winteria telescopa*. From: Brauer, A. 1906. Die Tiefsee-Fische. I. Systematischer Teil. *In*: C. Chun. Wissenschaftl. Ergebnisse der deutschen Tiefsee-Expedition "Valdivia," 1898-99. Jena. v. 15: 1-432, Pls. 1-18.

Perhaps the reason the meaning of the name is poorly known is that the German zoologist August Brauer (1863–1917), a pioneer in deep-sea ichthyology, did not explain its meaning in the brief (one-page), provisional description he published in 1901. He expanded on his description in the first volume of the two-volume *Die Tiefsee-Fische* (*The Deep-Sea Fishes*) in 1906. (The second volume was published in 1908.) Again, he did not explain the significance of the *Winteria* epithet. Scholars seeking an answer will find none if they restrict themselves to the sections describing the fish itself. But if you look to the book's introduction, Brauer devotes a paragraph to praising and thanking Fritz Winter (1878–1917), the scientific illustrator on the Valdivia Expedition (1888–1899) to subantarctic seas:

> The advantage of this publication over earlier ones is the exquisite color illustrations of new species and many previously known forms. This is the contribution of my friend and traveling companion Fritz Winter, who not only recorded the living colors of fishes immediately after their capture in a masterful manner, but also out of pure interest in science and the work itself was willing to complete the final versions of the sketches. His ability to excellently reflect the character of each deep-sea fish species in such a lifelike manner is due to his being a zoologist as well as an artist, resulting in the artistic figures shown here, which are unlike those in any previously published work. . . . It is therefore my great pleasure and duty to express to Fritz Winter my sincere thanks for his cooperation. [translated from the German with the help of Erwin Schraml]

Winter illustrated the species that would eventually be called *Winteria telescopa*.

The son of a printer in Frankfurt, Winter was just 20 years old when joined the Valdivia Expedition, led by German marine biologist Carl Chun, as illustrator and photographer. After the expedition ended, Winter began his formal scientific education under Chun, but had to give it up to run the family print shop after his father passed away. Winter eventually returned to his studies, primarily on protozoa, but was not allowed to graduate because his classes under Chun counted for just two semester hours instead of the required six. Winter continued to provide scientific and technical illustrations, eventually joining the Faculty of Arts at the University of Marburg in 1911 (or 1912) and receiving an honorary doctoral degree. During World War I he served in the German Army on the Western Front in France and was severely wounded by a grenade in Champagne in 1917. Confined to what would be his deathbed, Winter received the Iron Cross for his military duty. He died the next day.