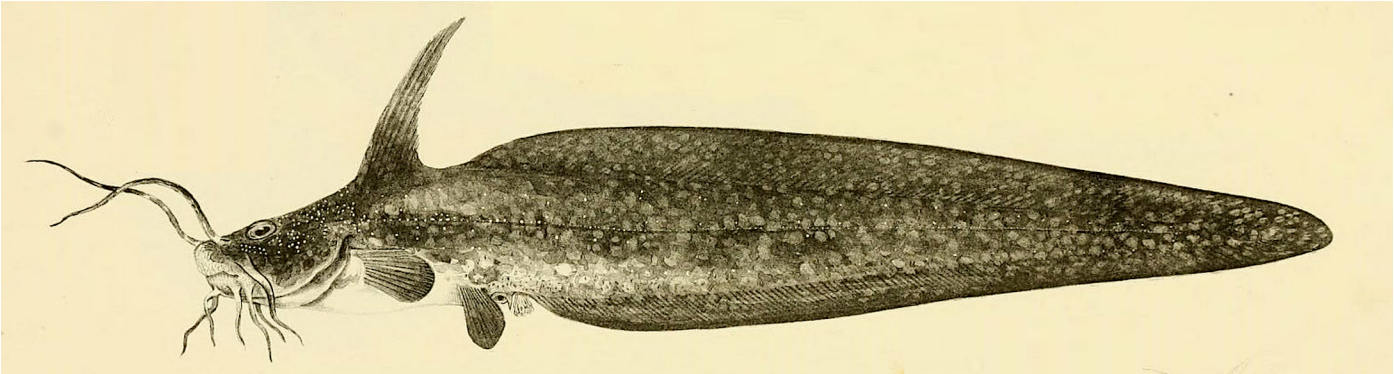
Order SILURIFORMES

Eeltail Catfishes

Family **PLOTOSIDAE**

Bleeker 1858



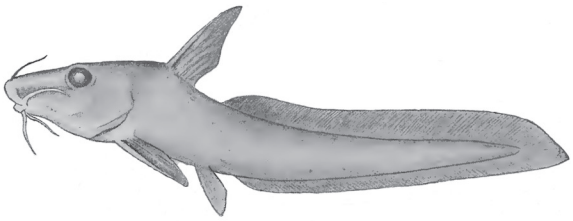
Euristhmus microceps. Illustration by W. Mitchell. From: Richardson, J. 1844–48. Ichthyology of the voyage of H. M. S. Erebus & Terror. *In*: J. Richardson & J. E. Gray (eds.). The zoology of the voyage of H.M.S. Erebus & Terror, under the command of Captain Sir J. C. Ross, R.N., F.R.S., during the years 1839 to 1843. E. W. Janson, London. v. 2 (2): i–viii + 1–139, Pls. 1–60. [Pages 17–52 published in 1845.]

Anodontiglanis

Rendahl 1922

án- (ἄν-), privative (i.e., without), and *odonti*, from *odonto* Neo-Latin combining form of *odoús* (ὀδούς), tooth, referring to lack of teeth on jaws and vomer (but pharyngeal teeth well developed); *glánis* (γλάνις), ancient name for a silurid catfish (probably *Silurus aristotelis*), now used as a general term for catfish

Anodontiglanis dahli **Rendahl 1922** in honor of Norwegian zoologist and explorer Knut Dahl (1871–1951), who collected holotype



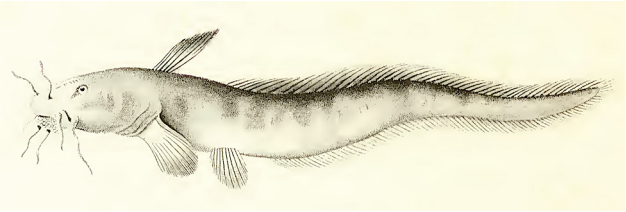
Anodontiglanis dahli. From: Rendahl, H. 1922. Meddelelser fra det Zoologiske Museum, Kristiania. Nr. 5. A contribution to the ichthyology of north-west Australia. Nyt Magazin for Naturvidenskaberne 60: 163–197.

Cnidoglanis

Günther 1864

cnido-, from *knídē* (κνίδη), stinging nettle, allusion not explained, probably referring to venomous dorsal- and pectoral-fin spines, which inflict very painful wounds analogous to those of a sea nettle; *glánis* (γλάνις), ancient name for a silurid catfish (probably *Silurus aristotelis*), now used as a general term for catfish

Cnidoglanis macrocephalus **(Valenciennes 1840)** big-headed, from *makrós* (μακρός), long or large, and *kephalḗ* (κεφαλή), head, "distinguished easily by its big head" (translation), comprising ¼ of its total length



Cnidoglanis macrocephalus. Illustration by Jacques Reyne Isidore Acarie-Baron. From: Cuvier, G. and A. Valenciennes. 1840. Histoire naturelle des poissons. Tome quinzième. Suite du livre dix-septième. Siluroïdes. 15: i–xxxi + 1≠540, Pls. 421–455. [Valenciennes authored volume.]

Euristhmus

Ogilby 1899

eurýs (εὐρύς), wide or broad; *isthmós* (ἰσθμός), narrow passage of the body, referring to gill membranes separated by a wide isthmus

Euristhmus lepturus **(Günther 1864)** thin-tailed, from *leptós* (λεπτός), fine or thin, and *urus*, from *ourá* (οὐρά), tail, described as "long, much produced and pointed behind"

Euristhmus microceps **(Richardson 1845)** *micro-*, from *mikrós* (μικρός), small; *-ceps* (Neo-Latin) headed, "remarkable for the smallness of its head, which does not exceed the eighth part of the entire length of the fish"

Euristhmus microphthalmus **Murdy & Ferraris 2006** *micro-*, from *mikrós* (μικρός), small; *ophthalmós* (ὀφθαλμός), eye, referring to small eye compared to congeners

Euristhmus nudiceps **(Günther 1880)** *nudus* (L.), bare or naked; *-ceps* (Neo-Latin), headed, referring to osseous occipital region, "not covered with loose skin" unlike *E. lepturus* and *E. microcephalus*

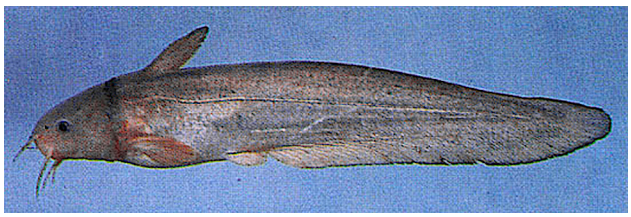
Euristhmus sandrae **Murdy & Ferraris 2006** in honor of Sandra J. Raredon (b. 1954), Museum Specialist, National Museum of Natural History, Smithsonian Institution (Washington, D.C., USA), who contributed greatly to the revision of this genus and other studies undertaken by the authors

Neosiluroides

Allen & Feinberg 1998

-oides, Neo-Latin from *eī́dos* (εἶδος), form or shape: referring to superficial resemblance to *Neosilurus*

Neosiluroides cooperensis **Allen & Feinberg 1998** *-ensis*, Latin suffix



Neosiluroides cooperensis. Photo by Douglass F. Hoese. From: Allen, G. R. and M. N. Feinberg. Descriptions of a new genus and four new species of freshwater catfishes (Plotosidae) from Australia. aqua, Journal of Ichthyology and Aquatic Biology 3 (1): 9–18.

denoting place: Cooper Creek and its tributaries, Innamincka, South Australia, where it is endemic

Neosilurus

Steindachner 1867

néos (νέος), new; *silurus*, from *sílouros* (σίλουρος), a word of uncertain origin historically applied to catfishes, i.e., a new catfish (referring to *N. hyrtlii*) [see essay on next page]

***Neosilurus ater* (Perugia 1894)** Latin for black, referring to uniform black color of body and fins (throat whitish)

***Neosilurus brevidorsalis* (Günther 1867)** *brevis* (L.), short; *dorsalis* (L.), of the back, presumably referring to small, short anterior dorsal fin (a character not mentioned by Günther; instead, he described anterior half of second dorsal fin, confluent with caudal fin, as "replaced by a pad of fat, from which the rays gradually emerge behind")

***Neosilurus coatesi* (Allen 1985)** in honor of biologist David Coates, Fisheries Research Laboratory of the Papua New Guinea Department of Primary Industry, who helped collect type series

***Neosilurus equinus* (Weber 1913)** Latin for equine, allusion not explained, perhaps referring to its elongate, horse-like face[1]

***Neosilurus gjellerupi* (Weber 1913)** in honor of Danish health officer and botanist Knud Gjellerup (1876–1950), who collected holotype

***Neosilurus gloveri* Allen & Feinberg 1998** in honor of the late John Glover (1935–1992), former Curator of Fishes, South Australian Museum, who collected many of the type specimens and made valuable contributions to our knowledge of fishes from the central Australian desert [note: three species from Dalhousie Springs are named after Glover: this catfish, the goby *Chlamydogobius gloveri*, and the silverside *Craterocephalus gloveri*]

***Neosilurus hyrtlii* Steindachner 1867** patronym not identified, possibly in honor of Steindachner's Austrian colleague, anatomist Josef Hyrtl (1810–1894)

***Neosilurus idenburgi* (Nichols 1940)** of the Idenburg River, Irian Jaya, Indonesia, type locality

***Neosilurus mollespiculum* Allen & Feinberg 1998** *molle*, from *mollis* (L.), soft; *spiculum* (L.), a sharp little point, referring to its weak and flexible dorsal- and pectoral-fin spines, unlike the stiff spines of most congeners[1]

***Neosilurus manjandi* Hammer, Moore, Allen, Adams & Unmack 2026** from *manjan di*, Ngarinyin (Aboriginal Australian people of the Kimberley region of Western Australia) word for sandstone, referring to its habitat

***Neosilurus novaeguineae* (Weber 1907)** of New Guinea, specifically Irian Jaya of Western New Guinea (now West Papua, Indonesia), type locality

***Neosilurus pseudospinosus* Allen & Feinberg 1998** *pseudo-*, from *pseúdēs* (ψεύδης), false; *spinosus* (L.), thorny, referring to its weak and flexible (and therefore "false") dorsal- and pectoral-fin spines, unlike the stiff spines of most congeners[1]

Oloplotosus

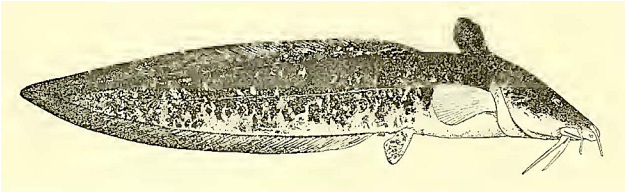
Weber 1913

olṓ (ὀλῶ), to be lost, i.e., *Plotosus* with lost (i.e., absent) maxillary teeth

***Oloplotosus luteus* Gomon & Roberts 1978** Latin for yellow, presumably referring to bright orange barbels and ventral surface of head, and pale orange ventral surface of abdomen

***Oloplotosus mariae* Weber 1913** in honor of the Baroness Maria van Nagell (1885–1981), wife of Dutch explorer who collected holotype, Hendrikus Albertus Lorentz (1871–1944)

[1] Gerald R. Allen, Western Australian Museum, pers. comm.



Oloplotosus mariae. Illustration by Joan François Obbes. From: Weber, M. 1913. Süsswasserfische aus Niederländisch Süd- und Nord-Neu-Guinea. *In*: Nova Guinea. Résultats de l'expédition scientifique Néerlandaise à la Nouvelle-Guinée. Zoologie. Leiden. v. 9 (livr. 4): 513–613, Pls. 12–14.

***Oloplotosus torobo* Allen 1985** local name for this catfish in Papua New Guinea

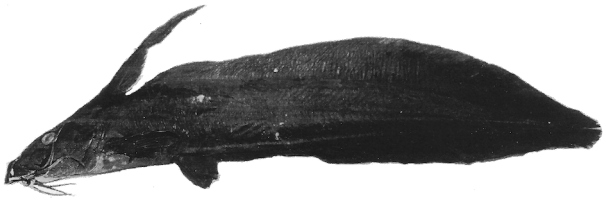
Paraplotosus

Bleeker 1863

para- (παρά), near; *Plotosus*, original genus of *P. albilabris*

***Paraplotosus albilabris* (Valenciennes 1840)** *albus* (L.), white; *labris*, plural of *labrum* (L.), lip, referring to all-black color in alcohol, except for lips, which are white (or yellow or tan)

***Paraplotosus butleri* Allen 1998** in honor of Australian naturalist and environmental consultant William Henry "Harry" Butler (1930–2015), who helped collect many of the paratypes; he also offered "generous financial support over the years" to the Western Australian Museum for field work via his Butler Fund



Paraplotosus butleri, holotype, 325 mm SL. From: Allen, G. R. 1998. A review of the marine catfish genus *Paraplotosus* (Plotosidae) with the description of a new species from north-western Australia. Raffles Bulletin of Zoology 46 (1): 123–134.

***Paraplotosus muelleri* (Klunzinger 1879)** in honor of German-Australian physician, geographer and botanist Ferdinand von Müller (1825–1896), who collected and/or provided holotype

Plotosus

Lacepède 1803

from *plōtós* (πλωτός), swimming or floating, presumably referring to long tail of *P. lineatus*, confluent with second dorsal and anal fins, which makes it a strong anguilliform swimmer

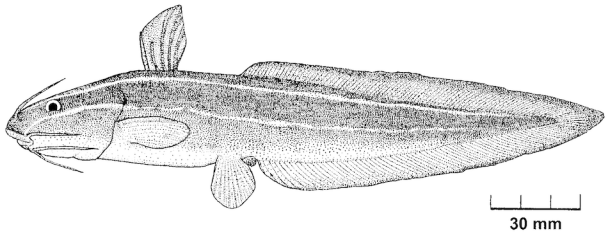
***Plotosus abbreviatus* Boulenger 1895** Latin for shortened, allusion not explained, perhaps referring to body depth eight times in total length

***Plotosus canius* Hamilton 1822** Latinization of *Kani*, from *Kani magur,* local Bengali name for this catfish in India

***Plotosus fisadoha* Ng & Sparks 2002** Malagasy contraction of *fisaka*, flat, and *loha*, head, referring to flattened head especially when compared with the sympatric *P. lineatus*

***Plotosus japonicus* Yoshino & Kishimoto 2008** *-icus* (L.), belonging to: Japan, referring to distribution in southern Japan, from Honshu Island to the Ryukyu Islands

***Plotosus limbatus* Valenciennes 1840** Latin for edged or bordered,

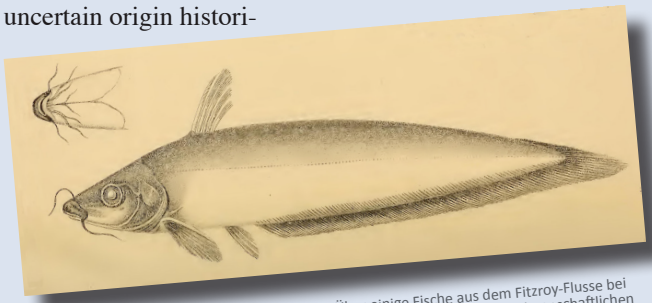


Plotosus japonicus, holotype, 183 mm SL. From: Yoshino, T. and H. Kishimoto. 2008. *Plotosus japonicus*, a new eeltail catfish (Siluriformes: Plotosidae) from Japan. Bulletin of the National Museum of Nature and Science (Ser. A) Supplement No. 2: 1–11.

Neosilurus Steindachner 1867 and *Neosilurus* Castelnau 1878

The name is bland and undescriptive. The fact that it was seemingly coined twice for the exact same species is quite amazing.

Austrian ichthyologist Franz Steindachner (1834–1919) proposed the name *Neosilurus* for a genus of eeltail catfishes native to Australia and New Guinea. It translates as *néos* (νέος), new, and *silurus*, from *sílouros* (σίλουρος), a word of uncertain origin historically applied to a catfish. Steindachner did not explain why he proposed this name. Maybe Steindachner believed the type species, *N. hyrtlii*, superficially resembled the Wels Catfish *Silurus glanis* of Europe. Or maybe the name simply (and unimaginatively) means "new catfish."



Neosilurus hyrtlii. From: Steindachner, F. 1867. Über einige Fische aus dem Fitzroy-Flusse bei Rockhampton in Ost-Australien. Sitzungsberichte der Mathematisch-Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften 55: 9–16, Pl. 1.

Eleven years later, French naturalist François de Laporte de Castelnau (1810–1880) published a paper called "Australian fishes. New or little known species." In it he provided descriptive accounts of the genus *Neosilurus* and a species named *Neosilurus australis*. Castelnau did not mention that Steindachner had already proposed the genus.

A year after Castelnau's death, naturalist William Macleay concluded that Castelnau, seemingly oblivious of Steindachner's description from 1867, had described *Neosilurus* as a new genus. This made *Neosilurus* Castelnau a junior primary homonym of *Neosilurus* Steindachner. Since no two animal taxa can have the same name, Macleay proposed a replacement: *Cainosilurus*. Today, *Cainosilurus* is considered a synonym of *Neosilurus* Steindachner and *N. australis* a synonym of *N. hyrtlii*.

There are two possibilities here. Accepted wisdom is that Castelnau independently coined the same generic name for the same species of catfish that Steindachner had studied and published on 11 years earlier. Possibility #2 is that Castelnau was aware of Steindachner's *Neosilurus* and was adding a new species (*N. australis*) to the genus. Let's examine both possibilities.

It's not hard to imagine that Steindachner's Austrian paper never reached Castelnau in Australia. But it seems an improbable coincidence that Castelnau devised the same name. (This is nothing like Darwin and Wallace, who, confronted with the same overwhelming evidence, independently theorized about evolution.) Coining a name is a personal, subjective exercise. Names often reveal more about the describer than the taxon being described. Yet, seemingly, there was Castelnau, examining his catfish. "Behold, a new *Silurus*," he might have said (in French). "And that is what I — and all of science — shall call you for eternity. *Neosilurus*!"

In support of this possibility is the fact that Castelnau used the *neo-* prefix many times in coining generic names. *Neoarius*. *Neoatherina*. *Neoblennius*. *Neocarassius*. *Neoceratodus*. *Neochaetodon*. *Neocirrhites*. *Neogunellus*. *Neolethrinus*. *Neomesoprion*. *Neomordacia*. *Neomyripristis*. *Neoniphon*. *Neoodax*. *Neoplatycephalus*. *Neoplotosus*. *Neorhombus*. *Neoscopelus*. *Neosillago*. *Neosphyraena*. *Neosudis*. *Neotephraeops*. *Neotrygon*. So why not *Neosilurus*? Adding *neo-* to an existing generic name is a quick and easy way to delineate its resemblance to and/or relationship with an existing group of fishes.

Evidence against the "new" possibility is that Castelnau proposed three other genera in this paper. For all three names he explicitly or implicitly indicated that they were new. However, there is no indication of newness in his account of *Neosilurus*. Based on this internal (and admittedly inconclusive) evidence, one could conclude that Castelnau's *Neosilurus* was not a *genus novum*.

Here's another wrinkle: In 1875, Castelnau described an Australian catfish he called *Silurichthys australis*. According to Eschmeyer's Catalog of Fishes and other references, this is a separate species from his *Neosilurus australis* of 1878. (Today, both are treated as junior synonyms of *N. hyrtlii*.) However, I'm not convinced that Castelenau intended them as different taxa. In 1878, Castelnau said that *Neosilurus* "comes near" to *Silurichthys*, so it is reasonable to conclude that he simply moved his *S. australis* of 1875 into a different genus — *Neosilurus* — in 1878. The type specimens of both putative taxa (both from Queensland) are now lost, so there's no way of knowing for sure. A side-by-side reading of the two accounts is inconclusive; some characters match, others do not.

My guess is that *Neosilurus australis* was Castelnau's new name for *Silurichthys australis*. The jury is still out on whether Castelnau coined *Neosilurus* as new, but based on his frequent use of the *neo-* prefix, I lean that way. We will likely never know for sure. As catfish taxonomist Isaäc J. H. Isbrücker told me upon reviewing an early draft of this account, "It's hard to reliably read the minds of dead authors."

referring to fins edged in black

***Plotosus lineatus* (Thunberg 1787)** Latin for lined, referring to striped color pattern (distinct in juveniles, less so in adults)

***Plotosus nhatrangensis* Prokofiev 2008** *-ensis*, Latin suffix denoting place: fish market at Nha Trang Bay, Vietnam, type locality

***Plotosus nkunga* Gomon & Taylor 1982** local Zulu name for this species in South Africa

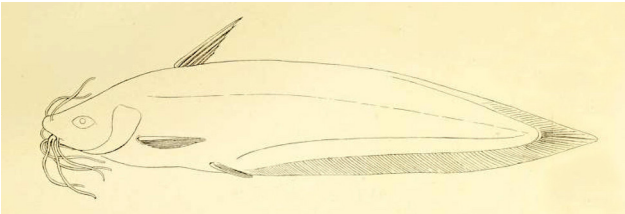
***Plotosus papuensis* Weber 1910** *-ensis*, Latin suffix denoting place: Papua, i.e., West Papua or Western New Guinea, where Lorentz River (type locality) is situated

Porochilus

Weber 1913

póros (πόρος), hole or passage; *cheílos* (χεῖλος), lip, referring to interior of upper lip border perforated by the anterior nostrils

***Porochilus argenteus* (Zietz 1896)** Latin for silvery, referring to its pale, silvery white color



Porochilus argenteus. From: Zietz, A. H. C. 1896. Pisces. Report on the work of the Horn Expedition to Central Australia. Part 2. Zoology. 176–180, Appendix, pp. 410–411, Pl. 16.

***Porochilus meraukensis* (Weber 1913)** *-ensis*, Latin suffix denoting place: Merauke, Papua, Indonesia, type locality

***Porochilus obbesi* Weber 1913** in honor of Dutch artist Joan François Obbes (1869–1963), who illustrated the figures in Weber's monograph

***Porochilus rendahli* (Whitley 1928)** in honor of Swedish zoologist and artist Hialmar Rendahl (1891–1969), who described this catfish in 1922 as *Copidoglanis obscurus*, preoccupied by *C. obscurus* Günther 1864 (=*Plotosus limbatus*)

Tandanus

Mitchell 1838

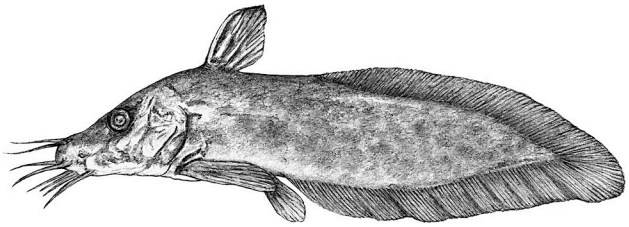
tautonymous with *T. tandanus*, latinization of *Tandan*, aboriginal name for this catfish in New South Wales, Australia

***Tandanus bellingerensis* Welsh, Jerry, Burrows & Rourke 2017** *-ensis*, Latin suffix denoting place: Bellinger River drainage (New South Wales, Australia) where this catfish was first recognized as an undescribed species based on genetic evidence

***Tandanus bostocki* Whitley 1944** in honor of Rev. George James Bostock (1833–1881), Anglican Church minister and naturalist, who collected fishes for Castelnau in western Australia, including holotype of this one [replacement name for *Plotosus unicolor* Castelnau 1873, preoccupied by *P. unicolor* Valenciennes 1840 (=*P. canius*)]

***Tandanus tandanus* (Mitchell 1838)** Latinization of *Tandan*, aboriginal name for this catfish in New South Wales, Australia

***Tandanus tropicanus* Welsh, Jerry & Burrows 2014** *-anus* (L.), belonging to: the tropics, referring to the wet, tropical region of northeast Queensland, Australia, where it occurs



Tandanus tropicanus, holotype, female, 356 mm SL. Illustration by Stuart A. Welsh. From: Welsh, S. A., D. R. Jerry and D. W. Burrows. 2014. A new species of freshwater eel-tailed catfish of the genus *Tandanus* (Teleostei: Plotosidae) from the wet tropics region of eastern Australia. Copeia 2014 (1): 136–142.