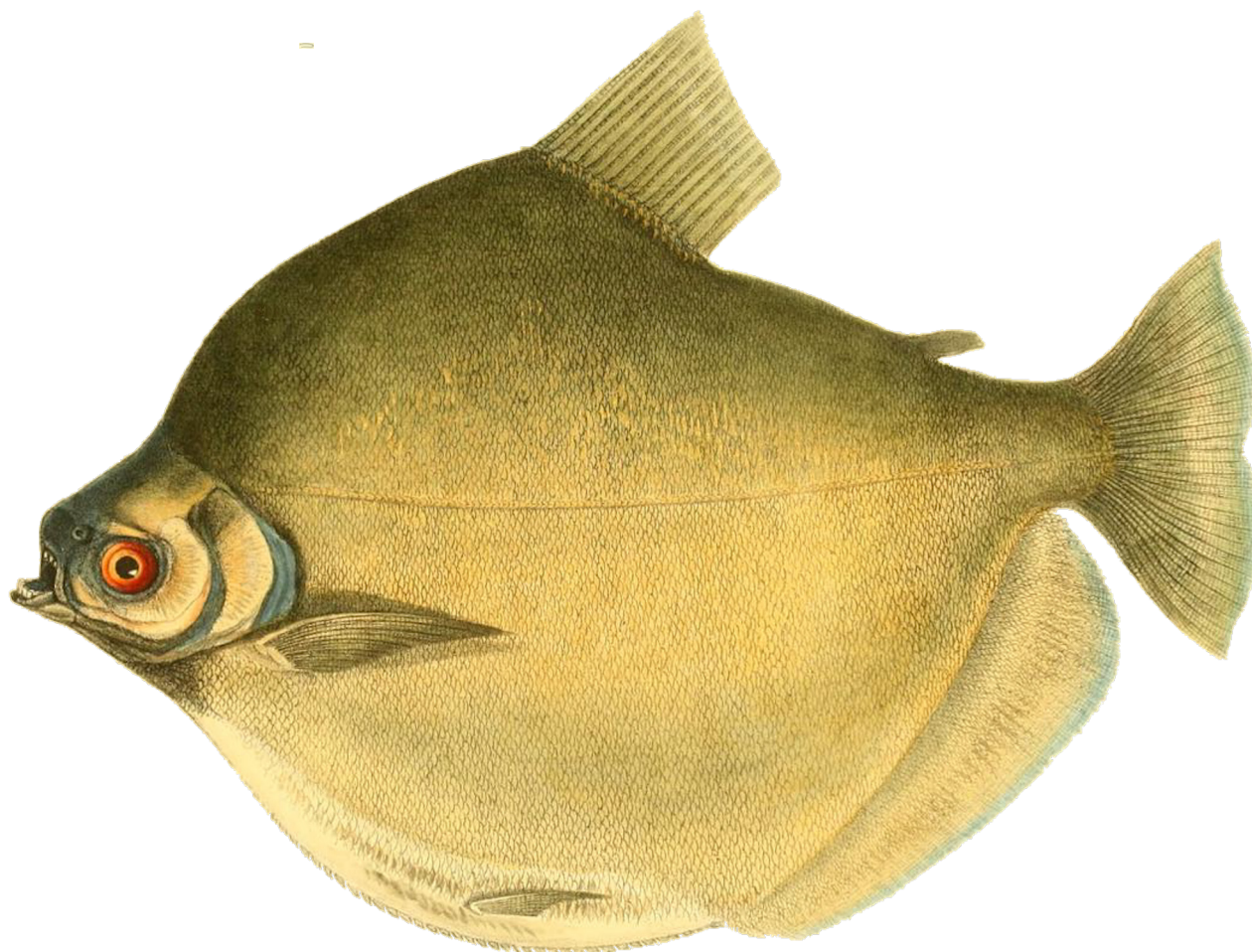


Order CHARACIFORMES

Pacus and Piranhas

Family SERRASALMIDAE

Bleeker 1859



Mylossoma aureum. From: From: Spix, J. B. von and L. Agassiz 1829–31. Selecta genera et species piscium quos in itinere per Brasiliam annis MDCCCXXVII-MDCCCXXX jussu et auspiciis Maximiliani Josephi I. Monachii (Munich). Part 1: i–xvi + i-ii + 1-6 + 1-82, Pls. 1–48, Part 2: 83–138, Pls. 49–101. [Part 1 published June 1829, part 2 Jan. 1831.]

Lowland Pacu

Subfamily COLOSSOMATINAE

Kolmann, Hughes, Hernandez, Arcila, Betancur-R,
Sabaj Pérez, López-Fernández & Ortí 2021

Colossoma

Eigenmann & Kennedy 1903

colos, from *chólos* (Gr. χόλος), gall or bile, but authors say “without horns”; *sóma* (Gr. σῶμα), body, referring to lack of “procumbent predorsal spine” as present on many serrasalmids¹

Colossoma macropomum (Cuvier 1816) *macro-*, from *makrós* (Gr. μακρός), long or large; *róma* (Gr. πῶμα), lid or cover, i.e., operculum (but apparently treated as an adjective by Cuvier), referring to its large, wide operculum

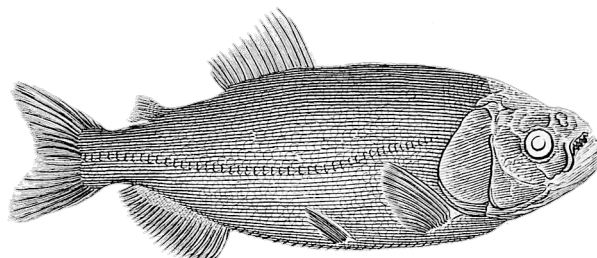
¹ Etymology explained in a follow-up publication: Eigenmann, C. H. 1903. New genera of South American fresh-water fishes, and new names for some old genera. Smithsonian Miscellaneous Collections 45: 144–148.

Mylossoma

Eigenmann & Kennedy 1903

mylo-, from *mýlos* (Gr. μύλος), mill (i.e., millstone);
sóma (Gr. σῶμα), body, referring to disk-like body shape

Mylossoma acanthogaster (Valenciennes 1850) *acanthus* (L.), from *ákantha* (Gr. ἀκανθα), thorn; *gastér* (Gr. γαστήρ), belly or stomach, referring to its serrate ventral keel



Colossoma macropomum. Illustration by Charles Léopold Laurillard. From: Cuvier, G. 1816. Le Règne Animal distribué d'après son organisation pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Les reptiles, les poissons, les mollusques et les annélides. A. Belin, Paris. Edition 1. 4 vols. [Description in vol. 2, illustration in vol. 4.]

Mylossoma albiscopum (Cope 1872) *albus* (L.), white; *σκοπός* (Gr. σκοπός), looker, contemplator or viewer (i.e., eye), allusion not explained nor evident [name historically treated as an adjective]

Mylossoma aureum (Spix & Agassiz 1829) Latin for golden, referring to its coloration

Mylossoma duriventre (Cuvier 1818) *durus* (L.), hard or tough; *ventre*, genitive of *venter* (L.), belly, probably referring to spiny serrae on ventral keel

Mylossoma unimaculatum (Steindachner 1908) *uni-*, from *unus* (L.), one; *maculatum* (L.), spotted, referring to a “deep, round, sharply demarcated spot a short distance above the lateral line and in the vertical direction, slightly behind the beginning of the dorsal” (translation); modern accounts and photographs do not mention nor show this spot, but do report a conspicuous black or brown blotch on opercle

Piaractus

Eigenmann 1903

píar (Gr. πῖαρ), fat; *aktís* (Gr. ἀκτίς), ray, referring to rayed adipose fin

Piaractus brachypomus (Cuvier 1818) *brachýs* (Gr. βραχύς), short; *póma* (Gr. πῶμα), lid or cover, i.e., operculum (but apparently treated as an adjective by Cuvier), referring to shorter operculum compared with *Colossoma macropomum*

Piaractus mesopotamicus (Holmberg 1887) *-icus* (L.), belonging to: *mésos* (Gr. μέσος), middle or in between; *potamós* (Gr. ποταμός), river, allusion not explained but almost certainly referring to Región Mesopotámica (or La Mesopotamia), the northeast region of Argentina located between the rivers Paraná and Uruguay, where this species occurs

Piaractus orinoquensis Escobar L., Ota, Machado-Allison, Andrade-López, Farias & Hrbek 2019 *-ensis*, Latin suffix denoting place: Orinoquia or Llanos Orientales, geographic area of Colombia where it occurs



Piaractus orinoquensis, holotype, 150.2 mm SL. Photo by Mark Henry Sabaj. From: Escobar L., M. D., R. P. Ota, A. Machado-Allison, J. Andrade-López, I. P. Farias and T. Hrbek. 2019. A new species of *Piaractus* (Characiformes: Serrasalminae) from the Orinoco Basin with a redescription of *Piaractus brachypomus*. *Journal of Fish Biology* 95 (2): 411–427.

Upland Pacu
Subfamily MYLEINAE
Eigenmann 1903

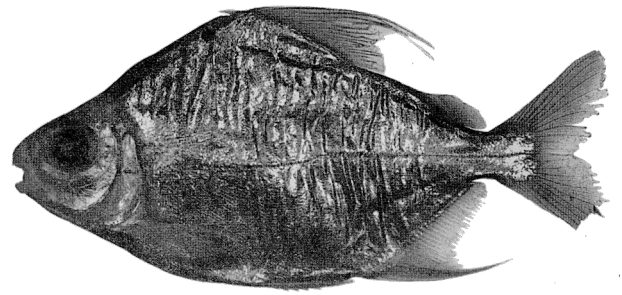
Acnodon

Eigenmann 1903

á-, Greek privative, i.e., without; *knódon* (Gr. κνώδων), projecting teeth on the blade of a hunting spear, presumably based on the false impression that *A. oligacanthus* lacks a predorsal spine (it is small and easily overlooked)

Acnodon normani Gosline 1951 in honor of English ichthyologist J. R. (John Roxborough) Norman (1898–1944), British Museum (Natural History), for his “excellent work” on serrasalminids as well as other fish groups

Acnodon oligacanthus (Müller & Troschel 1844) *oligos* (ὀλίγος), little, small or few; *acanthus* (L.), from *ákantha* (Gr. ἄκανθα), thorn, referring to small (and easily overlooked) predorsal spine



Acnodon normani, holotype, 127 mm SL. From: Gosline, W. A. 1951. Notes on the characid fishes of the subfamily Serrasalminae. *Proceedings of the California Academy of Sciences* (Series 4) 27 (2): 17–64.

Acnodon senai Jégu & Santos 1990 in memory of Brazilian fisheries worker Anazildo Mateus de Sena, Instituto Nacional de Pesquisas da Amazônia (Manaus), who collected holotype during one of his last trips to the field in June 1987

Mylesinus

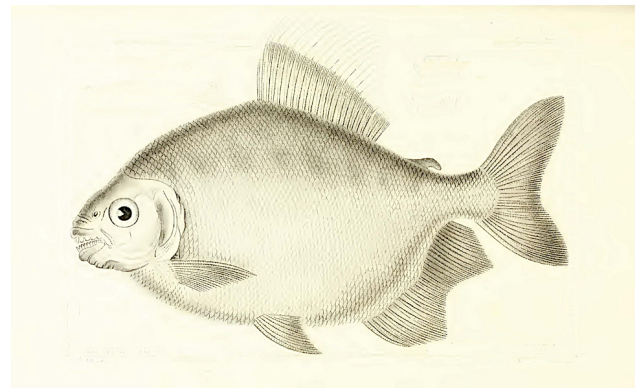
Valenciennes 1850

-inus (L.), adjectival suffix, i.e., *Myleus*-like, referring to similarity to that genus

Mylesinus paraschomburgkii Jégu, Santos & Ferreira 1989 *pará* (Gr. παρά), near, referring to previous misidentification as *M. schomburgkii*

Mylesinus paucisquamatus Jégu & Santos 1988 *paucus* (L.), few; *squamatus* (L.), scaled, referring to fewer lateral-line scales compared with other myleinine fishes

Mylesinus schomburgkii Valenciennes 1850 in honor of German explorer Robert Hermann Schomburgk (1804–1865), who illustrated the specimen upon which the description is based (holotype is a head)



Mylesinus schomburgkii. Illustration by Robert Hermann Schomburgk, upon which description is based. From: Cuvier, G. and A. Valenciennes. 1850. *Histoire naturelle des poissons*. v. 22. i–xx + 1 p. + 1–532 + 1–91, Pls. 634–650.

Myleus

Müller & Troschel 1844

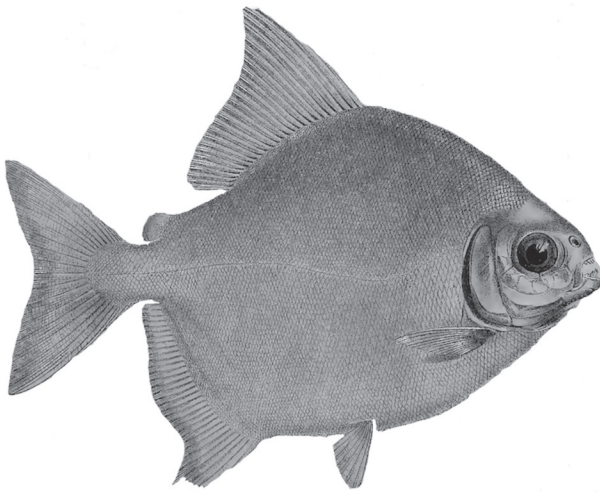
Neo-Latin scientific adjective of *mýlos* (Gr. μύλος), mill, i.e., like a millstone, presumably referring to disk-like shape of *M. setiger*

Myleus altipinnis (Valenciennes 1850) *altus* (L.), high; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to its long posterior dorsal-fin rays, longer than those on *Tometes unilobatus* (= *T. trilobatus*)

Myleus knerii (Steindachner 1881) patronym not identified but almost certainly in honor of Steindachner’s Austrian friend and colleague, ichthyologist Rudolf Kner (1810–1869), who described several serrasalminid fishes

Myleus micans (Lütken 1875) Latin for twinkling, allusion not explained, perhaps referring to silvery iridescent markings on sides

Myleus pachyodus Andrade, Jégu, Buckup & Netto-Ferreira 2018 *pachýs* (Gr. παχύς), thick or stout; *odus*, from *odoús* (Gr. οδοός), tooth, referring to teeth of adults, which are much thicker when compared with the



Myleus knerii. From: Steindachner, F. 1881. Beiträge zur Kenntniss der Flussfische Südamerika's. II. Denkschriften der Kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe 43: 103–146, Pls. 1–7.

flat, incisiform teeth of congeners

Myleus pacu (Jardine 1841) a “provincial name” for several species in Guyana, including this one, derived from the Tupí word *pa'ku* [*Species inquirenda*, provisionally included here]

Myleus planquettei (Jégu, Keith & Le Bail 2003) in honor of French Guianan ichthyologist Paul Planquette (1940–1996), Institut National de la Recherche Agronomique (Kourou), for his work studying the fishes of French Guiana

Myleus setiger Müller & Troschel 1844 *seta* or *saeta* (L.), hair or bristle; *-iger* (L.), to have or bear, allusion not explained, probably referring to filamentous first dorsal-fin rays seen in this species (and other *Myleus* and *Myloplus*)²

Myloplus Gill 1896

proposed as a subgenus of *Myletes* (a suppressed name in the synonymy of *Alestes*, Alestidae), etymology not explained, perhaps *Mylo-*, referring to similarly disk-shaped serrasalmids with the same generic prefix, and *plus* (L.), more, i.e., an additional *Myleus*-like taxon

Myloplus animacula Soares, Andrade & Lucinda 2023 *ani* (L.), genitive singular of anus; *macula*, stain or mark, referring to conspicuous black mark at tip of anteriormost branched anal-fin rays

Myloplus arnoldi Ahl 1936 in honor of German aquarist Johann Paul Arnold (1869–1952), who donated specimens to the Zoological Museum of Berlin

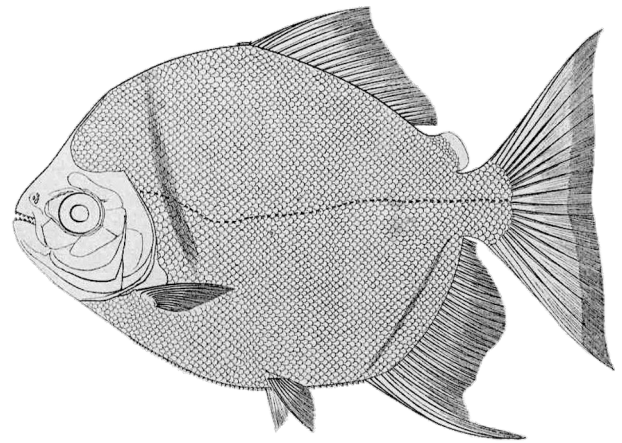
Myloplus asterias (Müller & Troschel 1844) *asterias* (Gr. ἀστερίας), a starred or starry fish or bird, allusion not explained, presumably referring to round, orange-colored spots on body

Myloplus levis (Eigenmann & McAtee 1907) Latin for smooth, polished or bald, allusion not explained nor evident

Myloplus lobatus (Valenciennes 1850) Latin for lobed, referring to anterior rays of anal fin forming a rounded lobe

Myloplus lucienae Andrade, Ota, Bastos & Jégu 2016 in honor of Luciene Maria Kassar Borges, for her “pioneer attempt” (a 1986 Ph.D. dissertation) to organize what is known about herbivorous Serrasalminae from the Rio Negro basin

Myloplus nigrolineatus Ota, Machado, Andrade, Collins, Farias & Hrbek 2020 *nigro-*, from *niger* (L.), dark or black; *lineatus* (L.), lined, referring to dark chromatophores on lateral-line scales, giving the appearance of a black lateral line



First-published image of *Myloplus torquatus*. From: Kner, R. 1860. Zur Familie der Characinen. III. Folge der ichthyologischen Beiträge. Denkschriften der Kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe 18: 9–62, Pls. 1–8.

Myloplus rubripinnis (Müller & Troschel 1844) *rubrum* (L.), red; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to distinctive red-hooked anal fin on adult males

Myloplus schomburgkii (Jardine 1841) in honor of German explorer Robert Hermann Schomburgk (1804–1865), who provided notes and illustration upon which description is based (no types known)

Myloplus tieté (Eigenmann & Norris 1900) etymology not explained, probably referring to Tieté River system (São Paulo, Brazil), which includes Piracicaba River, type locality

Myloplus torquatus (Kner 1858) Latin for collared or adorned with a necklace, referring to black vertical streak or band behind head over pectoral fin

Myloplus tumukumak Andrade, Jégu & Gama 2018 named for the Tumuk-Humak Mountain Range, where type locality (Oyapock River and its tributaries between Brazil and French Guiana) is situated

Myloplus zorroi Andrade, Jégu & Giarrizzo 2016 in honor of Maurício Camargo-Zorro, a researcher at the Instituto Federal de Educação, Ciência e Tecnologia (São Paulo), for his “invaluable” contribution to the fish fauna inventory from the Marmelos Conservation Area (boundaries of Amazonas and Rondônia states, Brazil, where this species occurs); name also alludes to the Latin-American fictional character “Zorro,” which was the secret identity of Don Diego de la Vega, because its features “masked” it as *Tometes*, concealing its true identity

Ossubtus Jégu 1992

os (L.), mouth; *subtus* (L.), below, referring to strictly ventral position of mouth, unique in the family

Ossubtus xinguense Jégu 1992 *-ense*, Latin suffix denoting place: Rio Xingu, Altamira, Pará, Brazil, type locality



Ossubtus xinguense, holotype, female, 170.2 mm SL. Photo by Willian Ohara. From: Andrade, M. C., L. M. de Sousa, R. P. Ota, M. Jégu and T. Giarrizzo. 2016. Redescription and geographical distribution of the endangered fish *Ossubtus xinguense* Jégu 1992 (Characiformes, Serrasalminae) with comments on conservation of the rheophilic fauna of the Xingu River. PLoS ONE 11 (9): e0161398: 1–29.

² Donald C. Taphorn (see *Paramyloplus taphorni*), pers. comm.



Paramyloplus taphorni, paratype, male, 154.9 mm SL. Photo by Hernán López-Fernández. From: Andrade, M. C., H. López-Fernández and E. A. Liverpool. 2019. New *Myloplus* from Essequibo River basin, Guyana, with discussion on the taxonomic status of *Myleus pacu* (Characiformes: Serrasalminidae). Neotropical Ichthyology 17 (4): e190026: 1–9.

Paramyloplus

Norman 1929

pará (Gr. παρά), near, similar to *Myloplus* but lacking conical maxillary teeth

***Paramyloplus taphorni* (Andrade, López-Fernández & Liverpool 2019)** in honor of American ichthyologist Donald C. Taphorn (b. 1951), for “over four decades of continuing contributions to Neotropical ichthyology, his expansive role in training South American ichthyologists (including the authors), and for his participation in the expedition” during which holotype was collected

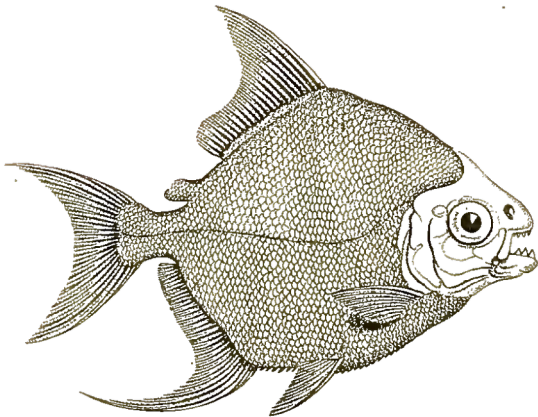
***Paramyloplus ternetzi* Norman 1929** in honor of Swiss-born ichthyologist and naturalist Carl Ternetz (1870–1928), who made extensive collections in French Guiana for the British Museum (including, presumably, holotype of this species)

Prosomyleus

Géry 1972

prósō (Gr. πρόσω), in front, proposed as a subgenus of *Myleus* with upper anterior medial teeth implanted anteriorly, forming the branches of a “V”

***Prosomyleus rhomboidalis* (Cuvier 1818) -alis** (L.), adjectival suffix, presumably referring to its rhomboid-like body shape



Prosomyleus rhomboidalis. Illustration by H. J. Redoulé. From: Cuvier, G. 1818. Sur les poissons du sous-genre Mylètes. Mémoires du Muséum d’Histoire Naturelle, Paris 4: 444–456, Pls. 21–22.

Tometes

Valenciennes 1850

presumably from *tómos* (Gr. τόμος), cutter or knife (i.e., one who cuts), referring to obliquely beveled incisors of *T. trilobatus*; according to Valenciennes, name was coined in the same way that Cuvier (1814) coined *Myletes* (now a synonym of *Alestes* but at the time including both alestids and serrasalmids) for characiform fishes with molariform (grinding) teeth, from *mýlos* (Gr. μύλος), mill (i.e., millstone)



Tometes leballi, adult female, 400 mm SL. From: Jégu, M., P. Keith and E. Belmont-Jégu. 2002. Une nouvelle espèce de Tometes (Teleostei: Characidae: Serrasalminae) du Bouclier Guyanais, *Tometes leballi* n. sp. Bulletin Français de la Pêche et de la Pisciculture 364: 23–48. Photo originally from: Planquette, P., P. Keith and P.-Y. Le Bail. 1996. Atlas des poissons d’eau douce de Guyane (Tome 1). Muséum National d’Histoire Naturelle, Ministère de l’Environnement, Paris. 1–429.

***Tometes ancylorhynchus* Andrade & Giarrizzo 2016** curve-snouted, from *ankýlos* (Gr. ἀγκύλος), bent, curved or bowed, and *rhýnchos* (Gr. ῥύγχος), snout, referring to its relatively short and curved snout, resembling the curved beak of a parrot

***Tometes camunani* Andrade, Giarrizzo & Jégu 2013** vernacular for this species among the Wai-Wai, who inhabit the upper rio Trombetas basin (Pará State, Brazil) and consider this species of great cultural importance; name is also used by local quilombolas (inhabitants of settlements founded by escaped slaves of African origin), who capture the fish using the fruit of the camu-camu tree (*Myrciaria dubia*, Myrtaceae) as bait

***Tometes kranponhah* Andrade & Giarrizzo 2016** named for the indigenous Pytako tribe inhabiting the banks of the Xingu River basin (Brazil), who know this fish as *kranponhah*, meaning long-haired (*kran*, head; *ponhah*, hair or hairy), referring to the long dorsal-fin filaments of mature males

***Tometes leballi* Jégu, Keith & Belmont-Jégu 2002** in honor of French ichthyologist Pierre-Yves Le Bail (b. 1954), Institut National de la Recherche Agronomique (Rennes, France), for research and revisionary studies of the fishes of French Guiana, including the first collection of this species

***Tometes makue* Jégu, Santos & Belmont-Jégu 2002** from *makue ñigi*, local Tukano (also spelled Tucano) name for this species in Brazil, meaning “black pacu”

***Tometes siderocarajensis* Andrade, Machado, Jégu, Farias & Giarrizzo 2017 -ensis**, Latin suffix denoting place: Serra dos Carajás, the largest high-grade iron deposit in the world (from *sídēros* [Gr. σίδηρος] iron), Tocantins-Araguaia River basin, Pará, Brazil, type locality

***Tometes trilobatus* Valenciennes 1850 tri-** (L.), three; *lobatus* (L.), lobed, presumably referring to anal-fin lobe formed by its middle (three?) rays

Utiaritchthys

Miranda Ribeiro 1937

Utiarity, referring to Salto Utiarity, or Utiarity Falls, Mato Grosso, Brazil, type locality of *U. sennaebregai*; *ichthýs* (Gr. ἰχθύς), fish

***Utiaritchthys esguiceroi* Pereira & Castro 2014** in honor of Brazilian ichthyologist André L. H. Esguícero (b. 1980), University of São Paulo, who collected holotype

***Utiaritchthys longidorsalis* Jégu, Tito de Morais & Santos 1992 longus** (L.), long; *dorsalis* (L.), of the back, referring to longer dorsal-fin base compared with *U. sennaebregai*

***Utiaritchthys sennaebregai* Miranda Ribeiro 1937** in honor of Colonel Senna Braga, Commander of the 5º Militar Grupamento de Engenharia (equivalent to the U.S. Army Corps of Engineers), who helped Miranda Ribeiro obtain types when he visited Salto Utiarity (or Utiarity Falls, type locality) in May 1909



Utariitichthys esguiceiroi, holotype, female, 197.9 mm SL. From: Pereira, T. N. A. and R. M. C. Castro. 2014. A new species of *Utariitichthys* Miranda Ribeiro (Characiformes: Serrasalminidae) from the Serra dos Parecís, Tapajós drainage. Neotropical Ichthyology 12 (2): 397–402.

Piranhas
Subfamily **SERRASALMINAE**
Bleeker 1859

Catoprion

Müller & Troschel 1844

cato-, from *katá* (Gr. κατώ), beneath, below or under; *príōn* (Gr. πρίων), saw, probably referring to saw-toothed ventral keel on *C. mento*

***Catoprion absconditus* Mateussi, Melo & Oliveira 2020** Latin for hidden or concealed, having been identified as *C. mento* for 201 years, ever since that species was described in 1819

***Catoprion mento* (Cuvier 1819)** from *mentum* (L.), chin, referring to its jutting lower jaw



Catoprion absconditus, 121 mm SL. Photo by Valéria Machado. From: Mateussi, N. T. B., B. F. Melo and C. Oliveira. 2020. Molecular delimitation and taxonomic revision of the wimple piranha *Catoprion* (Characiformes: Serrasalminidae) with the description of a new species. Journal of Fish Biology 97 (3): 668–685.

Metynnis

Cope 1878

etymology not explained, possibly *metá* (Gr. μετά), with, and *hýnnis* (Gr. ὕννις), plowshare (main cutting blade of a plow), perhaps referring to serrate abdominal keel or belly of *M. luna*, “armed with spiniferous ? interhæmal bones” (question mark in original, significance not evident, perhaps a lapsus), or to “cultriform” (knife-shaped) predorsal bone or spine at base of dorsal fin, a character Cope used to distinguish the genus from *Myletes* (now divided between *Colossoma*, *Mylossoma* and *Piaractus*)

***Metynnis altidorsalis* Ahl 1923** *altus* (L.), high; *dorsalis* (L.), of the back, allusion not explained, perhaps referring to its extended dorsal-fin rays and/or high dorsal profile

***Metynnis anisurus* Ahl 1923** unequally-tailed, from *ánisos* (Gr. ἄνισος), unequal, and *urus*, from *ourá* (Gr. οὐρά), tail, referring to upper caudal-fin lobe smaller than lower lobe

***Metynnis argenteus* Ahl 1923** Latin for silvery, referring to its shiny silver color in alcohol

***Metynnis cuiaba* Pavanelli, Ota & Petry 2009** named for the Rio Cuiabá, Rio Paraguai basin, Mato Grosso, Brazil, type locality

***Metynnis fasciatus* Ahl 1931** Latin for banded, referring to 3–4 bluish bars on sides

***Metynnis guaporensis* Eigenmann 1915** *-ensis*, Latin suffix denoting place: Rio Guaporé at Maciél, Brazil, type locality

***Metynnis hypsauchen* (Müller & Troschel 1844)** *hypso-*, from *hypsēlós* (Gr. ὑψηλός), high; *auchēn* (Gr. αὐχίην), nape, referring to its high dorsal profile

***Metynnis lippincottianus* (Cope 1870)** *-ianus* (L.), belonging to: Cope’s friend James S. Lippincott (1819–1885), “author of important contributions to Meteorology, Agriculture and other subjects”

***Metynnis longipinnis* Zarske & Géry 2008** *longus* (L.), long; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to its extremely elongated dorsal and anal fins

***Metynnis luna* Cope 1878** Latin for moon, presumably referring to its “orbicular” shape

***Metynnis maculatus* (Kner 1858)** Latin for spotted, referring to rounded dark spots on body and/or large black humeral spot

***Metynnis melanogrammus* Ota, Rapp Py-Daniel & Jégu 2016** dark-lined, from *mélas* (Gr. μέλας), black or dark, and *grammē* (Gr. γραμμή), line or stroke of the pen, referring to well-marked dark lateral line

***Metynnis mola* Eigenmann & Kennedy 1903** Latin for millstone, referring to its “nearly circular” form

***Metynnis orinocensis* (Steindachner 1908)** *-ensis*, Latin suffix denoting place: Orinoco River basin, Venezuela, where it is endemic

***Metynnis otuquensis* Ahl 1923** *-ensis*, Latin suffix denoting place: Río Otuquis, Paraguay, type locality

***Metynnis polystictus* Zarske & Géry 2008** *polý* (Gr. πολύ), many; *stictus*, from *stiktós* (Gr. στικτός), spotted, referring to numerous small spots on body



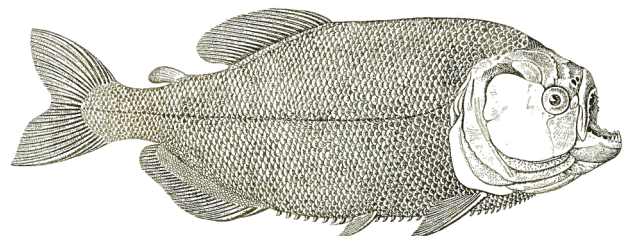
Metynnis polystictus, paratype, 160 mm SL. From: Zarske, A. and J. Géry. 2008. Revision der neotypischen Gattung *Metynnis* Cope, 1878. II. Beschreibung zweier neuer Arten und zum Status von *Metynnis goeldii* Eigenmann, 1903 (Teleostei: Characiformes: Serrasalminidae). Vertebrate Zoology 58 (2): 173–196.

Pygocentrus

Müller & Troschel 1844

pygo-, from *pygḗ* (Gr. πυγή), rump; *centrus*, from *kéntron* (Gr. κέντρον), prickle, referring to serrate abdomen

***Pygocentrus cariba* (Humboldt 1821)** local Venezuelan equivalent of the Brazilian word *piranha*



Pygocentrus piraya. From: Cuvier, G. 1819. Sur les poissons du sous-genre *Hydrocyn* [sic], sur deux nouvelles espèces de *Chalceus*, sur trois nouvelles espèces du *Serrasalmes*, et sur l’*Argentina glossodonta* de Forskahl, qui est l’*Albula gonorhynchus* de Bloch. Mémoires du Muséum National d’Histoire Naturelle, Paris (N. S.) (Série A) Zoologie 5: 351–379, Pls. 26–28.

***Pygocentrus nattereri* Kner 1858** in honor of Austrian naturalist Johann Natterer (1787–1843), who explored South America and collected specimens for 18 years, including some males of this species

***Pygocentrus piraya* (Cuvier 1819)** along with *piranha*, one of the local names for serrasalmid fishes in Brazil

Pygopristis

Müller & Troschel 1844

pygo-, from *pygē* (Gr. πυγή), rump; *pristis*, from *prīō* (Gr. πρίω) or *prīzō* (πρίζω), to saw, or from *pristēs* (πρίστης), sawyer, referring to serrated spines on abdomen

***Pygopristis denticulata* (Cuvier 1819)** Latin for having small teeth (denticulate), referring to its narrower, less-oblique teeth compared with other serrasalmids Cuvier had examined



Possibly first-published image of *Pygopristis denticulata* (as *Serrasalmus punctatus*, a junior synonym). Illustration by James Stewart. From: Schomburgk, R. H. 1841. The Natural history of fishes of Guiana. Part I. In: W. Jardine (ed.) The Naturalists' Library. Vol. 3. W. H. Lizars, Edinburgh. 17–263, Pls. 1–30.

Serrasalmus

Lacepède 1803

serra (L.), saw, referring to serrate ventral keel; *salmus*, from *salmo* (L.), salmon, referring to salmon-like adipose fin

***Serrasalmus altispinis* Merckx, Jégu & Santos 2000** *altus* (L.), high; *spinus*, from *spina* (L.), thorn, referring to “deeper” serrae compared with *S. rhombeus*

***Serrasalmus altuvei* Ramírez 1965** in honor of silviculturist and forestry expert Néstor Altuve, Director of Natural Resources of the Agriculture Ministry in Venezuela, where type locality (El Polvero, Río San José, Guárico) is situated

***Serrasalmus aureus* Spix & Agassiz 1829** Latin for golden, referring to olive and “shining gold” (translation) coloration

***Serrasalmus auriventris* (Burmeister 1861)** *aureus* (L.), golden; *ventris*, genitive of *venter* (L.), belly, referring to its golden-yellow belly [*Species inquirenda*, provisionally included here]

***Serrasalmus brandtii* Lütken 1875** patronym not identified, possibly in honor of German naturalist, surgeon and pharmacologist Johann Friedrich von Brandt (1802–1879)

***Serrasalmus calmoni* Steindachner 1908** patronym not identified but based on information in Steindachner’s 1907 description of the loricatoriid catfish *Pareiorhaphis cameroni* (a lapsus for *calmoni*), probably in honor of Miguel Calmon du Pin e Almedia (1879–1935), Brazil’s Minister of Agriculture, Commerce and Industry, as a “token of my respect and gratitude” (translation)

***Serrasalmus careospinus* (Fink & Machado-Allison 1992)** *careo* (L.), without; *spinus*, from *spina* (L.), thorn, referring to lack of pre-anal spine

***Serrasalmus compressus* Jégu, Leão & Santos 1991** Latin for squeezed together, referring to its deep and compressed body

***Serrasalmus eigenmanni* Norman 1929** in honor of German-born American ichthyologist Carl H. Eigenmann (1863–1927), for his work on

characid fishes

***Serrasalmus elongatus* Kner 1858** Latin for prolonged, referring to its relatively elongate body, the most elongate species of piranha

***Serrasalmus geryi* Jégu & Santos 1988** in honor of French physician and ichthyologist Jacques Géry (1917–2007), for his “important” (translation) work among serrasalmids and *Serrasalmus* in particular

***Serrasalmus gibbus* Castelnau 1855** Latin for hump or humpback, referring to “curved back of the head” (translation)

***Serrasalmus gouldingi* Fink & Machado-Allison 1992** in honor of conservation ecologist Michael Goulding (b. 1950), for his “indefatigable efforts” in collecting Amazonian fishes and understanding the ecosystem in which they live, helping the senior author in the field, and for sharing his first-hand knowledge of Amazonian piranhas

***Serrasalmus hastatus* Fink & Machado-Allison 2001** Latin for armed with a spear (authors say “spear-shaped”), referring to its pointed and highly compressed snout

***Serrasalmus hollandi* Eigenmann 1915** in honor of Jamaican-born American zoologist-paleontologist William J. Holland (1848–1932), Director of the Carnegie Museum, which published many of Eigenmann’s papers

***Serrasalmus humeralis* Valenciennes 1850** Latin for humeral, referring to its large, blackish humeral spot

***Serrasalmus irritans* Peters 1877** Latin for bothersome or irritating, allusion not explained, possibly referring to a piranha’s teeth, voracious feeding behavior and fearsome (though greatly exaggerated) reputation (although Peters noted that this species is less-aggressive than *Pygocentrus nattereri*)

***Serrasalmus maculatus* Kner 1858** Latin for spotted, referring to rounded blackish spots on body

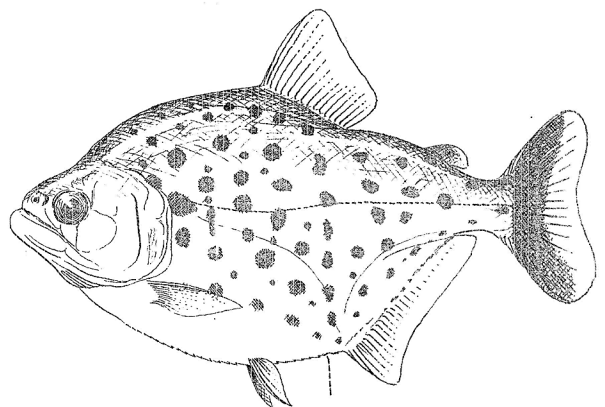
***Serrasalmus maculipinnis* (Fink & Machado-Allison 1992)** *maculatus* (L.), spotted; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to extensive spotting of vertical fins, a rare pattern in serrasalmids

***Serrasalmus magallanesi* Gallo-Cardozo, Maldonado, Careaga & Carvajal-Vallejos 2024** in memory of Frank Magallanes (d. 2022), for his “permanent collaboration with ichthyologists and *Serrasalmus* fans, mainly through his website” Oregon Piranha Exotic Fish Exhibit (opefe.com)

***Serrasalmus manueli* (Fernández-Yépez & Ramírez 1967)** in honor of Manuel, the second author’s son, who died early, and who since early childhood had accompanied the authors on their “memorable” (translation) fishing expeditions

***Serrasalmus marginatus* Valenciennes 1837** Latin for bordered, referring to its black-edged anal fin

***Serrasalmus medinai* Ramírez 1965** in honor of Gonzalo Medina, chief



Serrasalmus nalseni. From: Fernández-Yépez, A. 1969. Contribucion al conocimiento de los serrasalmidos. Evencias No. 23: 4 unnum.

of the Division of Fauna, Natural Resources, Ministry of Agriculture and Animal Husbandry, Venezuela, where type locality (El Polvero, Río San José, Guárico) is situated

***Serrasalmus nalseni* Fernández-Yépez 1969** in honor of Bo Jaime Nalsen (b. 1939), who helped collect holotype while working at the fish research station of Venezuela's Oficina Nacional de Pesca

***Serrasalmus neveriensis* Machado-Allison, Fink, López Rojas & Rodeñas 1993** *-ensis*, Latin suffix denoting place: Río Neveri, Querechual, Estado Anzoátegui, Venezuela, type locality

***Serrasalmus nigricans* Spix & Agassiz 1829** Latin for blackish, referring to body coloration

***Serrasalmus nigricauda* (Burmeister 1861)** *nigra-*, from *niger* (L.), dark or black; *cauda* (L.), tail, referring to broad black band at beginning of tail [*species inquirenda*, provisionally included here]

***Serrasalmus odyssei* Hubert & Renno 2010** Bolivian name “applied to the locally known piranha ‘suave’ and referring to the taxonomic confusion with this species at the beginning of the fieldwork during the present study”

***Serrasalmus rhombeus* (Linnaeus 1766)** Latin for rhombic, probably referring to the rhomboid shape of adults

***Serrasalmus sanchezi* Géry 1964** in honor of Peruvian fisheries biologist Jorge Sanchez Romero

***Serrasalmus scapularis* Günther 1864** Latin for scapular or of the shoulder, presumably referring to large blackish blotch behind gill opening

***Serrasalmus serrulatus* (Valenciennes 1850)** diminutive of *serra* (L.), saw, i.e., small saw-toothed, referring to its “clearly serrate” abdomen

***Serrasalmus spilopleura* Kner 1858** *spilos* (Gr. σπῖλος), mark or spot; *pleurá* (Gr. πλευρά), side, referring to numerous black spots on sides of juvenile specimens