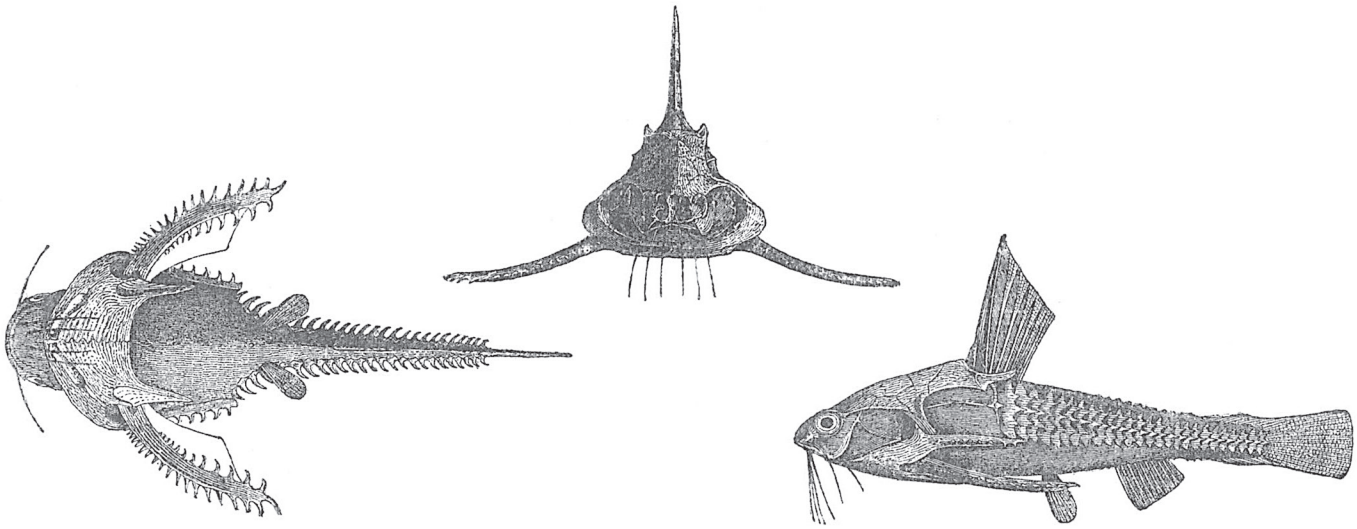
Order SILURIFORMES

Thorny Catfishes

Family **DORADIDAE**

Bleeker 1858



Amblydoras monitor, ventral, anterior and dorsal views. From: Cope, E. D. 1872. On the fishes of the Ambyiacu River. Proceedings of the Academy of Natural Sciences of Philadelphia 23: 250–294, Pls. 3–16.

Subfamily ACANTHODORADINAE
Sabaj & Mariangeles 2021

Acanthodoras

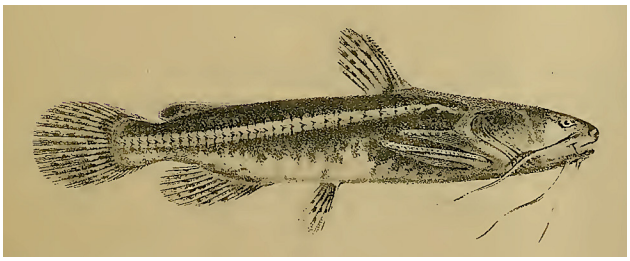
Bleeker 1862

acanthus (L.), from *ákantha* (ἄκανθα), thorn, probably referring to upper and hind parts of body of *A. cataphractus* covered by bony thorn-bearing plates; *Doras*, type genus of family

***Acanthodoras cataphractus* (Linnaeus 1758)** *katáphraktos* (κατάφρακτος), clad in armor, presumably referring to any or all of the following: heavily ossified nuchal shield; bony spine-like posterior cleithral (humeral) process; sturdy and well-serrated pectoral-fin spines; deep, bony thorn-bearing plates along sides of body from tympanal region to caudal-fin base[1]

***Acanthodoras depressus* (Steindachner 1881)** Latin for pressed down, referring to strongly depressed head, "almost completely flat across the top" (translation)

***Acanthodoras spinosissimus* (Eigenmann & Eigenmann 1888)** Latin for very spiny or thorny, presumably referring to "short sharp" spines on humeral process, "a series of which near the lower margin, is enlarged"



Acanthodoras depressus. Illustration by Eduard Konopicky. 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.

[1] Mark H. Sabaj Pérez, Academy of Natural Sciences of Drexel University, pers. comm.

Spotted Thorny Cats
Subfamily ASTRODORADINAE
Higuchi, Birindelli, Sousa & Britski 2007

Amblydoras

Bleeker 1862

amblýs (ἀμβλύς), blunt, allusion not explained, perhaps referring to smooth (non-serrated) dorsal-fin spine of *A. affinis*; *Doras*, type genus of family

***Amblydoras affinis* (Kner 1855)** Latin for related, referring to close similarity to *Doras dentatus* (=*Platydoras costatus*), its presumed congener at the time

***Amblydoras gonzalezi* (Fernández-Yépez 1968)** in honor of Venezuelan civil engineer Marcelo González Molina (1923–2000), who provided access to the type locality

***Amblydoras monitor* (Cope 1872)** allusion not explained; in presenting his paper to the Academy of Natural Sciences of Philadelphia in 1871, Cope reportedly described the swim bladder of *A. monitor* as having a "gun-boat style of shape," perhaps a reference to USS *Monitor*, an ironclad warship commissioned in 1862 during the U.S. Civil War that received much attention at the time (name could also be comparing the fish's bony shields to the *Monitor*'s ironclad hull; note that in the same paper Cope compared *Physopyxis lyra* to a "miniature iron-clad with mast and outriggers")

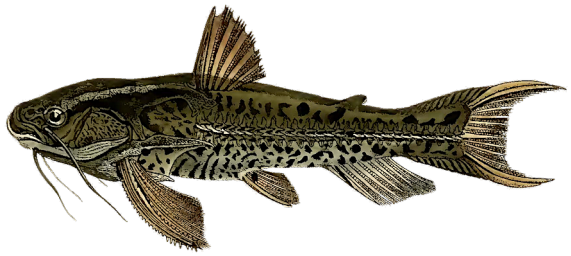
***Amblydoras nauticus* (Cope 1874)** *-icus* (L.), belonging to: Nauta, Peru, type locality

***Amblydoras nheco* (Higuchi, Birindelli, Sousa & Britski 2007)** named for town of Nhecolândia, Rio Paraguay basin, Brazil, type locality; *nheco* apparently does not have any particular significance other than having probably been a nickname for the town founder

Anadoras

Eigenmann 1925

án (ἄν), privative, i.e., without, referring to absence of plates between dorsal and adipose fins; *Doras*, type genus of family



Anadoras weddellii. From: Castelnau, F. L. 1855. Poissons. *In*: Animaux nouveaux or rares recueillis pendant l'expédition dans les parties centrales de l'Amérique du Sud, de Rio de Janeiro a Lima, et de Lima au Para; exécutée par ordre du gouvernement Français pendant les années 1843 a 1847. Part 7, Zoologie. Paris (P. Bertrand). v. 2: i–xii + 1–112, Pls. 1–50.

***Anadoras grypus* (Cope 1872)** from *grypós* (γρυπός), curved or hook-nosed, referring to its short, smoothly curved snout[1]

***Anadoras insculptus* (Miranda Ribeiro 1912)** Latin for engraved with markings, i.e., sculpted, referring to sculptured nature of exposed bones of cranium and pectoral girdle[1]

***Anadoras regani* (Steindachner 1908)** patronym not identified but almost certainly in honor of English ichthyologist Charles Tate Regan (1878–1943), Natural History Museum (London)

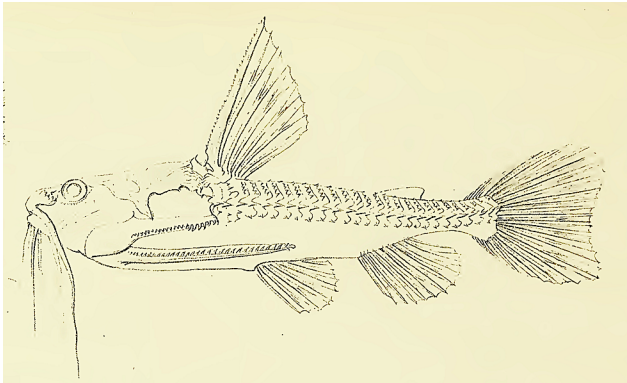
***Anadoras weddellii* (Castelnau 1855)** in honor of British physician-botanist Hugh Algernon Weddell (1819–1877), who presented holotype (a dried skin) and a drawing of it

Astrodoras

Bleeker 1862

astro, from *astḗr* (ἀστήρ), star, from the specific epithet *asterifrons*, presumably referring to its elevated (i.e., stargazing) eyes; *Doras*, type genus of family

***Astrodoras asterifrons* (Kner 1853)** *asterías* (ἀστερίας), a starred or starry fish or bird; *frons* (L.), face or brow, allusion not explained, presumably referring to raised superciliary margin, creating elevated (e.g., stargazing) eyes



First full-body image of *Astrodoras asterifrons* (original description illustrated swim bladder only). From: Kner, R. 1855. Ichthyologische Beiträge [Subtitles I-III]. Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe 17: 92–162, Pls. 1–6.

Hypodoras

Eigenmann 1925

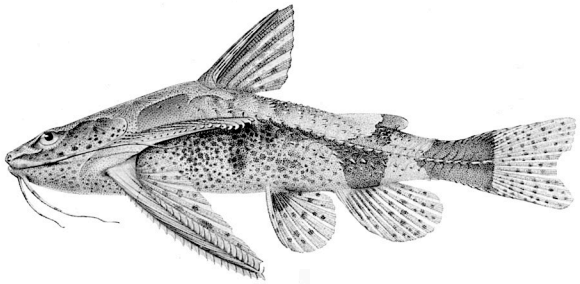
hypó (ὑπό), under or beneath, allusion not explained, perhaps referring to anterior two thirds of adipose fin under a rhomboidal plate; *Doras*, type genus of family

***Hypodoras forficulatus* Eigenmann 1925** Latin for forked, referring to posterior swim bladder, described as "forked (divided into two horns)"

Physopyxis

Cope 1871

phýsa (φύσα), bladder; *pyxís* (πυξίς), box, referring to "osseus box" that encloses and protects large, greatly developed swim bladder of *P. lyra*

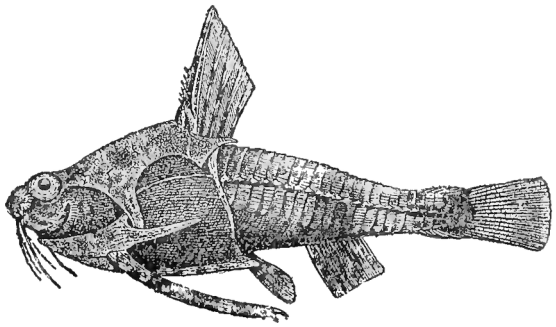


Hypodoras forficulatus, holotype. Illustration by W. S. Atkinson. From: Eigenmann, C. H. 1925. A review of the Doradidae, a family of South American Nematognathi, or catfishes. Transactions of the American Philosophical Society (New Series) 22 (5): 280–365, Pls. 1–27.

***Physopyxis ananas* Sousa & Rapp Py-Daniel 2005** *Ananas*, pineapple genus (Bromeliaceae), referring to stout body and spiny (i.e., pineapple-like) appearance due to additional row(s) of spines on lateral plates

***Physopyxis cristata* Sousa & Rapp Py-Daniel 2005** Latin for crested, referring to externally visible series of emergent neural spines

***Physopyxis lyra* Cope 1872** Latin for lyre, referring to the postcoracoid processes, "curved, and the extremities dilated outwards, so as to present with the thoracic portion exactly the form of the Grecian lyre"



Physopyxis lyra. See *Amblydoras monitor* caption for source.

Scorpiodoras

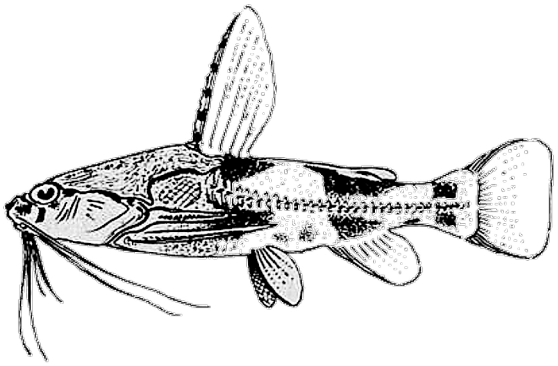
Eigenmann 1925

scorpio (L.), from *skorpiós* (σκορπιός), scorpion, referring to "banjo- or scorpion-shaped" posterior swim bladder of *S. heckelii*; *Doras*, type genus of family

***Scorpiodoras bolivarensis* (Fernández-Yépez 1968)** *-ensis*, Latin suffix denoting place: Estado Bolívar, Venezuela, type locality

***Scorpiodoras heckelii* (Kner 1855)** in honor of Austrian ichthyologist Johann Jakob Heckel (1790–1857), who provided manuscript names and descriptions for many of the doradids that Kner ultimately described

***Scorpiodoras liophysus* Sousa & Birindelli 2011** *lio*, from *leĩos* (λεῖος), smooth or bald; *physus*, from *phýsa* (φύσα), bladder, referring to absence of a secondary swim bladder



Scorpiodoras bolivarensis. From: Fernández-Yépez, A. 1968. Contribución al conocimiento de la familia Doradidae en Venezuela. Boletin del Instituto Oceanografico Universidad de Oriente Cumana 7 (1): 7–72.

First-published image of *Franciscodoras marmoratus*, holotype. From: Lütken, C. F. 1875. Velhas-Flodens fiske. Et bidrag til Brasiliens ichthyologi; efter Professor J. Reinhardts indsamlinger og optegnelser. Det Kongelige Danske Videnskabernes Selskabs Skrifter. Naturvidenskabelig og Mathematisk Afdeling (Ser. 5) 12 (2): 121–253 + 2 unnum. + i–xxi, Pls. 1–5.

Eastern Brazil Thorny Cats
Subfamily WERTHEIMERINAE
Birindelli 2014

Franciscodoras

Eigenmann 1925

Francisco, named for rio São Francisco basin, Brazil, where *F. marmoratus* is endemic; *Doras*, type genus of family

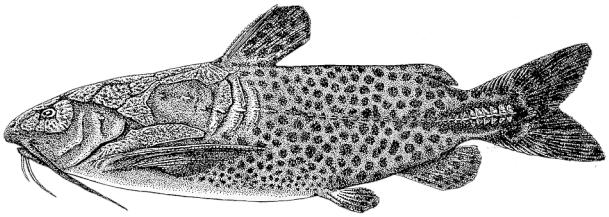
***Franciscodoras marmoratus* (Lütken 1874)** Latin for marbled, referring to its coloration

Kalyptodoras

Higuchi, Britski & Garavello 1990

kalýpto (καλύπτω), cover, referring to embedded condition of most lateral scutes; *Doras*, type genus of family

***Kalyptodoras bahiensis* Higuchi, Britski & Garavello 1990** *-ensis*, Latin suffix denoting place: Bahia State, Brazil, where type locality (rio Paraguaçu) is situated



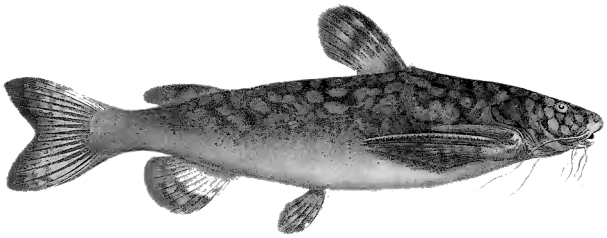
Kalyptodoras bahiensis, holotype, 186 mm SL. From: Higuchi, H., H. A. Britski and J. C. Garavello. 1990. *Kalyptodoras bahiensis*, a new genus and species of thorny catfish from northeastern Brazil (Siluriformes: Doradidae). Ichthyological Exploration of Freshwaters 1 (3): 219–225.

Wertheimeria

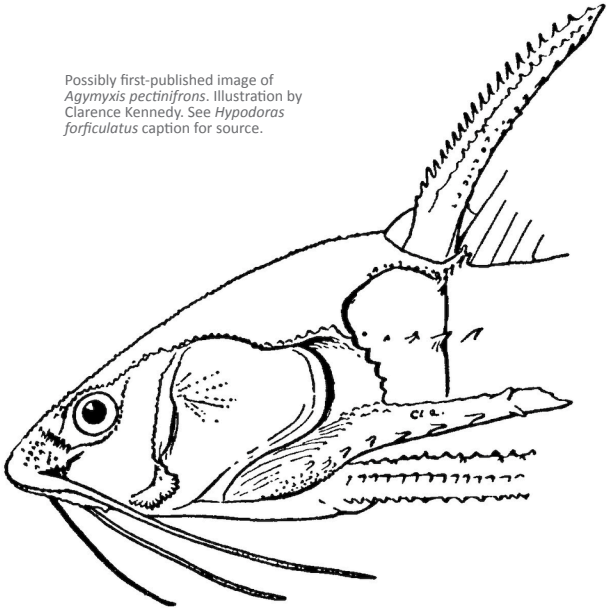
Steindachner 1877

-ia (L. suffix), belonging to: Mr. Wertheimer, who collected holotype, either Louis Wertheimer of the Thayer Expedition to Brazil (1865–1866), or Achilles Wertheimer, who died on the expedition due to a snakebite (see *Pogonopoma wertheimeri*, Loricariidae: Rhinelepinae)

***Wertheimeria maculata* Steindachner 1877** Latin for spotted, referring to large, oval, blue-gray spots on upper body, top of head, and pectoral and dorsal fins



Wertheimeria maculata. From: Steindachner, F. 1877. Die Süsswasserfische des südöstlichen Brasilien (III). Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe 74 (1): 559–694, Pls. 1–13.



Possibly first-published image of *Agymyxis pectinifrons*. Illustration by Clarence Kennedy. See *Hypodoras forficulatus* caption for source.

Subfamily AGAMYXINAE
Sabaj & Mariangeles 2021

Agamyxis

Cope 1878

aga-, from *ágan* (ἄγαν), much or very; *myxis*, from *mýxa* (μύξα), slime, allusion not explained; per Mark H. Sabaj Pérez (pers. comm.), *Agamyxis* closely resembles and sometimes occurs with *Acanthodoras*, which, when disturbed, exude a white milky mucous from the axillary region of their pectoral spines; perhaps John Hauxwell, who collected holotype of *A. pectinifrons* (type species of *Agamyxis*) shared such an observation with Cope

***Agamyxis albomaculatus* (Peters 1877)** *albus* (L.), white; *maculatus* (L.), spotted, referring to white spots on body, abdomen and caudal fin

***Agamyxis pectinifrons* (Cope 1870)** *pectinatus* (L.), raked or combed; *frons* (L.), brow or forehead, referring to strongly toothed preorbital bone (or "comb"), the first bone in the infraorbital series (also known as the lacrimal), forming a serrated crest anterior to the orbit[1]

Subfamily RHINODORADINAE
Sabaj & Mariangeles 2021

Rhinodoras

Bleeker 1862

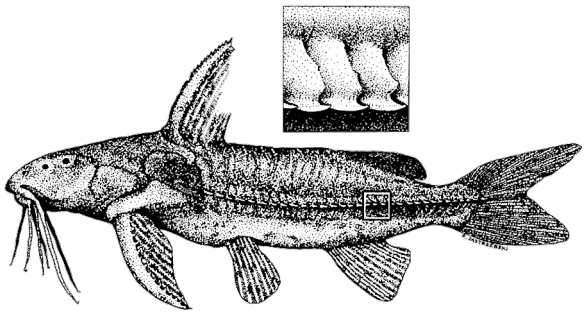
rhinós (ῥινός), genitive of *rhís* (ῥίς), snout, referring to pointed snout of *R. dorbignyi*; *Doras*, type genus of family

***Rhinodoras armbrusteri* Sabaj Pérez 2008** in honor of Jonathan W. Armbruster (b. 1969), curator of Fishes, Auburn University Museum (Alabama, USA), for "sterling" contributions to the collection and study of Neotropical fishes, and for "deftly" leading the expedition to Guyana that led to the discovery of this species

***Rhinodoras boehlkei* Glodek, Whitmire & Orcés V. 1976** in honor of American ichthyologist James E. Böhlke (1930–1982), Academy of Natural Sciences of Philadelphia, for his work on South American freshwater fishes

***Rhinodoras dorbignyi* (Kner 1855)** in honor of Alcide d'Orbigny (1802–1857), French explorer and naturalist, who collected in South America for the Muséum national d'Histoire naturelle (Paris) from 1827–1833

***Rhinodoras gallagheri* Sabaj Pérez, Taphorn & Castillo G. 2008** in honor of Francis Richard Gallagher (b. 1935), mailroom supervisor, Academy of Natural Sciences of Philadelphia (1967–2003), for dedicated service to the global community of taxonomists and systematists via the shipping and receiving of countless loans of biological specimens



Rhinodoras boehlkei, holotype, 132.6 mm SL. Inset shows enlarged view of main series lateral plates. Illustration by Zbigniew Jastrzebski. From: Glodek, G. S., G. L. Whitmire and G. Orcés V. 1976. *Rhinodoras boehlkei*, a new catfish from eastern Ecuador (Osteichthyes, Siluroidei, Doradidae). Fieldiana Zoology 70 (1): 1–11.

Rhinodoras thomersoni **Taphorn & Lilyestrom 1984** in honor of American ichthyologist Jamie E. Thomerson (1935–2015), Southern Illinois University, who introduced the senior author to the study of fishes and led his first trip to South America (he also led expedition during which holotype was collected)

Rhynchodoras

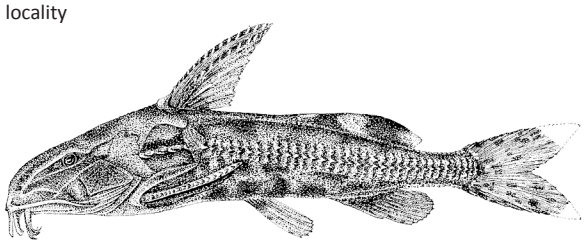
Klausewitz & Rössel 1961

rhýnchos (ῥύγχος), snout, referring to its turned-down, proboscis-like snout; *Doras*, type genus of family

Rhynchodoras castilloi **Birindelli, Sabaj Pérez & Taphorn 2007** in honor of Venezuelan biologist Otto E. Castillo G., who collected much of the type material, for his lifelong dedication to the study and stewardship of his country's rich diversity of freshwater fishes

Rhynchodoras woodsi **Glodek 1976** in honor of Loren P. Woods (1914–1979), Curator of Fishes, Field Museum of Natural History (Chicago), for numerous contributions to ichthyology

Rhynchodoras xingui **Klausewitz & Rössel 1961** of the rio Xingu, Brazil, type locality



Rhynchodoras xingui, holotype, 63 mm SL, with damaged caudal-fin lobes reconstructed. Illustration by I. Weirich. From: Klausewitz, W. and F. Rössel. 1961. *Rhynchodoras xingui*, ein bemerkenswerter neuer Wels aus Brasilien (Pisces, Siluroidea, Doradidae). Senckenbergiana Biologica 42 (1/2): 45–48.

Fimbriate Barbel Thorny Cats

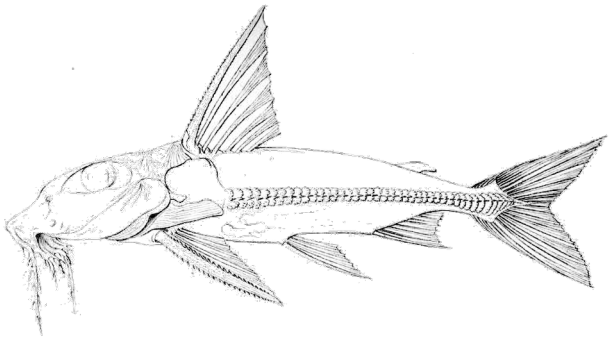
Subfamily DORADINAE

Bleeker 1858

Anduzedoras

Fernández-Yépez 1968

in honor of Pablo J. Anduze (1902–1989), Venezuelan explorer, ethnologist and medical entomologist, and later governor of Amazonas State, Venezuela, whom Fernández-Yépez said dedicated many years to practicing medicine in the jungle, and always found time to collect zoological specimens; *Doras*, type genus of family



Probably first-published full-body image (i.e., of more than just a swim bladder) of *Anduzedoras oxyrhynchus* (as *Doras lipophthalmus*, a junior synonym). From: Kner, R. 1855. Ichthyologische Beiträge. Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe 17: 92–162, Pls. 1–6.

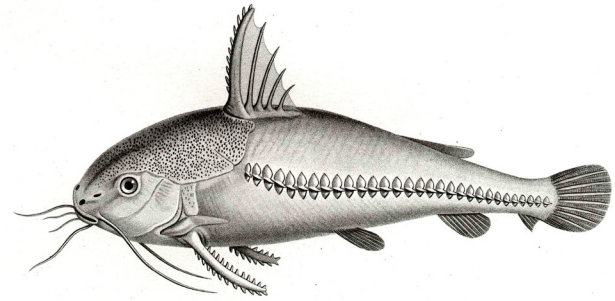
Anduzedoras oxyrhynchus **(Valenciennes 1821)** sharp-snouted, from *oxýs* (ὀξύς), sharp, and *rhýnchos* (ῥύγχος), snout, referring to compressed head with relatively pointed snout

Centrochir

Agassiz 1829

centro-, from *kéntron* (κέντρον), any sharp point; *chir*, from *cheír* (χείρ), hand (homologous to the pectoral fin), referring to its unrayed pectoral-fin spines

Centrochir crocodili **(Humboldt 1821)** of a crocodile (L. *crocodilus*), referring to its local name in Colombia, *pexe que mata el Cayman* (fish that kills caiman), referring to its sharp pectoral fins, known to kill caiman (or crocodiles) that attempt to eat it



Centrochir crocodili. From: Humboldt, F. H. A. von and A. Valenciennes. 1821. Recherches sur les poissons fluviatiles de l'Amérique Équinoxiale. *In*: Voyage de Humboldt et Bonpland, Deuxième partie. Observations de Zoologie et d'Anatomie comparée. Paris. v. 2: 145–216, Pls. 45–52.

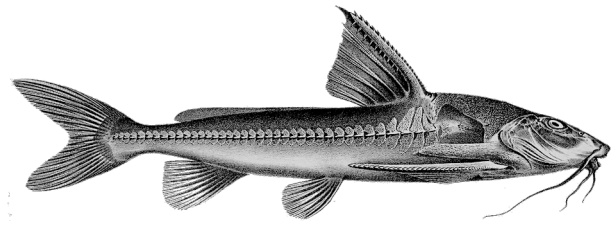
Centrodoras

Eigenmann 1925

centro-, from *kéntron* (κέντρον), any sharp point, allusion not explained, perhaps referring to dorsal spine of *C. brachiatus*, "with antrorse hooks in front, with straight to retrorse hooks behind"; *Doras*, type genus of family

Centrodoras brachiatus **(Cope 1872)** Latin for having branches like arms, presumably referring its to "very large" pectoral spines

Centrodoras hasemani **(Steindachner 1915)** in honor of American zoologist John D. Haseman (1882–1969), field collector for the Carnegie Museum of Natural History, who collected holotype



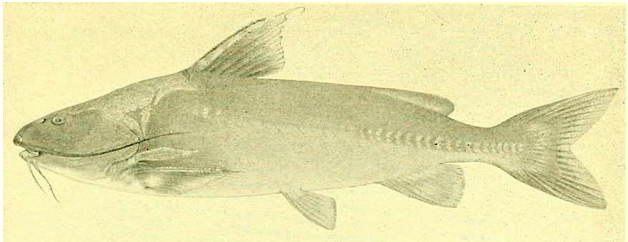
Probably first-published image of *Centrodoras brachiatus* (as *Rhinodoras amazonum*, a junior synonym). Illustration by Eduard Konopicky. From: Steindachner, F. 1875. Über einige neue brasilianische Siluroiden aus der Gruppe der Doradinen. Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe 71 (1): 138–151, Pls. 1–4.

Doraops

Schultz 1944

ṓps (ὦψ), eye or face (i.e., appearance), similar to "other members of the family Doradidae"

Doraops zuloagai **Schultz 1944** in honor of Venezuelan geologist Guillermo Zuloaga (1904–1984), assistant chief of exploration, Standard Oil Co. of Venezuela, who was largely responsible for inviting Schultz to study the fishes of the Maracaibo Basin



Doraops zuloagai, holotype, 287 mm SL. From: Schultz, L. P. 1944. The catfishes of Venezuela, with descriptions of thirty-eight new forms. Proceedings of the United States National Museum 94 (3172): 173–338, Pls. 1–14.

Doras

Lacepède 1803

dorás (δοράς), animal hide or skin, but said by Lacepède to mean cuirass (or breastplate), which were originally made of leather, probably referring to hard bony plates and/or thick, leathery skin (name does not mean "spear" as reported by others; that would be *dóry*, δόρυ)

Doras carinatus **(Linnaeus 1766)** Latin for keeled, referring to spines on midlateral scutes (which reminded Linnaeus of the longitudinal keels in "Scombris," presumably Atlantic Mackerel *Scomber scombrus*)

Doras higuchii **Sabaj Pérez & Birindelli 2008** in honor of Horácio Higuchi, Universidade de São Paulo, for his "groundbreaking contributions" to the systematics of doradid catfishes

Doras micropoeus **(Eigenmann 1912)** *micro-*, from *mikrós* (μικρός), small; *poeus*, from *poiéō* (ποιέω), to make or produce, referring to reduced or "rudimentary" anterior midlateral scutes

Doras phlyzakion **Sabaj Pérez & Birindelli 2008** *phlyzákion* (φλυζάκιον), diminutive of *phlýktaina* (φλύκταινα), blister, i.e., a small blister, referring to abundant pores on ventral surface

Doras phlyzakion, ~110 mm SL. Photo by Janses Alfredo Sampaio Zuanon. From: Sabaj Pérez, M. H. and J. L. O. Birindelli. 2008. Taxonomic revision of extant *Doras* Lacepède, 1803 (Siluriformes: Doradidae) with descriptions of three new species. Proceedings of the Academy of Natural Sciences of Philadelphia 157: 189–234.

Doras zuanoni **Sabaj Pérez & Birindelli 2008** in honor of Brazilian ichthyologist Jansen Alfredo Sampaio Zuanon, for his "extensive and valuable" contributions to the collection, taxonomy and natural history of Neotropical fishes, including discovery of this species

Hassar

Eigenmann & Eigenmann 1888

Arawak name for species of *Doras* in Guyana

Hassar affinis **(Steindachner 1881)** Latin for related, described as a variation of the closely related *H. orestis*

Hassar gabiru **Birindelli, Fayal & Wosiacki 2011** in honor of Leandro Melo de Sousa, known to his friends as "Gabiru," for his many contributions to the understanding of the Doradidae, including his M.Sc. and Ph.D. dissertations; he also helped collect part of the type series [a noun in apposition, without the genitive "*i*"]

Hassar orestis **(Steindachner 1875)** *-is*, Latin genitive singular of: American geologist Orestes Saint John (1841–1921), who collected holotype during Thayer Expedition to Brazil (1865–1866 (name was recommended by Louis Agassiz, leader of the Expedition)

Hassar shewellkeimi **Sabaj Pérez & Birindelli 2013** in honor of Shewell

Hassar gabiru, paratype, ~130 mm SL. Photo by Mark Sabaj Pérez. From: Birindelli, J. L. O., D. F. Fayal and W. B. Wosiacki. 2011. Taxonomic revision of thorny catfish genus *Hassar* (Siluriformes: Doradidae). Neotropical Ichthyology 9 (3): 515–542.

"Bud" DeBenneville Keim (1918–2014), electrical engineer, World War II veteran, and nephew of Henry Weed Fowler (1878–1965), the first full-time curator of fishes at the Academy of Natural Sciences of Philadelphia, for his generous support of Academy ichthyology, including the preservation of Fowler's legacy and the stewardship of his uncle's fishes

Hassar wilderi **Kindle 1895** in honor of American zoologist Burt Green Wilder (1841–1925), Cornell University, who sent the collection made by C. F. Hartt in Brazil to Carl H. Eigenmann for identification (and then transmitted to Kindle for final determination)

Hemidoras

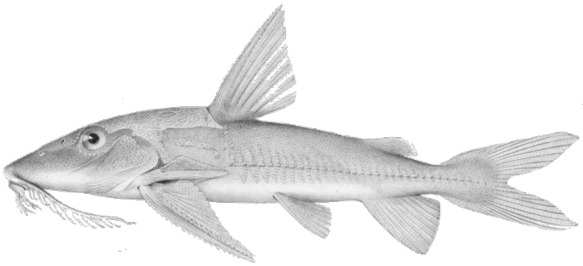
Bleeker 1858

hemi-, from *hḗmisys* (ἥμισυς), half, referring to species related to (and previously placed in) *Doras* but which lack teeth in the jaws and palate

Hemidoras boulengeri **Steindachner 1915** in honor of Belgian-born British ichthyologist-herpetologist Georges A. Boulenger (1858–1937), British Museum (Natural History)

Hemidoras morei **(Steindachner 1881)** patronym not identified nor can identity be inferred based on available information; could this be named after the same person (also unknown) Steindachner honored with the bryconid name *Brycon moorei* (note spelling) in 1878?

Hemidoras morrisi **Eigenmann 1925** in honor of Percival Morris, who collected holotype and served as Eigenmann's assistant, majordomo and interpreter in the Iquitos region of Peru



Hemidoras morrisi. Illustration by W. S. Atkinson. See *Hypodoras forficulatus* caption for source.

Hemidoras stenopeltis **(Kner 1855)** *sténos* (στένος), narrow; *peltis*, from *péltē* (πέλτη), small shield, probably referring to long and narrow humeral process

Hemidoras stuebelii **(Steindachner 1882)** in honor of German geologist-vulcanologist Alphons Stübel (1835–1904), who collected holotype

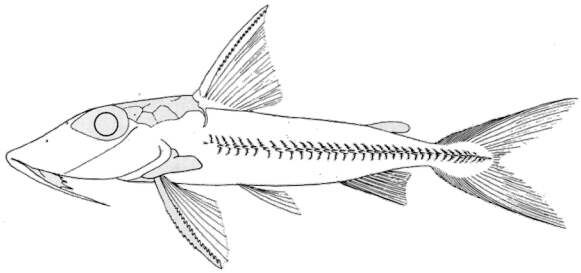
Leptodoras

Boulenger 1898

leptós (λεπτός), thin or slender, referring to longer bodies (with longer anal fins) of *L. acipenserinus* and *L. juruensis* compared with *Oxydoras*; *Doras*, type genus of family

Leptodoras acipenserinus **(Günther 1868)** *-inus* (L.), adjectival suffix: *Acipenser*, sturgeon genus, i.e., sturgeon-like, presumably referring to "peculiar" shape of head and snout, "elongate triangular, pointed, and much depressed in its anterior portion"

Leptodoras cataniai **Sabaj Pérez 2005** in honor of David Catania, for his dedicated service to the ichthyological community since 1985 as Collec-



Leptodoras praelongus, holotype, 116 mm SL. From: Myers, G. S. and S. H. Weitzman. 1956. Two new Brazilian fresh water fishes. Stanford Ichthyological Bulletin 7 (1): 1–4.

tion Manager of Fishes, California Academy of Sciences

Leptodoras copei **(Fernández-Yépez 1968)** in honor of American zoologist-paleontologist Edward Drinker Cope (1840–1897), for many "excellent" contributions to the study of Neotropical fishes, including doradid catfishes

Leptodoras hasemani **(Steindachner 1915)** in honor of American zoologist John D. Haseman (1882–1969), Carl Eigenmann's student and field collector for the Carnegie Museum of Natural History, who collected holotype

Leptodoras juruensis **Boulenger 1898** *-ensis*, Latin suffix denoting place: río Jurua, Brazil, type locality

Leptodoras linnelli **Eigenmann 1912** in honor of George Linnell, Essequibo Exploring Company, who provided Eigenmann with boats and crewmen for his expedition to British Guiana

Leptodoras marki **Birindelli & Sousa 2010** in honor of Mark Sabaj Pérez (b. 1969), Collection Manager of Fishes at the Illinois Natural History Survey (1995–2000) and the Academy of Natural Sciences of Philadelphia (2000–present), for dedicated service to the ichthyological community, and for encouraging the study of doradid catfishes as a co-principal investigator of the All Catfish Species Inventory

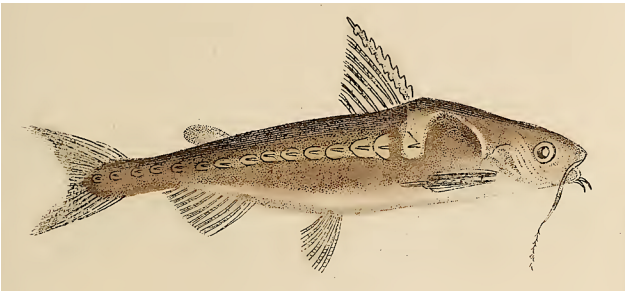
Leptodoras myersi **Böhlke 1970** in honor of Böhlke's professor and good friend George S. Myers (1905–1985), ichthyologist, Stanford University

Leptodoras nelsoni **Sabaj Pérez 2005** in honor of Douglas W. Nelson, for "dedicated" service to the ichthyological community since 1993 as Collection Manager of Fishes, University of Michigan Museum of Zoology

Leptodoras oyakawai **Birindelli, Sousa & Sabaj Pérez 2008** in honor of Osvaldo Takeshi Oyakawa, for dedicated service to the ichthyological community since 1989 as Collection Manager of the Fish Collection at the Museu de Zoologia da Universidade de São Paulo

Leptodoras praelongus **(Myers & Weitzman 1956)** *prae-* (L.), in front of; *longus* (L.), long, presumably referring to longer snout compared with *Hassar lipophthalmus* (=*Anduzedoras oxyrhynchus*)

Leptodoras rogersae **Sabaj Pérez 2005** in honor of Mary Ann Rogers, for her dedicated service to the ichthyological community since 1988 as Collection Manager of Fishes, Field Museum of Natural History (Chicago)



Doras (now *Lithodoras*) *dorsalis,* illustration that predated its 1840 description. From: Cuvier, G. 1837. The animal kingdom, arranged according to its organization, serving as a foundation for the natural history of animals, and an introduction to comparative anatomy. Vol. II. Reptiles-Fishes. London: J. Henderson. iii–xvi + 1–412 + xvii–xxxv, Pls. (fishes) 1–80.

Lithodoras

Bleeker 1862

líthos (λῖθος), stone, presumably referring to heavily armored body, including belly; *Doras*, type genus of family

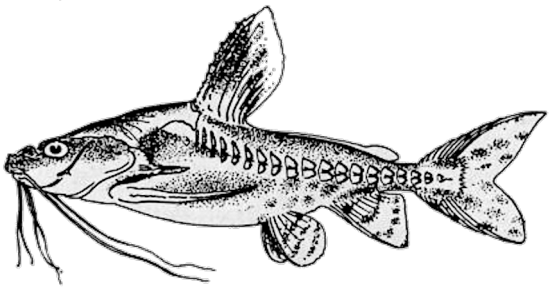
Lithodoras dorsalis **(Valenciennes 1840)** Latin for of the back, presumably referring to 5–6 oblong plates between dorsal and adipose fins

Megalodoras

Eigenmann 1925

megalo-, from *mégas* (μέγας), big, presumably referring to large size of *M. uranoscopus* (up to 60 cm SL and 4.8 kg); *Doras*, type genus of family

Megalodoras guayoensis **(Fernández-Yépez 1968)** *-ensis*, Latin suffix denoting place: Caño de Guayo, Delta Amacuro, Estado Delta, Venezuela, type locality



Megalodoras guayoensis. See *Scorpiodoras bolivarensis* caption for source.

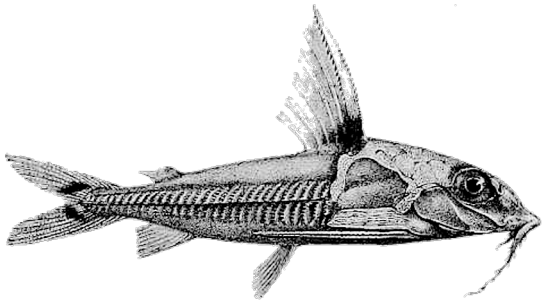
Megalodoras uranoscopus **(Eigenmann & Eigenmann 1888)** *ouranós* (οὐρανός), heaven or sky; *skopós* (σκοπός), looker, contemplator or viewer, "eye more superior [on top of head] than lateral [on sides]"

Nemadoras

Eigenmann 1925

nḗma (νῆμα), thread, referring to "simple" (vs. fringed) maxillary barbels; *Doras*, type genus of family

Nemadoras elongatus **(Boulenger 1898)** Latin for prolonged, referring to elongate body (depth 5 times in TL) compared with presumed congeners at the time



Nemadoras elongatus, 105 mm TL. Illustration by James Green. From: Boulenger, G. A. 1898. On a collection of fishes from the Rio Jurua, Brazil. Transactions of the Zoological Society of London 14 (7): 421–428, Pls. 39–42.

Nemadoras hemipeltis **(Eigenmann 1925)** *hemi-*, from *hḗmisys* (ἥμισυς), half; *peltis*, from *péltē* (πέλτη), small shield, allusion not explained, perhaps referring to fontanel "not continued as a groove to the dorsal plate"

Nemadoras humeralis **(Kner 1855)** Latin for humeral, presumably referring to rough and very wide humeral process, its greatest width equal to the eye

Orinocodoras

Myers 1927

Orinoco, referring to Orinoco River basin, Venezuela, type locality of *O. eigenmanni*; *Doras*, type genus of family

Orinocodoras eigenmanni, holotype, CAS-SU 58747. © California Academy of Sciences.

Orinocodoras eigenmanni **Myers 1927** in honor of German-born American ichthyologist Carl H. Eigenmann (1863–1927), "who recently [1925] placed the classification of the Doradidae on a firm foundation"

Ossancora

Sabaj Pérez & Birindelli 2011

oss (L.), bone; *ancora* (L.), anchor, referring to shape and articulation of pectoral spine and posterior cleithral and coracoid processes, which resemble shank and flukes, respectively, of a Danforth anchor

Ossancora asterophysa **Birindelli & Sabaj Pérez 2011** *astḗr* (ἀστήρ), star; *phýsa* (φύσα), bladder, referring to proliferation of diverticula along periphery of swim bladder

Ossancora asterophysa, 58.4 mm SL. Photo by Leandro Sousa. From: Birindelli, J. L. O. and M. H. Sabaj Pérez. 2011. *Ossancora*, a new genus of thorny catfish (Teleostei: Siluriformes: Doradidae) with description of one new species. Proceedings of the Academy of Natural Sciences of Philadelphia 161: 117–152.

Ossancora eigenmanni **(Boulenger 1895)** in honor of German-born American ichthyologist Carl H. Eigenmann (1863–1927), author of an "excellent" synopsis (1890) of South American catfishes

Ossancora fimbriata **(Kner 1855)** Latin for fringed, probably referring to fimbriae present on maxillary and mental barbels (may also refer to many diverticula on swim bladder)

Ossancora punctata **(Kner 1853)** Latin for spotted, presumably referring to dark dots conspicuously evident on head and body of syntypes

Oxydoras

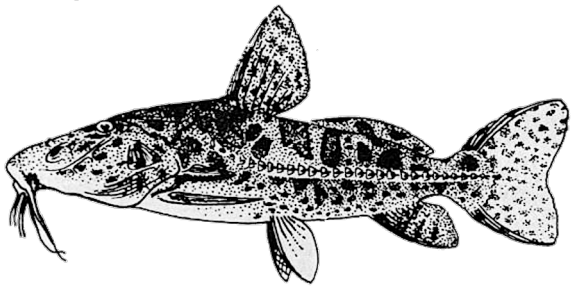
Kner 1855

oxýs (ὀξύς), sharp or pointed, allusion not explained, perhaps referring to "conically elongated" (translation) snouts of *O. kneri* (reported as *O. niger*) and *O.* (=*Hemidoras*) *stenopeltis*; *Doras*, type genus of family

Oxydoras kneri **Bleeker 1862** in honor of Austrian ichthyologist Rudolph Kner (1810–1869), who described this catfish under the name *Doras* (*Oxydoras*) *niger* in 1855

Oxydoras niger **(Valenciennes 1821)** Latin for dark or black, presumably referring to its dark-brown or black coloration

Oxydoras sifontesi **Fernández-Yépez 1968** in memory of Venezuelan meteorologist-hydrologist Ernesto Sifontes (1881–1959), who devoted much of his life to studying the Río Orinoco, where this catfish occurs



Oxydoras sifontesi. See *Scorpiodoras bolivarensis* caption for source.

Platydoras

Bleeker 1862

platýs (πλατύς), flat or broad, presumably referring to depressed head; *Doras*, type genus of family

Platydoras armatulus **(Valenciennes 1840)** diminutive of *armatus* (L.), armed with a weapon, from *armadillo*, Spanish for "little armored one," apparently its local name in Brazil, probably referring to bony shields along middle of body, covered with backwards-pointing spines

Platydoras birindellii **Sousa, Chaves, Akama, Zuanon & Sabaj 2018** in honor of colleague and friend José Luís O. Birindelli (b. 1979), Universidade de São Paulo, "for enriching our knowledge of doradid catfishes and inspiring the next generation of Neotropical ichthyologists with his enthusiasm and integrity"

Platydoras birindellii in natural habitat. Photo by Oliver Lucanus. From: Sousa, L. M. de, M. S. Chaves, A. Akama, J. Zuanon and M. H. Sabaj Pérez. 2018. *Platydoras birindellii*, new species of striped raphael catfish (Siluriformes: Doradidae) from the Xingu Basin, Brazil. Proceedings of the Academy of Natural Sciences of Philadelphia 166 (1) [for 2017]: 1–13.

Platydoras brachylecis **Piorski, Garavello, Arce H. & Sabaj Pérez 2008** *brachýs* (βραχύς), short; *lekís* (λεκίς) or lékos (λέκος) dish, pot or pan (authors say plate or dish), referring to its relatively shallow midlateral scutes

Platydoras costatus **(Linnaeus 1758)** Latin for ribbed, possibly referring to rib-like appearance of longitudinal bony plates

Platydoras hancockii **(Valenciennes 1840)** in honor of British naturalist (and father of modern taxidermy) John Hancock (1808–1890); in 1829 he reported how this catfish, under the name *Doras* (now *Platydoras*) *costatus*, can crawl on land during droughts in search of water

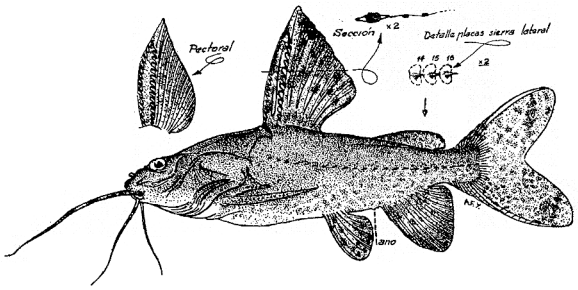
Pterodoras

Bleeker 1862

pterus, from *pterón* (πτερόν) or *ptéryx* (πτέρυξ), fin, referring to forked caudal fin; *Doras*, type genus of family

Pterodoras granulosus **(Valenciennes 1821)** *granum* (L.), seed or grain; *-osus* (L.), suffix connoting fullness, presumably referring to 23–28 shallow lateral plates (or scutes) along length of body, which may give the scaleless skin a granulated appearance

Pterodoras rivasi **(Fernández-Yépez 1950)** in honor of Luis A. Rivas L. (no other information available), who collected fishes with Fernández-Yépez and assisted with the description of this species



Pterodoras rivasi. Illustration by Augustín Fernández-Yépez. From: Fernández-Yépez, A. 1950. Un nuevo pez de la familia Doradidae. Memoria de la Sociedad de Ciencias Naturales La Salle 10 (27): 195–198.

Tenellus cristinae in aquaria. Photos by Hans-Georg Evers. From: Sabaj Pérez, M. H., M. Arce H., L. M. de Sousa and J. L. O. Birindelli. 2014. *Nemadoras cristinae*, new species of thorny catfish (Siluriformes: Doradidae) with redescriptions of its congeners. Proceedings of the Academy of Natural Sciences of Philadelphia 163: 133–178.

Tenellus

Birindelli 2014

Latin for somewhat tender or delicate, referring to delicate appearance of all included species

***Tenellus cristinae* (Sabaj Pérez, Arce H., Sousa & Birindelli 2014)** in honor of Maria Cristina Sabaj Pérez, teacher at Friends' Central School (Wynnewood, Pennsylvania, USA), for her contributions to the collection of the type series and to the well-being of the senior author (her husband)

***Tenellus leporhinus* (Eigenmann 1912)** *lepo-*, from *lepis* (L.), hare or rabbit; *rhinós* (ῥινός), genitive of *rhís* (ῥίς), nose, referring to its "peculiar leporine snout"

***Tenellus ternetzi* (Eigenmann 1925)** in honor of Swiss-born ichthyologist and naturalist Carl Ternetz (1870–1928), who collected holotype

***Tenellus trimaculatus* (Boulenger 1898)** *tri-* (L.), three; *maculatus* (L.), spotted, referring to black spot on dorsal fin and at base of each caudal-fin lobe

Trachydoras

Eigenmann 1925

trachýs (τραχύς), jagged or rough, referring to granular opercle, preopercle and coracoid-process; *Doras*, type genus of family

***Trachydoras brevis* (Kner 1853)** Latin for short, referring to its short (length) but high (height) body

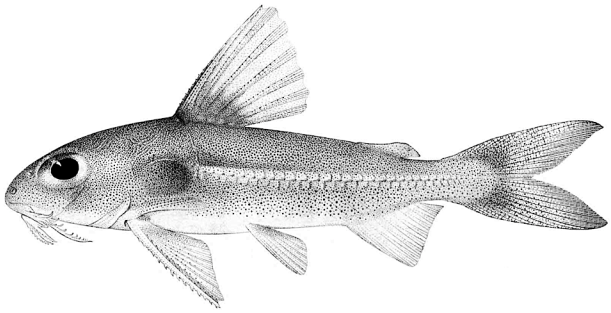
***Trachydoras gepharti* Sabaj & Arce H. 2017** in honor of George W. Gephart, Jr., President & CEO of the Academy of Natural Sciences of Drexel University from 2010 to 2017, for his "bold, deft and heartfelt leadership of a Glorious Enterprise into its third century" ["Glorious Enterprise" alludes to the title of a 2012 book about the Academy, which is America's oldest natural history museum]

***Trachydoras microstomus* (Eigenmann 1912)** small-mouthed, from *mikrós* (μικρός), small, and *stóma* (στόμα), mouth, its width "equal to half the distance between gill-openings"

***Trachydoras nattereri* (Steindachner 1881)** patronym not identified but probably in honor of Austrian naturalist Johann Natterer (1787–1843), who explored South America and collected specimens for 18 years

***Trachydoras paraguayensis* (Eigenmann & Ward 1907)** *-ensis*, Latin suffix denoting place: Corumba, Paraguay, type locality

***Trachydoras steindachneri* (Perugia 1897)** patronym not identified but clearly in honor of Austrian ichthyologist Franz Steindachner (1834–1919), who described several doradid taxa



Trachydoras microstomus, holotype. From: Eigenmann, C. H. 1912. The freshwater fishes of British Guiana, including a study of the ecological grouping of species, and the relation of the fauna of the plateau to that of the lowlands. Memoirs of the Carnegie Museum 5 (1): i–xxii + 1–578, Pls. 1–103.