

The ETYFish Project

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COMMENTS: 

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Order CICHLIFORMES (part 6 of 10)

Family CICHLIDAE Cichlids (part 6 of 7)

Subfamily Cichlinae American Cichlids (*Acarichthys* through *Cryptoheros*)

***Acarichthys* Eigenmann 1912**

Acara (= *Astronotus*, from *acará*, Tupí-Guaraní word for cichlids), original genus of *A. heckelii*; *ichthys*, fish

***Acarichthys heckelii* (Müller & Troschel 1849)**

in honor of Austrian ichthyologist Johann Jakob Heckel (1790-1857), who proposed the original genus, *Acara* (= *Astronotus*) in 1840, and was the first to seriously study cichlids and revise the family

***Acaronia* Myers 1940**

-*ia*, belonging to: *Acara* (= *Astronotus*, from *acará*, Tupí-Guaraní word for cichlids), original genus of *A. nassa* [replacement name for *Acaropsis* Steindachner 1875, preoccupied by *Acaropsis* Moquin-Tandon 1863 in Arachnida]

***Acaronia nassa* (Heckel 1840)**

wicker basket or fish trap, presumably based on its local name, *Bocca de Juquia*, meaning “fish trap mouth,” referring to its protractile jaws and gape-and-suck feeding strategy

***Acaronia vultuosa* Kullander 1989**

full of facial expressions or grimaces, referring to diagnostic conspicuous black markings on head

***Aequidens* Eigenmann & Bray 1894**

aequus, same or equal; *dens*, teeth, referring to even-sized teeth of *A. tetramerus*, proposed as a subgenus of *Astronotus*, which has enlarged anterior teeth

***Aequidens chimantanus* Inger 1956**

-*anus*, belonging to: Chimantá-tepui, Venezuela, where type locality (Río Abácapa, elevation 396 m) is situated

***Aequidens diadema* (Heckel 1840)**

crowned, presumably referring to brown band between eyes on top of head

***Aequidens epae* Kullander 1995**

of EPA, acronym for Expedação Permanente da Amazônia of the Museu de Zoologia da Universidade de São Paulo, for the “importance” of the “substantial” collections of Amazonian freshwater fishes they amassed

***Aequidens gerciliae* Kullander 1995**

in honor of fisheries biologist Maria Gercília Mota Soares, Federal University of Amazonas, who first studied this cichlid in 1980

***Aequidens mauesanus* Kullander 1997**

-*anus*, belonging to: Rio Maués drainage, Amazonas, Brazil, type locality

***Aequidens metae* Eigenmann 1922**

of Río Meta, Orinoco System, Colombia, type locality

***Aequidens michaeli* Kullander 1995**

in honor of conservation ecologist Michael Goulding (b. 1950), who collected type, a “distinguished student” of Amazonian fishes

***Aequidens pallidus* (Heckel 1840)**

pale, presumably referring to its fins, which “have the basic [yellowish] color of the body [in spirits], only paler” (translation), and/or to faded color of preserved holotype in general

***Aequidens paloemeuensis* Kullander & Nijssen 1989**

-*ensis*, suffix denoting place: Paloemeu River, Marowijne River drainage, Suriname, where it is endemic

***Aequidens patricki* Kullander 1984**

in honor of Swiss ichthyologist and aquarist Patrick de Rham (1936-2022), who helped collect holotype

***Aequidens pirilampo* Oliveira, Tencatt, Deprá, Britzke, Oliveira & da Graça 2024**

Portuguese for firefly, a common insect where this cichlid occurs, which emit an intense green light, reminiscent of the iridescent green on the cichlid’s body

***Aequidens plagiozonatus* Kullander 1984**

plagios, oblique; *zonatus*, girdled, referring to distinct, obliquely slanting bars on sides

***Aequidens potaroensis* Eigenmann 1912**

-ensis, suffix denoting place: Potaro River, Guyana, type locality

***Aequidens rondoni* (Miranda Ribeiro 1918)**

in honor of Cândido Rondon (1865-1958), Brazilian army engineer and explorer, whose Rondon Commission to install telegraph poles from Mato Grosso to Amazonas included expedition that collected type

***Aequidens superomaculatum* Hernández-Acevedo, Machado-Allison & Lasso 2015**

super, above; *maculatum*, spot, referring to dark blotch positioned high on sides of body

***Aequidens tetramerus* (Heckel 1840)**

tetra, four; *meros*, part, referring to four distinct rows of scales running slantwise across the cheek (compared to three rows in *A. viridis*)

***Aequidens tubicen* Kullander & Ferreira 1991**

trumpeter, referring to Rio Trombetas drainage of Brazil (*trombetas* is Portuguese for trumpets), where it is endemic

***Aequidens viridis* (Heckel 1840)**

green, referring to any or all of the following colors in life: green head and back, blue-green on sides of head near nose, gray-green forehead, and bright green bands on sides

***Amatitlania* Schmitter-Soto 2007**

-ia, belonging to: Lake Amatitlán, Guatemala, type locality of type species, *A. nigrofasciata* (“*Amatitlán*” means “a place abundant in amate” in Nahuatl, amate being a kind of rustic paper made from the bark of *Ficus petiolaris* or *F. indica*)

***Amatitlania altolava* (Allgayer 2001)**

altus, high; *flavus*, yellow, referring to higher body with more yellow compared to *A. nanoluteus*, its closest relative

***Amatitlania coatepeque* Schmitter-Soto 2007**

named for Lake Coatepeque, El Salvador, only known area of occurrence (“Coatepeque” is likely formed from the Nahuatl *cóatl*, snake, and *tépetl*, mount, i.e., “mount of the snake”)

***Amatitlania kanna* Schmitter-Soto 2007**

Greek for reed, referring to Río Cañaveral (=reedbed), Panama, where this species was first detected

***Amatitlania myrnae* (Loiselle 1997)**

in honor of Myrna I. Lopez Sanchez de Bussing (b. 1937), Director, Museo de Zoología, Universidad de Costa Rica (and wife of ichthyologist William A. Bussing; see *Cribroheros bussingi*, below), a “dedicated and enthusiastic student of Central American fishes whose invaluable assistance [e.g., applying for permits] greatly contributed to the success of the Atlantic Coast Cichlid’s collecting trip to Costa Rica,” during which type was collected

***Amatitlania nanolutea* (Allgayer 1994)**

nanus, dwarf, referring to small body size of adults (<7 cm SL); *luteus*, yellow, referring to predominant body and fin color in life

***Amatitlania nigrofasciata* (Günther 1867)**

nigro-, black; *fasciatus*, banded, referring to nine deep-black crossbands on body (the “prison” stripes behind its common name, Convict Cichlid)

***Amatitlania sajica* (Bussing 1974)**

acronym utilizing initial two letters of given name and paternal and maternal surnames of Salvador Jiménez Canossa (1922-1986), Director of the Library of Congress of Costa Rica, a “friend and experienced field collector” who accompanied Bussing on most of his early collecting trips in Costa Rica, and “through his enthusiasm and curiosity of nature, contributed greatly to their success”

***Amatitlania septemfasciata* (Regan 1908)**

septem, seven; *fasciata*, banded, referring to seven “vertical bars of equal strength” crossing body

***Amatitlania siquia* Schmitter-Soto 2007**

Siquia, meaning “avocado” in the Miskito dialect Ulwa, name of river chosen as type locality in Nicaragua

***Amphilophus* Agassiz 1859**

amphi-, on both sides; *lophos*, mane or crest, allusion not explained, probably referring to its hyperdeveloped lips, described as a “large triangular lobe projecting above the upper and below the lower jaw” of *A. froebelii* (= *labiatus*), “like the nasal appendages of some bats”; name could also refer to nuchal hump (large on males, smaller on females) of breeding adults

***Amphilophus amarillo* Stauffer & McKaye 2002**

Spanish word for yellow, referring to yellow highlights in its coloration

***Amphilophus astorquii* Stauffer, McCrary & Black 2008**

in honor of Ignacio Astorqui (1923-1994), a Jesuit priest, teacher and naturalist who researched the freshwater fishes of Nicaragua (where this cichlid is endemic)

- Amphilophus chancho* Stauffer, McCrary & Black 2008**
Spanish for pig, local name for this cichlid at Lake Apoyo, Nicaragua
- Amphilophus citrinellus* (Günther 1864)**
lemon-colored, referring to “nearly uniform” body coloration, sometimes with a black back, and sometimes with black irregular blotches on vertical fins
- Amphilophus erythraeus* (Günther 1867)**
-*eus*, having the quality of: *erythros*, red, referring to its deep orange color
- Amphilophus flaveolus* Stauffer, McCrary & Black 2008**
yellowish, referring to its “yellow-base color throughout”
- Amphilophus globosus* Geiger, McCrary & Stauffer 2010**
round or globated, referring to general appearance of this high-bodied cichlid
- Amphilophus hogaboomorum* (Carr & Giovannoli 1950)**
-*orum*, commemorative suffix, plural: in honor of George (1929-1950) and Peter (1931-1992) Hogaboom, who helped collect type, the authors’ “companions on many profitable collecting trips” in Honduras
- Amphilophus istlanus* (Jordan & Snyder 1899)**
-*anus*, belonging to: Río Ixtla at Puente de Ixtla, Morelos, México, type locality
- Amphilophus labiatus* (Günther 1864)**
lipped, referring to “much enlarged” anterior portions of both upper and lower lips, “each forming a moveable subtriangular flap”
- Amphilophus lyonsi* (Gosse 1966)**
in honor of E. Lyons, Belgium’s ambassador to Panama (type was collected in Costa Rica during King Léopold’s collecting trip to Panama and Costa Rica)
- Amphilophus sagittae* Stauffer & McKaye 2002**
arrow, referring to its slender shape when compared to congeners found in Lake Xiloá (Atlantic slope of Nicaragua, type locality)
- Amphilophus superciliosus* Geiger, McCrary & Stauffer 2010**
eyebrow or “frowning being,” referring to strongly developed portion of the neurocranium that borders eye cavity, giving this cichlid the appearance of having eyebrows and a frowning countenance
- Amphilophus tolteca* Recknagel, Kusche, Elmer & Meyer 2013**
named for Toltec, a pre-Columbian culture in Central America that was probably responsible for a mural painting of a feathered serpent, called Quetzalcoatl, close beside Lake Asososca Managua (where this cichlid is endemic); according to a folk tale, the deist pictogram guards the lake
- Amphilophus trimaculatus* (Günther 1867)**
tri-, three; *maculatus*, spotted, referring to three black spots: above origin of lateral line, middle of side, and above end of lateral line
- Amphilophus viridis* Recknagel, Kusche, Elmer & Meyer 2013**
green, referring to its prominent green ground coloration
- Amphilophus xiloaensis* Stauffer & McKaye 2002**
-*ensis*, suffix denoting place: Lake Xiloá, Atlantic slope of Nicaragua, type locality
- Amphilophus zaliosus* (Barlow 1976)**
zale, wave born, referring to its open-water habitat; *isosus*, like an arrow, referring to “unusually” slender body
- Andinoacara Musilová, Říčan & Novák 2009***
andino-, referring to Andes mountain chain, where this genus is distributed on both cis- and trans-andean slopes and in the intervening valleys of the Northern Andes; *acará*, Tupí-Guaraní word for cichlids
- Andinoacara biseriatus* (Regan 1913)**
bi-, two; *seriatus*, rowed, allusion not explained, presumably referring to “dark longitudinal stripes or series of spots along the rows of scales”
- Andinoacara blombergi* Wijkmark, Kullander & Barriga Salazar 2012**
in honor of the life’s work of Swedish explorer, writer, photographer, and filmmaker Rolf Blomberg (1912-1996), who made several expeditions to Ecuador, and eventually made Quito, Ecuador (near type locality), his home
- Andinoacara coeruleopunctatus* (Kner 1863)**
coeruleo-, blue; *punctatus*, spotted, referring to blue dots scattered on the sides
- Andinoacara latifrons* (Steindachner 1878)**
latus, wide; *frons*, forehead, referring to its wide, scaleless forehead

***Andinoacara pulcher* (Gill 1858)**

beautiful, presumably reflecting Gill's opinion about its color, described as olive-green with "sky-blue" lines across cheeks and preopercula

***Andinoacara rivulatus* (Günther 1860)**

rivulated, i.e., marked by irregular streaks, referring to "oblique, waving, bluish, shining silvery streaks" on preorbital and cheeks

***Andinoacara sapayensis* (Regan 1903)**

-ensis, suffix denoting place: Río Sapayo, Ecuador, type locality (also occurs in Colombia)

***Andinoacara stalsbergi* Musilová, Schindler & Staeck 2009**

in honor of Norwegian cichlid aquarist Alf Stalsberg (1948-2022), who collected holotype, for his "longstanding commitment to increase the knowledge about cichlid fishes"

***Apistogramma* Regan 1913**

apistos, inconstant; *gramme*, line, allusion not explained, presumably referring to variably developed lateral lines, largely represented only by pored scales; replacement name for *Heterogramma* Regan 1906 (preoccupied in butterflies), wherein Regan described the two lateral lines, "the upper running obliquely upwards to the spinous dorsal fin, from which, if complete, it is separated by not more than 1 series of scales for most of its course; posterior part of upper lateral line and the lower line sometimes wanting"

***Apistogramma acrensis* Staeck 2003**

-ensis, suffix denoting place: Rio Acre basin, Brazil and Bolivia, where it is endemic

***Apistogramma agassizii* (Steindachner 1875)**

in honor of zoologist-geologist Louis Agassiz (1807-1873), at the time the leading authority on Brazilian fishes, who led the Thayer Expedition (1865-1866) to Brazil, which provided Steindachner with many fishes to study, including type of this one

***Apistogramma aguarico* Römer & Hahn 2013**

named for the río Aguarico system, Ecuador, only known area of occurrence

***Apistogramma alacrina* Kullander 2004**

ala or *axilla*, armpit; *crinis*, hair, referring to dark lining of pectoral-fin base, which resembles dark armpit hair

***Apistogramma allpahuayo* Römer, Beninde, Duponchelle, Díaz, Ortega, Hahn, Soares, Díaz Cachay, García Dávila, Cornejo & Renno 2012**

referring to type locality, a small brook feeding Quebrada Allpahuayo within the Reserva Nacional Allpahuayo Mishana (Loreto, Peru)

***Apistogramma amoena* (Cope 1872)**

Latin for pleasant or delightful, allusion not explained, perhaps referring to "blue spots separated by yellow line" on cheeks and operculum [treated as a *species inquirenda* by some workers, provisionally included here]

***Apistogramma angayuara* Kullander & Ferreira 2005**

Brazilian Lingua Geral adjective meaning skinny or thin, referring to its slender shape

***Apistogramma arua* Römer & Warzel 1998**

referring to type locality, 2.5 km upstream of village of Arua in a small right-bank affluent of Rio Arua, tributary of Rio Arapiuns, Pará, Brazil

***Apistogramma atahualpa* Römer 1997**

Atahualpa, the last ruling Inca, who was strangled in 1533 on the order of the gold-hungry Spanish conquistador Pizarro; this murder is a "perfect metaphor for the continuing destruction of the cultures of the indigenous peoples of South America and destruction of their environment by 'modern' man" [a noun in apposition, without the patronymic "i"]

***Apistogramma baenschi* Römer, Hahn, Römer, Soares & Wöhler 2004**

in honor of Römer's friend, Hans A. Baensch (1941-2016), publisher of the "conceptually groundbreaking" (translation) series of Mergus aquarium-fish atlases, including two volumes on cichlids written by Römer

***Apistogramma barlowi* Römer & Hahn 2008**

in honor of George W. Barlow (1929-2007), "one of the most productive and notably leading behavioral ichthyologists of the last decades," among the first to "seriously discuss consequences of Environmental Sex Determination in *Apistogramma* species with [Römer] in the 1990s, and, of course, noticed the potential behavioural and socio-biological impact of this fascinating mechanism for individual female as well as species reactions on environmental changes"; his "comments, always constructive and mostly humorous, have influenced the work of numerous ichthyologists, including the authors of this paper"

***Apistogramma bitaeniata* Pellegrin 1936**

bi-, two; *taeniata*, striped or banded, referring to black longitudinal stripe from top of branchial cleft to end of caudal peduncle, and a second (less defined) parallel stripe running from axil of pectoral fin to lower edge of

caudal peduncle

***Apistogramma borellii* (Regan 1906)**

in honor of French-born Italian zoologist Alfredo Borelli (1858-1943), Università di Torino, who led three expeditions to South America and collected many animals, including holotype of this one

***Apistogramma brevis* Kullander 1980**

short, referring to its size compared to congeners also found at Uaupés (Amazonas, Brazil), type locality

***Apistogramma cacatuoides* Hoedeman 1951**

-oides, having the form of: *Cacatua* (cockatoo bird genus), allusion not explained, probably referring to similarity of produced dorsal-fin lappets with the produced head feathers of the cockatoo

***Apistogramma caetei* Kullander 1980**

of the rio Caeté (Bragança, Pará, Brazil), into which type locality (an unnamed igarapé, or canal) probably flows

***Apistogramma caudomaculata* Mesa S. & Lasso 2011**

caudo-, tail; *maculata*, spotted, referring to transversely elongate spot on caudal fin

***Apistogramma cinilabra* Römer, Duponchelle, Diaz, Davilla, Sirvas, Catchay & Renno 2011**

cineris, ashes, or *cinereus*, gray; *labrum*, lip, referring to light ash-grey lips exhibited by adult territorial males in aggression and during mating displays

***Apistogramma commbrae* (Regan 1906)**

misinterpretation of "*corumbae*," a name Eigenmann had intended for the species and communicated to Regan in a handwritten letter, referring to Corumbá, Mato Grosso, Brazil, the collection locality of Eigenmann's specimen (but not Regan's)

***Apistogramma cruzi* Kullander 1986**

in honor of José Cruz Rodriguez, "motorista and skilled volunteer co-collector on visits both to Pebas in 1981 and Mazan in 1984, in recognition of his tireless help on those trips which added considerably to the inventory of the Peruvian ichthyofauna"

***Apistogramma diplotaenia* Kullander 1987**

diplos, double; *taenia*, stripe, referring to two dark bands along sides that converge anteriorly and posteriorly

***Apistogramma eleutheria* Varella & Britzke 2016**

Greek for freedom, referring to the rio Treze de Maio (Thirteenth of May), Pará, Brazil (type locality), commemorating the day in 1888 in which Princess Isabel signed the "Áurea" law, marking the official end of slavery in Brazil

***Apistogramma elizabethae* Kullander 1980**

in honor of Elizabeth Agassiz (1822-1907), who joined her husband Louis Agassiz (1807-1873) on the Thayer Expedition (1865-1866) to Brazil and collaborated with him on an 1868 book about the journey; in addition, the name reflects this cichlid's similarity to *A. agassizii*



Apistogramma erythrura. From: Staeck, W. and I. Schindler. 2008. *Apistogramma erythrura* sp. n. – a new geophagine dwarf cichlid (Teleostei: Perciformes: Cichlidae) from the río Mamoré drainage in Bolivia. *Vertebrate Zoology* v. 58 (no. 2): 197-206.

Apistogramma eremnopyge Ready & Kullander 2004

eremnos, black, swarthy, or dark; *pyge*, rump or buttocks, referring to identifying mark of a dark blotch on lower caudal peduncle

Apistogramma erythrura Staeck & Schindler 2008

erythros, red; *oura*, tail, referring to conspicuous color of caudal fin in most adult males

Apistogramma eunotus Kullander 1981

eu-, well; *notos*, back, referring to very high-backed appearance of large males

Apistogramma feconat Römer, Soares, Dávila, Duponchelle, Renno & Hahn 2015

named for the Federation of the Native Communities of the Tigre (FECONAT), for its struggle to protect the environment of tribal lands in the Rio Tigre drainage of Peru (where this cichlid occurs) from the impacts of modern society; the “ongoing battle for Indian civil rights by FECONAT against powerful industrial opponents has repeatedly brought severe environmental problems to public awareness”

Apistogramma flabellicauda Mesa S. & Lasso 2011

flabellum, fan; *cauda*, tail, referring to fan-like pattern of transverse bands on caudal fin

Apistogramma flavipedunculata Varella & Britzke 2016

flavis, yellow; *pedunculatus*, with a peduncle, referring to yellow color that dominates posterior part of body in adult males

Apistogramma geisleri Meinken 1971

in honor of Rolf Geisler (1925-2012), German aquarist and Meinken’s “longtime friend” (translation), who collected type

Apistogramma gephyra Kullander 1980

bridge, referring to “superficial morphological intermediacy” between *A. agassizii* and *A. pertensis*, despite “belonging to a different group of species”

Apistogramma gibbiceps Meinken 1969

gibbus, hump; *ceps*, head, referring to its elevated nape

Apistogramma gossei Kullander 1982

in honor of Jean-Pierre Gosse (1924-2001), curator of vertebrates, Institut Royal des Sciences Naturelles de Belgique, who collected part of the type series, for his “substantial contribution to South American ichthyology in collecting and taxonomic studies”

Apistogramma guttata Antonio C., Kullander & Lasso A. 1989

spotted, referring to rows of conspicuous black spots along the sides

Apistogramma helkeri Schindler & Staeck 2013

in honor of German aquarist Oliver Helker, who brought this species to the authors’ attention, provided several photos and the information on type locality, and helped collect type

Apistogramma hippolytae Kullander 1982

of Hippolyta, queen or leader of the Amazons; other than its occurrence in the Amazon basin of Amazonas, Brazil, there is no special significance to its name (Sven O. Kullander, pers. comm.)

Apistogramma hoignei Meinken 1965

in honor of Argentinian aquarist (relocated to Venezuela) Emil “Leo” Hoigne (d. 1996, pronounced on-*yea*), who collected type

Apistogramma hongsloui Kullander 1979

in honor of aquarist and fish-disease specialist Thorbjörn Hongslou, National Veterinary Institute (Uppsala, Sweden), who collected type (and that of three congeners: *iniridae*, *macmasteri*, *viejita*), “entirely on his own initiative”

Apistogramma huascar Römer, Pretor & Hahn 2006

named for the Inca prince Huascar, brother of the last Inca ruler Atahualpa (commemorated in the name of *A. atahualpa*, above), referring to “large phenotypical similarity” between the two species, and to their common origin from the region of the Inca state Tahuantinsuyu, which includes present-day Peru [a noun in apposition, without the patronymic “i”]

Apistogramma inconspicua Kullander 1983

inconspicuous, referring to near-absence of abdominal stripes, distinguishing it from *A. commbrae*, in which abdominal stripes are prominent

Apistogramma iniridae Kullander 1979

of the Rio Inírida, major river in area (Guainia, Colombia) where type material was collected

Apistogramma inornata Staeck 2003

simple or unadorned, referring to its inconspicuous coloration

***Apistogramma intermedia* Mesa S. & Lasso 2011**

in the middle, referring to its average size (“la talla media”), allusion not evident; described at 28.16 mm SL, it appears to be at low end of range (19.8–60.2 mm SL) for *Apistogramma* species in the Orinoco River basin

***Apistogramma juruensis* Kullander 1986**

-ensis, suffix denoting place: upper Rio Juruá system, upper Amazon basin, Brazil, type locality

***Apistogramma kullanderi* Varella & Sabaj Pérez 2014**

in honor of Swedish ichthyologist Sven O. Kullander (b. 1952), whose 40 years of “careful and comprehensive work have transformed the taxonomy of Neotropical Cichlidae and continue to inspire all those fascinated with its diversity”

***Apistogramma lineata* Mesa S. & Lasso 2011**

lined, referring to well-defined longitudinal lines on lower (abdominal) half of body

***Apistogramma linkei* Koslowski 1985**

in honor of Horst Linke (b. 1938), aquarist and author, who collected type with Wolfgang Staeck (see *A. staeckii*)

***Apistogramma luelingi* Kullander 1976**

in honor of Karl Heinz Lüling (1913–1984), curator of fishes, Zoologisches Forschungsmuseum Alexander Koenig (Bonn), who collected type in 1965 and sent to Kullander for study

***Apistogramma macmasteri* Kullander 1979**

in honor of cichlid aquarist Mark McMaster, who directed Kullander’s attention to this species as early as 1973, when only aquarium specimens were available [note latinization of “Mc” to “Mac”]

***Apistogramma martini* Römer, Hahn, Römer, Soares & Wöhler 2003**

in honor of Martin Mortenthaler (1961–2018), then owner of Aquarium Rio Momon, an aquarium–fish exporter in Iquitos, Peru, who collected type

***Apistogramma megaptera* Mesa S. & Lasso 2011**

mega-, large; ptera, fin, referring to higher dorsal fin and longer caudal fin of breeding males compared to females

***Apistogramma megastoma* Römer, Römer, Estivals, Díaz, Duponchelle, Dávila, Hahn & Renno 2017**

mega-, large; stoma, mouth, referring to its exceptionally large mouth, allowing it to swallow relatively large prey and for females to mouthbrood their fry

***Apistogramma meinkeni* Kullander 1980**

in honor of Hermann Meinken (1896–1976), German amateur fish taxonomist and aquarist, who had a special interest in *Apistogramma*, and published several papers on the taxonomy and geographical distribution of these fishes

***Apistogramma mendezi* Römer 1994**

in honor of Francisco Alves “Chico” Mendes (1944–1988), Brazilian rubber tapper and union leader who fought to preserve the Amazonian rainforest; he was assassinated by a rancher whom Mendes had prevented from logging a protected area, while gaining a warrant for the rancher’s arrest for a murder committed elsewhere

***Apistogramma minima* Mesa S. & Lasso 2011**

least, reaching 19.8 mm SL, the smallest *Apistogramma* in the Rio Orinoco drainage

***Apistogramma moae* Kullander 1980**

of the rio Moá, Cruzeiro-do-Sul, Acre, Brazil, type locality

***Apistogramma nijsseni* Kullander 1979**

in honor of Han Nijssen (1935–2013), Zoölogisch Museum, Amsterdam, “author of many papers on South American fishes” (he also brought this species to Kullander’s attention)

***Apistogramma norberti* Staeck 1991**

in honor of aquarist Norbert Wiesheu, who discovered this species, was the first to keep it in an aquarium, and “did not shy away from the hardships and costs of subsequently determining its exact location” (translation)

***Apistogramma nororientalis* Mesa S. & Lasso 2011**

nor, abbreviation of the French *nord*, north; *orientalis*, eastern, referring to its distribution in the northeast Rio Orinoco drainage

***Apistogramma ortegai* Britzke, Oliveira & Kullander 2014**

in honor of ichthyologist Hernán Ortega Torres, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos (Lima, Peru), for his “life-long dedication and contribution to the study of the fishes of Peru”

***Apistogramma ortmanni* (Eigenmann 1912)**

patronym not identified, probably in honor of malacologist Arnold E. Ortmann (1863–1927), curator of invertebrate zoology at the Carnegie Museum, which funded expedition during which type was collected

***Apistogramma panduro* Römer 1997**

in honor of the Peruvian ornamental-fish exporters Jesus Victoriano Panduro Pinedo and Noronha Jorge Luis Panduro Pinedo, who were the first to recognize this cichlid as a new species, and who collected and shipped the type specimens to Germany [a noun in apposition, without the plural commemorative suffix “*orum*”]

***Apistogramma pantalone* Römer, Römer, Soares & Hahn 2006**

named for Pantalone, a mainstay of Comedia dell Arte (an Italian early form of professional theater), an aged, clumsy-looking gentleman who constantly and hotly pursued young girls with whom he was infatuated, usually without success, referring to this cichlid’s unusual courtship behavior, apparently unique in the genus, in which males swim around females (regardless of their readiness to spawn) in a “sometimes rather violent and clumsy-looking zig-zag dance” as he “tries to impress her with his passionate courtship” [a noun in apposition, without the patronymic “*i*”]

***Apistogramma paucisquamis* Kullander & Staeck 1988**

paucus, few; *squamis*, scale, referring to its having 12 instead of 16 circumpeduncular scale rows compared to congeners

***Apistogramma paulmuelleri* Römer, Beninde, Duponchelle, García Dávila, Vela Díaz & Renno 2013**

in honor of the late Paul Müller (1940-2010), Trier University (Trier, Germany), “one of the leading biogeographers of recent decades, who made a number of significant contributions to our understanding of the origins of Neotropical cichlids, including the genus *Apistogramma*”

***Apistogramma payaminonis* Kullander 1986**

-is, genitive singular of: Río Payamino drainage, Ecuador, type locality (also occurs in Colombia)

***Apistogramma pedunculata* Mesa S. & Lasso 2011**

referring to its elongate caudal peduncle

***Apistogramma personata* Kullander 1980**

masked, referring to band between eyes, across the forehead

***Apistogramma pertensis* (Haseman 1911)**

persisted, allusion not explained nor evident; Kullander (1980) said name is derived from *pertinere*, to belong, in which case Haseman may have been suggesting that this taxon, proposed as a variety of *A. taeniata*, “belongs” to that species

***Apistogramma piaroa* Mesa S. & Lasso 2011**

named for the indigenous Piaroa ethnic group that inhabits the banks of the Orinoco River, in the northwest of the Amazonas State of Venezuela, where this cichlid occurs

***Apistogramma piauiensis* Kullander 1980**

-ensis, suffix denoting place: Piauí, Brazil, where type locality (Lagoa Seca) is situated

***Apistogramma playayacu* Römer, Beninde & Hahn 2011**

named for Playayacu, a quebrada in the rio Napo system, Ecuador, type locality

***Apistogramma pleurotaenia* (Regan 1909)**

pleuro-, side; *taenia*, band, referring to dark lateral stripe from eye to base of caudal fin

***Apistogramma psammophila* Staeck & Schindler 2019**

psammos, sand; *phila*, loving, referring to its habitat preference, over sandy bottoms several meters from the exposed beach

***Apistogramma pulchra* Kullander 1980**

handsome, referring to its “carefully blended colour pattern and the slender body shape”

***Apistogramma regani* Kullander 1980**

in honor of ichthyologist Charles Tate Regan (1878-1943), Natural History Museum (London), for his “eminent” revisions of the American cichlids (1905-1906)

***Apistogramma resticulosa* Kullander 1980**

diminutive of *restis*, thin string or line, referring to vertical “dash-marking” of its abdominal sides

***Apistogramma rositae* Römer, Römer & Hahn 2006**

in honor of Rosita Bonhaus, “long-term partner” of aquarium-book publisher Hans A. Baensch (see *A. baenschi*), who helped in the preparation of the book in which the description appeared; in addition, the name also “highlights the similarity and apparent close systematic links” between *A. rositae* and *A. baenschi*

***Apistogramma rubrolineata* Hein, Zarske & Zapata 2002**

rubrus, red; *lineatus*, lined, referring to seven dark-red longitudinal stripes or lines

***Apistogramma rupununi* Fowler 1914**

named for the Rupununi River, Guyana, type locality (also occurs in Brazil)

- Apistogramma salpinction* Kullander & Ferreira 2005**
diminutive of *salpinctes*, Greek for trumpet, referring to the Trombetas (Portuguese for trumpets), type locality drainage in Pará, Brazil, and small body size (at least 35 mm SL)
- Apistogramma similis* Staeck 2003**
similar, referring to similarity with *A. inconspicua* and *A. linkei*
- Apistogramma sororcula* Staeck & Schindler 2016**
Latin for little sister, referring to similarity to and close relationship with *A. staECKi*
- Apistogramma staECKi* Koslowski 1985**
in honor of Wolfgang Staeck (b. 1939), biologist and cichlid aquarist, who collected type with Horst Linke (see *A. linkei*)
- Apistogramma steindachneri* (Regan 1908)**
in honor of Austrian ichthyologist Franz Steindachner (1834-1919), who reported this species as *Geophagus taeniatus* (= *A. taeniata*) in 1875
- Apistogramma taeniata* (Günther 1862)**
banded, referring to any or all of the following: black band running along middle of side, oblique black band from eye to angle of the pre- and inter-operculum, short black streak in front of eye
- Apistogramma trifasciata* (Eigenmann & Kennedy 1903)**
tri-, three; *fasciata*, banded, referring to (1) streak along base of dorsal fin, (2) well-defined oblique band from lower margin of pectoral fin to origin of anal fin, and (3) oblique bar on cheek below eye
- Apistogramma tucuruí* Staeck 2003**
named for the Tucuruí Reservoir (Para, Brazil), which destroyed a large portion of its habitat
- Apistogramma uaupesi* Kullander 1980**
of the rio Uaupés drainage system (Amazonas, Brazil), type locality
- Apistogramma urteagai* Kullander 1986**
in honor of Peruvian biologist Jorge Andres Urteaga Cavero, co-leader of the expedition during which type was collected, for his “considerable effort” in making the expedition a success
- Apistogramma velifera* Staeck 2003**
velum, sail; *fero*, to bear, referring to its enlarged dorsal fin
- Apistogramma viejita* Kullander 1979**
vernacular name for *Apistogramma* species in eastern Colombia, diminutive of *vieja* (Spanish for old woman), vernacular for cichlids in parts of South America and labrids in the West Indies, originally applied (according to Jordan & Evermann 1896) to larger and plainly colored fishes [see also *Vieja* and *Guianacara owroerwefi* in Cichliformes part 7]
- Apistogramma wapisana* Römer, Hahn & Conrad 2006**
named for the Arucan Wapisána tribe (sometimes called the Mawayana), who inhabit the region of all collecting sites of this species known at the time; in recent decades, large parts of their tribal area have been devastated by excessive gold-mining and deforestation
- Apistogramma wollí* Römer, Soares, Dávila, Duponchelle, Renno & Hahn 2015**
in honor of Wolfgang “Wolli” Friedrich, “one of the most notable and skilled professional German fish breeders of recent decades until he finally closed down his facility in early 2014”; his “long-term work in breeding cichlid fishes has substantially contributed to our present knowledge of this family,” and his “helpful and always constructive and mostly humorous comments on fish maintenance and breeding” positively influenced the work of several ichthyologists, including Römer [a noun in apposition, without the patronymic “i”]
- Apistogrammoides* Meinken 1965**
-oides, having the form of: *Apistogramma*, similar in form and shape to that genus but differing in having eight anal-fin spines instead of three
- Apistogrammoides pucallpaensis* Meinken 1965**
-ensis, suffix denoting place: near Pucallpa, Ucayali region, Peru, type locality (also occurs in Colombia)
- Archocentrus* Gill 1877**
archos, anus; *kentron*, spine, a reversal of the North American sunfish genus name *Centrarchus* (see below), referring to numerous (10) anal-fin spines
- Archocentrus centrarchus* (Gill 1877)**
named for resemblance to the North American sunfish genus *Centrarchus* (*kentron*, spine; *archos*, anus, referring to well-developed anal-fin spines), “both in physiognomy and in the number of anal spines”
- Astatheros* Pellegrin 1904**
astatos, unstable (i.e., variable); *Heros*, a related and/or similar genus, allusion not explained, perhaps referring to dissimilar

teeth in upper jaw, some conical and pointed as in *Heros*, but most abraded to a flat surface

***Astatheros macracanthus* (Günther 1864)**

macro-, long or large; *acanthus*, spine, presumably referring to “strong” dorsal- and anal-fin spines

Astronotus Swainson 1839

astron, star; *notos*, back, referring to ocellated spots on dorsal fin of *A. ocellatus*

***Astronotus crassipinnis* (Heckel 1840)**

crassus, thick, fat or stout; *pinnis*, fin, referring to bases of vertical-fin spines enveloped in thick, fleshy skin covered with small scales

***Astronotus mikoljii* Lozano, Lasso-Alcalá, Bittencourt, Taphorn, Perez & Farias 2022**

in honor of Ivan Mikolji (b. 1972), Venezuelan explorer, artist, author, underwater photographer, and audiovisual producer, for being a “tireless and enthusiastic diffuser of the biodiversity and natural history of freshwater fishes, conservation of aquatic ecosystems of Venezuela and Colombia, and for logistic support for this work”

***Astronotus ocellatus* (Agassiz 1831)**

having little eyes, referring to ocellated spots on dorsal, caudal and pectoral fins

***Australoheros* Řičan & Kullander 2006**

australis, southern, referring to distribution in southern half of South America; *Heros*, nominotypic genus of the heroini tribe

***Australoheros acaroides* (Hensel 1870)**

-oides, having the form of: allusion not explained, perhaps referring to resemblance to *A. autochthon*, then placed in the genus *Acara*

***Australoheros angiru* Řičan, Piálek, Almirón & Casciotta 2011**

Guaraní word for friend or partner, referring to how this species and *A. kaaygua* had previously been confused as one species but are now believed to represent two non-sister group species living in the same river drainage (río Iguazú), though not sympatrically

***Australoheros charrua* Řičan & Kullander 2008**

named after the Charrua, indigenous people who inhabited an area including Rio Grande do Sul (Brazil), where this cichlid appears to be endemic

***Australoheros facetus* (Jenyns 1842)**

well-made, fine or elegant, allusion not explained, described as “greenish black; the sides paler; slightly iridescent” in the field (per Charles Darwin, who collected type during his famous *Beagle* voyage), and by Jenyns as “nearly uniform brown all over, fins included” in spirits, “being destitute of all markings and spots” (actually, this cichlid usually exhibits 6-7 vertical bars running entire length of body and a prominent mid-lateral blotch)

***Australoheros forquilha* Řičan & Kullander 2008**

named for rio Forquilha, Rio Grande do Sul, Brazil, type locality

***Australoheros guarani* Řičan & Kullander 2008**

named after the indigenous Guaraní people of Paraguay, where this cichlid is endemic

***Australoheros ipatinguensis* Ottoni & Costa 2008**

-ensis, suffix denoting place: Município de Ipatinga, Minas Gerais, Brazil, type locality (note: in 2020, the senior author corrected type locality to Município de Belo Oriente)

***Australoheros kaaygua* Casciotta, Almirón & Gómez 2006**

named for the Ka’aygua people (Guaraní group), who, in the 16th century, refused the domination of Jesuit Missions

***Australoheros mboapari* Lucena, Kullander, Norén & Calegari 2023**

named for Mboapari, previous name of the Rio das Antas, Rio Grande do Sul, Brazil, where this cichlid occurs [description published in 2022 but name not made available until 2023]

***Australoheros minuano* Řičan & Kullander 2008**

named after the native Minuano people, who formerly lived in the area of the Brazilian state of Rio Grande do Sul, type locality (also occurs in Argentina)

***Australoheros oblongus* (Castelnau 1855)**

Latin for oblong (longer than broad), “remarkable for the very elongated shape of its body, which rises above the head, then extends of equal height up to about three quarters rear of the body” (translation)

***Australoheros riberae* Ottoni, Oyakawa & Costa 2008**

of Ribeira do Iguape basin, Estado de São Paulo, Brazil, where type locality is situated

***Australoheros ricani* Lucena, Kullander, Norén & Calegari 2023**

in honor of Czech ichthyologist Oldřich Řičan, University of South Bohemia, “the first to recognize *Australoheros* species richness, and made the pioneering analyses, discovering and highlighting the phylogeny and species richness

of inland species” of the genus [description published in 2022 but name not made available until 2023]

***Australoheros robustus* Ottoni & Costa 2008**

stout or robust, referring to its robust snout

***Australoheros sanguineus* Ottoni 2013**

blood-red, referring to two blood-red markings on posterior margin of caudal fin

***Australoheros scitulus* (Říčan & Kullander 2003)**

handsome or pretty, alluding to its relationship with *A. facetus*, whose name means well-made, fine or elegant

***Australoheros tembe* (Casciotta, Gómez & Toresanni 1995)**

Guaraní word for lips, referring to its enlarged fleshy lip folds

***Australoheros ykeregua* Říčan, Piálek, Almirón & Casciotta 2011**

Guaraní word for neighbor, referring to how this species and *A. forquilha* had previously been treated as conspecific but are now believed to represent two sister group species living in the same river drainage (río Uruguay), though not sympatrically

***Biotodoma* Eigenmann & Kennedy 1903**

biotós, living; *domus*, a home, referring to their “habit of carrying the young in the gills” (a behavior that has never been observed in this genus; the authors apparently mistakenly believed these cichlids were mouthbrooding geophagines)

***Biotodoma cupido* (Heckel 1840)**

etymology not explained, perhaps named for Cupid, Roman god of erotic love and desire, or generically meaning “desire” or “longing,” perhaps alluding to the desirable nature of its attractive coloration (in life)

***Biotodoma wavrini* (Gosse 1963)**

in honor of the Marquis (Robert) de Wavrin de Villers-au-Tertre (1888-1971), Belgian ethnologist and explorer, who collected type in 1935

***Biotocus* Eigenmann & Kennedy 1903**

biotós, living; *oikos*, house or home, referring to their “habit of carrying their young in their gills” (a behavior that has never been observed in this genus; the authors apparently mistakenly believed these cichlids were mouthbrooding geophagines)

***Biotocus dicentrarchus* Kullander 1989**

di-, two; *kentron*, spine; *archos*, vent or anus, referring to two anal-fin spines, a unique character among cichlids (other species have 3-15)

***Biotocus opercularis* (Steindachner 1875)**

gill cover, referring to large and dark opercular spot

***Bujurquina* Kullander 1986**

from *bujurqui*, “best known” local Peruvian name for cichlids

***Bujurquina apoparuana* Kullander 1986**

-ana, belonging to: Apoparu (“Great River”), ancient name of Río Ucayali, in whose drainage this cichlid is endemic

***Bujurquina cordemadi* Kullander 1986**

of CORDEMAD, acronym for the Corporacion Departamental de Desarrollo de Madre de Dios, which, through its director, greatly facilitated collecting around Puerto Maldonado (Peru), which led to the discovery of this species

***Bujurquina eurhinus* Kullander 1986**

eu-, well or big; *rhinos*, snout, referring to prominent snout due to well-developed lips

***Bujurquina hophrys* Kullander 1986**

Greek for eyebrow, referring to widened portion of nape band close to orbit

***Bujurquina huallagae* Kullander 1986**

of the Río Huallaga drainage, Huánuco, Peru, where it appears to be endemic

***Bujurquina labiosa* Kullander 1986**

large-lipped, referring to its hypertrophied (fleshy) lips

***Bujurquina mariae* (Eigenmann 1922)**

in honor of Hermano Apolinar Maria (1867-1949), Director, Museum at the Instituto de La Salle, Bogotá, who provided Eigenmann with “valuable collections” of fishes from the Meta River basin of Colombia, including this one

***Bujurquina megalospilus* Kullander 1986**

mega-, large; *spilos*, spot, referring to large midlateral and caudal spots

***Bujurquina moriorum* Kullander 1986**

-*orum*, commemorative suffix, plural: in honor of Luis Mori Pinedo and Palmira Padilla de Mori, Proyecto de Asentamiento Rural Integral, for their assistance to ichthyologists collecting in the Jenaro Herrera region of Peru

***Bujurquina oenolaemus* Kullander 1987**

oinos, wine; *laimos*, throat, referring to wine-colored branchiostegal membrane

***Bujurquina omagua* Říčan & Říčanová 2023**

named for the Omagua people, who were at the time of first contact with Europeans in the 16th century the dominant people along the banks of the Amazon River upstream from the mouth of the Negro River well into Peru, where this species occurs

***Bujurquina ortegai* Kullander 1986**

in honor of Peruvian ichthyologist Hernán Ortega Torres (who usually publishes as Hernán Ortega)

***Bujurquina pardus* Arbour, Barriga Salazar & López-Fernández 2014**

leopard, referring to its leopard-like pattern of dark blackish-brown spots on sides

***Bujurquina peregrinabunda* Kullander 1986**

“one that travels abroad,” referring to its wide distribution (Brazil, Ecuador, Colombia, Peru)

***Bujurquina robusta* Kullander 1986**

referring to more robust body compared to the otherwise similar *B. eurbinus*

***Bujurquina syspilus* (Cope 1872)**

sys-, together; *spilus*, spot, referring to straight wide black band from upper posterior margin of orbit to below end of spinous dorsal fin, “composed of three confluent spots”

***Bujurquina tambopatae* Kullander 1986**

of the Río Tambopata drainage, Madre de Dios, Peru, where type locality (an unnamed quebrada) is situated

***Bujurquina vittata* (Heckel 1840)**

banded, presumably referring to 6-8 interrupted vertical bars above a lateral stripe

***Bujurquina zamorensis* (Regan 1905)**

-*ensis*, suffix denoting place: Zamora River basin, Ecuador, where it is endemic

***Caquetaia* Fowler 1945**

-*ia*, belonging to: Rio Caquetá drainage, Colombia, type locality of *C. amploris* (= *myersi*)

***Caquetaia kraussii* (Steindachner 1878)**

in honor of Christian F. F. Krauss (1812-1890), botanist, malacologist, and director of the Royal Natural History Cabinet in Stuttgart

***Caquetaia myersi* (Schultz 1944)**

in honor of Stanford University ichthyologist George S. Myers (1905-1985), who, when in charge of the fish collection at the U.S. National Museum, noticed that two specimens of this species appeared to be new but did not describe it

***Caquetaia spectabilis* (Steindachner 1875)**

notable or showy; although Steindachner did not describe its life colors, it is indeed a showy fish, with an assortment of blue, yellow, orange and green colors

***Chaetobranchopsis* Steindachner 1875**

-*opsis*, appearance, proposed as a subgenus of *Chaenobranchus*

***Chaetobranchopsis australis* Eigenmann & Ward 1907**

south, allusion not explained, possibly referring to its southern distribution in the Paraná River basin compared to the Amazonian distribution of *C. orbicularis*

***Chaetobranchopsis orbicularis* (Steindachner 1875)**

circular or disc-shaped, allusion not explained; perhaps referring to arcuate body shape, or to two spots on flanks seen on some specimens

***Chaetobranchus* Heckel 1840**

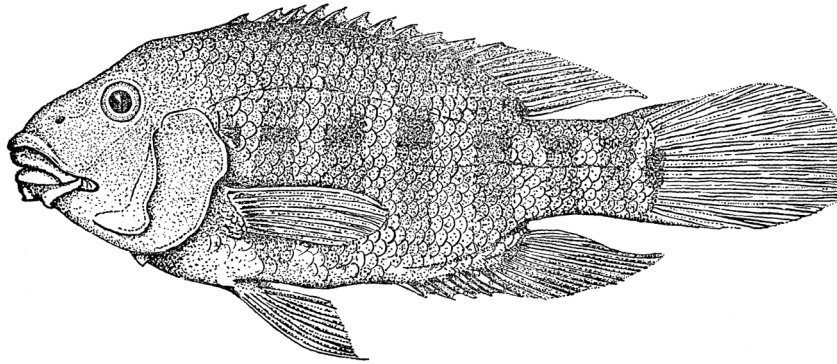
chaeto-; bristle; *branchus*, gill, referring to their very long and numerous setiform (thin) gill rakers, used for planktivorous filter-feeding

***Chaetobranchus flavescens* Heckel 1840**

yellowish, presumably referring to “pale ochre-yellow” color in life, “dirty yellow” in alcohol (translations; species has a bright-yellow opercular area, which Heckel did not mention)

***Chaetobranchus semifasciatus* Steindachner 1875**

semi-, half; *fasciatus*, banded, referring to light vertical bars extending from dorsal fin downwards about halfway to belly



Chocoheros microlepis. From: Dahl, G. 1960. New fresh-water fishes from western Colombia. *Caldasia* v. 8 (no. 39): 451-484.

Chiapaheros McMahan & Piller 2015

Chiapa, referring to Río Chiapa, type locality of *C. grammodes* in Chiapas, México; *Heros*, generic name formerly used for many neotropical cichlids; name also honors the memory of the late Gustavo Concheiro-Pérez (d. 2008), who recorded this generic epithet in a 2006 GenBank submission

Chiapaheros grammodes (Taylor & Miller 1980)

linear or in lines, referring to series of thin, dark lines (typically 7, varying to 10 or 12 in large adults) across interorbital region, snout, and anterior part of cheek, that become disrupted with age

Chocoheros Říčan & Piálek 2016

named after the Embera-Wounaan indigenous tribe, also known as the *Chocó* in their language, and after the Chocó biogeographic area and area of endemism encompassing the distribution of the genus; *Heros*, old neotropical cichlid name meaning “hero,” used here to mean “hero of the Chocó”

Chocoheros microlepis (Dahl 1960)

micro-, small; *lepis*, scale, referring to its very small scales, 50 or more in a longitudinal series, compared to most other *Cichlasoma*-like cichlids (30-40 scales) in Colombia and Panama

Chortiheros Říčan & Dragová 2016

named after the Ch'orti' people, an indigenous Maya people of southeastern Guatemala, northwestern Honduras (where it occurs), and northern El Salvador, and for whom the Chortis Block (one of the main geological components of Middle America) is named and to whose northern part this genus is the oldest and most isolated endemic lineage; *Heros*, old neotropical cichlid name meaning “hero,” used here to mean “hero of the Chortis”

Chortiheros wesseli (Miller 1996)

in honor of cichlid aquarist Richard (Rusty) Wessel, a “dedicated amateur naturalist devoted to gathering information on the ecology, behavior, and identification of Middle American cichlids” who discovered this species and collected type

Chuco Fernández-Yépez 1969

local name for these cichlids in Guatemala

Chuco godmanni (Günther 1862)

patronym not identified, probably in honor of Frederick DuCane Godman (1834-1919), entomologist, ornithologist, and collector in Central America for the British Museum, who collected type [although Günther credited “Godman” (one *n*) with collecting type, he did not explicitly state that he named the species after him, therefore his apparent Germanized spelling (*nn*) is retained; interestingly, Regan also used the Germanic spelling (*nn*) for the cynolebiid *Rivulus* (now *Cynodonichthys*) *godmani* in 1907, but emended it later that year, a spelling that is in prevailing usage]

Chuco intermedium (Günther 1862)

in the middle, i.e., intermediate between *Heros* (now *Paraneetroplus*) *nebulifer* and *Heros angulifer* (now a junior synonym of this species), its presumed closest congeners at the time

Chuco microphthalmus (Günther 1862)

micro-, small; *ophthalmus*, eye, “diameter of which is one-fifth, or rather less than one-fifth, of the length of the head”

Cichla Bloch & Schneider 1801

from the Greek *kichle*, historically applied to both thrushes (Aves) and wrasses (Labridae, once thought to be closely related to cichlids), now applied only to cichlids

***Cichla cataractae* Sabaj, López-Fernández, Willis, Hemraj, Taphorn & Winemiller 2020**

waterfall or rapids, referring to its occurrence in rocky shoals in clearwater river channels with swift current

***Cichla intermedia* Machado-Allison 1971**

intermediate in characters between its Venezuelan congeners, *C. ocellaris* and *C. temensis*

***Cichla jariina* Kullander & Ferreira 2006**

-*ina*, belonging to: Jari River, in the region of Cachoeira Itacari and Cachoeira Santo Antonio, Brazil, only known area of occurrence

***Cichla kelberi* Kullander & Ferreira 2006**

in honor of recreational angler Dieter Kelber, for his promotion of *Cichla* as sportfishes, and for supporting the authors' study with information and photographs of this species and *C. piquiti*

***Cichla melaniae* Kullander & Ferreira 2006**

in honor of Melanie Stiassny (b. 1953), Curator of Ichthyology, American Museum of Natural History (New York, USA), for her "significant" contribution to cichlid systematics

***Cichla mirianae* Kullander & Ferreira 2006**

in honor of Mirian Leal-Carvalho, who participated in the collection of part of the type series

***Cichla monoculus* Spix & Agassiz 1831**

mono-, one; *oculus*, eye, referring to single eyespot at caudal-fin base

***Cichla nigromaculata* Jardine & Schomburgk 1843**

nigro-, black; *maculata*, spotted, referring to body and head "irregularly spotted with black, which vary in different individuals"

***Cichla ocellaris* Bloch & Schneider 1801**

having an eye-like spot, referring to dark, round, ocellated blotch on caudal-fin base of adults

***Cichla orinocensis* Humboldt 1821**

-*ensis*, suffix denoting place: Río Orinoco basin, one of the two major river systems where Humboldt encountered this cichlid (the other being the Río Negro)

***Cichla pinima* Kullander & Ferreira 2006**

Tupí-Guaraní word meaning "spotted with white," referring to four or more horizontal rows of light spots on sides of subadults and large females

***Cichla piquiti* Kullander & Ferreira 2006**

Tupí-Guaraní word meaning "striped," referring to five wide, dark vertical bars below dorsal fin of adults

***Cichla pleiozona* Kullander & Ferreira 2006**

pleios, more; *zona*, girdle, referring to pronounced occipital bar on large specimens, and additional bar on caudal peduncle compared to *C. kelberi* and *C. monoculus*

***Cichla temensis* Humboldt 1821**

-*ensis*, suffix denoting place: Río Temi, Venezuela, type locality (no types known)

***Cichla thyrurus* Kullander & Ferreira 2006**

Greek for doorkeeper or porter, referring to distribution near Cachoeira Porteira (Para, Brazil), with *porteira* being the Portuguese word for gate or entrance

***Cichla vazzoleri* Kullander & Ferreira 2006**

in honor of Gelso Vazzoler (1929-1987), former head of the Departamento de Biologia Acuática, Instituto Nacional de Pesquisas da Amazônia (Manaus, Brazil), who collected type in 1982

***Cichlasoma* Swainson 1839**

Cichla, a related genus; *soma*, body, presumably referring to its resemblance to that genus, but Kullander (1983) reports that there is no apparent similarity between the two genera in body or caudal-fin shape

***Cichlasoma amazonarum* Kullander 1983**

of the Amazons, a widespread cichlid in the Amazon River system, "dedicated to the mythological (?) all-woman tribe" after whom the Amazon was named ["?" in original]

***Cichlasoma araguaense* Kullander 1983**

-*ensis*, suffix denoting place: Rio Araguaia system, Mato Grosso, Brazil, where type locality is situated

***Cichlasoma bimaculatum* (Linnaeus 1758)**

bi-, two; *maculatus*, spotted, presumably referring to its midlateral and caudal spots

***Cichlasoma boliviense* Kullander 1983**

-*ensis*, suffix denoting place: Bolivia, its principal area of distribution (also occurs in Peru)

***Cichlasoma dimerus* (Heckel 1840)**

di-, two; *merus*, series or row, probably referring to two scale series on cheek of holotype

***Cichlasoma orientale* Kullander 1983**

eastern, referring to its distribution, the easternmost species in the genus

***Cichlasoma orinocense* Kullander 1983**

-ensis, suffix denoting place: Orinoco River of Colombia and Venezuela, the main river of the drainage basin where it appears to be endemic

***Cichlasoma paranaense* Kullander 1983**

-ensis, suffix denoting place: Paraná River basin, Brazil, where it appears to be endemic

***Cichlasoma portalegrense* (Hensel 1870)**

-ensis, suffix denoting place: Porto Alegre, Brazil, type locality (also occurs in Bolivia and Uruguay)

***Cichlasoma pusillum* Kullander 1983**

very small, referring to size compared to *C. dimerus* and *C. portalegrense*; also, first two letters of name refer to the two drainages in which it occurs, Paraná and Uruguay, which Kullander says continues his theme of naming *Cichlasoma* after their distribution

***Cichlasoma sanctifranciscense* Kullander 1983**

-ensis, suffix denoting place: São Francisco system, Bahia, Brazil, where it appears to be endemic

***Cichlasoma taenia* (Bennett 1831)**

band or stripe, referring to series of black blotches that form a broken (but sometimes solid) lateral band from eye to caudal-fin base

***Cichlasoma zarskei* Ottoni 2011**

in honor of Axel Zarske (b. 1952), ichthyologist and “editor chief” of *Vertebrate Zoology*, journal in which description was published

***Cincolichthys* McMahan & Piller 2015**

cinzel, Spanish for chisel, referring to spatulate or chisel-like teeth defining the genus; *ichthys*, fish

***Cincolichthys bocourti* (Vaillant & Pellegrin 1902)**

in honor of zoologist and artist Marie Firmin Bocourt (1819-1904), who collected type

***Cincolichthys pearsei* (Hubbs 1936)**

in honor of animal ecologist Arthur Sperry Pearse (1877-1956), leader of the Yucatán expedition during which type was collected, and “explorer of many lands and of many fields of science”

***Cleithracara* Kullander & Nijssen 1989**

kleithron, lock; *acara*, Tupí-Guaraní word for cichlids, inspired by the common name “Keyhole Cichlid” used by aquarists, referring to its characteristic flank marking

***Cleithracara maronii* (Steindachner 1881)**

of the Maroni River, French name for Marowijne River, French Guiana, type locality (also occurs in Guyana, Suriname, Trinidad and Tobago, and Venezuela)

***Crenicara* Steindachner 1875**

crenulatus, cut or clipped, presumably referring to denticulated preoperculum; *Acara*, referring to similar body shape (oval and compressed) with that genus (Kullander [1986] incorrectly states that *-cara* is from the Greek *kara*, meaning face]

***Crenicara latruncularium* Kullander & Staeck 1990**

referring to checkerboard (*tabula latruncularia*) pattern of the sides (*latruncularius* is an adjective referring to the Roman strategy game *Ludus latruncularum*, similar to chess)

***Crenicara punctulata* (Günther 1863)**

diminutive of *punctum*, spot, i.e., dotted, presumably referring to numerous brown dots on upper side of head

***Crenicichla* Heckel 1840**

crenulatus, cut or clipped, presumably referring to serrated posterior margin of preopercle; *cichla*, from the Greek *kichle*, historically applied to both thrushes (Aves) and wrasses (Labridae, once thought to be related to cichlids), now applied only to cichlids, perhaps referring here to *Cichla*, type genus of family

Subgenus ***Crenicichla******Crenicichla macropthalma* Heckel 1840**

macro-, large; *ophthalmos*, eye, described as $\frac{1}{4}$ length of head

Subgenus ***Batrachops* Heckel 1840**

batrachus, frog; *ops*, face or appearance, allusion not explained, perhaps referring to “particularly thick and blunted” (translation), and hence frog-like, heads of *C. reticulata* and *C. semifasciata*, and/or their wide gapes

***Crenicichla cametana* Steindachner 1911**

-*ana*, belonging to: Cameta, Brazil, where type locality (Rio Tocantins) is situated

***Crenicichla cyanonotus* Cope 1870**

ciano-, blue; *notos*, back, referring to blue dorsal-fin base of holotype

***Crenicichla cyclostoma* Ploeg 1986**

cyclos, round or circular; *stoma*, mouth, referring to rounded mouth with very thick lips

***Crenicichla geayi* Pellegrin 1903**

in honor of pharmacist and natural history collector Martin François Geay (1859-1910), who collected holotype

***Crenicichla jegui* Ploeg 1986**

in honor of ichthyologist Michael Jégu, ORSTOM (Office de la Recherche Scientifique et Technique d'Outre-Mer), who collected paratypes and most of the other specimens on which Ploeg's paper is based

***Crenicichla reticulata* (Heckel 1840)**

netted or net-like, referring to "beautiful" yellowish margin on blackish-brown scales of upper body, whereby the "fish appears to be, as it were, covered with a delicate net" (translation)

***Crenicichla sedentaria* Kullander 1986**

sitting, referring to "occasional resting behaviour" in aquaria

***Crenicichla semifasciata* (Heckel 1840)**

semi-, half; *fasciatus*, banded, referring to 7-8 vertical brown bands on upper half of body

***Crenicichla stocki* Ploeg 1991**

in honor of Ploeg's promoter (Ph.D. supervisor) Jan H. Stock (1931-1997), carcinologist, Zoological Museum, Amsterdam, on the occasion of his retirement in October 1990

Subgenus ***Lacustria* Varella, Kullander, Menezes, Oliveira & López-Fernández 2023**

named for its type species, *C. lacustris*

***Crenicichla ama* Říčan, Piálek, Almirón & Casciotta 2023**

Guaraní word for rain, referring to small diagnostic spots below midlateral blotches which appear as if rain (spots) is falling from clouds (midlateral blotches)

***Crenicichla aravera* Říčan, Piálek, Almirón & Casciotta 2023**

Guaraní word for flash (as associated with stormy and rainy weather), name given in association with its sister-species *C. ama* (meaning rain), referring to its "long body, pointed head, and a dominant colouration marking of a black midlateral band and rapid hunting strategy, all alluding to a flash"

***Crenicichla celidochilus* Casciotta 1987**

celidos, spot; *cheilus*, lip, referring to four "intensely pigmented" spots on lips

***Crenicichla empheres* Lucena 2007**

Greek for similar, referring to its similarity with the sympatric *C. jurubi*

***Crenicichla gaucho* Lucena & Kullander 1992**

gaúcho, local Brazilian name for cowboy, referring to its distribution in the traditional south Brazilian cattle ranching districts

***Crenicichla gillmorlisi* Kullander & Lucena 2013**

in honor of ichthyologist Walter A. Gill Morlis A., fisheries officer of the Itaipú Binacional, Ciudad del Este, Paraguay, who contributed considerably to surveys of fishes in tributaries of the río Paraná, for his "strong long term engagement" in the inventory of fishes in that river system

***Crenicichla hadrostigma* Lucena 2007**

hadros, well-developed; *stigma*, spot or mark, referring to its prominent posttemporal spot

***Crenicichla haroldoi* Luengo & Britski 1974**

in honor of Brazilian ichthyologist Haroldo P. Travassos (1922-1977)

***Crenicichla hu* Piálek, Říčan, Casciotta & Almirón 2010**

hú, Guaraní word for black, referring to ground color of body and fins

***Crenicichla igara* Lucena & Kullander 1992**

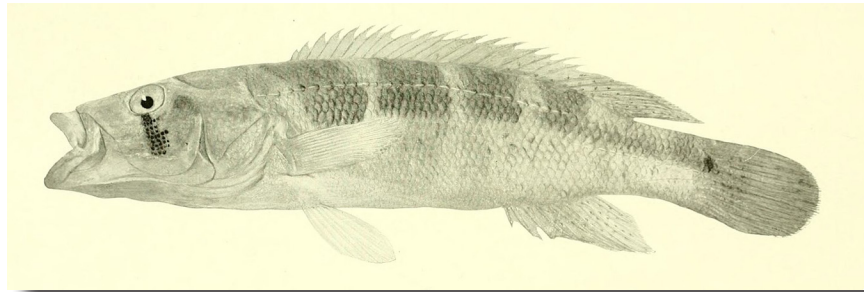
igará, Tupí-Guaraní word for canoe, referring to type locality, rio Canoas (river of canoes), Santa Catarina, Brazil

***Crenicichla iguapina* Kullander & Lucena 2006**

named for the rio Ribeira de Iguapé drainage, São Paulo, Brazil, where it appears to be endemic

***Crenicichla iguassuensis* Haseman 1911**

-*ensis*, suffix denoting place: Rio Iguassú at Porto União da Victoria, Paraná, Brazil, type locality (also occurs in Argentina)



Crenicichla iguassuensis. From: Haseman, J. D. 1911. An annotated catalog of the cichlid fishes collected by the expedition of the Carnegie Museum to central South America, 1907-10. *Annals of the Carnegie Museum* v. 7 (nos 3-4) (18): 329-373, Pls. 53-72.

***Crenicichla jaguarensis* Haseman 1911**

-*ensis*, suffix denoting place: Jaguara, Minas Gerais, Brazil, where type locality (rio Grande, rio Paraná basin) is situated

***Crenicichla jupiaensis* Britski & Luengo 1968**

-*ensis*, suffix denoting place: Jupia, a fishing village on the Rio Paraná, Mato Grosso, Brazil, type locality

***Crenicichla jurubi* Lucena & Kullander 1992**

Tupí-Guaraní word for “small mouth,” referring to its smaller mouth compared to the otherwise similar *C. igara*

***Crenicichla lacustris* (Castelnau 1855)**

lacustrine (belonging to a lake), referring to its type locality, an ornamental or manmade pond in Brazil (also occurs in Uruguay)

***Crenicichla lucenai* Mattos, Schindler, Ottoni & Cheffe 2014**

in honor of Carlos Alberto Santos de Lucena, curator of fishes, Museu de Ciências e Tecnologia de Pontifícia Universidade Católica do Rio Grande do Sul, for his contributions to the taxonomy and systematics of *Crenicichla*

***Crenicichla maculata* Kullander & Lucena 2006**

spotted, referring to a row of 5-8 dark blotches along middle of sides

***Crenicichla mandelburgeri* Kullander 2009**

in honor of Paraguayan ichthyologist Darío Mandelburger, co-coordinator of Proyecto Vertebrados del Paraguay (1992-1999), during which type was collected

***Crenicichla minuano* Lucena & Kullander 1992**

Minuano, a cold wind that blows in the winter from the southwest across the Rio Grande do Sul, Brazil (where this cichlid occurs), formerly the land of the Minuano Indian people

***Crenicichla missioneira* Lucena & Kullander 1992**

from the Portuguese *missioneiro*, i.e., someone coming from Missões, Rio Grande do Sul, Brazil, type locality region

***Crenicichla mucuryna* Ihering 1914**

-[i]na, belonging to: rio Mucury (now spelled Mucuri) basin, Minas Gerais, Brazil, where it is endemic

***Crenicichla prenda* Lucena & Kullander 1992**

older *Gaúcho* (Brazilian cowboy) word for woman, referring to color pattern of males, which approaches that of females of the sexually dichromatic *C. gaucho*

***Crenicichla punctata* Hensel 1870**

spotted, referring to any or all of the following: dark spots covering upper side of body; a “not so obvious” (translation) spot just behind eye; ocellus (eyespot) at upper caudal-fin base

***Crenicichla scottii* (Eigenmann 1907)**

in honor of vertebrate paleontologist William Berryman Scott (1858-1947), Princeton University, who collected holotype

***Crenicichla taikyra* Casciotta, Almirón, Aichino, Gómez, Piálek & Říčan 2013**

combination of Guaraní words *tái* (tooth) and *kyra* (thick), referring to thick molariform teeth and stout lower pharyngeal tooth plate

***Crenicichla tapii* Piálek, Dragová, Casciotta, Almirón & Říčan 2015**

tapii, Guaraní word for tapir (*Tapirus*), referring to its subterminal mouth and concave head, associated with its grazing semi-herbivorous mode of feeding similar to that of the tapir but highly untypical for the generally

- predatory *Crenicichla*
- Crenicichla tendybaguassu* Lucena & Kullander 1992**
from the Tupí-Guaraní words *tendybá* (lip) and *açu* (large), referring to its enlarged lips
- Crenicichla tesay* Casciotta & Almirón 2009**
Guaraní word for tears, referring to shape of suborbital stripe
- Crenicichla tingui* Kullander & Lucena 2006**
Tupí word used in southern Brazil to designate an origin or inhabitant of the State of Paraná, where this cichlid is endemic
- Crenicichla tuca* Piálek, Dragová, Casciotta, Almirón & Říčan 2015**
túca, Guaraní word for toucan (*Ramphastos*) referring to their “similarly enlarged lips/beak”
- Crenicichla vittata* Heckel 1840**
banded, referring to black midlateral stripe running from snout to caudal-fin base
- Crenicichla yaha* Casciotta, Almirón & Gómez 2006**
y'aha, Guaraní word for waterfall, referring to Urugua-í, an arroyo in isla Palacios, Misiones Province, Argentina (type locality), had a 28 m-high waterfall before the construction of a dam in 1989
- Crenicichla yjhui* Piálek, Casciotta, Almirón & Říčan 2019**
combination of the Guaraní words *y*, water, and *jhuí*, arrow, referring to streamlined head and body shape, coloration (a continuous black stripe resembling an arrow), and trophic ecology (open-water predator) [name published online in 2018 but not available until 2019]
- Crenicichla ypo* Casciotta, Almirón, Piálek, Gómez & Říčan 2010**
y po, Mbya Guaraní word meaning “water dweller”
- Crenicichla zebrina* Montaña, López-Fernández & Taphorn 2008**
zebra-like, referring to pattern of vertical dark bars in caudal region of body
- Cribroheros* Říčan & Piálek 2016**
cribrum, sifter or sieve, referring to how members feed by sifting through the substrate; *Heros*, an old name for neotropical cichlids, meaning “hero” (see *Heros*, Cichliformes part 7)
- Cribroheros alfari* (Meek 1907)**
in honor of Anastasio Alfaro (1865-1951), zoologist, geologist and Director of the National Museum of Costa Rica, who provided a small collection of fishes from that country, including type of this one
- Cribroheros altifrons* (Kner 1863)**
altus, high; *frons*, forehead, referring to nape sloping sharply towards occiput
- Cribroheros bussingi* (Loiselle 1997)**
in honor of ichthyologist William A. Bussing (1933-2014), Universidad de Costa Rica, for numerous contributions to the systematics, natural history and historical biogeography of Central American fishes
- Cribroheros diquis* (Bussing 1974)**
diquis, Botucas (an Indian tribe indigenous to southern Costa Rica) word for “Large Water” or “Big River,” referring to Diquis archaeological region where this cichlid occurs
- Cribroheros longimanus* (Günther 1867)**
longus, long; *manus*, hand, referring to long pectoral fin, extending nearly to end of anal fin
- Cribroheros rhytisma* (López S. 1983)**
Greek for patch, referring to large, semi-ocellated spot or patch on flanks
- Cribroheros robertsoni* (Regan 1905)**
in honor of Rev. John Robertson, British priest and naturalist, whose parish was Stann Creek (type locality) in British Honduras (now Belize), where he collected plant, amphibian and fish specimens for the British Museum, including type of this cichlid
- Cribroheros rostratus* (Gill 1877)**
beaked, referring to “acutely pointed” head and “extension” of “rectilinear” snout
- Cryptoheros* Allgayer 2001**
crypto-, hidden, referring to reproductive behavior of species in this genus, which spawn in enclosed spaces; *Heros*, original genus of type species, *C. spilurus*
- Cryptoheros chetumalensis* Schmitter-Soto 2007**
-ensis, suffix denoting place: Chetumal, Quintana Roo, Mexico, near where Aguadulce, a tributary of the Río Hondo (type locality), is situated

***Cryptoheros cutteri* (Fowler 1932)**

in honor of Victor M. Cutter (1881-1952), President, United Fruit Company (Costa Rica), for his “deep interest in neotropical zoology, and his cordial assistance to the Academy [of Natural Sciences of Philadelphia] on numerous occasions”

***Cryptoheros spilurus* (Günther 1862)**

spilos, spot; *oura*, tail, referring to large black spot at the middle of caudal-fin base