# The ETYFish Project

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# Order CYPRINODONTIFORMES (part 4 of 4)

# Suborder CYPRINODONTOIDEI (cont.)

Family POECILIIDAE Poeciliids

39 genera/subgenera · 282 species/subspecies

# Subfamily Xenodexiinae Grijalva Studfish

# Xenodexia Hubbs 1950

*xenos*, strange; *dexia*, right hand, referring to axillary region of right pectoral fin "spectacularly modified" into a sort of "clasper" with an "assortment of hooks, pads, and other processes" (the precise copulatory function of this "clasper" remains unknown)

# Xenodexia ctenolepis Hubbs 1950

ctenos, comb; lepis, scale, referring to its ctenoid scales, unique in Cyprinodontiformes

# Subfamily Tomeurinae

# Tomeurus Eigenmann 1909

*tomeus*, knife; *oura*, tail, referring to ventral "knife-like" ridge, resembling an adipose fin but composed of ~16 paired scales, extending almost entire length of caudal peduncle

# Tomeurus gracilis Eigenmann 1909

slender, described as "Very long and slender"

# Subfamily Poeciliinae Livebearers

# Alfaro Meek 1912

named for Anastasio Alfaro (1865-1951), archaeologist, geologist, ethnologist, zoologist, Director of the National Museum of Costa Rica (type locality of *A. cultratus*), and "the best known scientist of the Republic"

# Alfaro cultratus (Regan 1908)

knife-shaped, referring to lower surface of tail compressed to a sharp edge

# Alfaro huberi (Fowler 1923)

in honor of Wharton Huber (1877-1942), Curator of Mammals, Academy of Natural Sciences of Philadelphia (where Fowler worked), who collected type

### Belonesox Kner 1860

resembling both the needlefish, Belone, and the pike, Esox

# Belonesox belizanus belizanus Kner 1860

-anus, belonging to: Belize, type locality (also occurs in Costa Rica, Honduras, México and Nicaragua)

### Belonesox belizanus maxillosus Hubbs 1936

pertaining to the jaw, referring to its "very heavy jaws"

# Brachyrhaphis Regan 1913

brachy, short; rhaphis, needle, presumably referring to shorter gonopodium compared to Gambusia, original genus of type species, B. rhabdophora

# Brachyrhaphis episcopi (Steindachner 1878)

of Obispo (Spanish for pope, episcopus in Latin), referring to Obispo Station, Canal Zone, Panama

# Brachyrhaphis hartwegi Rosen & Bailey 1963

in honor of Norman Hartweg (1904-1964), Curator of Reptiles, University of Michigan Museum of Zoology, who first collected this species and has "long been an enthusiastic and active student" of the biota of México

# Brachyrhaphis hessfeldi Meyer & Etzel 2001

in honor of German aquarist Gerhard Hessfeld, who helped collect type with a small hand net while snorkeling (G. Hessfeld, pers. comm. with Erwin Schraml)

# Brachyrhaphis holdridgei Bussing 1967

in honor of botanist-ecologist Leslie R. Holdridge (1907-1999), President, Tropical Science Center (San José, Costa Rica), who "made possible" Bussing's study of the fishes of the Río Puerto Viejo, "as well as the studies of many students of tropical biology, through his outstanding generosity and friendly advise [*sic*]"

### Brachyrhaphis olomina (Meek 1914)

Spanish word equivalent to the Anglo-Saxon *minnow* (i.e., small fish), common name for *Brachyrhaphis* species in Costa Rica, where it is endemic

# Brachyrhaphis punctifer (Hubbs 1926)

*punctum*, spot; *fero*, to carry or bear, referring to darkened scale pockets, which form "rather inconspicuous rows" of spots on middle anterior body

### Brachyrhaphis rhabdophora (Regan 1908)

*rhabdos*, rod or stick (i.e., line or stripe); *phorus*, bearer, allusion not explained, presumably referring to "series of short dark vertical bars along the middle of the side"

### Brachyrhaphis roseni Bussing 1988

in memory of Donn E. Rosen (1929-1986), American Museum of Natural History, for "outstanding contributions to biosystematics and biogeography, many dealing with fishes of the Middle American region"

# Brachyrhaphis roswithae Meyer & Etzel 1998

in honor of the junior author's daughter, Roswitha

# Brachyrhaphis terrabensis (Regan 1907)

*-ensis*, suffix denoting place: Río Grande de Térraba, Pacific Slope of Costa Rica, type locality (also occurs in Panama)

### Carlhubbsia Whitley 1951

-*ia*, belonging to: ichthyologist Carl L. Hubbs (1894-1979), who proposed this genus as *Allophallus* in 1936 but used a name preoccupied in *Diptera* 

# Carlhubbsia kidderi (Hubbs 1936)

in honor of archaeologist Alfred Vincent Kidder (1885-1963), Chairman of the Division of Historical Research of the Carnegie Institution, whose "broad interest" made possible Hubbs' work in Yucatán, México (type locality; also occurs in Guatemala)

# Carlhubbsia stuarti Rosen & Bailey 1959

in honor of herpetologist Laurence C. Stuart (1907-1983), University of Michigan Museum of Zoology, who since the 1930s has collected many freshwater fishes in Guatemala, including type of this one

### Cnesterodon Garman 1895

*knester*, Greek for scraper; *odon*, tooth, allusion not explained, perhaps referring to outer series of teeth of *C. decemmaculatus*, described as "rather broad and shovel-shaped" and "hooked"

### Cnesterodon brevirostratus Rosa & Costa 1993

brevis, short; rostratus, beaked, referring to its blunt snout

### Cnesterodon carnegiei Haseman 1911

in honor of philanthropist Andrew Carnegie (1835-1919), whose Carnegie Museum sponsored Carl Eigenmann's 1907 expedition to central South America (during which type was collected) and published his description

# Cnesterodon decemmaculatus (Jenyns 1842)

*decem*, ten; *maculatus*, spotted, referring to "about ten conspicuous somewhat oval-shaped dusky spots, arranged in a longitudinal line along the middle of each side"

# Cnesterodon holopteros Lucinda, Litz & Recuero 2006

*holo*-, whole (i.e., undivided); *pterus*, fin, referring to unbranched pelvic-fin rays vs. branched (except first one) in congeners

# Cnesterodon hypselurus Lucinda & Garavello 2001

*hypselos*, high; *oura*, tail, referring to greater caudal peduncle length of males compared to congeners (with possible exception of *C. pirai*, described eight years later)

# Cnesterodon iguape Lucinda 2005

named for rio Ribeira de Iguape (São Paulo, Brazil), in whose headwaters type locality is situated

# Cnesterodon omorgmatos Lucinda & Garavello 2001

Greek for spotted, referring to blotches of dark pigmentation on sides

### Cnesterodon pirai Aguilera, Mirande & Azpelicueta 2009

pirá, Guarani word for fish and the diminutive í, referring to small size of fishes in this genus

# Cnesterodon raddai Meyer & Etzel 2001

in honor of zoologist-virologist Alfred C. Radda (1936-2022), University of Vienna, the first to recognize this species as undescribed

### Cnesterodon septentrionalis Rosa & Costa 1993

northern, referring to position of type locality (Alto Araguaia, Mato Grosso, Brazil) relative to distribution of

# congeners

# Gambusia Poey 1854

latinization of the Cuban *gambusino*, signifying "nothing," referring to their inconsequential size; "to fish for gambusinos" is an idiomatic way of saying one has caught nothing

# Subgenus Gambusia

# Gambusia baracoana Rivas 1944

named for the city of Baracoa, Oriente Province, Cuba, near where type was collected

### Gambusia beebei Myers 1935

in honor of naturalist and explorer William Beebe (1877-1962), New York Zoological Society, for his "extensive" ichthyological work in Haiti; he also helped collect type

# Gambusia bucheri Rivas 1944

in honor of George C. Bucher of Santiago de Cuba (no other information available), "through whose interest" Rivas was able to collect type

# Gambusia dominicensis Regan 1913

*-ensis*, suffix denoting place: Santo Domingo, historical name for Hispaniola, the Caribbean island encompassing Dominican Republic and Haiti, where it is endemic (but introduced elsewhere)

# Gambusia hispaniolae Fink 1971

of Hispaniola, the Caribbean island encompassing Dominican Republic and Haiti, where it is endemic

# Gambusia luma Rosen & Bailey 1963

Latin for thorn, referring to "tremendously enlarged and straight" terminal claw on ray 5 of gonopodium

# Gambusia manni Hubbs 1927

in honor of entomologist William M. Mann (1886-1960), "distinguished" Director of the National Zoological Park in Washington, D.C., and an aquarium enthusiast who bred this fish in captivity and supplied specimens to Hubbs

# Gambusia melapleura (Gosse 1851)

*melas*, black; *pleura*, side, referring to black band "rising from the upper side of the base of the pectoral" running  $\sim$ 1/3 length of fish along the sides

# Gambusia monticola Rivas 1971

of the mountains, referring to the "clear, cool, mountain stream habitat" to which it appears to be confined

### Gambusia nicaraguensis Günther 1866

*-ensis*, suffix denoting place: Lake Nicaragua, Nicaragua, type locality (also occurs in Panama, Belize, Guatemala, and Honduras)

### Gambusia pseudopunctata Rivas 1969

pseudo-, false, i.e., although this species may superficially resemble G. punctata, such an appearance is false

# Gambusia punctata Poey 1854

spotted, referring to conspicuous dark spots arranged in a longitudinal series on the sides

### Gambusia puncticulata puncticulata Poey 1854

dotted, allusion not explained, possibly referring to rows of dark spots on body and/or dorsal and caudal fins

# Gambusia puncticulata caymanensis Regan 1913

-ensis, suffix denoting place: Grand Cayman Island, West Indies, type locality, where it is endemic

### Gambusia puncticulata oligosticta Regan 1913

oligo-, few; sticta, spot, presumably referring to a "few scattered spots" on sides

### Gambusia rhizophorae Rivas 1969

of *Rhizophora*, genus of tropical mangrove trees, referring to its brackish and saltwater red-mangrove swamp habitat

### Gambusia wrayi Regan 1913

in honor of Charles Arthur Wray (ca. 1891-1936), attendant and clerk, British Museum (where Regan worked), who collected type

# Gambusia xanthosoma Greenfield 1983

xanthus, yellow; soma, body, referring to yellow coloration of body and fins

# Gambusia yucatana yucatana Regan 1914

-ana, belonging to Yucatán Peninsula (México and Guatemala for this subspecies)

### Gambusia yucatana australis Greenfield 1985

southern, referring to distribution in southern Yucatán Peninsula (México and Belize)

### Subgenus Arthrophallus Hubbs 1926

arthro, joint; phallos, penis, referring to segmented gonopodium

### Gambusia affinis (Baird & Girard 1853)

related, allusion not explained, but probably referring to its close relationship with *G. holbrooki*, whose name, although not formally published until 1859, was first used in an unpublished 1853 manuscript by Louis Agassiz

# Gambusia alvarezi Hubbs & Springer 1957

in honor of ichthyologist José Alvarez del Villar (1903-1986), who assisted the authors (e.g., collecting permits) and for his work on Mexican fishes

# Gambusia amistadensis Peden 1973

*-ensis*, suffix denoting place: Amistad Reservoir, which inundated Goodenough Spring and its outflow (Val Verde County, Texas, USA), only known area of occurrence, causing extinction in wild by time of description [captive stock contaminated by *G. affinis* and extinct by 1979]

# Gambusia atrora Rosen & Bailey 1963

ater, black; ora, border or edge, referring to "striking" dark pigment on distal margins of dorsal and caudal fins

# Gambusia aurata Miller & Minckley 1970

golden, referring to its "spectacular life colors"

# Gambusia clarkhubbsi Garrett & Edwards 2003

in honor of ichthyologist Clark Hubbs (1921-2008), University of Texas at Austin, for his contributions to the study of ecology and systematics of *Gambusia*, and his "lifetime pursuit of conservation of rare fishes"

### Gambusia eurystoma Miller 1975

eury, wide; stoma, mouth, referring to its "notably broad mouth"

# Gambusia gaigei Hubbs 1929

in honor of Frederick McMahon Gaige (1890-1976), entomologist, herpetologist, botanist, and Director of the Zoological Museum, University of Michigan, who collected type

# Gambusia geiseri Hubbs & Hubbs 1957

in honor of Samuel Wood Geiser (1890-1983), for his studies of this and other Gambusia species

# Gambusia georgei Hubbs & Peden 1969

in honor of Stanford University ichthyologist George S. Myers (1905-1985), for his contributions to the study of cyprinodont fishes and his long interest in the problems of endangered fishes [presumed extinct due to dewatering, pollution, non-native plants and fishes, and introgressize hybridization with *G. affinis*; genetically pure specimens not collected since 1983]

# Gambusia heterochir Hubbs 1957

heteros, different; cheir, hand, referring to deep indentation on upper margin of pectoral fin in males

# Gambusia holbrooki Girard 1859

manuscript name coined by Louis Agassiz in 1853 but first made available by Girard; patronym not identified but certainly in honor of physician-naturalist John E. Holbrook (1796-1871), who lived in South Carolina (USA), where Girard said this species was "very abundant in ponds and ditches of fresh water"

# Gambusia hurtadoi Hubbs & Springer 1957

in honor of Leopoldo Hurtado Olin, Departamento de Economía (Chihuahua, México), for his help during the authors' collecting trip in June 1951; he also informed them of the location of El Ojo de la Hacienda Dolores, type locality

# Gambusia krumholzi Minckley 1963

in honor of Louis A. Krumholz (1909-1981), University of Louisville (Kentucky, USA), for contributions to the knowledge of "many phases of aquatic biology," and to the biology of *G. affinis* 

### Gambusia lemaitrei Fowler 1950

in honor of "esteemed" friend Ernesto D. Lemaitre (Cartagena, Colombia), a naturalist and angler who accompanied and assisted Fowler "in every way" during his collecting trip to Colombia, where this species is endemic; in 1953, Fowler said "His familiarity and knowledge of all the more usual fishes about Cartagena was as revealing as was his delightful conversation during our trips about the country."

### Gambusia longispinis Minckley 1962

longus, long; spina, spine, referring to elongated spines of distal segment of third ray of gonopodium

# Gambusia nobilis (Baird & Girard 1853)

well-known or excellent, allusion not explained, perhaps referring to handsome appearance of its reddish ground color and black-margined scales

### Gambusia quadruncus Langerhans 2012

quad, four; uncus, hook, referring to four hooked elements at distal tip of gonopodium

# Gambusia senilis Girard 1859

aged, senior or older, allusion not explained, perhaps referring to larger size (and therefore older age) compared to other *Gambusia* specimens Girard examined; Wischnath (1993) offered this explanation: "Girard used the name to mean *of differing or distinct relationship*" (italics in original), but this may be a misinterpretation of Girard's sentence: "To distinguish this species from its congeners, the name of *G. senilis* is here proposed"; Huber (2019) hypothesizes name refers to "color pattern with mainly black and gray, as dress colors of {human} senescence {in those days}" [braces in original], but Girard describes a slightly more colorful fish with a "chestnut brown" body, a "yellowish golden" abdomen, and "olivaceous" ventral and pectoral fins

# Gambusia sexradiata Hubbs 1936

sex, six; radiata, rayed, proposed as a subspecies of *G. nicaraguaensis* with six (rarely seven) instead of seven (rarely six) dorsal-fin rays

### Gambusia speciosa Girard 1859

splendid or showy, allusion not explained, perhaps referring to reddish-brown body and yellow or white belly

# Gambusia zarskei Meyer, Schories & Schartl 2010

in honor of ichthyologist Axel Zarske (b. 1952), Senckenberg Natural History Museum, for "valuable contributions to discussions on the conservation biology and problems of endangered fishes" such as this one

# Subgenus Heterophallina Hubbs 1926

diminutive of *Heterophallus*, "in some respects intermediate" between that genus and *Gambusia* in anal-fin structure of males

# Gambusia marshi Minckley & Craddock 1962

in honor of E. G. Marsh, Jr., Gus Engling Wildlife Refuge (Texas, USA), who first explored the fauna of the Cuatro Ciénegas area of Coahuila (where this species is endemic), and who contributed many specimens of fishes and other vertebrates from northern México

# Gambusia panuco Hubbs 1926

named for northern Río Pánuco basin (San Luis Potosí, Mexico), where it is endemic

# Gambusia regani Hubbs 1926

in honor of ichthyologist Charles Tate Regan (1878-1943), Natural History Museum (London), "who, more than any other worker, has brought order into the classification of the poeciliid fishes"

### Gambusia vittata Hubbs 1926

striped, referring to prominent lateral stripe

# Girardinus Poey 1854

-*inus*, belonging to: ichthyologist-herpetologist Charles Girard (1822-1895), for his descriptions of freshwater fishes from North America

# Girardinus creolus Garman 1895

Creole, allusion not explained, perhaps from the Latin *creare*, meaning "to make, bring forth, produce, beget," referring to its viviparity, and/or referring to Cuba, where it is endemic, and which has a sizable population of partial Haitian ancestry who speak Haitian Creole

### Girardinus denticulatus denticulatus Garman 1895

denticulated, i.e., finely toothed or notched, referring to bands of denticles behind outer series of teeth [sometimes placed in its own genus, *Dactylophallus*, with *D. d. ramsdeni* elevated to full species]

# Girardinus denticulatus ramsdeni Rivas 1944

in honor of Cuban zoologist Charles T. Ramsden (1876-1951), for his "extensive" zoological work in the region of Guantánamo

# Girardinus falcatus (Eigenmann 1903)

sickle-shaped, referring to falcate dorsal fin of males and dorsal and anal fins of females, with "sickle-shaped" second rays [sometimes placed in *Glaridichthys*, treated here as a synonym of *Girardinus*]

# Girardinus metallicus Poey 1854

like metal, referring to metallic-blue scales of head and back in living specimens (absent in alcohol)

# Girardinus microdactylus Rivas 1944

*micro-*, small; *dactylus*, finger, referring to finger-like appendages of gonopodium, smaller than other known species of the tribe Girardinini

### Girardinus uninotatus Poey 1860

*uni-*, one; *notatus*, marked, referring to single large round spot on sides directly above anus [sometimes placed in *Glaridichthys*, treated here as a synonym of *Girardinus*]

### Heterandria Agassiz 1853

heteros, different; andros, male, referring to sexually dimorphic anal fin, i.e., the gonopodium



# Heterandria formosa (Girard 1859)

comely or attractive, allusion not explained but probably referring to its appearance [name coined by Louis Agassiz in 1855 who mentioned only its diminutive size; workers who believe this mention constitutes a distinguishing feature assign authorship to Agassiz 1855; Girard's authorship often appears without parentheses but he originally placed species in *Girardinus*]

### Heterophallus Regan 1914

*heteros*, different; *phallus*, penis, described as closely related to *Gambusia*, "differing only in the somewhat different structure of the intromittent organ" (i.e., gonopodium)

# Heterophallus echeagarayi (Álvarez 1952)

in honor of Luis Echeagaray Bablot (d. 1984), manager of water resources in southeast México; he took a great interest in Álvarez' work and facilitated his collecting

# Heterophallus milleri Radda 1987

in honor of Robert Rush Miller (1916-2003), University of Michigan, "one of the most distinguished" ichthyologists and a specialist in cyprinodontiforms; he discovered this species and shared data, photographs and illustrations with Radda

### Heterophallus rachovii Regan 1914

in honor of German aquarist Arthur Rachow (1884-1960), who presented type to the British Museum

# Hiatirhaphis Huber 2019

*hiatus*, gap, presumably referring to how genus is "molecularly separated from related *Priapichthys* since ca. 22 MYA"; *rhaphis*, abridgement of *Brachyrhaphis*, in which both species had previously been placed

### Hiatirhaphis cascajalensis (Meek & Hildebrand 1913)

-ensis, suffix denoting place: Río Cascajal at Porto Bello, Panama, type locality (also occurs in Costa Rica)

### Hiatirhaphis parismina (Meek 1912)

named for Parismina, Limón Province, Costa Rica, type locality

# Neoheterandria Henn 1916

neo-, new, described as intermediate between Heterandria and Pseudopoecilia

# Neoheterandria cana (Meek & Hildebrand 1913)

named for Cana (now in Darién National Park), Panama, type locality

### Neoheterandria elegans Henn 1916

elegant, fine or select, allusion not explained, presumably referring to its coloration, similar to that of *Heterandria* formosa, also presumably named for its attractive appearance

# Neoheterandria tridentiger (Garman 1895)

tri-, three; dens, teeth; -iger, to bear, referring to tricuspid teeth on inner series of jaw

### Phallichthys Hubbs 1924

*phallus*, penis, presumably referring to longer gonopodium compared to *Poeciliopsis*, original genus of type species, *P. isthmensis* (*=amates*); *ichthys*, fish

### Phallichthys amates amates (Miller 1907)

named for Los Amates, Guatemala, type locality (also occurs in Honduras; subspecies *pittieri* occurs in Costa Rica and Panama)

# Phallichthys amates pittieri (Meek 1912)

patronym not identified, probably in honor of geographer-botanist Henri François Pittier (1857-1950), who collected specimens in Central America, including Costa Rica (type locality), and may have collected this fish

### Phallichthys fairweatheri Rosen & Bailey 1959

in honor of Rev. Gerald Fairweather, for his participation in obtaining extensive scientific collections of fishes in British Honduras (now Belize)

# Phallichthys quadripunctatus Bussing 1979

quadri-, four; punctatus, spotted, referring to four "distinctive" spots on body

# Phallichthys tico Bussing 1963

from Ticos, as Costa Ricans affectionately call themselves, so named for their linguistic tendency to add the diminutive "*tico*" to the end of each word, referring to country where this species is endemic

### Phalloceros Eigenmann 1907

phallus, intromittent organ; ceros, horn, referring to "antler-like" structures (paired appendix) at tip of gonopodium

### Phalloceros alessandrae Lucinda 2008

in honor of Lucinda's wife, Alessandra M. V. Lucinda

### Phalloceros anisophallos Lucinda 2008

anisos, unequal or uneven; phallos, penis, referring to asymmetrical terminal appendix of gonopodium

### Phalloceros aspilos Lucinda 2008

a-, without; spilos, spot, i.e., spotless, referring to absence of a lateral spot

# Phalloceros buckupi Lucinda 2008

in honor of Paulo A. Buckup (b. 1959), collector of most specimens of this species, for his many contributions to neotropical ichthyology

### Phalloceros caudimaculatus (Hensel 1868)

*caudi*-, tail; *maculatus*, spotted, described as having a single vertical spot on caudal peduncle (color highly variable; this marking absent on many specimens)

# Phalloceros elachistos Lucinda 2008

*elachis*, small, short or little; *-istos*, superlative suffix, i.e., least, referring to small size, 15.1-27.8 mm SL (females), 14.9-18.5 mm (males)

# Phalloceros enneaktinos Lucinda 2008

enneas, nine; aktinos, rays, referring to number of dorsal-fin rays in both sexes

### Phalloceros harpagos Lucinda 2008

Greek for hook, referring to small and simple (vs. large and sickle-shaped) hook in gonopodial appendix

### Phalloceros heptaktinos Lucinda 2008

hepta-, seven; aktinos, rays, referring to number of dorsal-fin rays of females

### Phalloceros leptokeras Lucinda 2008

leptos, narrow; keras, horn, referring to large, slender sickle-like hook on gonopodial appendix

### Phalloceros leticiae Lucinda 2008

in honor of Lucinda's daughter, Letícia M. Lucinda

### Phalloceros lucenorum Lucinda 2008

*-orum*, commemorative suffix, plural: in honor of Carlos A. S. de Lucena and Zilda Margarete S. de Lucena, curators and researchers at the Museu de Ciências e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul (Porto Alegre, Brazil), for their many contributions to neotropical ichthyology

### Phalloceros malabarbai Lucinda 2008

in honor of Luiz Roberto Malabarba, Universidade Federal do Rio Grande do Sul (Porto Alegre, Brazil), for his many contributions to neotropical ichthyology

# Phalloceros maldonadoi Souto-Santos, Lucinda & Buckup 2023

in honor of biologist Javier Alejandro Maldonado-Ocampo (1977-2019), for his many contributions to Neotropical ichthyology; sadly, he was killed when, crossing a river in a small boat, the boat overturned and he was swept downstream (coincidentally in the same month the authors first diagnosed this species)

# Phalloceros megapolos Lucinda 2008

mega-, large; polos, rod, axle or pole, referring to expanded terminal appendix of gonopodium

# Phalloceros mikrommatos Lucinda 2008

*mikro*-, small; *ommatus*, eyed, referring to eye-like (ocellated) lateral spot

### Phalloceros ocellatus Lucinda 2008

with little eyes, referring to eye-like spot (ocellus) on sides

# Phalloceros pellos Lucinda 2008

dark-colored or dusky, referring to its background color

# Phalloceros reisi Lucinda 2008

in honor of Roberto E. Reis, Pontificia Universidade Católica do Rio Grande do Sul (Porto Alegre, Brazil), for his many contributions to neotropical ichthyology

# Phalloceros spiloura Lucinda 2008

*spilos*, spot; *oura*, tail, referring to rounded spot close to base of lowest caudal-fin rays

# Phalloceros titthos Lucinda 2008

Greek for a woman's breast or animal's teat, referring to small papillae at mandibular symphysis of large adult females

### Phalloceros tupinamba Lucinda 2008

named for the Tupinambá, indigenous tribe who inhabited the rio Itamambuca and rio Macacu drainages (São Paulo and Rio de Janeiro states, Brazil) during Pre-Cabralian times

# Phalloceros uai Lucinda 2008

an interjection usually served to express surprise used by the natives of Minas Gerais, Brazil (where this species occurs), an homage to Minas Gerais, the author's birthplace

### Phalloptychus Eigenmann 1907

*phallus*, intromittent organ; *ptychos*, fold, referring to third anal-fin ray of male folded back, and fifth and part of fourth rays folded forward, forming a slender tube at tip of gonopodium

# Phalloptychus eigenmanni Henn 1916

in honor of ichthyologist Carl H. Eigenmann (1863-1927), Henn's "respected professor," who proposed the genus in 1907

# Phalloptychus iheringii (Boulenger 1889)

in honor of German-Brazilian zoologist Hermann von Ihering (1850-1930), who collected type

### Phalloptychus januarius (Hensel 1868)

*-ius*, belonging to: January, described from Rio de Janeiro ("River of January"), Brazil (also occurs in Uruguay)

# Phallotorynus Henn 1916

phallus, intromittent organ; toryne, trowel, referring to gonopodium, which resembles a "garden trowel or scoop"

### Phallotorynus dispilos Lucinda, Rosa & Reis 2005

di-, twice or two; spilos, spot, referring to two round-to-elliptical dark blotches along ventral half of flanks

### Phallotorynus fasciolatus Henn 1916

banded, referring to 6-7 narrow vertical bands, or dark brownish streaks, on sides

# Phallotorynus jucundus Ihering 1930

pleasant or agreeable, presumably referring to its coloration, described as "almost white" (translation) with 6-8 stripes on sides and 4-5 black spots on lower half of body

# Phallotorynus pankalos Lucinda, Rosa & Reis 2005

Greek for very beautiful, referring to "beauty of specimens"

### Phallotorynus psittakos Lucinda, Rosa & Reis 2005

parrot, referring to Rio Paraguay, Paraguay (from the Guaraní *paraguá-í*, meaning Parrot River), where it is endemic

### Phallotorynus victoriae Oliveros 1983

in honor of María Victoria Oliveros, presumably a relative of the author

# Poecilia Bloch & Schneider 1801

from the Greek *poikilos*, variegated or speckled, referring to color pattern of *P. vivipara* and other cyprinodontiform fishes (e.g., *Fundulus heteroclitus*) Bloch & Schneider placed in the genus

# Subgenus Poecilia

### Poecilia vivipara Bloch & Schneider 1801

viviparous, described as having a belly full of fetuses ("venter ab embryonibus turgidus")

### Subgenus Acanthophacelus Eigenmann 1907

acanthus, spine; phacelus, bundle, referring to short gonopodium, with long and pointed comb-like spines on ray 3

# Poecilia obscura Schories, Meyer & Schartl 2009

hidden, member of a cryptic species complex with P. reticulata and P. wingei

### Poecilia reticulata Peters 1859

netted or reticulate, referring to scale pattern forming a "black network, the meshes parallel to the edges of the scales" (translation)

### Poecilia wingei Poeser, Kempkes & Isbrücker 2005

in honor of Danish biologist Øjvind Winge (1886-1964), called by some the "father of genetic engineering," who described many color patterns and the genetics of sex-determination in *P. reticulata* as a result of extensive breeding experiments; he provided the basis for understanding color polymorphism in guppies and the means for recognizing character displacement between *P. wingei* and *P. reticulata* 

### Subgenus Allopoecilia Hubbs 1924

*allos*, another, i.e., proposed as one of three new genera of the tribe Poeciliini, along with *Neopoecilia* (=*Poecilia*) and *Parapoecilia* (=*Pamphorichthys*)

# Poecilia caucana (Steindachner 1880)

-anus, belonging to: Río Cauca, Colombia, type locality (also occurs in Panama and Venezuela)

# Poecilia dauli Meyer & Radda 2000

in honor of German aquarist Günter Daul, known for collecting (while on holiday in México) and introducing into the hobby a strain of *Xiphophorus helleri* called "Yucatan" (but actually from Quintana Roo)

# Subgenus Curtipenis Rivas & Myers 1950

curtus, short; penis, copulatory organ, referring to "very short" gonopodium

# Poecilia elegans (Trewavas 1948)

elegant, fine or select, presumably referring to appearance of both sexes, described as having reticulate markings on body, a vertical series of small spots crossing the caudal fin midway in its length, and a "brilliant metallic gleam" on upper part of iris and top of operculum

### Subgenus Limia Poey 1854

-ia, belonging to: limus, mud, referring to limivorous (detrital) diet of Limia cubensis (=Poecilia vittata)

# Poecilia caudofasciata (Regan 1913)

*caudo-*, tail; *fasciata*, banded, allusion not explained, perhaps referring to "series of dark vertical bars on posterior part of body," with last one at base of caudal fin

# Poecilia caymanensis (Rivas & Fink 1970)

-ensis, suffix denoting place: Cayman Island, West Indies, where it is endemic

# Poecilia dominicensis Valenciennes 1846

*-ensis*, suffix denoting place: Santo Domingo, historical name for Hispaniola, the Caribbean island encompassing Dominican Republic and Haiti, where it is endemic

# Poecilia fuscomaculata (Rivas 1980)

fuscus, dusky; maculata, spotted, referring to dark spots and blotches on sides

# Poecilia garnieri (Rivas 1980)

in honor of Emmanuel Garnier, Director, Fisheries Service of Haiti (where this species is endemic), for his assistance during Rivas' 1951 expedition to Haiti, when type was collected

### Poecilia grossidens (Rivas 1980)

grossus, large; dens, teeth, referring to very large teeth, largest in the subgenus

### Poecilia immaculata (Rivas 1980)

im-, not; maculatus, spotted, referring to absence of crossbars, blotches, spots, mottling, and speckling on body

### Poecilia islai (Rodriguez-Silva & Weaver 2020)

in honor of Dominic Isla (d. 2020), aquarist and tropical-fish dealer, one of the first collectors of this species and who introduced it to the aquarium hobby; he passed away before it was formally evaluated

# Poecilia mandibularis (Rodriguez-Silva, Torres-Pineda & Josaphat 2020)

of the jaw, referring to well-developed lower jaw

# Poecilia melanogaster Günther 1866

*melano*-, black; *gaster*, belly, referring to "deep black" color of posterior belly on females (the anterior half silvery, the colors sharply separated from each other)

### Poecilia melanonotata (Nichols & Myers 1923)

*melano*-, black; *notata*, marked, referring to series of black spots down middle of sides of younger females, which fade out slightly as the fish grows

# Poecilia miragoanensis (Rivas 1980)

-ensis, suffix denoting place: Lake Miragoâne, Haiti, where it is endemic

# Poecilia nicholsi (Myers 1931)

in honor of John Treadwell Nichols (1883-1958), curator of fishes, American Museum of Natural History, Myers' "first teacher in ichthyology"; description based on data and figures published by Nichols, who reported this species as *P. versicolor* in 1915

# Poecilia nigrofasciata (Regan 1913)

nigro-, black; fasciata, banded, referring to 7-9 blackish vertical bars on body

# Poecilia ornata (Regan 1913)

adorned or decorated, presumably referring to "blackish spots more or less well developed" on head, body, and usually vertical fins, and/or "series of dark bars or large vertically expanded spots" on body

# Poecilia pauciradiata (Rivas 1980)

*paucus*, few; *radiata*, rayed, referring to fewer caudal-fin rays than other species placed by Rivas in the subgenus *Limia* except for *P. versicolor* and *P. zonata* 

# Poecilia perugiae (Evermann & Clark 1906)

in honor of Italian ichthyologist Albert Perugia (1847-1897), Natural History Museum of Genoa, for his work on the fishes of the West Indies

# Poecilia rivasi (Franz & Burgess 1983)

in honor of Luis René Rivas y Díaz (1916-1986), Curator of Fishes, University of Miami, for his "long standing interest" in the systematics of poeciliid fishes of the Greater Antilles

# Poecilia sulphurophila (Rivas 1980)

*philos*, loving, i.e., sulphur-loving, referring to its occurrence in La Zurza (Dominican Republic), a sulfide spring to which it is "well adapted and apparently confined"

# Poecilia tridens Hilgendorf 1889

tri-, three; dens, teeth, referring to tricuspid inner teeth

# Poecilia versicolor (Günther 1866)

of various colors (variegated), e.g., reddish-olive above, 2-3 reticulated black spots on sides, and sometimes with indistinct silvery cross bars on tail

# Poecilia vittata Guichenot 1843

banded, described as having a "broad band of a beautiful silvery color" (translation) on sides [often incorrectly dated to 1853 French translation of original Spanish text]

# Poecilia yaguajali (Rivas 1980)

of Río Yaguajal, Dominican Republic, type locality (may also occur in Haiti)

# Poecilia zonata (Nichols 1915)

banded, referring to 4-5 broad black bars on sides

# Subgenus Micropoecilia Hubbs 1926

micro-, small, "signifying Poecilia-like fishes of reduced size"

# Poecilia bifurca (Eigenmann 1909)

*bi*-, two; *furcatus*, pronged, referring to caudal fin of males, with a "variously shaped dark olive-green vertical band at its base, usually continued into a long prong along the entire upper margin of the fin, very frequently continued into a shorter prong along the ventral edge of the fin"

### Poecilia branneri Eigenmann 1894

in honor of American geologist John Casper Branner (1950-1922), Stanford University, "for some years an associate" in Brazil of the late Charles Frederick Hartt (1840-1878), who collected some of the type series

# Poecilia minima Costa & Sarraf 1997

minimal, referring to its small size, up to 16.8 mm SL

### Poecilia parae Eigenmann 1894

of Pará, Brazil, type locality (also occurs in Guyana, French Guiana and Suriname)

### Poecilia picta Regan 1913

painted, allusion not explained, probably referring to color pattern of females (dark-brown spot on each scale and dark-brown longitudinal stripes between series of scales) and/or males (similar to females but with a few large dark spots in posterior part of body and often an ocellus on upper base of caudal fin)

# Poecilia sarrafae Bragança & Costa 2011

in honor of Brazilian ichthyologist Alessandra Sarraf, who first studied this species in her unpublished 1998 dissertation on *Micropoecilia* 

# Poecilia waiapi Bragança, Costa & Gama 2012

named for the Waiāpi indigenous group who live along the rio Jari drainage (Amapá, Brazil), where this species occurs

# Subgenus Mollienesia Lesueur 1821

*-esia*, adjectival suffix: in honor of Nicholas François, Count Mollien (1758-1850), one of Napoleon's finance ministers, "a man of science, and one of the patrons" of Lesueur's friend and scientific associate François Peron (1775-1810) [originally spelled "*Mollinesia*" in text and "*Mollienisia*" on plate, both considered typographical or copyist errors]

### Poecilia boesemani Poeser 2003

in honor of Marinus Boeseman (1916-2006), emeritus curator of the ichthyological collection of the National Museum of Natural History (Leiden), who collected type in 1960

# Poecilia butleri Jordan 1889

in honor of Jordan's friend, ornithologist Amos W. Butler (1860-1937), Secretary, Indiana Academy of Sciences; he also collected fishes in México, but apparently not this one

# Poecilia catemaconis Miller 1975

-is, genitive singular of: Laguna Catemaco and its tributaries and outflow (Veracruz, México), where it is endemic

### Poecilia chica Miller 1975

Spanish for little or small, referring to small fins and size

# Poecilia formosa (Girard 1859)

comely, referring to a male *P. latipinna*, which Girard believed was a male *P. formosa* (an all-female species [hence the popular name Amazon Molly, referring to mythic race of female warriors, not the Amazon River], arisen through natural hybridization between *P. latipinna* and *P. mexicana*, that mates with males from either *P. latipinna*, *P. latipunctata*, *P. mexicana* or *P. sphenops*; sperm stimulates egg cleavage but does not contribute to inheritance, so offspring are genetically identical clones of the mother)

### Poecilia gillii (Kner 1863)

patronym not identified but almost certainly in honor of Smithsonian zoologist Theodore Gill (1837-1914)

### Poecilia hondurensis Poeser 2011

*-ensis*, suffix denoting place: Caribbean drainage basins of Honduras, where it is endemic (name used in the notes of Robert Rush Miller and Gustavo Cruz, who were preparing a joint description when Miller passed away; Poeser retained the name "in honor of both discoverers")

# Poecilia koperi Poeser 2003

in honor of Poeser's friend Michel Koper, "with whom discussions have helped to keep my thinking flexible"

# Poecilia kykesis Poeser 2002

Greek for "a mixing," replacement name for *Mollienesia petenensis* Günther 1866 (not *Poecilia petenensis* Günther in the same work), "reflecting the confusing mixture of homonyms, caused by the double recognition *Poecilia petenensis* and *Mollienesia petenensis* as congeneric species"

### Poecilia latipinna (Lesueur 1821)

*latus*, broad; *pinna*, fin, referring to enlarged dorsal fin of male

### Poecilia latipunctata Meek 1904

latus, broad; punctata, spotted, referring to black band on sides made up of spots about as large as pupil

# Poecilia limantouri Jordan & Snyder 1899

in honor of José Yves de Limantour (1854-1935), "the accomplished minister of the 'Hacienda' for Mexico" (i.e., finance ministry), for "favors received through his courtesy"

### Poecilia marcellinoi Poeser 1995

in honor of Poeser's friend Marcellino Rozemeyer, who helped him throughout his studies

# Poecilia maylandi Meyer 1983

in honor of aquarium-fish author Hans Joachim Mayland (ca. 1928-2004), whose photographs of this species were used in its description

# Poecilia mechthildae Meyer, Etzel & Bork 2002

in honor of Mechthild Etzel, the second author's daughter

# Poecilia mexicana Steindachner 1863

Mexican, referring to Orizaba, Veracruz, type locality (but occurs along Atlantic coast of Central America from Texas, USA, to Río Cuango, Panama, and along Pacific coast from El Salvador/Guatemala to Panama)

### Poecilia nelsoni (Meek 1904)

in honor of naturalist-ethnologist Edward William Nelson (1855-1934), Division of Biological Survey, U.S. Department of Agriculture, who collected type

### Poecilia orri Fowler 1943

in honor of G. A. Bisler Orr (1916-1956), who made an "interesting collection" of shore fishes from Bay Islands off northern Honduras for the Academy of Natural Sciences of Philadelphia, including type of this species

### Poecilia petenensis Günther 1866

-ensis, suffix denoting place: Lake Petén, Guatemala, where it is endemic

# Poecilia rositae Meyer, Schneider, Radda, Wilde & Schartl 2004

in honor of Rosita Bonhaus, partner of aquarium-book publisher Hans A. Baensch (see *Poeciliopsis baenschi*), "who has considerably contributed to the production process of numerous aquaristic books, including the new atlas of livebearing fishes" (possibly *Lebendgebaerende Zierfische: Arten der Welt*, published in 1985)

# Poecilia salvatoris Regan 1907

-is, genitive singular of: El Salvador, San Salvador, type locality (also occurs in Guatemala and Honduras)

# Poecilia sphenops Valenciennes 1846

sphenos, wedge; ops, face, referring to its depressed snout and wedge-shaped head

# Poecilia sulphuraria (Álvarez 1948)

-aria, of or belonging to: sulfidic springs with high concentrations of toxic hydrogen sulfide

# Poecilia teresae Greenfield 1990

in honor of Greenfield's wife Teresa, a "collaborator and companion during many years of fish collecting in Belize" (where this species is endemic)

### Poecilia thermalis Steindachner 1863

Latin for hot spring, referring to type locality, La Esperanza (Chiapas, México), a sulfide spring that reaches 28.75°C

### Poecilia vandepolli van Lidth de Jeude 1887

in honor of Dutch entomologist Jacob R. H. Neervoort van de Poll (1862-1924), who collected specimens in the Netherlands West Indies (Aruba, Curaçao, Bonaire) for the Rijksmuseum van Natuurlijke Historie (Leiden, Netherlands), including type of this species

# Poecilia velifera (Regan 1914)

velum, sail; fero, to bear, referring to large, sail-like dorsal fin of males

# Poecilia wandae Poeser 2003

in honor of Vanda Marisa Freitas de Leite (no other information available), "who wishes to be called Wanda" (like the Oscar-winning film *A Fish Called Wanda*?)

# Subgenus Pamphorichthys Regan 1913

pamphoros, fertile, allusion not explained, probably referring to their viviparity; ichthys; fish

# Poecilia akroa Figueiredo & Moreira 2018

named for the Akroá people, one of the indigenous populations who lived in the northeastern part of the Brazilian state of Tocantins, including type locality

### Poecilia araguaiensis (Costa 1991)

-ensis, suffix denoting place: rio Araguaia basin, Goiás, Brazil, where type locality (a lagoon) is situated

# Poecilia hasemani (Henn 1916)

in honor of John D. Haseman (1882-1969), field collector in the Carnegie Museum of Natural History's Department of Ichthyology, who collected type, and "to whose energy and zeal as a collector is to be attributed the greater portion of the collection upon which [Henn's] paper is based"

### Poecilia hollandi (Henn 1916)

in honor of zoologist-paleontologist William J. Holland (1848-1932), Director, Carnegie Museum of Natural History, "whose interest and support has made possible the extensive collection of South American fishes in the Museum," including this one

### Poecilia minor (Garman 1895)

small, described at 1.78 cm (males) and 2.0 cm (female)

# Poecilia pertapeh (Figueiredo 2008)

named for Lagoa Perta-Pé, a marginal lake on left side of Bezerra River, São Francisco basin, Brazil, only known area of occurrence; "Lagoa Perta-Pé means "Squeeze-Foot Lake," referring to how it dense aquatic vegetation makes wading almost impossible

### Poecilia scalpridens (Garman 1895)

scalprum, chisel; dens, teeth, referring to its chisel-shaped teeth

### Subgenus Pseudolimia Poeser 2002

*pseudo*-, false, i.e., "superficially like, but not identical" to *Limia* (both genus-level names treated as full genera by Poeser), original genus of *P heterandria* 

# Poecilia heterandria (Regan 1913)

*heteros*, different; *andros*, male, allusion not explained, perhaps referring to sexually dimorphic coloration: males with 3-4 blackish crossbars, females with a blackish lateral stripe anteriorly

### Subgenus Psychropoecilia Myers 1935

a Poecilia adapted to psychros, cold, referring to "clear mountain torrents," habitat of P. dominicensis (renamed P. montana)

# Poecilia hispaniolana Rivas 1978

-ana, belonging to: Hispaniola (Dominican Republic and Haiti), where it is endemic

### Poecilia montana Rosen & Bailey 1963

mountainous, referring to its habitat (see *Psychropoecilia*) [replacement name for *Platypoecilus dominicensis* Evermann & Clark 1906, secondarily preoccupied in *Poecilia* by *P. dominicensis* Valenciennes 1846]

# Poeciliopsis Regan 1913

-opsis, appearance, i.e., similar to Poecilia (in mouth and dentition)

### Subgenus *Poeciliopsis*

# Poeciliopsis baenschi Meyer, Radda, Riehl & Feichtinger 1986

in honor of Hans A. Baensch (1941-2016), aquarium book author, publisher and editor

# Poeciliopsis balsas Hubbs 1926

named for Río Balsas basin (Guerrero, México), where Hubbs believed it was apparently confined (also occurs in ríos Arteaga and Aguililla [Jalisco, Michoacán, Morelos, Puebla])

# Poeciliopsis catemaco Miller 1975

named for Lago de Catemaco and its outflow (Veracruz, México), where it is endemic

# Poeciliopsis fasciata (Meek 1904)

banded, referring to 3-5 vertical bars on sides

### Poeciliopsis gracilis (Heckel 1848)

slender, referring to its "slimmer build" (translation) compared to *Pseudoxiphophorus bimaculatus* and *Xiphophorus helleri*, its presumed congeners at the time

### Poeciliopsis hnilickai Meyer & Vogel 1981

in honor of Erich Hnilicka, Mexican aquarist and amateur limnologist, who "greatly contributed" (translation) to the discovery of poeciliids in México (including this species) through private research supported by the Departamento de Pesca (Mexico City); he also collected type of *Xiphophorus meyeri* (named after the senior author)

# Poeciliopsis infans (Woolman 1894)

infant, referring to its small size (as small as 3 cm in males)

# Poeciliopsis jackschultzi Conway, Mateos & Vrijenhoek 2019

in honor of R. Jack Schultz (d. 2016), University of Connecticut, a "pioneer" of studies on hybridization and all-female reproduction in *Poeciliopsis* 

# Poeciliopsis latidens (Garman 1895)

latus, broad; dens, teeth, referring to its wide mandibular teeth

### Poeciliopsis lucida Miller 1960

clear or bright, referring to its clear dorsal and anal fins

### Poeciliopsis lutzi (Meek 1902)

in honor of entomologist Frank Eugene Lutz (1879-1943), Meek's volunteer assistant in México

### Poeciliopsis monacha Miller 1960

single or solitary, referring to its isolated and restricted distribution, at the time known only from a few small streams

# Poeciliopsis occidentalis (Baird & Girard 1853)

western, allusion not explained, perhaps referring to its western distribution (described from Sonora, México) compared to presumed congeners in *Heterandria* 

### Poeciliopsis pleurospilus (Günther 1866)

pleuro-, side; spilos, spot, referring to 6-7 round blackish spots on sides, each about the size of the eye

# Poeciliopsis presidionis (Jordan & Culver 1895)

-is, genitive singular of: Río Presidio, Sinaloa, México, type locality

### Poeciliopsis prolifica Miller 1960

producing abundantly or freely, referring to the production of frequent broods (as many as six per month)

# Poeciliopsis santaelena Bussing 2008

named for the Peninsula Santa Elena, Costa Rica, where only known locality (Río Potrero Grande) is situated

# Poeciliopsis scarlli Meyer, Riehl, Dawes & Dibble 1985

in honor of British fish importer John Scarll, who helped collect type

# Poeciliopsis sonoriensis (Girard 1859)

*-ensis*, suffix denoting place: Sonora, México, where type locality (San Bernardino Creek, tributary of Río Yaqui) is situated (also occurs in Arizona, USA)

# Poeciliopsis turneri Miller 1975

in honor of the late Clarence Lester Turner (1890-1969), "who made important, pioneering contributions to the knowledge of reproduction and viviparity in teleost fishes and who first collected this species and recognized it as new"

# Poeciliopsis turrubarensis (Meek 1912)

-ensis, suffix denoting place: Turrubares, Costa Rica, type locality (occurs from México south to Colombia)

# Poeciliopsis viriosa Miller 1960

robust or strong, referring to its "exceptional hardiness" in captivity and its wide ecological tolerance in nature

### Subgenus Aulophallus Hubbs 1926

aulon, pipe; phallus, penis, referring to infolded rays of gonopodium forming a tube on left side of fin

# Poeciliopsis elongata (Günther 1866)

elongate, allusion not explained, perhaps referring to slimmer body compared to all other species Günther included in *Poecilia* at the time (with exception of *Poecilia petenensis*)

### Poeciliopsis paucimaculata Bussing 1967

*paucus*, few; *maculata*, spotted, referring to 2-3 dark blotches on sides vs. 8 thin bars or no markings compared to other members of subgenus

# Poeciliopsis retropinna (Regan 1908)

*retro*-, backward; *pinnis*, fin, presumably referring to rearward dorsal-fin origin, "equidistant from anterior part of eye and posterior edge of caudal fin"

# Priapella Regan 1913

etymology not explained but probably diminutive of Priapos, god of reproduction, represented by a large penis, referring to long gonopodium, and/or diminutive of *Priapichthys*, a closely related genus described in the same publication

### Priapella bonita (Meek 1904)

Spanish for pretty, allusion not explained, perhaps referring to each scale on darker portion of body with a light margin forming lateral stripes along each scale row [probably extinct; no recorded sightings since 1903 and one aquarium record ca. 1935]

# Priapella chamulae Schartl, Meyer & Wilde 2006

in honor of the Chamula, native people of central Chiapas and Tabasco border, México, where this species occurs

### Priapella compressa Álvarez 1948

named for its compressed body, especially its "markedly compressed" (translation) caudal peduncle

# Priapella intermedia Álvarez & Carranza 1952

intermediate, referring to taxonomic position between P. bonita and P. compressa

# Priapella lacandonae Meyer, Schories & Schartl 2011

in honor of the Lacandons, native people of northeastern Chiapas, México (where this species occurs) and Petén, Guatemala

### Priapella olmecae Meyer & Espinosa Pérez 1990

in honor of the Olmecas, native people of southern Veracruz (where this species occurs) and northern Tabasco, México

### Priapichthys Regan 1913

etymology not explained but almost certainly referring to Priapos, god of reproduction, represented by a large penis, referring to longer gonopodium compared to *Gambusia*; *ichthys*, fish

# Priapichthys annectens (Regan 1907)

linking or joining, hypothesized to form a link between *Gambusia* (now *Pseudoxiphophorus*) *bimaculata* and *G*. (now *Brachyrhaphis*) *episcopi*, its presumed congeners at the time

### Priapichthys caliensis (Eigenmann & Henn 1916)

-ensis, suffix denoting place: Cali, Colombia, type locality

# Priapichthys chocoensis (Henn 1916)

-ensis, Chocó, Colombia, type locality

### Priapichthys darienensis (Meek & Hildebrand 1913)

-ensis, suffix denoting place: Darién, Panama, type locality (also occurs in Colombia)

# Priapichthys nigroventralis (Eigenmann & Henn 1912)

*nigro-*, black; *ventralis*, ventral, allusion not explained, perhaps referring to "heavily pigmented" posterior rays of male anal fins, "forming a conspicuous, bright black spot" (much less noticeable in females)

### Priapichthys puetzi Meyer & Etzel 1996

in honor of German aquarist Wilfried Pütz (b. 1940), who collected type with the junior author

# Pseudopoecilia Regan 1913

pseudo-, false, i.e., not a true Poecilia, in which P. festae had been classified

# Pseudopoecilia austrocolumbiana Radda 1987

-ana, belonging to: austro-, south, referring to distribution in southern Colombia

# Pseudopoecilia festae (Boulenger 1898)

in honor of Italian naturalist Enrico Festa (1868-1939), who collected type

### Pseudopoecilia fria (Eigenmann & Henn 1914)

etymology not explained, perhaps *fria*, Spanish for cold or cool, referring to occurrence in cooler forest pools compared to nearly identical *P. festae*, also of western Ecuador, which occurs in hot springs reaching 35°C

### Pseudoxiphophorus Bleeker 1860

*pseudo-*, false, i.e., not a "true" *Xiphophorus* (original genus of *P. bimaculata*); Bleeker separated the genera based on placement of dorsal fin (starting behind tip of ventral fins in *Pseudoxiphophorus*; starting above or hardly behind tip of pectoral fins in *Xiphophorus*)

# Pseudoxiphophorus anzuetoi (Rosen & Bailey 1979)

in honor of Roderico Anzueto, commemorating the senior author's "deep appreciation of, and affection for, my good friend and frequent field companion," one of Guatemala's "most distinguished naturalists"

# Pseudoxiphophorus attenuatus (Rosen & Bailey 1979)

thin or tapered, referring to its "slender body form"

# Pseudoxiphophorus bimaculatus (Heckel 1848)

bi-, two; maculatus, spotted, referring to blotches on caudal peduncle and operculum

### Pseudoxiphophorus cataractae (Rosen 1979)

of a cataract or cascade, referring to its isolated distribution above a ribbon fall of the stream section in the Arroyo Sachicha, Alta Verapaz, Guatemala

# Pseudoxiphophorus diremptus (Rosen 1979)

separate or isolated, referring to physical isolation of the Rio Chajmaic (Alta Verapaz, Guatemala), where this species is endemic

### Pseudoxiphophorus jonesii (Günther 1874)

in honor of Thomas Manson Rymer Jones (1839-1894), Assistant Engineer on the Mexican Railway, who discovered this species and presented type to the British Museum

# Pseudoxiphophorus litoperas (Rosen & Bailey 1979)

litos, smooth or plain; peras, end, referring to simple terminal segment in gonopodium

### Pseudoxiphophorus obliquus (Rosen 1979)

oblique, referring to oblique orientation of caudal blotch in half-grown and adult fish

### Pseudoxiphophorus tuxtlaensis (McEachran & DeWitt 2008)

-ensis, suffix denoting place: Tuxtla Mountains of Veracruz, México, only known area of occurrence

# Quintana Hubbs 1934

pertaining to the fifth, referring to unique modification of ray 5 of gonopodium (e.g., modified distally into a structure that resembles terminal hook of *Gambusia* but points forward instead of backward)

### Quintana atrizona Hubbs 1934

atri-, black; zona, band, referring to 3-9 vertical to slightly oblique "sooty black" bars on sides

# Scolichthys Rosen 1967

scolos, thorn or prickle, referring to thorn-like bony style at tip of ray 3 of gonopodium in both species; ichthys, fish

### Scolichthys greenwayi Rosen 1967

in honor of ornithologist James C. Greenway, Jr. (1903-1989), who supported Rosen's field work in Guatemala (e.g., provided vehicle; made necessary local arrangements; supplied funds for travel, equipment, and assistants; offered much personal encouragement in Rosen's research)

# Scolichthys iota Rosen 1967

anything very small (from *iota*, ninth and smallest letter of Greek alphabet), referring to its small size (females reaching nearly 22 mm SL)

# Xenophallus Hubbs 1924

*xenos*, strange or foreign (i.e., different); *phallus*, penis, referring to gonopodium with two prominent horn-like appendages, one "like the excrescence on a pelican's bill," the other a "long curved horn attached at base to posterior edge of ray 4"

# Xenophallus umbratilis (Meek 1912)

shady, presumably referring to its "dark olivaceous" color

### Xiphophorus Heckel 1848

*xiphos*, sword; *phorus*, carrier, referring to dagger-like gonopodium and/or extended lower caudal fin (the "sword" of the common name "swordtail") on males of several species (Heckel described both features using sword and blade allusions without specifying which one inspired the name)

# Xiphophorus alvarezi Rosen 1960

in honor of Mexican ichthyologist José Álvarez del Villar (1903-1986), who brought this species to Rosen's attention and "generously provided many measurements and observations"

### Xiphophorus andersi Meyer & Schartl 1980

in honor of geneticist Fritz Anders (1919-1999), University of Giessen (Germany), for contributions to understanding the development of cancer through research using *Xiphophorus* as experimental models

# Xiphophorus birchmanni Lechner & Radda 1987

in honor of Heinz Birchmann (Vienna, Austria), who helped collect type during a botanical expedition and was the first to import this species to Europe and breed it in captivity

# Xiphophorus clemenciae Álvarez 1959

in honor of Alvarez' wife Clemencia, whose help and advice made it possible for him to devote himself to scientific research

### Xiphophorus continens Rauchenberger, Kallman & Morizot 1990

conto-, short; ensis, sword, referring to small caudal-fin appendage (the sword) of males

# Xiphophorus cortezi Rosen 1960

proposed as a subspecies of *X. montezumae* and named for the Spanish conquistador who defeated Montezuma II, the last leader of the Aztecs: Hernán Cortés (1485-1547)

### Xiphophorus couchianus (Girard 1859)

*-ianus*, belonging to: Lieut. Darius Nash Couch (1822-1897), a "lover and cultivator of natural sciences," who took a leave of absence from the U.S. Army to lead a zoological expedition to México (at his own risk and cost), whereupon he collected type

# Xiphophorus evelynae Rosen 1960

in honor of Evelyn Gordon, wife of Myron Gordon (see *X. gordoni*); she accompanied her husband on his field work in México and was "instrumental" in first collecting this species in 1939

# Xiphophorus gordoni Miller & Minckley 1963

in honor of the late Myron Gordon (1899-1959), biologist and geneticist who became an expert on *Xiphophorus* while using them for cancer research; "it is largely due to his efforts that we know so much about the biology of this genus of poeciliids"

# Xiphophorus hellerii Heckel 1848

in honor of Austrian botanist Karl Bartholomaeus Heller (1824-1880), who collected type while exploring México (1845-1848)

# Xiphophorus kallmani Meyer & Schartl 2003

in honor of Klaus D. Kallman, Director of the *Xiphophorus* Genetic Stock Center (formerly at the New York Aquarium, now at Texas State University, San Marcos, Texas, USA), who has "considerably contributed to our knowledge of the systematics, zoogeography, evolution, physiology and genetics" of the genus

### Xiphophorus maculatus (Günther 1866)

spotted, referring to any or all of the following: roundish black spot on middle of caudal-fin base, blackish spot on middle of sides, dorsal fin "sometimes densely spotted with black"

# Xiphophorus malinche Rauchenberger, Kallman & Morizot 1990

named after La Malinche (ca. 1496 or ca. 1501-ca. 1529), a "linguistically gifted" Nahua slave girl who played a role in the Spanish conquest of the Aztec Empire as interpreter, secretary, and mistress of Hernán Cortés; authors selected name in keeping with the "allegorical use of important historical figures in the Spanish conquest of Mexico to suggest phylogenetic relationships of swordtails in the Pánuco basin" [e.g., X. nezahualcoyot/]

### Xiphophorus mayae Meyer & Schartl 2002

of the Maya, indigenous peoples of Mesoamerica in pre-Columbian times, who occupied the region (Honduras and Guatemala) where this species occurs

# Xiphophorus meyeri Schartl & Schröder 1988

in honor of German ichthyologist Manfred K. Meyer, for contributions to the taxonomy of poeciliid fishes, and for bringing this species to the authors' attention

### Xiphophorus milleri Rosen 1960

in honor of ichthyologist Robert Rush Miller (1916-2003), University of Michigan, who collected type and "many other forms" of *Xiphophorus* 

# Xiphophorus mixei Kallman, Walter, Morizot & Kazianis 2004

of the Mixe, native people who live in villages along the Rio del Sol and Rio Jaltepec headwaters (Oaxaca, México), where this species occurs [emendment to "*mixeorum*" is not mandatory since the plural form applies to family and personal names but not to tribal or ethnic-group names]

# Xiphophorus montezumae Jordan & Snyder 1899

etymology not explained, presumably a historical reference to Montezuma (or Moctezuma) II (ca. 1466-1520), the last leader of the Aztecs, who was defeated by Spanish conquistador Hernán Cortés (see *X. cortezi*)

### Xiphophorus monticolus Kallman, Walter, Morizot & Kazianis 2004

mountain dweller, referring to its restricted range of headwater streams inside the Sierra Madre of Oaxaca, México

### Xiphophorus multilineatus Rauchenberger, Kallman & Morizot 1990

multi-, many; lineatus, lined, referring to its prominent vertical bars

# Xiphophorus nezahualcoyotl Rauchenberger, Kallman & Morizot 1990

as the sister species of *X. montezumae*, the authors "felt it appropriate" to name it after Nezahualcoyotl (1402-1472), the poet-philosopher emperor of Tezcoco (now Texcoco), considered to be Montezuma's equal

### Xiphophorus nigrensis Rosen 1960

niger, black; ensis, sword, referring to black ventral margin of caudal-fin appendage (the "sword") of males

# Xiphophorus pygmaeus Hubbs & Gordon 1943

dwarf, referring to its small size, usually <4 cm SL

# Xiphophorus signum Rosen & Kallman 1969

mark, token or sign, referring to black mark near base of lower caudal-fin rays in all half-grown fish and adults

### Xiphophorus variatus (Meek 1904)

variable or variegated, referring to how its color markings "vary greatly"

### Xiphophorus xiphidium (Hubbs & Gordon 1932)

*xiphos*, sword, referring to short, spike-like caudal-fin extension (the "sword") of males; *-idium*, diminutive connoting resemblance

### Family ANABLEPIDAE

4 genera/subgenera · 19 species

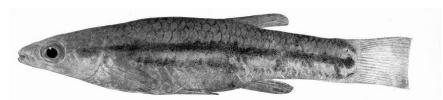
Subfamily Anablepinae Four-eyed fishes & Onesided Livebearers

# Anableps Scopoli 1777

presumably tautonymous with *Cobitis anableps* (no species mentioned)

### Anableps anableps (Linnaeus 1758)

ana-, up; blepsis, sight, i.e., to look upward, referring to eye divided by a horizontal partition into a lower portion



Jenynsia eigenmanni. From: Haseman, J. D. 1911. Some new species of fishes from the Rio Iguassú. Annals of the Carnegie Museum v. 7 (nos. 3-4) (19): 374-387, Pls. 48, 50, 73-83.

for water use, and an upper portion for seeing in the air

# Anableps dowii Gill 1861

in honor of John Melmoth Dow (1827-1892), Panama Railroad Company, ship captain and amateur naturalist, who collected type [originally spelled *dowei*, possibly a printer's error since Gill consistently spelled it *dowii* elsewhere]

### Anableps microlepis Müller & Troschel 1844

micro-, small; lepis, scale, referring to smaller scales compared to A. anableps

# Jenynsia Günther 1866

-*ia*, belonging to: English clergyman and naturalist Leonard Jenyns (1800-1893), who described the fishes collected by Charles Darwin (see *J. darwini*), including type species of this genus, *J. lineata* 

# Subgenus Jenynsia

### Jenynsia alternimaculata (Fowler 1940)

*alternus*, alternate; *maculata*, spotted, referring to 10-12 dark-brown vertical bars in two rows along side of trunk and tail, alternating in upper and lower rows

# Jenynsia darwini Amorim 2018

in honor of English naturalist Charles Darwin (1809-1882), who collected the first individuals of the genus now known as *Jenynsia* in Uruguay during the voyage of the H.M.S. *Beagle* 

### Jenynsia lineata (Jenyns 1842)

lined, referring to 6-7 longitudinal dark lines on sides "apparently made up of spots for the most part confluent, but here and there not so, interrupting the continuity of the lines"

# Jenynsia luxata Aguilera, Mirande, Calviño & Lobo 2013

dislocate, referring to medial processes of left and right pelvic bones relatively reduced and separated from each other

### Jenynsia maculata Regan 1906

spotted, referring to 3-4 irregular series of "more or less oblong blackish spots" on sides

# Jenynsia obscura (Weyenbergh 1877)

dark, referring to darker coloration compared to *Xiphophorus heckelii* (=*J. lineata*), described as having brown-tobrownish sides and back, and a dark, almost black, upper surface of head

# Jenynsia onca Lucinda, Reis & Quevedo 2002

onça, Portuguese vernacular for the jaguar, Panthera onca, referring to its spotted color pattern, like that of the wild cat

# Jenynsia sanctaecatarinae Ghedotti & Weitzman 1996

of Santa Catarina, Brazil, where type locality is situated

# *Jenynsia sulfurica* Aguilera, Terán, Mirande, Alonso, Rometsch, Meyer & Torres-Dowdall 2019 *-ica*, belonging to: sulfur, known only from a sulfide spring in Northwestern Argentina

# Jenynsia tucumana Aguilera & Mirande 2005

-ana, belonging to: Tucumán Province, Argentina, where type locality is situated

### Subgenus Plesiojenynsia Ghedotti 1998

*plesio*-, primitive, the basal-most clade in *Jenynsia* 

### Jenynsia diphyes Lucinda, Ghedotti & da Graça 2006

double in nature or form, referring to its sexually dimorphic coloration

# Jenynsia eigenmanni (Haseman 1911)

in honor of Haseman's professor, ichthyologist Carl H. Eigenmann (1863-1927)

# Jenynsia eirmostigma Ghedotti & Weitzman 1995

eirmos, series; stigma, mark, referring to series of marks that compose three discontinuous stripes on sides

# Jenynsia unitaenia Ghedotti & Weitzman 1995

uni-, one; taenia, band or ribbon, referring to single stripe on sides

# Jenynsia weitzmani Ghedotti, Meisner & Lucinda 2001

in honor of Stanley H. Weitzman (1927-2017), for his many contributions to neotropical ichthyology, particularly his work on the fishes of southern Brazil and the taxonomy of *Jenynsia* 

# Subfamily Oxyzygonectinae White-eye

# Oxyzygonectes Fowler 1916

*oxy*, pointed, presumed to be related to the fundulid subgenus *Zygonectes* but with an "extremely depressed head" serving as a "point of difference" (pun not intended?)

# Oxyzygonectes dovii (Günther 1866)

in honor John Melmoth Dow (1827-1892), Panama Railroad Company, ship captain and amateur naturalist, who presented type to the British Museum ["w" latinized as a "v"]

# Family VALENCIIDAE Valencia Toothcarps

# Valencia Myers 1928

etymology not explained, presumably named for Valencia, city on Mediterranean coast of Spain, or to the region now known as the Valencian Community, where type species, *V. hispanica*, occurs

# Valencia hispanica (Valenciennes 1846)

Spanish, referring to its occurrence in coastal Spain (also occurred in coastal France, now extirpated), and/or to fact that Valenciennes believed it was a Spanish congener of the North American *Fundulus majalis* (Fundulidae)

# Valencia letourneuxi (Sauvage 1880)

in honor of botanist Aristide-Horace Letourneux (1820-1890), who collected type

# Valencia robertae Freyhof, Kärst & Geiger 2014

in honor of ichthyologist Roberta Barbieri (Hellenic Centre for Marine Research, Athens, Greece), student of Greek *Valencia* and engaged in their conservation

# Family APHANIIDAE Eurasian Toothcarps

8 genera · 43 species

# Anatolichthys Kosswig & Sözer 1945

Anatolia, Asiatic part of Turkey, referring to distribution of A. splendens; ichthys, fish

# Anatolichthys anatoliae (Leidenfrost 1912)

of Anatolia, geographic and historical term denoting westernmost protrusion of Asia, comprising most of the Republic of Turkey, where this killifish is endemic

# Anatolichthys chantrei (Gaillard 1895)

in honor of French anthropologist and archaeologist Ernest Chantre (1843–1924), who collected holotype [treated as a junior synonym of *A. danfordii* by some workers without direct comparison of specimens; provision-ally treated as valid pending future study]

# Anatolichthys danfordii (Boulenger 1890)

in honor of Charles George Danford (1843-1928), Scottish artist, sportsman and ornithologist, who "obtained" type and specimens of *Aphaniops dispar* from the same locality

# Anatolichthys fontinalis (Akşiray 1948)

living in or near springs, referring to spring near Lake Yarisli, southwest of Lake Burdur, Turkey, type locality

# Anatolichthys iconii (Akşiray 1948)

etymology not explained, probably of Iconium, ancient name of Konya Province, Central Anatolia, Turkey, where this killifish occurs (also occurs in tributaries to lakes Eğirdir and Kovada, Isparta Province) [Wildekamp (1993) and others are probably incorrect in stating that name means "as an icon, Byzantine painting," referring to color pattern]

### Anatolichthys irregularis (Yoğurtçuoğlu & Freyhof 2018)

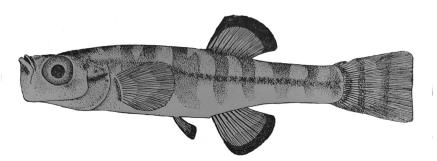
named for irregularly set and shaped dark-brown bars on sides of males, unique in Anatolian congeners

# Anatolichthys maeandricus (Akşiray 1948)

-*icus*, belonging to: Maendres (now Büyük Menderes) River basin, Turkey (source of the word "meander," referring to the river's convoluted path), where it is endemic

### Anatolichthys marassantensis (Pfleiderer, Geiger & Herder 2014)

-ensis, suffix denoting place: Marassanta, Hittite name for Kizilirmak River (Ankara Province, Turkey), in whose



Anatolichthys saldae, 3. From: Aksiray, F. 1955. Über eine neue Anatolichthys – Form. Publications of the Hydrobiological Research Institute. Series B, Istanbul. v. 3 (nos. 2-3): 57-62, Pl. 1.

basin it occurs; also occurs in Yeşilırmak River basin (Yozgat Provinces)

### Anatolichthys meridionalis (Akşiray 1948)

southern, described as the southernmost subspecies of Aphanius (now Anatolichthys) chantrei

### Anatolichthys saldae (Akşiray 1955)

of Lake Salda, Burdur District, Turkey, where it is endemic

# Anatolichthys splendens Kosswig & Sözer 1945

splendid or beautiful, referring to color pattern of breeding males, a "pretty fish [that] could be a favorite object for aquarists"

### Anatolichthys sureyanus (Neu 1937)

*-anus*, belonging to: Mr. Süreyya (forename not available), an official or administrator in the State Council of Ankara who in some capacity advanced zoological exploration in Turkey

### Anatolichthys transgrediens (Ermin 1946)

transitional or intermediate, referring to transitional morphological characteristics between Aphanius and Anatolichthys

# Anatolichthys villwocki (Hrbek & Wildekamp 2003)

in honor of zoologist Wolfgang Villwock (1930-2014), University of Hamburg, for contributions to the knowledge of the genus *Aphanius* 

# Aphaniops Hoedeman 1951

ops, appearance, i.e., resembling Aphanius

# Aphaniops dispar (Rüppell 1829)

dissimilar, referring to different coloration between the sexes

### Aphaniops furcatus (Teimori, Esmaeili, Erpenbeck & Reichenbacher 2014)

forked, referring to slightly forked caudal fin, unique in the genus

# Aphaniops ginaonis (Holly 1929)

-is, genitive singular of: Ginao (now Genow) village, Hormuz basin, southeastern Iran, where only known area of occurrence (a hot spring) is situated

# Aphaniops hormuzensis (Teimori, Esmaeili, Hamidan & Reichenbacher 2018)

*-ensis*, suffix denoting place: Hormuzgan basin, southern Iran, where it is endemic [*A. teimorii* Freyhof & Yoğurtçuoğlu 2020 is an unnecessary replacement per Eschmeyer's Catalog of Fishes]

# Aphaniops kruppi (Freyhof, Weissenbacher & Geiger 2017)

in honor of ichthyologist Friedhelm (Fareed) Krupp, Qatar Natural History Museum (Doha), for many contributions to explorations of the freshwater fishes of the Middle East

### Aphaniops richardsoni (Boulenger 1907)

in honor of surgeon-naturalist John Richardson (1787-1865), who reported this species as *Aphanius hammonis* (*=fasciatus*) in 1856

### Aphaniops sirhani (Villwock, Scholl & Krupp 1983)

of the Wadi Sirhan system, Jordan, where Azraq Oasis (type locality) is situated

# Aphaniops stiassnyae (Getahun & Lazara 2001)

in honor of Melanie Stiassny (b. 1953), Curator of Ichthyology, American Museum of Natural History, for her contributions to the study of African fishes

# Aphaniops stoliczkanus (Day 1872)

-anus, belonging to: paleontologist Ferdinand Stoliczka (1838-1874), who collected type

# Aphanius Nardo 1827

inconspicuous, allusion not explained nor evident, perhaps referring to small size of *A. nanus* (=*fasciatus*), with "*nanus*" meaning "dwarf"

### Aphanius almiriensis Kottelat, Barbieri & Stoumboudi 2007

*-ensis*, suffix denoting place: southern end of Almiri beach, Korinthia District, Peloponnese, Greece, type locality (also occurs in Italy and Turkey)

# Aphanius fasciatus (Valenciennes 1821)

striped, referring to color pattern of males

# Apricaphanius Freyhof & Yoğurtçuoğlu 2020

*apricus*, shining, referring to many small white spots on flanks of males, which give them a shiny appearance; *Aphanius*, previous genus of all included species

### Apricaphanius baeticus (Doadrio, Carmona & Fernández-Delgado 2002)

-icus, belonging to: Baetis, Roman name of Guadalquivir River valley (Spain), where this killifish is endemic

### Apricaphanius iberus (Valenciennes 1846)

from the Iberian Peninsula of Spain (extirpated from France) [placed in *Aphanius* by some workers]

# Apricaphanius saourensis (Blanco, Hrbek & Doadrio 2006)

-ensis, suffix denoting place: Saoura Valley in northwestern Algeria, type locality and only known extant population

# Esmaeilius Freyhof & Yoğurtçuoğlu 2020

-ius, pertaining to: Hamid Reza Esmaeili (Shiraz, Iran), for his "extensive" contribution to the understanding of diversity within this genus

# Esmaeilius darabensis (Esmaeili, Teimori, Gholami & Reichenbacher 2014)

-ensis, suffix denoting place: Darab (the land of water), Hormuz, Iran, near where type locality (a spring) is situated

# Esmaeilius isfahanensis (Hrbek, Keivany & Coad 2006)

-ensis, suffix denoting place: named for both Isfahan Province, Iran, where it is endemic, and the province's capital city, also called Isfahan

# Esmaeilius persicus (Jenkins 1910)

Persian, referring to southern Persia (now Iran), where type locality (Shiraz Lake) is situated [Aphanius farsicus Teimori, Esmaeili & Reichenbacher 2011 is an unnecessary replacement]

# Esmaeilius shirini (Gholami, Esmaeili, Erpenbeck & Reichenbacher 2014)

of Shirin, referring to Khosroshirin spring-stream system, Khosroshirin Village, Kor River basin, Iran, where type locality (Paselari spring) is situated

# Esmaeilius sophiae (Heckel 1847)

matronym not identified, possibly in honor of Sophie Frederike Wilhelmine von Bayern (1805-1872), who was Archduchess of Austria (Heckel was Austrian) when the species was described; another possibility is Heckel's mother, Sophia

### Esmaeilius vladykovi (Coad 1988)

in honor of the late Vadim D. Vladykov (1898-1986), who worked in Iran (where this species in endemic) on the fisheries of the Caspian Sea basin, collected extensive material there, and accepted Coad as his graduate student to study those specimens

# Kosswigichthys Sözer 1942

in honor of Turkish zoologist and geneticist Curt Kosswig (1903-1982), who offered Sözer the opportunity to work with killifishes, for his "invaluable" (translation) help; *ichthys*, fish

# Kosswigichthys asquamatus Sözer 1942

a-, without; squamatus, scaled, referring to scaleless body

# Paraphanius Esmaeili, Teimori, Zarei & Sayyadzadeh 2020

para-, near, referring to its phylogenetic position being sister to Aphanius and Aphaniops

# Paraphanius alexandri (Akşiray 1948)

of Alexander, etymology not explained, perhaps named after Alexandria, historical name of Iskenderun, Turkey (type locality), and/or in honor of Alexander the Great (356-323 BC), who founded settlement that eventually bore his name

# Paraphanius boulengeri (Akşiray 1948)

in honor of ichthyologist-herpetologist George A. Boulenger (1858-1937), who described *Anatolichthys danfordii* in 1890

# Paraphanius mento (Heckel 1843)

mentum, chin, presumably referring to its prominent chin ("Kinn vorstehend")

### Paraphanius mentoides (Akşiray 1948)

-oides, having the form of: A. mento, which has a similar shape

### Paraphanius orontis (Akşiray 1948)

latinization of Orontes, river basin in Turkey, where Lake Amik (or Antioch), type locality, is situated

### Paraphanius similis (Akşiray 1948)

like or resembling, referring to similar body color of males and females, unlike all other Turkish congeners known at the time

### Paraphanius striptus (Goren 1974)

striped, proposed as a subspecies of *Aphanius* (now *Paraphanius*) *mento* in which breeding males have 7-13 transverse stripes on body instead of silvery spots (Menachem Goren, pers. comm.)

### Tellia Gervais 1853

-ia, belonging to: springs of Tell, south of Constantine, Algeria, type locality of T. apoda

# *Tellia apoda* (Gervais 1853)

*a*-, without; *podus*, foot, referring to absence of ventral fins

### Family PROCATOPODIDAE African Lampeyes

14 genera · 82 species

### Subfamily Aplocheilichthyinae

### Aplocheilichthys Bleeker 1863

Aplocheilus, presumed to be a close relative of this aplocheilid genus; ichthys, fish

# Aplocheilichthys spilauchen (Duméril 1861)

spilos, spot or blotch; auchen, neck, described as having four spots on occiput and nape

# Subfamily Procatopodinae

# Aapticheilichthys Huber 2011

*aaptos*, unapproachable; *-cheilichthys*, short for *Aplocheilichthyinae*, presumed subfamily at the time, referring to "superimposed unpaired fins" (i.e., dorsal-fin insertion above anal-fin insertion) "unseen and unreached" in other lampeyes

# Aapticheilichthys websteri (Huber 2007)

in honor of Kent Webster (b. 1959), Peninsula Hatchery (Gardena, California, USA), who discovered this species on the night of the Asian Tsunami (26 Dec. 2004), and who has "devoted much of his life to breeding aquarium fishes," notably Australian and New Guinean rainbowfishes

# Congopanchax Poll 1971

*Congo*, referring to both species endemic to central Congo River basin; *Panchax* (=*Aplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case possibly alluding to the related genera *Hylopanchax* and *Poropanchax* 

### Congopanchax brichardi Poll 1971

in honor of aquarium fish exporter Pierre Brichard (1921-1990), who collected paratypes and provided notes on coloration in life

### Congopanchax myersi (Poll 1952)

in honor of Stanford University ichthyologist George S. Myers (1905-1985), who proposed the tribe Aplocheilichthyini in 1938

# Hylopanchax Poll & Lambert 1965

*hylo*-, wood, allusion not explained, presumably referring to occurrence of type species, *H. silvestris*, in black-brown acidic streams under primary forest cover compared to *Hypsopanchax*, which usually inhabits secondary forests and savannahs; *Panchax* (=*Aplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case possibly referring to its close relationship with and/or previous indentification as *Hypsopanchax* 

# Hylopanchax leki van der Zee, Sonnenberg & Schliewen 2013

Lingala word for "smaller or younger sibling," referring to fact that it is slightly smaller than its sibling species, *H. ndeko* (see below)

# Hylopanchax moke van der Zee, Sonnenberg & Schliewen 2013

moké, Lingala word for "very small," referring to its minute size (up to 21.1 mm SL)

# Hylopanchax multisquamatus Bragança, van der Zee, Sonnenberg & Vreven 2020

multi-, many; squamatus, scaled, referring to more mid-longitudinal scales compared to congeners

### Hylopanchax ndeko van der Zee, Sonnenberg & Schliewen 2013

Lingala word for "sibling," referring to its close relationship with H. leki (the two species occurs along opposite

banks of the Lokoro River, Salonga National Park, central Congo basin)

# Hylopanchax paucisquamatus Sonnenberg, Friel & van der Zee 2014

paucus, few; squamatus, scaled, referring to low number of lateral-line scales compared to congeners

# Hylopanchax silvestris (Poll & Lambert 1958)

of woods, a "typical forest species" (translation) occurring in black-brown acidic streams under primary forest cover

# Hylopanchax stictopleuron (Fowler 1949)

*stictos*, spotted; *pleuron*, side, referring to dark to blackish basal blotch on each scale along lateral line and two series of scales below it

# Hylopanchax thysi Bragança, van der Zee, Sonnenberg & Vreven 2020

in honor of Dirk Thys van den Audenaerde (b. 1934), for his "outstanding" contributions to our knowledge of African ichthyology and for the many expeditions and resulting collections he made in Africa

### Hypsopanchax Myers 1924

*hypsos*, high, presumably referring to "very compressed deep body" of *H. platysternus*; *Panchax* (*=Aplocheilus*, sometimes spelled *Haplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case probably referring to *Haplocheilus*, original genus of type species

# Hypsopanchax catenatus Radda 1981

chained, referring to ring-shaped pattern formed by deep-black scales along middle of body

# Hypsopanchax jobaerti Poll & Lambert 1965

in honor of A. J. Jobaert, Warden of the Muene Ditu Game Reserve, Zaire (now Democratic Republic of the Congo), who assisted Poll with his collections in the region

# Hypsopanchax jubbi Poll & Lambert 1965

in honor of Reginald A. "Rex" Jubb (1905-1987), Freshwater Fish Section, Albany Museum, Grahamstown, South Africa, whose work has "greatly contributed" (translation) to the knowledge of the fishes of Rhodesia (now Zambia), where this lampeye is endemic

# Hypsopanchax platysternus (Nichols & Griscom 1917)

platy, wide; sternus, chest, referring to its deep body, with a "preventral [i.e., chest] area swollen and compressed"

# Hypsopanchax stiassnyae van der Zee, Sonnenberg & Mbimbi Mayi Munene 2015

in honor of Melanie Stiassny (b. 1953), Curator of Ichthyology at the American Museum of Natural History, who supported the authors in many ways in their studies of the systematics of Cyprinodontiformes of the Congo Basin

# Hypsopanchax zebra (Pellegrin 1929)

allusion not explained, presumably referring to chevron-shaped crossbars (i.e., like zebra stripes) on sides of both sexes

# Laciris Huber 1981

*lacus*, lake, referring to Lake Edward (border between Democratic Republic of the Congo and Uganda), where it is endemic; *iris*, eye, a member of the "lampeye" family

# Laciris pelagica (Worthington 1932)

pelagic, i.e., of the open water, referring to its occurrence in the "open deep water" of Lake Edward (border between Democratic Republic of the Congo and Uganda), where it is endemic

### Lacustricola Myers 1924

lacus, lake; -icola, dweller or inhabitant, presumably referring to type locality (Lake Tanganyika) of L. pumilus

### Lacustricola atripinna (Pfeffer 1896)

atri-, black; pinna, fin, referring to almost entirely black fins of males

# Lacustricola bragancai Huber 2020

in honor of Pedro F. M. Bragança, South African Institute for Aquatic Biodiversity (Grahamstown, South Africa) for his recent (2019 and 2020) "major works" on Procatopodidae and Fluviphylacidae

# Lacustricola bukobanus (Ahl 1924)

-anus, belonging to: near the town of Bukoba, northwestern Tanzania, type locality

# Lacustricola centralis (Seegers 1996)

central, referring to its occurrence in Central Africa (Tanzania and Uganda)

# Lacustricola chobensis (Fowler 1935)

-ensis, suffix denoting place: Chobe River, below rapids, near Kasane, Botswana, type locality

# Lacustricola kassenjiensis (Ahl 1924)

*-ensis*, suffix denoting place: Kassenji (now Kassenye), Lake Albert, Democratic Republic of the Congo, type locality

### Lacustricola kongoranensis (Ahl 1924)

-ensis, suffix denoting place: Kongoran Botto (today Ikongoro), eastern Tanzania, type locality

### Lacustricola lacustris (Seegers 1984)

lacustrine (belonging to a lake), referring to a swampy or heavily vegetated lake just north of Kibiti, eastern Tanzania, type locality

### Lacustricola lualabaensis (Poll 1938)

-ensis, suffix denoting place: upper Lualaba River system, Democratic Republic of the Congo, where it is endemic

### Lacustricola maculatus (Klausewitz 1957)

spotted, referring to dark spot at upper end of operculum

### Lacustricola margaritatus Nagy & Watters 2022

Latin for "adorned with pearls," referring to its striped color pattern of distinct pearlescent patches along the longitudinal series on the side of body

### Lacustricola matthesi (Seegers 1996)

in honor of Dutch ichthyologist Hubert Matthes, Musée Royal de l'Afrique Centrale (Tervuren, Belgium), who was the first to collect this species (1967) and recognize it as new

### Lacustricola moeruensis (Boulenger 1914)

-ensis, Lake Moero (or Mweru), Kilwa, Zaire (now Democratic Republic of the Congo), type locality

# Lacustricola nitidus Nagy & Manda 2020

bright, shining or glittering, referring to its "neat appearance" and distinctive pattern of independent metallic blue spots creating an overall reflective blue coloration [originally spelled *nitida*; emended to agree with masculine gender of *Lacustricola*]

# Lacustricola omoculatus (Wildekamp 1977)

omos, shoulder; oculatus, eyed, referring to vertically elongated black patch on upper edge of operculum

# Lacustricola pumilus (Boulenger 1906)

dwarfish, diminutive or little, described at 34 mm TL

# Lacustricola pygmaeus Bragança, Skelton, Bills, Tweddle & Chakona 2021

dwarf, referring to its miniature size (13.3–18.3 mm SL)

# Lacustricola usanguensis (Wildekamp 1977)

-ensis, suffix denoting place: Usangu Flats, eastern branch of the African Rift, southwestern Tanzania, only known area of occurrence

### Lacustricola vitschumbaensis (Ahl 1924)

*-ensis*, suffix denoting place: Vitschumba (now spelled Vitshumbi), Democratic Republic of the Congo, type locality [placed in *Micropanchax* by some workers]

### Lamprichthys Regan 1911

*lampros*, shining, allusion not explained, described as a "silvery fish" so perhaps referring to its silvery (i.e., shiny) body; *ichthys*, fish

### Lamprichthys tanganicanus (Boulenger 1898)

-anus, belonging to: Lake Tanganyika, type locality (also occurs in Lukuga River, only outlet of Lake Tanganyika)

# Micropanchax Myers 1924

*micro-*, small, referring to size (16 mm) of *M. schoelleri* (*=loati*); *Panchax* (*=Aplocheilus*, sometimes spelled *Haplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case probably referring to *Haplocheilus*, original genus of *M. schoelleri* (*=loati*)

### Micropanchax antinorii (Vinciguerra 1883)

in memory of zoologist and explorer Orazio Antinori (1811-1882), who collected type in 1881 and died the following year at the geographical station he founded in Shewa, Ethiopia

### Micropanchax bracheti (Berkenkamp 1983)

in honor of German aquarist Heinrich "Heinz" Brachet (1919-2011), who collected holotype

### Micropanchax camerunensis (Radda 1971)

-ensis, suffix denoting place: Cameroon, type locality (also occurs in Gabon and Ecuatorial Guinea)

# Micropanchax ehrichi (Berkenkamp & Etzel 1994)

in honor of the junior author's friend, horticulturist Christian Ehrich, who invited him to west Sumatra in the early 1970s, thus beginning several fish-collecting trips together in several tropical countries

### Micropanchax fuelleborni (Ahl 1924)

in honor of Friedrich Fülleborn (1866-1933), who collected type during his travels as a parasitologist and military physician



Micropanchax ebrichi, ♀. From: Berkenkamp, H. O. and V. Etzel. 1994. Ein neuer Leuchtaugenfisch aus Mali, Aplocheilichthys ebrichi spec. nov., mit Informationen zur Systematik und Chorologie verwandter Arten. Deutsche Killifisch Gemeinschaft Journal v. 26 (no. 1): 1-9.

### Micropanchax hutereaui (Boulenger 1913)

in honor of Armand Hutereau (1875-1914), head of a Belgian ethnographic mission to the Congo, who supplied holotype

### Micropanchax johnstoni (Günther 1894)

in honor of Sir Harry Johnston (1858-1927), British explorer, botanist, linguist and colonial administrator, who "transmitted" type to the British Museum

### Micropanchax katangae (Boulenger 1912)

of Katanga, now called Shaba, Zaire (now Democratic Republic of the Congo), type locality (also occurs in Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe)

### Micropanchax keilhacki (Ahl 1928)

in honor of German ichthyologist Ludwig Keilhack, who collected type

# Micropanchax kingii (Boulenger 1913)

in honor of entomologist Harold Henry King (1885-1954), Sudan Government Department of Education, who presented type to the British Museum

# Micropanchax loati (Boulenger 1901)

in honor of William Leonard Stevenson Loat (1871-1932), British archaeologist, naturalist and superintendent of the survey party that collected type

# Micropanchax Iuluae (Fowler 1930)

of Lulua River, Democratic Republic of the Congo, type locality (also occurs in Angola)

# Micropanchax macrurus (Boulenger 1904)

macro-, long; oura, tail, referring to longer caudal fin compared to Aplocheilichthys spilauchen, its presumed congener at the time

### Micropanchax mediolateralis (Poll 1967)

medius, middle; lateralis, of the side, referring to dark, broad, longitudinal band along middle of sides of both sexes

# Micropanchax myaposae (Boulenger 1908)

of Myaposa River, Natal, South Africa, type locality

# Micropanchax nigrolateralis (Poll 1967)

nigro-, black; lateralis, of the side, referring to dark, broad, submedian band on sides of males

# Micropanchax petnehazyi Nagy & Vreven 2018

in honor of Gábor Petneházy, who accompanied senior author collecting killifishes during several trips to Africa; he enjoys nature travel, African landscapes and taking photos, but is not an aquarist or killifish enthusiast (Béla Nagy, pers. comm.) [provisionally placed here; warrants a new genus with some species provisionally placed in *Lacustricola*]

# Micropanchax pfaffi (Daget 1954)

in honor of Swedish ichthyologistJohannes Rasch Pfaff (d. 1959), who first collected this species in 1933

### Micropanchax rudolfianus (Worthington 1932)

-ianus, belonging to: Lake Rudolf (now Turkana), Kenya and Ethiopia, where it is endemic

# Micropanchax scheeli (Roman 1971)

in honor of Danish count, colonel, explorer and ichthyologist (specializing in African rivulines) Jørgen J. Scheel (1916-1989), who informed Roman about the existence of this species

### Plataplochilus Ahl 1928

platys, referring to body, "strongly compressed laterally" (translation), of *P. ngaensis*; [H]aplochilus (=Aplocheilus), original

genus of type species

### Plataplochilus cabindae (Boulenger 1911)

of Cabinda, Angola, near Lucola River, type locality (Cabinda is an exclave of Angola situated on a narrow strip on the Atlantic Coast between Democratic Republic of the Congo to the south and east and the Republic of the Congo to the north; in addition to all three of these countries, this killifish also occurs in Gabon)

### Plataplochilus chalcopyrus Lambert 1963

*chalco-*, copper; *pyrus*, flame, referring to upper longitudinal band on males, which glows like the green when copper salts are burned during a flame test

# Plataplochilus eliasi Walsh, Bragança & van der Zee 2022

"In the naming of this species, we extend the sentiment of the Congolese tradition of the burying of a newborn baby's placenta under a large tree in the child's village of birth, representing a wish for growth, wisdom and strength for the child's soul. The species is named for Elias Charly Arnaud Robert de Blic, a child no longer physically here, but remembered in this small fish in a forest stream, a space that is very much living and alive." [online records indicate that a South African baby of the same name died shortly after birth, 23 July 2013]

# Plataplochilus loemensis (Pellegrin 1924)

*-ensis*, Loémé River system, Gabon, type locality (also occurs in Republic of the Congo, Democratic Republic of the Congo, and Cabinda, Angola)

# Plataplochilus miltotaenia Lambert 1963

miltos, red lead; taenia, band, referring to broad, red median line from opercle to caudal-fin base in males

# Plataplochilus mimus Lambert 1967

imitator or mimic, referring to color pattern on sides of males, mimetic with P. chalcopyrus

# Plataplochilus ngaensis (Ahl 1924)

*-ensis*, suffix denoting place: Nga (now spelled Noya) River tributaries, Gabon (then a part of Cameroon), type locality (also occurs in Equatorial Guinea)

# Plataplochilus terveri (Huber 1981)

in honor of Huber's "good friend" Denis Terver (b. 1940), Director, Nancy Museum and Aquarium (France), who "helped and heavily supported" Huber for several years, including during the preparation of his *Rivulus* thesis

### Platypanchax Ahl 1928

*platys*, referring to its body, "extremely compressed laterally" (translation); *Panchax* (=*Aplocheilus*, sometimes spelled *Haplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case probably referring to *Haplocheilus*, original genus of *P. modestus* 

# Platypanchax modestus (Pappenheim 1914)

modest or unassuming, allusion not explained, possibly referring to light yellowish brown color in alcohol and/or lack of bright colors on sides and fins of males

# Poropanchax Clausen 1967

*porus*, pore, referring to tubular supraorbital lateral-line organ with three pairs of pores; *Panchax* (=*Aplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case probably referring to *Micropanchax* and/or *Hypsopanchax*, both related genera

# Poropanchax hannerzi (Scheel 1968)

in honor of Swedish tropical-fish hobbyist (and later anthropologist) Ulf Hannerz (b. 1942), who collected live specimens in Nigeria and sent them to Scheel in 1961 [biographical footnote: in 1957, a 14-year-old Hannerz appeared on a Swedish TV quiz show, whereupon he was asked which of the seven displayed fishes had eyelids; he answered "*hundfisk*" (mudminnow) but the host said the correct answer was "*slamkrypare*" (mudskipper); when viewers informed the show's producers that mudskippers retract their eyes into a dermal cup and technically do not have eyelids, Hannerz was allowed to return to the show and advance in the competition; since then, "*slam-krypare*" has entered the Swedish language as a term for an incorrectly formulated question in a quiz]

# Poropanchax luxophthalmus (Brüning 1929)

*lux*, light or lamp; *ophthalmus*, eye, referring to shining light-blue spot in upper part of iris of both sexes, common to all "lampeyes"

### Poropanchax normani (Ahl 1928)

in honor of ichthyologist J. R. (John Roxborough) Norman (1898-1944), British Museum, who sent specimens to Ahl for "determination"

# Poropanchax pepo van der Zee, Bernotas, Bragança & Stiassny 2019

ripe gourd, from the name of the pumpkin, *Cucurbita pepo*, referring to orange, pumpkin-like color of dorsum and unpaired fins of males

### Poropanchax rancureli (Daget 1965)

in honor of zoologist (specializing in aquatic invertebrates) Paul G. Rancurel, Director, Centre de Recherches Océanographiques, Abidjan, Ivory Coast, near type locality (also occurs in Liberia and Ghana)

# Poropanchax stigmatopygus Wildekamp & Malumbres 2004

stigma, mark; pygus, anus, referring to dark spot at anus of both sexes

# Procatopus Boulenger 1904

pro-, forward; cato-, low; pous, foot, referring to ventral fins of *P. nototaenia*, which are far forward, almost below base of pectoral fins

### Procatopus abbreviatus Pellegrin 1929

shortened, allusion not explained, perhaps referring to its very high (and thereby shorter in length) body compared with congeners

### Procatopus aberrans Ahl 1927

aberrant (i.e., straying or different), allusion not explained, presumably referring to differences between it and *P. similis* (described in same paper), e.g., lyre-shaped caudal fin of male compared to rounded caudal fin of *P. similis* 

# Procatopus nototaenia Boulenger 1904

notos, back; taenia, band, referring to bright yellow streak on both sides of back and orange streak on middle of back

# Procatopus similis Ahl 1927

like or resembling, allusion not explained, presumably referring to resemblance with P. nototaenia

# Rhexipanchax Huber 1999

*rhexis*, broken, referring to body shape or outline at lower opercle level forming an interrupted (vs. continuous) line; *Panchax* (=*Aplocheilus*), an aplocheiloid genus, often used to compose generic names of killifishes but in this case referring to a "related fish," presumably *Hylopanchax*, *Hypsopanchax* and/or *Poropanchax* 

### Rhexipanchax kabae (Daget 1962)

of the Kaba River system, Guinea, where type locality (tributary of the Mamou River) is situated

# Rhexipanchax lamberti (Daget 1962)

in honor of Belgian ichthyologist Jacques G. Lambert (1923-2013), who discovered this species and noted its main characters

### Rhexipanchax nimbaensis (Daget 1948)

-ensis, suffix denoting place: Mount Nimba (also known as Mount Richard-Molard), Guinea, type locality

# Rhexipanchax schiotzi (Scheel 1968)

in honor of Danish herpetologist and aquarist Arne Schiøtz (b. 1932), Director, Danish Aquarium (1964-1996), who collected killifishes for Scheel in Ghana and Zaire (Democratic Republic of the Congo), including type of this one [originally spelled "*schiötzi*," in which the authors incorrectly replaced the Danish "ø" with a German "ö" (latinized as "oe" but only for German names proposed before 1985); since Schiøtz' name is Danish, not German, "ö" is to be rendered as "o"; note: *Aphyosemion schioetzi* (Nothobranchiidae), also named for Schiøtz, retains the "oe" because that is how the authors chose to latinize "ø"]