Order CYPRINIFORMES

American Minnows and Shiners

Family **LEUCISCIDAE**

Subfamily **POGONICHTHYINAE** Girard 1858

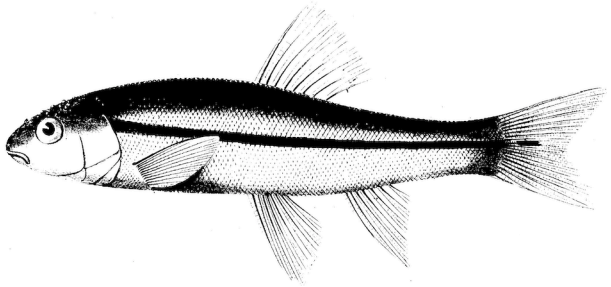
Macrhybopsis tomellerii, female, 51 mm SL. Illustration © Joseph R. Tomelleri, for whom the species is named. From: Gilbert, C. R., R. L. Mayden and S. L. Powers. 2017. Morphological and genetic evolution in eastern populations of the *Macrhybopsis aestivalis* complex (Cypriniformes: Cyprinidae), with the descriptions of four new species. Zootaxa 4247 (5): 501–555.

Agosia

Girard 1856

a Native American word, chosen presumably because Girard liked the sound of it

***Agosia chrysogaster* Girard 1856** *chrysós* (χρυσός), gold or golden; *gastḗr* (γαστήρ), belly or stomach, referring to light-yellow ("of a golden hue") bellies of males



First-published image of *Agosia chrysogaster*. Illustration by John H. Richard. From: Girard, C. F. 1859. Ichthyology of the boundary. *In*: United States and Mexican boundary survey, under the order of Lieut. Col. W. H. Emory, Major First Cavalry and United States commissioner. v. 2 (pt 2): 1–85, Pls. 1–41.

Alburnops

Girard 1856

ṓps (ὦψ), eye or face (i.e., appearance), referring to "striking external resemblance" of *A. blennius* and *A. shumardi* to minnows Girard had placed in the European genus *Alburnus* (Leuciscinae)

***Alburnops aguirrepequenoi* (Contreras-Balderas & Rivera-Teillery 1973)** in honor of biologist Eduardo Aguirre Pequeño (1904–1988), founder of Escuela de Ciencias Biológicas, Universidad Autónoma de Nuevo León, Monterrey, Mexico, for his teachings and guidance

***Alburnops asperifrons* (Suttkus & Raney 1955)** *asper* (L.), rough; *frons* (L.), face or brow, referring to its tuberculate snout

***Alburnops baileyi* (Suttkus & Raney 1955)** in honor of American ichthyologist Reeve M. Bailey (1911–2011), University of Michigan, for contributions to the knowledge of North American freshwater fishes and for helping the authors in their studies

***Alburnops bairdi* (Hubbs & Ortenburger 1929)** in honor of Spencer Fullerton Baird (1823–1887), Director, U.S. National Museum, "an early student of the fishes of the southwest, and one of the outstanding figures in American zoology"

***Alburnops blennius* Girard 1856** Latin for blenny, derived from *blénnos* (βλέννος), mucus or slime (referring to scaleless and therefore slimy body of blenniids), presumably referring to its convex profile ("snout most prominently rounded"), like that of a blenny

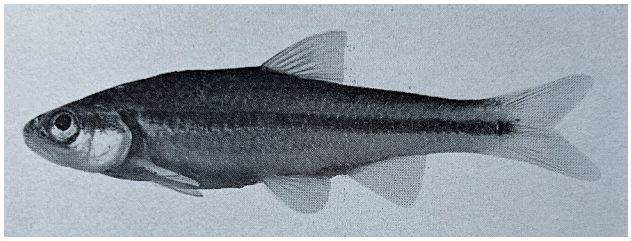
***Alburnops braytoni* (Jordan & Evermann 1896)** in honor of American physician-naturalist Alembert Winthrop Brayton (1848–1926), "with pleasant memories of our explorations in Georgia and the Carolinas" in the 1870s

***Alburnops buccula* (Cross 1953)** diminutive of *bucca* (L.), cheek or cavity, i.e., little mouth, proposed as a subspecies of *A. bairdi* with a smaller mouth

***Alburnops candidus* (Suttkus 1980)** Latin for shining white, clear or bright, referring to silver stripe along its sides

***Alburnops chalybaeus* (Cope 1867)** Latin for iron-colored, from *chalubḗios* (χαλυβήϊος), made of iron, referring to its "broad burnished black" lateral band

***Alburnops edwardraneyi* (Suttkus & Cremmer 1968)** in honor of American ichthyologist Edward C. Raney (1909–1984), Cornell University, for his contributions to North American ichthyology and "his guidance and imparted enthusiasm toward a multitude of students"



Alburnops baileyi, paratype, adult female, 56 mm SL. Photo by Douglass M. Payne. From: Suttkus, R. D. and E. C. Raney. 1955. *Notropis baileyi*, a new cyprinid fish from the Pascagoula and Mobile Bay drainages of Mississippi and Alabama. Tulane Studies in Zoology 2 (5): 71–86.

***Alburnops girardi* (Hubbs & Ortenburger 1929)** in honor of French ichthyologist-herpetologist Charles Girard (1822–1895), who, along with Spencer Fullerton Baird (see *A. bairdi*), "were among the first to make known the rich fish fauna of the [American] southwest"

***Alburnops hypsilepis* (Suttkus & Raney 1955)** *hypsi-*, from *hypsēlós* (ὑψηλός), high; *lepís* (λεπίς), scale, referring to its elevated anterior lateral line scales

***Alburnops orca* (Woolman 1894)** Latin for orc, a kind of whale, now applied to the Killer Whale *Orcicnua orca* (which is actually a dolphin), referring to its resemblance to the head of a dolphin [extinct due to habitat loss and introduced fishes; last known specimen collected in 1975]

***Alburnops petersoni* (Fowler 1942)** in honor of C. Bernard Peterson (1906–1963), Fowler's editor at the Academy of Natural Sciences of Philadelphia, who helped collect holotype

***Alburnops potteri* (Hubbs & Bonham 1951)** in honor of American zoologist George E. Potter (1898–1962), Agricultural and Mechanical College of Texas, who collected type specimens and sent them to Hubbs for study

***Alburnops shumardi* Girard 1856** in honor of George C. Shumard (1823–1867), American surgeon, naturalist and geologist, who collected holotype

***Alburnops simus* (Cope 1875)** Latin for flat- or pug-nosed, referring to its blunt snout

> ***Alburnops simus pecosensis* (Gilbert & Chernoff 1982)** *-ensis*, Latin suffix denoting place: Pecos River, New Mexico, USA, where it is endemic

***Alburnops texanus* (Girard 1856)** *-anus* (L.), belonging to: Texas, USA, described from specimens collected from Rio Salado and Turkey Creek, both in Texas

***Alburnops xaenocephalus* (Jordan 1877)** scratch-headed, from *xaeno*, from *xaínō* (ξαίνω), to scratch, and *kephalḗ* (κεφαλή), head, referring to head tubercles of breeding males

Algansea

Girard 1856

a Native American word, chosen presumably because Girard liked the sound of it

***Algansea amecae* Pérez-Rodríguez, Pérez-Ponce de León, Domínguez-Domínguez & Doadrio 2009** of the Río Ameca basin, Jalisco, Mexico, type locality

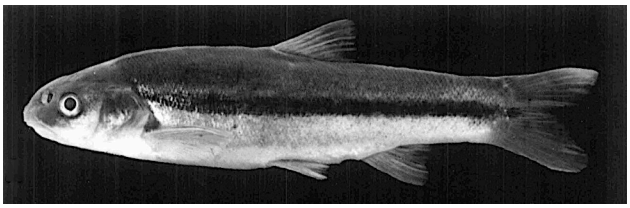
***Algansea aphanea* Barbour & Miller 1978** *aphanḗs* (ἀφανής), invisible, secret or unknown, referring to the "considerable osteological differences separating it from other barbeled species of *Algansea*"

***Algansea avia* Barbour & Miller 1978** Latin for out of the way or remote, being the most western species of *Algansea*

***Algansea barbata* Álvarez & Cortés 1964** Latin for bearded, the only *Algansea* known at the to possess barbels

***Algansea lacustris* Therese von Bayern & Steindachner 1895** Latin for relating to or associated with lakes (lacustrine), referring to Lake Pátzcuaro, Michoacán, Mexico, where it is endemic

***Algansea monticola* Barbour & Contreras-Balderas 1968** *montis* (L.), mountain, *-cola* (L.), dweller or inhabitant, referring to "rugged nature" of the area in which it occurs



Algansea avia, male, 67.9 mm SL. Photo by Louis P. Martonyi. From: Barbour, C. D. and R. R. Miller. 1978. A revision of the Mexican cyprinid fish genus *Algansea*. Miscellaneous Publications, Museum of Zoology, University of Michigan No. 155: 1–72.

> ***Algansea monticola archidion* Barbour & Miller 1978** *-idion* (-ἴδιον), diminutive suffix: *archídion* (ἀρχίδιον), diminutive of *archḗ* (ἀρχή), principal or chief, here, per the authors, meaning petty office or position, referring to its subspecific status

***Algansea popoche* (Jordan & Snyder 1899)** from *popocha*, Mexican name for this minnow

***Algansea tincella* (Valenciennes 1844)** diminutive of *Tinca* (Tincidae), i.e., like a small Tench

Aztecula

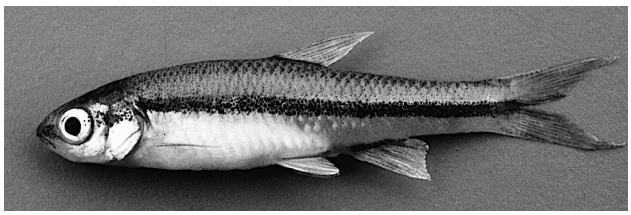
Jordan & Evermann 1898

-ula (L.), diminutive suffix: in remembrance of the Aztec culture that dominated 15th-century central Mexico, where *A. sallaei* occurs

***Aztecula amecae* (Chernoff & Miller 1986)** of Río Ameca, Jalisco, Mexico, type locality

***Aztecula aulidion* (Chernoff & Miller 1986)** *-idion* (-ἴδιον), diminutive suffix: *aulós* (αὐλός), tube or pipe, referring to its short infraorbital canal

***Aztecula calabazas* (Lyons & Mercado-Silva 2004)** named for Río Calabazas, San Luis Potosí, Mexico, where it is endemic



Aztecula calabazas, holotype, 26.8 mm SL. From: Lyons, J. and N. Mercado-Silva. 2004. *Notropis calabazas* (Teleostei; Cyprinidae): new species from the Río Pánuco basin of central Mexico. Copeia 2004 (4): 868–875.

***Aztecula calientis* (Jordan & Snyder 1899)** *-is*, Latin genitive singular of: Aquascalientes, Mexico, type locality

***Aztecula grandis* (Domínguez-Domínguez, Pérez-Rodríguez, Escalera-Vázquez & Doadrio 2010)** Latin for large, referring to its larger size relative to other members of the *N. calientis* complex (=*Aztecula*)

***Aztecula marhabatiensis* (Domínguez-Domínguez, Pérez-Rodríguez, Escalera-Vázquez & Doadrio 2010)** *-ensis*, Latin suffix denoting place: Marhabatio, Michoacan, Mexico, type locality

***Aztecula sallaei* (Günther 1868)** patronym not identified but probably in honor of Auguste Sallé (1820–1896), French traveler and entomologist who supplied Mexican fishes to the British Museum [Günther spelled the name with a ligature, *sallæi*, perhaps trying to render in Latin the acute accent in Sallé's name]

Campostoma

Agassiz 1855

campo, from *kámptō* (κάμπτω), to bend or curve; *stóma* (στόμα), mouth, referring to U-shaped mouth of *C. anomalum*

***Campostoma anomalum* (Rafinesque 1820)** Latin for uneven or irregular, differing from all other Ohio minnows known to Rafinesque by its "unequal bilobed tail" (name does mean not different or abnormal, referring to ridge on lower jaw, as reported elsewhere[1])

> ***Campostoma anomalum michauxi* Fowler 1945** in honor of French botanist André Michaux (1746–1802), "probably the first naturalist to explore the region of the upper Catawba watershed," where this subspecies occurs

***Campostoma oligolepis* Hubbs & Greene 1935** *olígos* (ὀλίγος), few or scanty; *lepís* (λεπίς), scale, referring to larger and therefore fewer scales compared with *C. anomalum*

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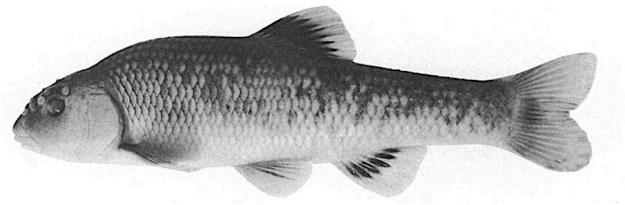
[1] Jenkins, R. E. and N. M. Burkhead. 1994. Freshwater fishes of Virginia. American Fisheries Society, Bethesda, Maryland. i–xxiii + 1–1079. Pls. 1–40.



Campostoma pauciradii, male, 115 mm SL. From: Burr, B. M. and R. C. Cashner. 1983. *Campostoma pauciradii*, a new cyprinid fish from southeastern United States, with a review of related forms. Copeia 1983 (1): 101–116.

Campostoma ornatum **Girard 1856** Latin for adorned or decorated, referring to ornamental coloration, presumably of breeding males: "upper regions are purplish black; the inferior regions golden brown and yellow, with black spots distributed over the flanks. A black patch at the base of all the fins, otherwise the latter are orange or yellowish brown"

Campostoma pauciradii **Burr & Cashner 1983** *paucus* (L.), few; *radii* (L.), rayed, referring to low number of gill rakers on first arch compared with congeners

Campostoma pullum **(Agassiz 1854)** Latin for dark or dusky, allusion not explained, described as a "peculiar deep but dull green, darker above, passing into yellowish white"; other sources explain that *pullum* may be derived from the Latin noun *pullus*, the young of an animal, reflecting Agassiz's belief that it represented the smallest species in *Chondrostoma* (Leuciscinae), a Eurasian genus with a similar cartilaginous layer on lower lip

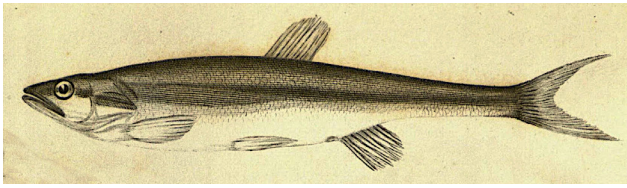
Campostoma spadiceum **(Girard 1856)** Latin for light- or nut-brown, described as "brownish red above"

Clinostomus

Girard 1856

clino, from *klínō* (κλίνω), to bend; *stóma* (στόμα), mouth, referring to mouth shape of *C. elongatus*, the "lower jaw longer than the upper, beyond which it protrudes, giving to the cleft an oblique direction upwards"

Clinostomus elongatus **(Kirtland 1840)** Latin for prolonged, referring to its "elongated" head and/or "long, slim, particularly elongated" body between caudal and dorsal fins



Clinostomus elongatus. From: Kirtland, J. P. 1840. Descriptions of the fishes of the Ohio River and its tributaries. Boston Journal of Natural History 3 (3–4): 338–352, 469–482, Pls. 4–6, 27–29.

Clinostomus funduloides **Girard 1856** *-oides*, Neo-Latin from *eī́dos* (εἶδος), having the form of: allusion not explained, perhaps referring to its superficial resemblance to topminnows (Cyprinodontiformes: Fundulidae, *Fundulus*)

> ***Clinostomus funduloides estor*** **(Jordan & Brayton 1878)** eater or glutton, presumably derived from *estrix* (L.), a female glutton, likewise derived from *edere* (L.), to eat, allusion not explained but probably referring to its "very large and oblique" mouth, "even larger" than that of *C. elongatus*

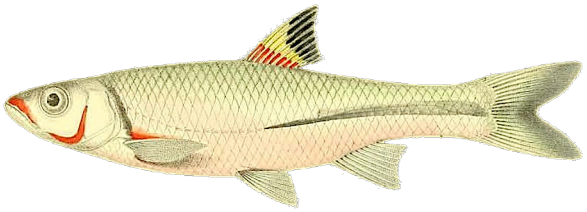
Coccotis

Jordan 1882

coccom (L.), berry; *otis*, obscurely Latinized from *oús* (οὖς) or its genitive *ōtós* (ὠτός), ear, referring to prominent crimson slash on opercle of *C. coccogenis*

Coccotis coccogenis **(Cope 1868)** *coccom* (L.), berry; *genis*, from *géneion* (γένειον), cheek, referring to prominent crimson slash on opercle

Coccotis zonistius **(Jordan 1880)** *zona* (L.), belt or girdle; *istius*, from *histíon* (ἱστίον), sail (i.e., dorsal fin), referring to band on dorsal fin



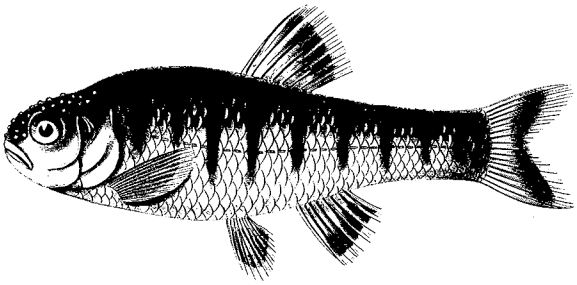
First-published image of *Coccotis coccogenis*. From: Cope, E. D. 1868. On the distribution of fresh-water fishes in the Allegheny region of southwestern Virginia. Journal of the Academy of Natural Sciences of Philadelphia. Series 2. 6 (3): 207-247, Pls. 26–28 [wrongly as 22–24].

Codoma

Girard 1856

a Native American word, chosen presumably because Girard liked the sound of it

Codoma ornata **Girard 1856** Latin for adorned or decorated, referring to its "rich and profuse" coloration, presumably of breeding males



First-published image of *Codoma ornata*. Illustration by John H. Richard. See caption of *Codoma ornata* for source.

Cyprinella

Girard 1856

etymology not explained, presumably a diminutive of *cypris*, a common suffix for small cyprinoid genera, derived from *Cyprinus* (Common Carp)[2]

Cyprinella alvarezdelvillari **Contreras-Balderas & Lozano-Vilano 1994** in honor of the late José Alvarez del Villar (1903–1986), "founder of modern Mexican ichthyology, who trained many generations of ichthyologists," for "his teaching, his friendship, and his many contributions to our understanding of Mexican freshwater fishes"

Cyprinella analostana **Girard 1859** *-ana* (L.), belonging to: Analostan (now Theodore Roosevelt) Island, Potomac River, Washington, D.C., USA, type locality

Cyprinella bocagrande **(Chernoff & Miller 1982)** *boca*, Spanish for mouth; *grande*, Spanish for large, referring to its long upper jaw (Spanish because it's endemic to Chihuahua, Mexico)

Cyprinella caerulea **(Jordan 1877)** Latin for dark blue (but used here to mean blue in general), referring to its bright steel-blue coloration

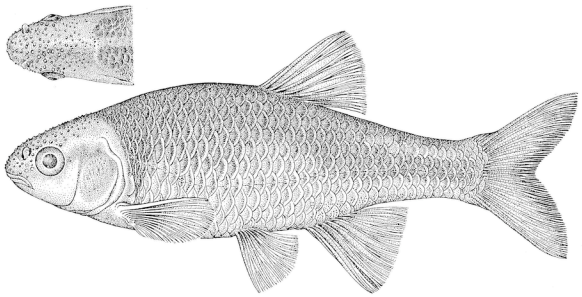
Cyprinella callisema **(Jordan 1877)** *calli-*, from *kállos* (κάλλος), beauty; *sêma* (σῆμα), sign (i.e., flag semaphore), referring to extremely high dorsal fin of breeding males

Cyprinella callistia **(Jordan 1877)** *calli-*, from *kállos* (κάλλος), beauty; *istia*, from *histíon* (ἱστίον), sail (i.e., dorsal fin), referring to iridescent dorsal fin of breeding males [may warrant placement in a new or different genus]

Cyprinella callitaenia **(Bailey & Gibbs 1956)** *calli-*, from *kállos* (κάλλος), beauty; *taenia*, from *tainía* (ταινία), band or ribbon, referring to its lateral blue stripe

Cyprinella camura **(Jordan & Meek 1884)** Latin for crooked or turned inward, referring to its "bluntly decurved snout" (Jordan & Evermann

[2] Some authors believe *Cyprinus* (from the Greek κυπρῖνος, *kyprínos*) is derived from Kypris, also known as Venus (or Aphrodite), the goddess of love, referring to the Common Carp's fecundity. Another explanation is that *kyprínos* is derived from *kýpros* (κύπρος), a Greek word for henna, referring to the carp's bronze coloration. See: Guasparri, A. 2022. The Roman classification and nomenclature of aquatic animals: an annotated checklist (with a focus on ethnobiology). Anthropozoologica 57 (2): 19–100.



Cyprinella panarcys, holotype, nuptial and tuberculate male, 50.8 mm SL. Illustration by Mark Orsen. From: Hubbs, C. L. and R. R. Miller. 1978. *Notropis panarcys*, n. sp., and *N. proserpinus*, cyprinid fishes of subgenus *Cyprinella*, each inhabiting a discrete section of the Rio Grande complex. Copeia 1978 (4): 582–592.

[1896] say name means "blunt-faced"[3])

Cyprinella chloristia **(Jordan & Brayton 1878)** *chlōrós* (χλωρός), green; *istia*, from *histíon* (ιστίον), sail (i.e., dorsal fin), referring to its green dorsal fin

Cyprinella formosa **(Girard 1856)** Latin for beautiful, "the prettiest of the genus" *Moniana* (=*Cyprinella*)

Cyprinella galactura **(Cope 1868)** milk-tailed, from *gálaktos* (γάλακτος), milk, and *ourá* (οὐρά), tail, referring to two clear-to-white areas on caudal-fin base

Cyprinella gibbsi **(Howell & Williams 1971)** in honor of American ichthyologist Robert H. Gibbs, Jr. (1929–1988), U.S. National Museum, for his contributions to the knowledge of *Cyprinella*

Cyprinella labrosa **(Cope 1870)** Latin for large-lipped, referring to its "prominent" lips

Cyprinella leedsi **(Fowler 1942)** in honor of the late Arthur N. Leeds (1870–1939), botanist, Academy of Natural Sciences of Philadelphia, "who had been much attracted to the charm of the Ohoopee" River, Georgia, USA (type locality), and who was present when holotype was collected

Cyprinella lepida **Girard 1856** Latin for pleasant, agreeable, neat or fine, allusion not explained, perhaps referring to it large scales and/or coloration, described as reddish above, yellowish below, with a "jet black patch" at base of caudal fin; name could also be a variant spelling of *lepídos* (λεπίδος), genitive of *lepís* (λεπίς), scale, referring to its scales "larger than in any of its hitherto known congeners"

Cyprinella leptocheilus **Tracy, Rohde & Jenkins 2024** *leptós* (λεπτός), fine or thin; *cheílos* (χεῖλος), lip, referring to its thinner upper lip compared with *C. labrosa* and *C. zanema*

Cyprinella lutrensis **(Baird & Girard 1853)** *-ensis*, Latin suffix denoting place: *lutra* (L.), otter, referring to Otter Creek, Oklahoma (erroneously reported as Arkansas), USA, type locality

> ***Cyprinella lutrensis blairi*** **Hubbs 1940** in honor of American zoologist W. Frank Blair (1912–1985), University of Texas at Austin, who helped collect holotype [extinct due to competition from introduced *Fundulus zebrinus*; last known collection in 1954]
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> ***Cyprinella lutrensis forlonensis*** **Meek 1904** *-ensis*, Latin suffix denoting place: Río Forlon, Tamaulipas, Mexico, where it appears to be endemic

Cyprinella nivea **(Cope 1870)** Latin for snowy, referring to white fins of breeding males

Cyprinella panarcys **(Hubbs & Miller 1978)** *pan* (παν), all, whole or every; *arcys* (ἄρκυς), net, referring to the "prominence and wide extent" of crescentic marks on scale pockets, which, when taken together, "suggest a net"

Cyprinella proserpina **(Girard 1856)** Latin name for Persephone, queen of the infernal regions, referring to Devils River, Texas, USA, type locality

Cyprinella pyrrhomelas **(Cope 1870)** *pyrrhós* (πῦρρός), flame-colored; *mélas* (μέλας), black, referring to red and black caudal fin of breeding males

Cyprinella rubripinna **Garman 1881** *ruber* (L.), red; *pinna* (L.) fin, referring to "salmon color" of pectoral, ventral and anal fins and "reddish" caudal fin [previously known as *C. garmani* (Jordan 1885), a replacement name that is no longer needed]

Cyprinella rutila **(Girard 1856)** Latin for red, golden red or reddish yellow, presumably referring to its "golden" sides and abdomen

Cyprinella spiloptera **(Cope 1867)** spot-finned, from *spílos* (σπίλος), mark or spot, and *ptera*, from *pterón* (πτερόν) or *ptéryx* (πτέρυξ), fin, referring to black blotch on rear half of dorsal fin

Cyprinella trichroistia **(Jordan & Gilbert 1878)** *tri-* (L.), three; *chrŏs* (χρώς), skin color; *istia*, from *histíon* (ιστίον), sail (i.e., dorsal fin), referring to black-red-white dorsal fin of nuptial males

Cyprinella venusta **Girard 1856** Latin for charming or beautiful, perhaps referring to its "Gracefully compressed and fusiform" profile

> ***Cyprinella venusta cercostigma*** **Cope 1868** *cerco-*, from *kérkos* (κέρκος), tail; *stígma* (στίγμα), mark or spot, referring to spot at base of caudal fin
>
> ***Cyprinella venusta stigmatura*** **(Jordan 1877)** spot-tailed, from *stígma* (στίγμα), mark or spot, and *ourá* (οὐρά), tail, referring to spot at base of caudal fin

Cyprinella whipplei **Girard 1856** in honor of Lieut. Amiel Weeks Whipple (1818–1863), American military engineer and surveyor, who led boundary survey team that collected holotype

Cyprinella xaenura **(Jordan 1877)** scratch-tailed, from *xaina* (ξαίνω), scratch, and *ourá* (οὐρά), tail, referring to several series of strong, "very striking" tubercles on caudal peduncle

Cyprinella xanthicara **(Minckley & Lytle 1969)** *xanthós* (ξανθός), yellow; *cara*, from *kára* (κάρα), top of head, referring to head color of breeding males

Cyprinella zanema **(Jordan & Brayton 1878)** *zá-* (ζά), intensive, i.e., well or very; *nḗma* (νῆμα), thread, referring to its "extremely long [barbels], probably longer than in any other of our Cyprinoids"

Dionda

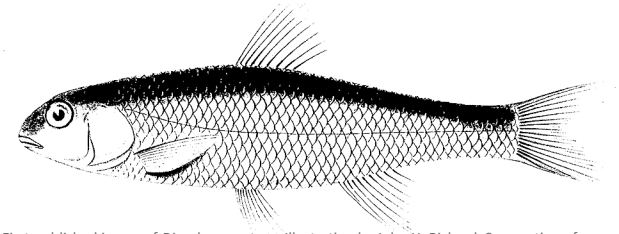
Girard 1856

a Native American word, presumably chosen because Girard liked the sound of it (name does not derive from the Greek Dione, mother of Venus, as reported in some references[4])

Dionda argentosa **Girard 1856** *-osa*, Latin suffix connoting fullness or abundance: *argentea* (L.), silvery, "sides and abdomen as if painted over with silver or quicksilver"

Dionda diaboli **Hubbs & Brown 1957** Latin for of the devil, referring to Devils River, Texas, USA, type locality

Dionda episcopa **Girard 1856** Latin for pope, referring to U.S. Army officer John Pope (1822–1892), who led party that collected holotype



First-published image of *Dionda argentosa*. Illustration by John H. Richard. See caption of *Codoma ornata* for source.

[3] Jordan, D. S. and B. W. Evermann. 1896. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama. Part I. Bulletin of the United States National Museum No. 47: i–lx + 1–1240.

[4] Texas Freshwater Fishes, http://txstate.fishesoftexas.org, citing: Edwards, R.J. 1999. Ecological profiles for selected stream-dwelling Texas freshwater fishes II. Report to the Texas Water Development Board. 69 pp.

***Dionda flavipinnis* (Cope 1880)** *flavus* (L.), yellow; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to its "generally pale yellow" fins

***Dionda melanops* Girard 1856** *mélanos* (μέλανος), genitive of *mélas* (μέλας), black; *ṓps* (ὦψ), eye or face (i.e., appearance), its blackish dorsal region and black spots on sides and abdomen "giving the whole fish a dark appearance"

***Dionda nigrotaeniata* (Cope 1880)** *nigro-*, from *niger* (L.), dark or black; *taeniata* (L.), striped, referring to blacker lateral band compared with *D. flavipinnis*

***Dionda serena* Girard 1856** Latin for clear, bright or fair, allusion not explained, perhaps referring to its "silvery" sides and abdomen and/or fairer complexion compared with *D. episcopa*, with which it could "easily be mistaken"

***Dionda texensis* Girard 1856** *-ensis*, Latin suffix denoting place: Texas, USA, where type locality (Nueces River) is situated

Ericymba

Cope 1865

eri- (ἐρι), intensive particle (i.e., very); *cymba*, from *kymbē* (κύμβη), the hollow of a vessel, cup or bowl, referring to externally visible mucous "channels" (cavities) on cheek of *E. buccata*

***Ericymba amplamala* (Pera & Armbruster 2006)** *ampla* (L.), enlarged; *mala* (L.), jaw, referring to long jaw and expanded infraorbital and preoperculomandibular canals

Ericymba amplamala, holotype, 64.2 mm SL. From: Pera, T. P. and J. W. Armbruster. 2006. A new species of *Notropis* (Cypriniformes: Cyprinidae) from the southeastern United States. Copeia 2006 (3): 423–430.

***Ericymba buccata* Cope 1865** Neo-Latin adjective derived from *bucca* (L.), cavity or cheek, referring to mucous channels (cavities) and where they occur (cheek)

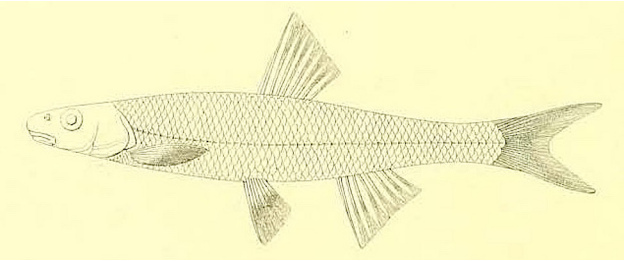
***Ericymba dorsalis* (Agassiz 1854)** Latin for of the back, referring to narrow black band that extends from neck to caudal fin base along the dorsal surface

> ***Ericymba dorsalis keimi* (Fowler 1909)** in honor of Thomas D. Keim (1879–1968), Fowler's friend (and future brother-in-law), who helped collect holotype and other fishes for the Academy of Natural Sciences of Philadelphia
>
> ***Ericymba dorsalis piptolepis* (Cope 1871)** *pī́ptō* (πίπτω), to fall; *lepís* (λεπίς), scale allusion, not explained, perhaps referring to absent (or embedded) scales on nape (as if they had fallen off?)

Erimonax

Jordan 1924

eri- (ἐρι), intensive (i.e., well or very), but in this case perhaps referring to its similarity to ("much like") *Erimystax*; *monax*, from *monakhós* (μοναχός), solitary, referring to *E. monachus*



Erimonax monachus. See *Coccotis coccogenis* caption for source.

***Erimonax monachus* (Cope 1868)** *monakhós* (μοναχός), solitary, referring to its isolated suite of characters and the fact that Cope only saw it "singly or in pairs"

Erimystax

Jordan 1882

eri- (ἐρι), intensive particle (i.e., very); *mýstax* (μύσταξ), moustache, referring to "well developed" barbel at posterior end of maxillary of *E. dissimilis*

***Erimystax cahni* (Hubbs & Crowe 1956)** in honor of American biologist Alvin R. Cahn (1892–1971), who collected holotype

***Erimystax dissimilis* (Kirtland 1840)** Latin for unlike or dissimilar, different from its presumed congeners in *Luxilus*

Erimystax dissimilis. From: Kirtland, J. P. 1840. Descriptions of the fishes of the Ohio River and its tributaries. Boston Journal of Natural History 3 (3–4): 338–352, 469–482, Pls. 4–6, 27–29.

***Erimystax harryi* (Hubbs & Crowe 1956)** in honor of George V. Harry (d. 1979), one of Hubbs' graduate students, for his extensive survey of Missouri (USA) fishes (he was also a member of the party who collected the holotype)

***Erimystax insignis* (Hubbs & Crowe 1956)** Latin for distinguished by marks, referring to "median row of large, rather intense, more or less rectangular blotches" on sides

> ***Erimystax insignis eristigma* (Hubbs & Crowe 1956)** *eri-* (ἐρι), intensive (i.e., well or very); *stígma* (στίγμα), mark or spot, referring to "median row of large, rather intense, more or less rectangular blotches" on sides

***Erimystax x-punctatus* (Hubbs & Crowe 1956)** *punctatus* (L.), spotted, referring to x-shaped spots along body

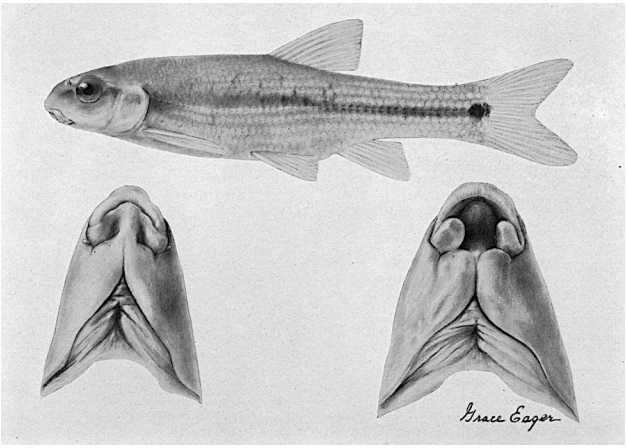
> ***Erimystax x-punctatus trautmani* (Hubbs & Crowe 1956)** in honor of American ichthyologist-ornithologist Milton B. Trautman (1899–1991), Ohio State University, for his "life-long thorough investigation of the fishes of Ohio"

Exoglossum

Rafinesque 1818

ex- (ἐξ) or *éxō* (ἔξω), outer or external; *glossa*, from *glṓssa* (γλῶσσα), tongue, referring to bony tongue-like extension of lower jaw of *E. maxillingua*

***Exoglossum laurae* (Hubbs 1931)** in honor of Hubbs' wife Laura (1893–1988), an ichthyologist herself, "who has helped collect all the specimens I have obtained, and has been a helpful companion on many



Exoglossum laurae, holotype, 55.5 mm SL, with lower side of head (left), and lower side of head of *E. maxillingua* of same length (right). Illustration by Grace Eager. From: Hubbs, C. L. 1931. *Parexoglossum laurae*, a new cyprinid fish from the Upper Kanawha River system. Occasional Papers of the Museum of Zoology University of Michigan No. 234: 1–12, Pls. 1–2.

other scientific adventures”

Exoglossum maxillingua **(Lesueur 1817)** *maxilla* (L.), jaw; *lingua* (L.), tongue, referring to bony tongue-like extension of lower jaw

Graodus

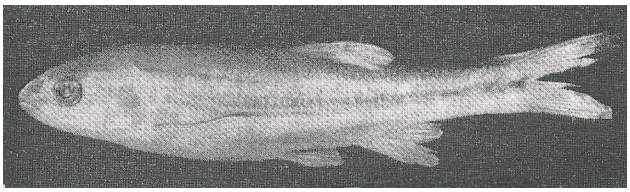
Günther 1868

gra-, etymology not explained nor evident, possibly *graûs* (γραῦς) or *graía* (γραῖα), old woman; *odus*, from *odoús* (ὀδούς), tooth, i.e., teeth that, like an old woman’s, missing or worn down, referring to “*quite rudimental*” pharyngeal teeth of *G. nigrotaeniatus* (=*boucardi*), “replaced by a somewhat uneven ridge of bone” (italics in original); Jordan (1879) believes these teeth “have been lost, either by natural shedding or through the softening due to long preservation in spirits”[5]

Graodus boucardi **(Günther 1868)** in honor of French naturalist Alphonse Boucard (1839–1905), who collected in Mexico, including holotype of this species

Graodus cumingii **(Günther 1868)** in honor of English natural history collector Hugh Cuming (1791–1865), whose collection (sold to the Natural History Museum in 1866) contained holotype

Graodus imeldae **(Cortés 1968)** in honor of biologist Imelda Martinez, who, with Lauro González (no other information available), collected holotype and donated it for study



Graodus imeldae. From: Cortés, M. T. 1968. Consideraciones sobre el género Notropis y descripción de una especie nueva, procedente del río Atoyac, en Juchatengo, Oax., México. Anales de la Escuela Nacional de Ciencias Biológicas, México 15 (1966): 185–192. [Sorry for poor quality.]

Graodus moralesi **(de Buen 1956)** in honor of Mexican water resource engineer Salvador Morales, who helped collect holotype

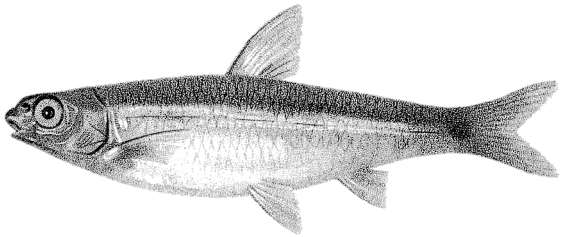
Hudsonius

Girard 1856

-ius (L.), adjectival suffix: named for the type species *Clupea hudsonia* Clinton 1824, referring to its type locality, Hudson River, New York, USA (not tautonymous because Girard unnecessarily renamed *H. hudsonius* as *H. fluviatilis*)

Hudsonius altipinnis **(Cope 1870)** *altus* (L.), high; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to “much elevated” dorsal fin compared with other minnows Cope grouped with this species

Hudsonius hudsonius **(Clinton 1824)** *-ius* (L.), adjectival suffix: Hudson River, New York, USA, type locality



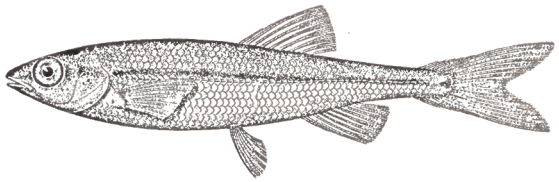
Hudsonius hudsonius. From: Clinton, de W. 1824. Description of a new species of fish, from the Hudson River. Annals of the Lyceum of Natural History of New York 1: 49–50, Pl. 2 (fig. 2).

Hybognathus

Agassiz 1855

hybos (ὑβος), hump; *gnáthos* (γνάθος), jaw, referring to “slight tubercle” at lower-jaw symphysis of *H. nuchalis*

Hybognathus amarus **(Girard 1856)** Latin for bitter, brackish or briny,



Hybognathus nazas. From: Meek, S. E. 1904. The fresh-water fishes of Mexico north of the isthmus of Tehuantepec. Field Columbian Museum, Zoölogical Series 5: i–lxiii + 1–252, Pls. 1–17.

allusion not explained, perhaps referring to its type locality, a brackish lagoon near Fort Brown (now Brownsville), Texas, USA

Hybognathus argyritis **Girard 1856** *argyrítĭs* (ἀργυρῖτις), of or belonging to silver, allusion not explained but almost certainly referring to its silvery coloration

Hybognathus hankinsoni **Hubbs 1929** in honor of American zoologist Thomas Leroy Hankinson (1876–1935), University of North Dakota, who collected fishes for the University of Michigan Museum of Zoology (but not this species)

Hybognathus hayi **Jordan 1885** in honor of American paleontologist-zoologist Oliver P. Hay (1846–1930), Field Museum of Natural History, who collected holotype

Hybognathus nazas **(Meek 1904)** named for the headwaters of the Río Nazas, Durango, México, type locality

Hybognathus nuchalis **Agassiz 1855** Latin for of the neck or nape, referring to dark dorsal stripe that begins at nape

Hybognathus placitus **Girard 1856** Latin for pleasing or agreeable, allusion not evident, perhaps referring to its color, “greyish silver along the middle of the flanks, and metallic white or yellow beneath”

Hybognathus regius **Girard 1856** Latin for royal or regal, a “large and beautiful species, the largest [member of the genus] that has, so far, come to our knowledge, some of the specimens measuring seven inches in length”

Hybopsis

Agassiz 1854

hybos (ὑβος), hump; *ṓps* (ὦψ), eye or face (i.e., appearance), allusion not explained, probably referring to “obtuse prominent snout” of *H. gracilis* (=*amblops*)

Hybopsis amblops **(Rafinesque 1820)** *amblýs* (ἀμβλύς), blunt; *ṓps* (ὦψ), eye or face (i.e., appearance), referring to its “round” snout

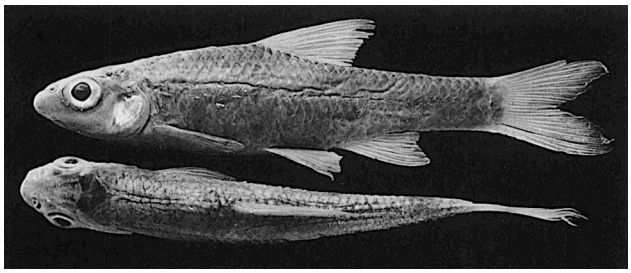
Hybopsis amnis **(Hubbs & Greene 1951)** Latin for river, referring to its typical habitat, larger rivers of the Mississippi River system

Hybopsis hypsinotus **(Cope 1870)** high-backed, from *hypsēlós* (ὑψηλός), high, and *nṓtos* (νῶτος), back, referring to its strongly arched back

Hybopsis lineapunctata **Clemmer & Suttkus 1971** *linea* (L.), line, referring to lateral stripe; *punctata* (L.), spotted, referring to spot on tail

Hybopsis rubrifrons **(Jordan 1877)** *rubrum* (L.), red; *frons* (L.), face or brow, “face rosy in summer males”

Hybopsis winchelli **Girard 1856** in honor of American geologist Alex-



Hybopsis amnis, holotype, 43 mm SL. Photo by Kelshaw Bonham. From: Hubbs, C. L. 1951. *Notropis amnis*, a new cyprinid fish of the Mississippi fauna, with two subspecies. Occasional Papers of the Museum of Zoology University of Michigan No. 530: 1–31.

[5] Jordan, D. S. 1879. Notes on certain typical specimens of American fishes in the British Museum and in the Museum d’Histoire Naturelle at Paris. Proceedings of the United States National Museum 2 (81): 218–226.

ander Winchell (1824–1891), University of Michigan, who collected holotype

Hydrophlox

Jordan 1878

hydro-, combining form of *hýdōr* (ὕδωρ), water; *phlóx* (φλόξ), flame, referring to red or orange colors of breeding males

***Hydrophlox chiliticus* (Cope 1870)** *cheílos* (χεῖλος), lip; *-icus* (L.), adjectival suffix, i.e., lipped, presumably referring to vermilion lips (and snout) of breeding males

***Hydrophlox chlorocephalus* (Cope 1870)** green-headed, from *chlōrós* (χλωρός), green, and *kephalḗ* (κεφαλή), head, referring to head coloration of breeding males

***Hydrophlox chrosomus* (Jordan 1877)** colorfully bodied, from *chrṓma* (χρῶμα), skin or color, and *sṓma* (σῶμα), body, referring to "brilliant" coloration of breeding males

***Hydrophlox lutipinnis* Jordan & Brayton 1878** *luteus* (L.), yellow; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to yellow fins of breeding males

***Hydrophlox rubricroceus* (Cope 1868)** *rubrum* (L.), red; *croceus* (L.), saffron, presumably referring to lower-body colors of breeding males

Hydrophlox rubricroceus. See caption of *Coccotis coccogenis* for source.

Iotichthys

Jordan & Evermann 1896

iota (ι), smallest letter of Greek alphabet, referring to small size (to 6.4 cm) of *I. phlegethontis*; *ichthýs* (ἰχθύς), fish

***Iotichthys phlegethontis* (Cope 1874)** *-is*, Latin genitive singular of: *Phlegéthōn* (Φλεγέθων), a river of fire in Hades, allusion not explained, possibly referring to red-gold color of breeding males

First-published image of *Iotichthys phlegethontis*. From: Cope, E. D. and H. C. Yarrow. 1875. Report upon the collections of fishes made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, during the years 1871, 1872, 1873, and 1874. Engineer Department, United States Army, Report upon the Geographical and Geological Explorations and Surveys west of the one hundredth Meridian v. 5 (Zoology) Chapter 6: 635–703, Pls. 26–32.

Luxilus

Rafinesque 1820

diminutive of *lux* (L.), light, connoting the American vernacular "shiner," i.e., a small, shiny fish

***Luxilus albeolus* (Jordan 1889)** Latin for whitish, the sides and fins a "pure silvery white"

***Luxilus cardinalis* (Mayden 1988)** zoological Neo-Latin for red (from the color of a Catholic cardinal's cassock), referring to red fins of breeding males

***Luxilus cerasinus* (Cope 1868)** Latin for cherry-colored, referring to body color of breeding males

***Luxilus chrysocephalus* Rafinesque 1820** gold-headed, from *chrysós* (χρυσός), gold or golden, and *kephalḗ* (κεφαλή), head, referring to its "gilt" head

Luxilus cardinalis, breeding male. Photo by William Roston. From: Mayden, R. L. 1988. Systematics of the *Notropis zonatus* species group, with description of a new species from the interior highlands of North America. Copeia 1988 (1): 153–173.

***Luxilus chrysocephalus isolepis* (Hubbs & Brown 1927)** *ísos* (ἴσος), equal; *lepís* (λεπίς), scale, presumably referring to less variation in number of predorsal scales (12–15) compared with *L. c. chrysocephalus* (14–29)

***Luxilus cornutus* (Mitchill 1817)** Latin for horned, referring to head tubercles of breeding males

***Luxilus cornutus frontalis* (Agassiz 1850)** Latin for frontal, also used to indicate forehead, allusion not explained, perhaps referring to tubercles of breeding males ("Small circular shields with depressed surface, surmounted with very small conical and acute points, cover the surface of the head")

***Luxilus pilsbryi* (Fowler 1904)** in honor of American malacologist-conchologist Henry A. Pilsbry (1862–1957), Academy of Natural Sciences of Philadelphia (where Fowler worked), who collected holotype

***Luxilus zonatus* (Putnam 1863)** Latin for banded or barred, referring to black lateral band on males

Lythrurus[6]

Jordan 1876

lythron (λύθρον), gore; *urus*, from *ourá* (οὐρά), tail, referring to blood-red caudal fin often seen on breeding males of *L. ardens* and *L. diploemius* (=*Chrosomus erythrogaster*, in Laviniinae)

***Lythrurus alegnotus* (Snelson 1972)** *ἀ-*, privative, i.e., without; *légnotos* (λέγοντος), with a colored border, proposed as a subspecies of *L. bellus* without black marginal bands on fins

***Lythrurus ardens* (Cope 1868)** Latin for burning or glowing, referring to bright colors of breeding males

Lythrurus ardens. From: See caption of *Coccotis coccogenis* for source.

***Lythrurus atrapiculus* (Snelson 1972)** *atra*, from *ater* (L.), black; *apiculus*, diminutive of *apex* (L.), extreme end or top, referring to black tip at top (apex) of dorsal fin

***Lythrurus bellus* (Hay 1881)** Latin for pretty, referring to its vivid coloration: orange fins, jet-black tips of fins, and "almost flame-color" of lower part of body in living specimens

***Lythrurus fasciolaris* (Gilbert 1891)** Latin for marked with narrow bands, referring to 5–8 "dark steel-blue" vertical bars on breeding males

***Lythrurus fumeus* (Evermann 1892)** Latin for smoky, referring to its dusky coloration

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[6] *Lythrurus* has a complicated taxonomic history that may necessitate a new valid name. In question is the identity of the type species *Semotilus diplemia* Rafinesque 1820. Recent evidence suggests that this species is actually *Chrosomus erythrogaster* (Rafinesque 1820). If so, then *Lythrurus* becomes a synonym of *Chrosomus* Rafinesque 1820 (in Laviniinae). See: Gilbert, C. R. 1998. Type catalogue of Recent and fossil North American Freshwater fishes: families Cyprinidae, Catostomidae, Ictaluridae, Centrarchidae and Elassomatidae. Florida Museum of Natural History, Special Publication No. 1: i–ii + 1–284.

***Lythrurus lirus* (Jordan 1877)** from *leírios* (λείριος), lily-like, referring to its pallid (i.e., lily white) coloration

***Lythrurus matutinus* (Cope 1870)** Latin for of the morning (i.e., the color of dawn), allusion not explained, perhaps referring to "rufous" color of muzzle and chin

***Lythrurus roseipinnis* (Hay 1885)** *roseus* (L.), rose-colored; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to pale to bright-red fins of breeding males

***Lythrurus snelsoni* (Robison 1985)** in honor of American chthyologist Franklin F. Snelson, Jr. (b. 1943), Florida Museum of Natural History, for "outstanding contributions" to the knowledge of *Lythrurus*

***Lythrurus umbratilis* (Girard 1856)** Latin for in the shade, its "backs, sides and fins as if shaded"

> ***Lythrurus umbratilis cyanocephalus* Copeland 1877** blue-headed, from *kýanos* (κύανος), dark blue (but here meaning blue in general), and *kephalḗ* (κεφαλή), head, the top of head being a "bright glaucous blue" in living specimens

Macrhybopsis

Cockerell & Allison 1909

macro-, from *makrós* (μακρός), long or large,
proposed as a more elongate subgenus of *Hybopsis*

***Macrhybopsis aestivalis* (Girard 1856)** Latin for summer-like or of the summer, allusion not explained, possibly alluding to Río San Juan (near Cadereyta, Nuevo León, Mexico), type locality, a considerably warmer habitat compared with the type locality of *M. gelida* (Montana, USA), described by Girard in the same publication

***Macrhybopsis australis* (Hubbs & Ortenburger 1929)** Latin for southern, probably referring to its more southerly distribution compared with *M. tetranema*

***Macrhybopsis boschungi* Gilbert & Mayden 2017** in honor of the late Herbert T. Boschung (1925–2015), University of Alabama, for his many contributions to southeastern (USA) ichthyology in general and the state of Alabama in particular, including co-authorship of *Fishes of Alabama* (2004)

***Macrhybopsis etnieri* Gilbert & Mayden 2017** in honor of David A. Etnier (1937–2023), University of Tennessee, for his many contributions to southeastern (USA) ichthyology and aquatic biology, including co-authorship of the "definitive" book on the fishes of Tennessee (1994)

***Macrhybopsis gelida* (Girard 1856)** Latin for icy or very cold, allusion not explained, perhaps alluding to Milk River (northern Montana, USA), type locality, a considerably colder habitat compared with the type locality of *M. aestivalis* (Nuevo León, Mexico), described by Girard in the same publication

***Macrhybopsis hyostoma* (Gilbert 1884)** hog-mouthed, from *hyos* (ὗς), hog, and *stóma* (στόμα), mouth, referring to underlying position of mouth relative to projecting snout

***Macrhybopsis marconis* (Jordan & Gilbert 1886)** *-is*, Latin genitive singular of: San Marcos River, Texas, USA, type locality

***Macrhybopsis meeki* (Jordan & Evermann 1896)** in honor of American ichthyologist Seth Eugene Meek (1859–1914), then at the University of Arkansas, who helped collect holotype

***Macrhybopsis pallida* Gilbert & Mayden 2017** Latin for pale or pallid, referring to its generally pallid body color

***Macrhybopsis storeriana* (Kirtland 1845)** *-ana* (L.), belonging to: David H. Storer (1804–1891), Vice President of the Boston Society of Natural History (in whose journal the description was published) and later (1846) author of first synopsis of North American fishes

***Macrhybopsis tetranema* (Gilbert 1886)** four-threaded, from *tetrá* (τετρά), four, and *nḗma* (νῆμα), thread, referring to its four thread-like barbels

***Macrhybopsis tomellerii* Gilbert & Mayden 2017** in honor of biological illustrator Joseph R. Tomelleri (b. 1958) of Leawood, Kansas (USA), whose "unsurpassed and meticulously rendered color illustrations of North American freshwater fishes have graced the pages of numerous scientific publications" (including description of this cyprinid) and books

Miniellus

Jordan 1882

etymology not explained but almost certainly *-ellus*, a Latin diminutive, i.e., a small minnow (or "minnie" in American vernacular), described as "small, plain" fishes, the "smallest and most insignificant of American Cyprinidae" [date of authorship often incorrectly given as 1888; not to be confused with *Minnilus* Rafinesque 1820, a junior synonym of *Notropis*]

***Miniellus albizonatus* (Warren & Burr 1994)** *albus* (L.), white; *zonatus* (L.), banded, referring to white band above lateral line

***Miniellus alborus* (Hubbs & Raney 1947)** *albus* (L.), white; *oris* (L.), mouth, referring to its unpigmented lips and mouth

***Miniellus ammophilus* (Suttkus & Boschung 1990)** sand-loving, from *ámmos* or *hámmos* (ἄμμος or ἅμμος), sand, and *phílos* (φίλος), friend or fond of, referring to its preferred habitat

***Miniellus anogenus* (Forbes 1885)** *án-* (ἄν), without (the "*o*" added for euphony); *génys* (γένυς), jaw, referring to its small, upturned mouth

***Miniellus boops* (Gilbert 1884)** *bo*, from *boū́s* (βοῦς), bull, metaphorically used to mean big; *ṓps* (ὦψ), eye, referring to its large eyes

***Miniellus chihuahua* (Woolman 1892)** named for Chihuahua, Mexico, type locality

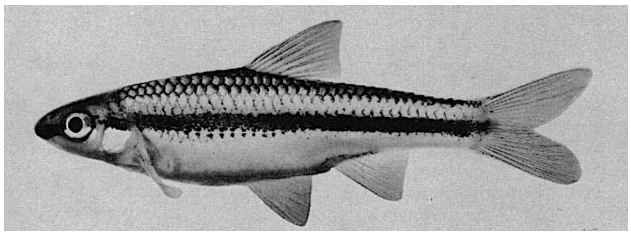
***Miniellus greenei* (Hubbs & Ortenburger 1929)** in honor of Hubbs' student Carroll Willard Greene (1901–?), "who is now engaged in making an ichthyological survey of Wisconsin" (Greene later became an ichthyologist for the New York State Department of Conservation)

***Miniellus heterodon* (Cope 1865)** *héteros* (ἕτερος), different; *odon*, Neo-Latin scientific adjective from ὀδούς (*odoús*), tooth, referring to variations in dentition, with features at times characteristic of *Alburnops* (original genus) or *Cyprinella*

***Miniellus longirostris* (Hay 1881)** *longus* (L.), long; *rostris*, Neo-Latin scientific adjective of *rostrum* (L.), snout, referring to long, rounded snout

***Miniellus lucifer* (Pinion, Kim, Dolan, Portnoy, Voelker & Conway 2025)** *lux* (L.), light; *-fer*, from *fero* (L.), to have or bear, referring to its comparatively brighter appearance compared with others in the *M. stramineus* species group, and to the Devils River (Texas, USA), type locality, with the connotation of Lucifer as the Devil in Jewish and Christian literature; in addition, the authors hope the recognition of this species will "cast a light upon the conservation risks of [its] geo¬graphic region, experienced by much of the arid regions of southwestern U.S. and adjacent Mexico"[7]

***Miniellus mekistocholas* (Snelson 1971)** *mḗkistos* (μήκιστος), tallest or longest; *cholás* (χολάς), intestine, referring to its elongate, convoluted intestine, an adaptation to its herbivorous diet



Miniellus mekistocholas, gravid adult female, 45.4 mm SL. Photo by Blake W. Palmer. From: Snelson, F. F., Jr. 1971. *Notropis mekistocholas*, a new herbivorous cyprinid fish endemic to the Cape Fear River basin, North Carolina. Copeia 1971 (3): 449–462.

[7] Described in *Notropis* because, the authors say, *Miniellus*, as currently defined, is non-monophyletic and its recognition is "premature." Following Eschmeyer's Catalog of Fishes, *Miniellus* is retained here until the limits of *Notropis*, *Miniellus* and related genera are clarified.

***Miniellus melanostomus* (Bortone 1989)** black-mouthed, from *mélas* (μέλας), black, and *stóma* (στόμα), mouth, referring to color of floor of mouth

***Miniellus missuriensis* (Cope 1871)** *-ensis*, Latin suffix denoting place: Missouri River drainage and/or state of Missouri, USA, where type locality (near St. Joseph) is situated

***Miniellus multicorniculatus* (Pinion, Kim, Dolan, Portnoy, Voelker & Conway 2025)** *multi-* (L.), many; *corniculatus*, horned (but treated as a noun, horn), referring to many tubercles across head and body of spawning males, with tubercles of greater size and number than others in the *M. stramineus* species group except for *M. topeka*[7]

***Miniellus nubilus* (Forbes 1878)** Latin for cloudy or gloomy, referring to its "unusually dusky" body color

***Miniellus oblitus* (Pinion, Kim, Dolan, Portnoy, Voelker & Conway 2025)** Latin for forgotten, recognized as a distinct form in 1928 but forgotten about by subsequent ichthyologists; also Latin for smeared or blurred, referring to the possible hybrid nature of its external morphology with that of *M. lucifer* collected in the Colorado River basin of Texas[7]

***Miniellus ortenburgeri* (Hubbs 1927)** in honor of Hubbs' student Arthur I. Ortenburger (1898–1961), "who is initiating an Oklahoma Fish Survey"

***Miniellus perpallidus* (Hubbs & Black 1940)** *per-* (L.), very, continuous or throughout; *pallidus* (L.), pale, referring to its "extreme pallor"

***Miniellus procne* (Cope 1865)** *Prokne*, from Greek mythology, whom the gods transformed into a swallow, alluding to its deeply forked tail

***Miniellus rafinesquei* (Suttkus 1991)** in honor of Constantine Samuel Rafinesque (1783–1840), "one of our early American naturalists"

***Miniellus sabinae* (Jordan & Gilbert 1886)** of the Sabine River, Texas, USA, type locality

***Miniellus scabriceps* (Cope 1868)** *scaber* (L.), rough; *-ceps* (Neo-Latin), headed, referring to abrasive tubercles on heads of breeding males

***Miniellus stramineus* (Cope 1865)** Latin for straw-like, referring to its coloration

***Miniellus topeka* (Gilbert 1884)** named for Topeka, Kansas, USA, type locality

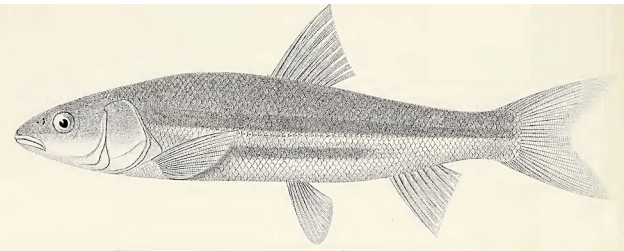
***Miniellus uranoscopus* (Suttkus 1959)** *ouranós* (οὐρανός), heaven or sky; *skopós* (σκοπός), looker, contemplator or viewer, referring to its skyward (upturned) eyes

Mylocheilus

Agassiz 1855

mylo-, from *mýlē* (μύλη), mill or millstone; *cheilus*, from *cheílos* (χεῖλος), lip, referring to bony sheath around lips

***Mylocheilus caurinus* (Richardson 1836)** Latin for "of the northwest wind," i.e., northwestern, described from the Columbia River, Fort Vancouver, Washington, in the Pacific Northwest of the USA



Possibly first-published image of *Mylocheilus caurinus*. Illustration by John H. Richard. From: Girard, C. F. 1857. Report on fishes collected on the survey. Route near the 38th and 39th parallels, explored by Captain J. W. Gunnison, and near the 41st parallel, explored by Lieutenant E. G. Beckwith. Zoological Report No. 4. Pp. 1–400, Pls. 1–76. *In*: Reports of explorations and surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean, v. 10. Beverley Tucker, Washington, D.C.

Nocomis raneyi, holotype, crested, nuptial male, 242 mm SL. From: Lachner, E. A. and R. E. Jenkins. 1971. Systematics, distribution, and evolution of the chub genus *Nocomis* Girard (Pisces, Cyprinidae) of eastern United States, with descriptions of new species. Smithsonian Contributions to Zoology No. 85: i–iii + 1–97.

Nocomis

Girard 1856

a Native American word, presumably chosen because Girard like the sound of it [*Nookomis* is the name of a grandmother in traditional stories among the indigenous Ojibwe people of North America and was made famous in Longfellow's 1855 epic poem "The Song of Hiawatha," in which a major female character named Nokomis falls from the moon]

***Nocomis asper* Lachner & Jenkins 1971** Latin for rough, referring to tubercles on scales on breeding males

***Nocomis biguttatus* (Kirtland 1840)** *bi-*, from *bis* (L.), twice; *guttatus* (L.), spotted or speckled, described as "The Two-Spotted Chub," probably referring to black spot at caudal-fin base and red spot on each side of head (the latter spot only on breeding males)

***Nocomis effusus* Lachner & Jenkins 1967** Latin for effusive, referring to the numerous breeding tubercles on its body and head

***Nocomis leptocephalus* (Girard 1856)** thin-headed, from *leptós* (λεπτός), thin, and *kephalḗ* (κεφαλή), head, referring to smaller head compared with *Ceratichthys* (=*Hybopsis*) *amblops*

> ***Nocomis leptocephalus bellicus* Girard 1856** Latin for of war or military, referring to Black Warrior River, Alabama, USA, type locality
>
> ***Nocomis leptocephalus interocularis* Lachner & Wiley 1971** *inter* (L.), between; *ocularis* (L.), of the eye, referring to location of tubercles on head

***Nocomis micropogon* (Cope 1865)** *micro-*, from *mikrós* (μικρός), small; *pōgōn* (πώγων), beard, referring to very small barbels on holotype (which was later discovered to be a *Luxilus cornutus* x *N. micropogon* hybrid; name validated by substituting holotype with a neotype)

***Nocomis platyrhynchus* Lachner & Jenkins 1971** broad-snouted, from *platýs* (πλατύς), broad or wide, and *rhýnchos* (ῥύγχος), snout, referring to large gape width

***Nocomis raneyi* Lachner & Jenkins 1971** in honor of ichthyologist American Edward C. Raney (1909–1984), Cornell University, "whose enthusiasm and guidance placed many American students on the professional pathway to ichthyology"

Notropis

Rafinesque 1818

nōtos (νῶτος), back; *trópis* (τρόπις), keel, referring to ridged or keeled back of *N. atherinoides*, possibly due to shriveling of desiccated specimen that Rafinesque examined

***Notropis amabilis* (Girard 1856)** Latin for amiable or attractive, a "very slender and graceful species"

***Notropis amoenus* (Abbott 1874)** Latin for pleasant, charming or delightful, a "beautiful cyprinoid" per Abbott

***Notropis ariommus* (Cope 1867)** *arí* (ἀρί), intensive particle (i.e., much or very); *ómma* (ὄμμα), eye, referring to its "strikingly larger" eye compared with the similar *Photogenis leucops* (=*N. photogenis*) [this species has the largest eyes in *Notropis* but Cope did not know this]

***Notropis atherinoides* Rafinesque 1818** *-oides*, Neo-Latin from *eídos* (εἶδος), having the form of: *Atherina*, typical genus of silversides (Atheriniformes: Atherinidae), which Rafinesque believed was closely related to *Notropis*

***Notropis atherinoides acutus* (Lapham 1854)** Latin for sharp or pointed, referring to sharper snout compared with *N. a. atherinoides* [presumably extinct]

***Notropis atrocaudalis* Evermann 1892** *atro-*, from *ater* (L.), black; *caudalis* (L.), of the tail, referring to black spot on tail

***Notropis bifrenatus* (Cope 1867)** *bi-*, from *bis* (L.), twice; *frenatus* (L.), bridled, allusion not explained, perhaps referring to black bridle-like preocular bars that unite across the snout (but why two instead of just one? Cope also described an orange band above the black one, so maybe that was bridle #2)

***Notropis heterolepis* Eigenmann & Eigenmann 1893** *héteros* (ἕτερος), another or different; *lepís* (λεπίς), scale, presumably referring to scale variation (scales along median line with a deep notch near middle of posterior margin; scales above lateral band dotted with black; dorsal scales with dark markings)

***Notropis heterolepis regalis* Hubbs & Lagler 1949** Latin for royal, referring to both its large size (up to 81 mm SL) and occurrence at Isle Royale, Michigan, USA

***Notropis jemezanus* (Cope 1875)** *-anus* (L.), belonging to: Jemez Mountains, New Mexico, USA, type locality

***Notropis maculatus* (Hay 1881)** Latin for spotted, referring to its large caudal spot

***Notropis megalops* (Girard 1856)** big-eyed, from *mégas* (μέγας), large, and *ṓps* (ὦψ), eye referring to larger eye compared with *N. amabilis*

***Notropis micropteryx* (Cope 1868)** *micro-*, from *mikrós* (μικρός), small; *ptéryx* (πτέρυξ), wing or fin, referring to smaller fins compared with *Alburnellus jaculus* (=*N. rubellus*)

***Notropis oxyrhynchus* Hubbs & Bonham 1951** sharp-snouted, from *oxýs* (ὀξύς), sharp or pointed, and *rhýnchos* (ῥύγχος), snout, referring to its sharp muzzle

***Notropis percobromus* (Cope 1871)** etymology not explained, perhaps *perco*, from *pérkē* (πέρκη), perch, and *Bromus*, a genus of forage grasses, derived from *bromós* (βρομός), a kind of oats, allusion not evident but here is a guess: Cope said the species was collected with the "percoid fishes" *Lepomis anagallinus* (=*L. humilis*, Centrarchidae) and *Boleosoma brevipinne* (= *Etheostoma nigrum*, Percidae), so perhaps he was suggesting that percoids foraged on this small minnow[8]

***Notropis photogenis* (Cope 1865)** *phōtō-* (φωτω-), combining form of *phṓs* (φῶς), light; *genis*, from *géneion* (γένειον), cheek, referring to its "bright silvery" sides, "especially brilliant" on the operculum

***Notropis rubellus* (Agassiz 1850)** Latin for reddish, referring to color around jaws of males

***Notropis rupestris* Page 1987** Neo-Latin for living among rocks, referring to its bedrock pool habitat

***Notropis saladonis* Hubbs & Hubbs 1958** *-is*, Latin genitive singular of: Río Salado basin (Nuevo León and Coahuila, Mexico), where it was endemic (now likely extinct)

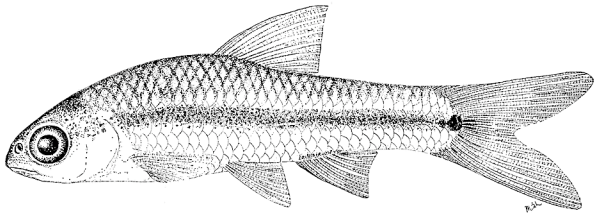
***Notropis scepticus* (Jordan & Gilbert 1883)** from *skeptikós* (σκεπτικός), thoughtful or inquiring (but here used to mean observant), referring to its large eyes

***Notropis semperasper* Gilbert 1961** *semper* (L.), always; *asper* (L.), rough, referring to tubercles on young-of-the-year and juveniles, and the retention of tubercles on adults not just during breeding season but throughout year

***Notropis stilbius* Jordan 1877** from *stilbo* (στίλβω), shining, referring to broad silvery band on cheek and side

***Notropis suttkusi* Humphries & Cashner 1994** in honor of American ichthylogist Royal D. Suttkus (1929–2009), Tulane University (New Orleans, Louisiana, USA), for his "outstanding contributions to North American ichthyology and cyprinid systematics during a long and productive career"

[8] Suggested by Mark Sabaj, Academy of Natural Sciences of Drexel University, pers. comm.



Notropis tropicus, paratype, nuptial male, 29.5 mm SL. Illustration by Martha B. Lackey. From: Hubbs, C. L. and R. R. Miller. 1975. *Notropis tropicus*, a new cyprinid fish from eastern Mexico. Southwestern Naturalist 20 (1): 121–131.

***Notropis telescopus* (Cope 1868)** from *tēleskópos* (τηλεσκόπος), far-seeing, referring to its large eyes

***Notropis tropicus* Hubbs & Miller 1975** Latin for tropical, one of the southernmost (Río Pánuco basin, Mexico) species in the family

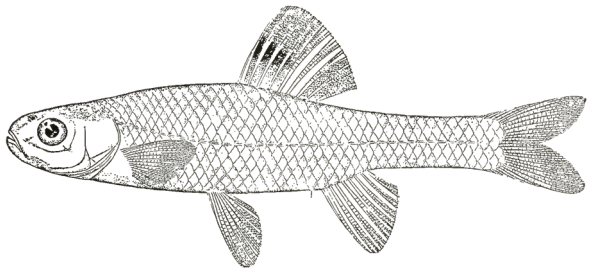
Opsopoeodus

Hay 1881

opsopoiós (ὀψοποιός), one who prepares or cooks food; *odus*, from *odoús* (ὀδούς), tooth, referring to "thoroughness with which the food is prepared by the numerous serrated pharyngeal teeth"

***Opsopoeodus emiliae* Hay 1881** matronym not identified but probably in honor of Hay's wife Emily (1849–1931)

***Opsopoeodus emiliae peninsularis* (Gilbert & Bailey 1972)** Latin for peninsular, referring to its occurrence in peninsular Florida, USA



Probably first-published image of *Opsopoeodus emiliae*. Illustration by A. H. Baldwin. From: Jordan, D. S. and B. W. Evermann. 1900. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama. Part IV. Bulletin of the United States National Museum No. 47: i–ci + 3137–3313, Pls. 1–392.

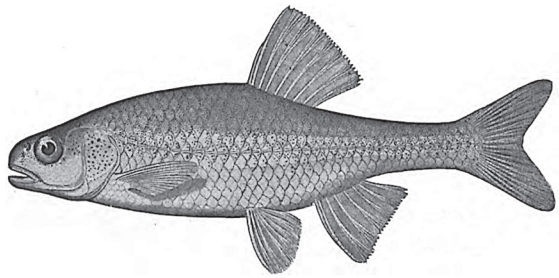
Oregonichthys

Hubbs 1929

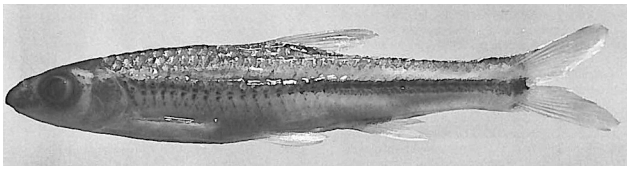
Oregon, USA, where *O. crameri* is endemic; *ichthýs* (ἰχθύς), fish

***Oregonichthys crameri* (Snyder 1908)** in honor of American biologist and educator Frank Cramer (1861–1948), Stanford University, who helped collect holotype

***Oregonichthys kalawatseti* Markle, Pearsons & Bills 1999** "Oregon [USA] once had a remarkable diversity of native peoples with more native languages than all of Europe. The Kalawatset, a tidewater Umpqua people . . . , were part of this lost human diversity and serve to forewarn of a parallel decline in diversity of Oregon's native freshwater fishes."



Oregonichthys crameri. From: Snyder, J. O. 1908. The fishes of the coastal streams of Oregon and northern California. Bulletin of the Bureau of Fisheries 27 (Doc. 638) (for 1907): 153–189, 1 map.



Paranotropis cahabae, holotype, breeding male, 39.8 mm SL. From: Mayden, R. L. and B. R. Kuhajda. 1989. Systematics of Notropis cahabae a new cyprinid fish endemic to the Cahaba River of the Mobile Basin. Alabama Museum of Natural History Bulletin No. 9: 1–16.

Paranotropis

Fowler 1904

pará (παρά), near, proposed as a subgenus of *Notropis*

***Paranotropis buchanani* (Meek 1896)** in honor of John L. Buchanan (1831–1922), president of Arkansas Industrial University (USA), where Meek was a professor of biology and geology

***Paranotropis cahabae* (Mayden & Kuhajda 1989)** of the Cahaba River (Alabama, USA), from a Choctaw word meaning "waters above," referring to water from sky, mountain springs, or gift from above

***Paranotropis leuciodus* (Cope 1868)** *leukós* (λευκός), white; *-iodus*, from *eídos* (εἶδος), form or shape, i.e., whitish, allusion not explained, perhaps referring to its silver (tinged with purple) sides, "resembling the nacre of some Uniones" (freshwater mussels)

***Paranotropis ozarcanus* (Meek 1891)** *-anus* (L.), belonging to: the Ozarks, referring to distribution in the Ozark region above the Fall Line in the White and Black River systems, Missouri and Arkansas, USA

***Paranotropis spectrunculus* (Cope 1868)** etymology not explained; Jordan & Evermann (1896)[3] suggest it is a diminutive of *spectrum* (L.), image, without explanation, whereas Jenkins & Burkhead (1994)[1] suggest *specca* (Anglo-Saxon), spot, and *trunculus*, diminutive of *truncus* (L.), stem, referring to "conspicuous" black spot at end of caudal peduncle

***Paranotropis volucellus* (Cope 1865)** diminutive of *volucer* (L.), flying or winged, probably referring to its "elongate fins, especially the dorsal"

***Paranotropis wickliffi* (Trautman 1931)** in honor of American biologist Edward L. Wickliff (1893–1975), Trautman's "loyal friend," who "has done much in carrying on and furthering ichthyological research in Ohio"

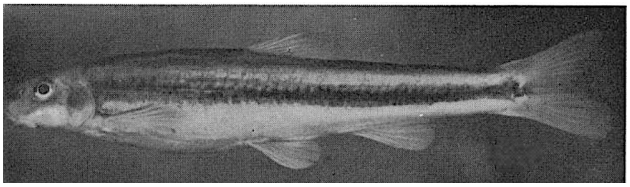
Phenacobius

Cope 1867

phénakos (φένακος), genitive of *phénax* (φέναξ), cheat or imposter; *bíos* (βίος), life, referring to *P. teretelus* and *P. uranops*, similar in aspect to the young of some species of *Catostomus* (Catostomidae)[9]

***Phenacobius catostomus* Jordan 1877** named for *Catostomus teres* (=*commersonii*, Catostomidae), which it resembles in color

***Phenacobius crassilabrum* Minckley & Craddock 1962** *crassus* (L.), thick, fat or stout; *labrum* (L.), lip, referring to its large, fleshy lips



Phenacobius crassilabrum, holotype, adult female, 88 mm SL. From: Minckley, W. L. and J. E. Craddock. 1962. A new species of *Phenacobius* (Cyprinidae) from the Upper Tennessee River system. Copeia 1962 (2): 369–377.

***Phenacobius mirabilis* (Girard 1856)** Latin for singular or strange; Girard said it belonged to the "most curious genus" of American minnows, *Exoglossum*

***Phenacobius teretulus* Cope 1867** etymology not explained, presumably a diminutive of *teretis* (L.), cylindrical, referring to its terete (cylindrical) body form

[9] Jordan & Evermann (1896, see footnote 3) say the name refers to their appearance, "suggesting an herbivorous species with long intestines, which it really is not." Cope, however, said the "digestive system [of *P. uranops*] indicates [a] carnivorous diet."

***Phenacobius uranops* Cope 1867** *ouranós* (οὐρανός), heaven or sky; *ōps* (ὦψ), eye, referring to its oval eyes, "having some vertical range" (i.e., upward-pointing)

Pimephales

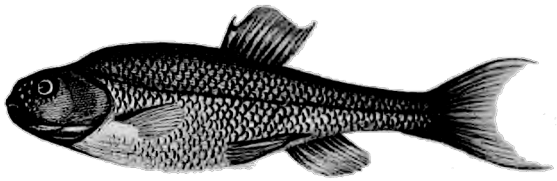
Rafinesque 1820

pīmelḗ (πῖμελή), fat; *cephales*, from *kephalḗ* (κεφαλή), head, the head of *P. promelas* described as "soft and fat all over," a clear reference to the fleshy growth on nape of breeding males [Rafinesque twice incorrectly translated name as "Flat-head" in his description of the genus, possibly a typesetting error, but correctly translated it as "Fat-head" in his description of *P. promelas*]

***Pimephales notatus* (Rafinesque 1820)** Latin for marked, probably referring to its caudal-fin spot

***Pimephales promelas* Rafinesque 1820** *pro-* (L.), in front of; *mélas* (μέλας), black, referring to black head of breeding males

***Pimephales promelas harveyensis* Hubbs & Lagler 1949** *-ensis*, Latin suffix denoting place: Harvey Lake on Lake Superior's Isle Royale, Michigan, USA, where it is endemic



Possibly first-published image of *Pimephales promelas* (but with a lunate rather than moderately forked caudal fin). From: Kirtland, J. P. 1840. Descriptions of the fishes of the Ohio River and its tributaries. Boston Journal of Natural History 3 (3–4): 338–352, 469–482, Pls. 4–6, 27–29. [This image possibly published in 1841.]

***Pimephales tenellus* (Girard 1856)** Latin for somewhat tender or delicate, allusion not explained, perhaps referring to its slenderer form compared with *Hyborhynchus perspicuus* (=*P. vigilax perspicuus*)

***Pimephales tenellus parviceps* (Hubbs & Black 1947)** *parvus* (L.), little; *-ceps* (Neo-Latin), headed, presumably referring to its shorter head compared with *P. t. tenellus*

***Pimephales vigilax* (Baird & Girard 1853)** Latin for watchful or restless, allusion not explained nor evident; Jenkins & Burkhead (1994)[1] suggest name refers to the vigilance of nest-guarding males, but it is doubtful that breeding behavior had been observed by the time of its description

***Pimephales vigilax perspicuus* (Girard 1856)** Latin for clear, transparent or evident, allusion not explained nor evident (despite the name!); perhaps Girard regarded it as clearly different from *P. tenellus*, described in the same publication

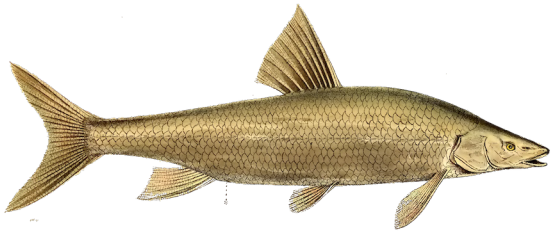
Platygobio

Gill 1863

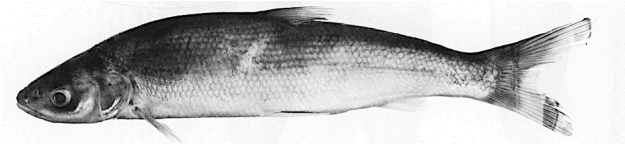
platýs (πλατύς), flat, referring to flattened head of *P. communis* (=*graclis*); *Gobio*, the similar-looking gudgeon of Europe

***Platygobio gracilis* (Richardson 1836)** Latin for thin or slender, allusion not explained, probably referring to its slenderer body compared with other cypriniform fishes (including suckers) then placed in the catch-all genus *Cyprinus*

***Platygobio gracilis gulonellus* (Cope 1865)** etymology not explained, perhaps diminutive of *gula* (L.), throat, or of *gulo* (L.), epicure or glutton, both possibly referring to "Breadth between eyes scarcely half length of cranium above" compared with *P. communis* (=*P. g. gracilis*)



Platygobio gracilis. Illustration by Waterhouse Hawkins. From: Richardson, J. 1836. The Fish. *In*: Fauna Boreali-Americana; or the zoology of the northern parts of British America: containing descriptions of the objects of natural history collected on the late northern land expeditions, under the command of Sir John Franklin, R.N. J. Bentley, London. Part 3: i–xv + 1–327, Pls. 74–97.



Pogonichthys ciscoides, paratype, female, 222 mm SL. Photo by Don Harvey. From: Hopkirk, J. D. 1974. Endemism in fishes of the Clear Lake region of central California. University of California Publications in Zoology 96 (for 1973): 1–135, Pls. 1–4.

Pogonichthys

Girard 1854

pōgōn (πώγων), beard, referring to well-developed barbel of *P. inaequilobus* (=*macrolepidotus*); *ichthýs* (ἰχθύς), fish

Pogonichthys ciscoides **Hopkirk 1974** *-oides*, Neo-Latin from *eĭdos* (εἶδος), having the form of: described as similar to a cisco (Salmonidae: *Coregonus*)

Pogonichthys macrolepidotus **(Ayres 1854)** large-scaled, from *makrós* (μακρός), long or large, and *lepidōtós* (λεπιδωτός), scaly, referring to larger scales compared with *Orthodon microlepidotus* (Laviniinae), its presumed congener at the time, described in the same publication

Pteronotropis

Fowler 1935

ptero-, from *pterón* (πτερόν), fin, referring to "greatly enlarged" dorsal and anal fins of breeding male *Ergola formosa* (=*P. hypselopterus*); *Notropis*, a related genus

Pteronotropis cummingsae **(Myers 1925)** in honor of Mrs. J. H. Cummings (1885–?), amateur naturalist, for her "investigation of the Wilmington [North Carolina, USA] fauna and flora" (she and her husband also hosted Myers in their houseboat during his North Carolina field work)

Pteronotropis euryzonus **(Suttkus 1955)** *eurýs* (εὐρύς), wide or broad; *zonus*, Neo-Latin adjective of *zona* (L.), band, referring to its broad lateral band

Pteronotropis grandipinnis **(Jordan 1877)** *grandis* (L.), large; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to enlarged dorsal fin of breeding males

Pteronotropis harperi **(Fowler 1941)** in honor of American naturalist Francis Harper (1886–1972), who collected holotype while retracing routes of 18th-century naturalists John and William Bartram

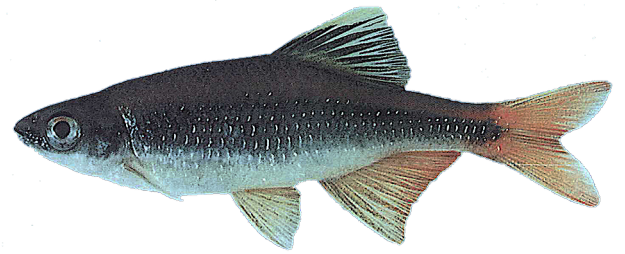
Pteronotropis hubbsi **(Bailey & Robison 1978)** in honor of American ichthyologist Carl L. Hubbs (1894–1979), "who has played a key role in the development of knowledge of *Notropis*"

Pteronotropis hypselopterus **(Günther 1868)** high-finned, from *hypsēlós* (ὑψηλός), high, and *pterus*, from *pterón* (πτερόν) or *ptéryx* (πτέρυξ), fin, referring to high dorsal fin of breeding males

Pteronotropis merlini **(Suttkus & Mettee 2001)** in honor of Merlin G. Suttkus (1919–1986), who helped his brother Royal collect fishes

Pteronotropis metallicus **(Jordan & Meek 1884)** Latin for metallic, referring to "burnished" dusky lateral band ending in a black spot at base of caudal fin

Pteronotropis signipinnis **(Bailey & Suttkus 1952)** *signum* (L.), flag or banner; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, referring to "striking" coloration of caudal and other median fins (hence the common name Flagfin Shiner"



Pteronotropis merlini, paratype, adult male. Photo by Robert H. Gibbs, Jr. From: Suttkus, R. D. and M. F. Mettee. 2001. Analysis of four species of *Notropis* included in the subgenus *Pteronotropis* Fowler, with comments on relationships, origin, and dispersion. Geological Survey of Alabama Bulletin 170: 1–50, 1 fold-out map.

Pteronotropis stonei **(Fowler 1921)** in honor of American ornithologist Witmer Stone (1866–1939), Academy of Natural Sciences of Philadelphia (where Fowler worked), who collected holotype

Pteronotropis welaka **(Evermann & Kendall 1898)** Native American name (meaning "chain-of-lakes") for St. Johns River, Florida (USA), type locality

Rhinichthys

Agassiz 1849

rhinós (ῥινός), genitive of *rhís* (ῥίς), nose, referring to prominent snout of *R. atronasus* (=*atratulus*); *ichthýs* (ἰχθύς), fish

Rhinichthys atratulus **(Hermann 1804)** Latin for dressed in black, referring to black stripe on body and around snout

Rhinichthys cataractae **(Valenciennes 1842)** of a cataract or cascade, referring to area around Niagara Falls, North America, type locality

> ***Rhinichthys cataractae dulcis*** **(Girard 1856)** Latin for sweet, referring to Sweetwater River, Wyoming, USA, type locality
>
> ***Rhinichthys cataractae smithi*** **Nichols 1916** in honor of American-born Canadian archaeologist Harlan I. Smith (1872–1940), who collected holotype [extinct by 1986 due to introgressive hybridization with the nominate form]

Rhinichthys deaconi **Miller 1984** in honor of American ichthyologist James E. Deacon (1934–2015), University of Nevada, "whose concern about the conservation status of many fishes from the Southwest has aroused interest on their behalf and whose ecological studies have provided the necessary biological information needed to aid their survival"

Rhinichthys evermanni **Snyder 1908** in honor of American ichthyologist Barton Warren Evermann (1853–1932), who surveyed the Pacific Northwest fish fauna of North America and later served as chief scientist of the U.S. Bureau of Fisheries, which published Snyder's paper

Rhinichthys falcatus **(Eigenmann & Eigenmann 1893)** Latin for falcate (sickle-shaped), referring to large dorsal fin with prolonged anterior rays

Rhinichthys gabrielino **Moyle, Buckmaster & Su 2023** named for the Gabrielino-Tongva people, indigenous inhabitants of the Los Angeles region (California, USA) where this species historically occurred

Rhinichthys klamathensis **(Evermann & Meek 1898)** *-ensis*, Latin suffix denoting place: Klamath River drainage, Oregon and California, USA, where it is endemic

> ***Rhinichthys klamathensis achomawi*** **Moyle, Buckmaster & Su 2023** named for the Achomawi people ("river people"), whose historic homelands were along the Pit River and tributaries in northeastern California, USA, where this subspecies occurs
>
> ***Rhinichthys klamathensis goyatoka*** **Moyle, Buckmaster & Su 2023** named for the Goyatöka people who, before the invasion of their homeland by Euro-Americans, lived on lands in the Warner Basin (California and Oregon, USA), where this subspecies occurs

Rhinichthys nevadensis **Gilbert 1893** *-ensis*, Latin suffix denoting place: Nevada, USA, where it is endemic

> ***Rhinichthys nevadensis caldera*** **Moyle, Buckmaster & Su 2023** named for the Long Valley Caldera (Inyo County, California, USA), the remnants of a

Rhinichthys gabrielino, breeding male. Photo by Jennifer Pareti. From: Moyle, P. B., N. Buckmaster and Y.-X. Su. 2023. Taxonomy of the Speckled Dace species complex (Cypriniformes: Leuciscidae, Rhinichthys) in California, USA. Zootaxa 5249 (5): 501–539.

gigantic volcano that last erupted 0.7 million years ago, in the remnants of which this subspecies colonized during the late Pleistocene

***Rhinichthys nevadensis robustus* (Rutter 1903)** Latin for of oak or oaken and, by extension, hard, firm or solid (but often used by ichthyologists to mean fat or stout), referring to its "heavy" body

***Rhinichthys obtusus* Agassiz 1854** Latin for blunt, referring to its blunter body compared with *R. marmoratus* (=*cataractae*)

***Rhinichthys osculus* (Girard 1856)** diminutive of *os* (L.), mouth, allusion not explained, perhaps referring to the "rather small" mouth Girard described for *Argyreus* Heckel 1843 (which he treated a senior synonym of *Rhinichthys* but is in fact preoccupied by *Argyreus* Scopoli 1777 in Lepidoptera)

***Rhinichthys osculus adobe* (Jordan & Evermann 1891)** Spanish for clay, referring to its color ("grayish-olivaceous above") and "the bottom it frequents"

***Rhinichthys osculus carringtonii* (Cope 1872)** in honor of Edward Campbell Carrington (1851–-1917), U.S. government survey naturalist who collected holotype

***Rhinichthys osculus lariversi* Lugaski 1972** in honor of American zoologist Ira La Rivers (1915–1977), University of Nevada, for his work on the fishes of Nevada (USA)

***Rhinichthys osculus lethoporus* Hubbs & Miller 1972** *letho-*, from *lḗthē* (λήθη), forgetfulness; *póros* (πόρος), hole or pore, referring to the extreme reduction of its lateral line

***Rhinichthys osculus moapae* Williams 1978** of the Moapa River, Nevada, USA, where it is endemic

***Rhinichthys osculus nubilus* (Girard 1856)** Latin for cloudy or gloomy, allusion not explained, perhaps referring to its "blackish brown" color, "with a purplish hue along the middle of the flanks"

***Rhinichthys osculus oligoporus* Hubbs & Miller 1972** *olígos* (ὀλίγος), few or scanty; *póros* (πόρος), hole or pore, referring to reduced lateral line

***Rhinichthys osculus reliquus* Hubbs & Miller 1972** Latin for relict, the only surviving native fish in Grass Valley, Nevada, USA (until 1938, that is, when it was last collected)

***Rhinichthys osculus robustus* (Rutter 1903)** Latin for of oak or oaken and, by extension, hard, firm or solid (but often used by ichthyologists to mean fat or stout), referring to its "heavy" body

***Rhinichthys osculus thermalis* (Hubbs & Kuhne 1937)** Neo-Latin for of or relating to hot springs or water, referring to Kendall Warm Spring, Wyoming, USA, where it is endemic

***Rhinichthys osculus velifer* Gilbert 1893** *velum* (L.), sail; *fero* (L.), to have or bear, probably referring to long pectoral fins, which overlap front of anal fin

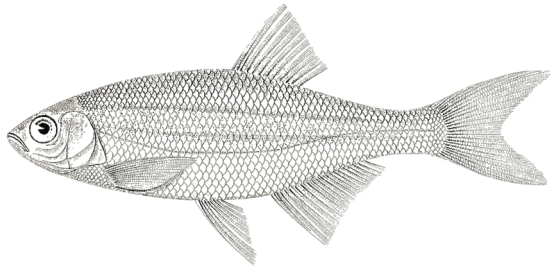
***Rhinichthys osculus yarrowi* Jordan & Evermann 1891** in honor of American surgeon-naturalist Henry C. Yarrow (1840–1929), for his work on the fishes of the Colorado River

***Rhinichthys umatilla* (Gilbert & Evermann 1894)** named for Umatilla, Oregon, USA, type locality

Richardsonius

Girard 1856

-ius (L.), pertaining to: Scottish surgeon-naturalist John Richardson (1787–1865); in selecting this name, "we have borne in mind the eminent labors" of Richardson, author of *Fauna Boreali-Americana* (1836), which included the description of *R. balteatus*



Possibly first-published image of *Richardsonius balteatus*. Illustration by John H. Richard. See *Mylocheilus caurinus* caption for source.

***Richardsonius balteatus* (Richardson 1836)** Latin for belted or girdled, probably referring to the "broad scarlet-red stripe" on breeding males

***Richardsonius balteatus hydrophlox* (Cope 1872)** *hydro-*, combining form of *hýdōr* (ὕδωρ), water; *phlóx* (φλόξ), flame, referring to brilliant colors of breeding males

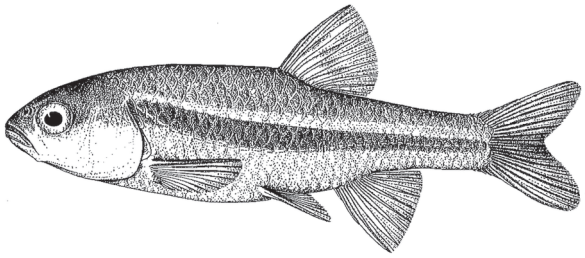
***Richardsonius egregius* (Girard 1858)** Latin for exceptional, allusion not explained, probably referring to its vivid coloration, being one of the most colorful fishes of the American West

Stypodon

Garman 1881

stýpos (στύπος), stump; *odon*, Neo-Latin scientific adjective from *odoús* (ὀδούς), tooth, referring to snail-grinding teeth

***Stypodon signifer* Garman 1881** *signum* (L.), flag or banner; *-ifer*, from *fero* (L.), to have or bear, perhaps referring to prominent lateral band [extinct in 1930 due to pollution and water diversion



Probably the *only* published image of the extinct *Stypodon signifer*. Illustration by Sara V. Fink. From: Miller, R. R., J. D. Williams, and J. E. Williams. 1989. Extinctions of North American fishes during the past century. Fisheries 14 (6): 22–38.

Tampichthys

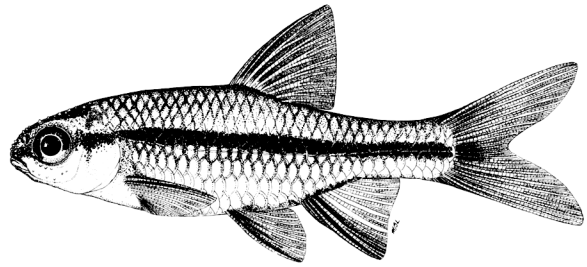
Schönhuth, Doadrio, Dominguez-Dominguez, Hillis & Mayden 2008

tamp, referring to Tampico Embayment drainage of Mexico, where all species occur; *ichthýs* (ἰχθύς), fish

***Tampichthys catostomops* (Hubbs & Miller 1977)** *ṓps* (ὦψ), eye or face (i.e., appearance), resembling a sucker (Catostomidae: *Catostomus*)

***Tampichthys dichroma* (Hubbs & Miller 1977)** *di-*, from *dýo* (δύο), two; *chrṓma* (χρῶμα), skin or color, sooty above, light below

***Tampichthys erimyzonops* (Hubbs & Miller 1974)** *ṓps* (ὦψ), eye or face (i.e., appearance), resembling, a young chubsucker (Catostomidae: *Erimyzon*)

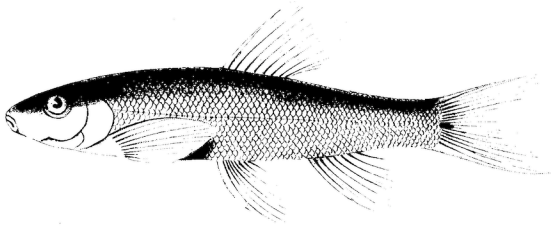


Tampichthys erimyzonops, paratopotype, nuptial male, 33.5 mm SL. Illustration by Martha B.Lackey. From: Hubbs, C. L. and R. R. Miller 1974. Dionda erimyzonops, a new, dwarf cyprinid fish inhabiting the Gulf coastal plain of Mexico. Occasional Papers of the Museum of Zoology University of Michigan No. 671: 1–17.

***Tampichthys ipni* (Álvarez & Navarro 1953)** in honor of Instituto Politecnio Nacional (IPN), Mexico, where the authors worked

***Tampichthys mandibularis* (Contreras-Balderas & Verduzco-Martínez 1977)** Latin for of or pertaining to a jaw, referring to its long mandible, or jaw

***Tampichthys rasconis* (Jordan & Snyder 1899)** *-is* (L.), genitive singular of: Rascon, San Luis Potosí, Mexico, type locality



First-published image of *Tiaroga cobitis*. Illustration by John H. Richard. See *Codoma ornata* caption for source.

Tiaroga

Girard 1856

a Native American word, presumably chosen because Girard like the sound of it [treated as a junior synonym of *Rhinichthys* by some workers]

***Tiaroga cobitis* Girard 1856** from *kōbítis* (κωβῖτις), ancient Greek name for small fishes that bury in the bottom and/or are like a gudgeon (Gobionidae: *Gobio*); Girard described this species as "not without analogy with the Gudgeons"

Yuriria

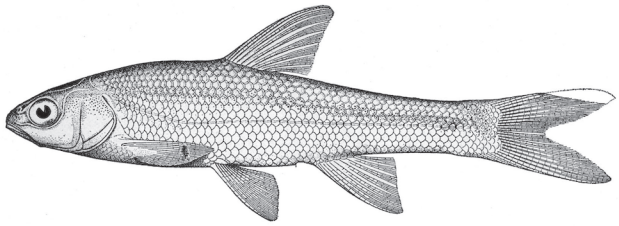
Jordan & Evermann 1896

named for Lake Yuriria in Guanajuato, Mexico, where *Y. alta* is abundant

***Yuriria alta* (Jordan 1880)** Latin for high, referring to its elevated back

***Yuriria amatlana* Domínguez-Domínguez, Pompa-Domínguez & Doadria 2007** *-ana* (L.), belonging to: Amatlan de Cañas (a town), Nayarit, Mexico, type locality

***Yuriria chapalae* (Jordan & Snyder 1899)** of Lago de Chapala, Jalisco, Mexico, type locality



Yuriria chapalae (damaged dorsal fin reconstructed). From: Jordan, D. S. and J. O. Snyder. 1899. Notes on a collection of fishes from the rivers of Mexico, with description of twenty new species. Bulletin of the U. S. Fish Commission 19: 115–147.