Order CYPRINIFORMES

Family LEUCISCIDAE Minnows (part 1 of 2)

Subfamily Pseudaspininae
4 genera - 20 species/subspecies

Oreoleuciscus Warpachowski 1889
oreo-, mountain, referring to distribution in short upland streams that drain southern slopes of Tanny-Ula and Hangayin (Hangay), and northen slopes of the Mongolian Altai mountain ranges; leuciscus, possibly referring to similarity to and/or perceived affinity with European Leuciscus, or possibly used as a generic suffix for dace (hence English vernacular, “mountain daces”)

- Oreoleuciscus angusticephalus Bogutskaya 2001
  angustus, narrow; cephalus, head, referring to long, narrow neurocranium

- Oreoleuciscus dsapchynensis Warpachowski 1889
  -ensis, suffix denoting place: Dsapchyn (also spelled Dsabchyn) River, northwestern Mongolia, type locality

- Oreoleuciscus humilis Warpachowski 1889
  low, allusion not explained, perhaps referring to low body compared to known congeners at time of description

- Oreoleuciscus potanini (Kessler 1879)
in honor of Grigory Nikolayaevich Potanin (1835-1920), Russian explorer of Inner Asia, who collected type

Pseudaspius Dybowski 1869
pseudo-, false, i.e., although this genus may superficially resemble Aspius (which also has a wedge-shaped head), such an appearance is false

- Pseudaspius leptcephalus (Pallas 1776)
  leptos, thin; cephalus, head, referring to wedge-shaped head

Rhynchocypris Günther 1889
rhynchus, snout, referring to “conically protruding snout”; cypris, a small carp, a common suffix for cyprinoid genera, although Günther may have used the suffix to reflect his belief that the genus “seems to come nearer to some of the small North-American members of Cypriniina than to any of the Old-World forms”

- Rhynchocypris czekanowskii (Dybowski 1869)
patronym not identified, probably in honor of Dybowski’s Polish colleague, geologist and Siberian explorer Aleksander Czekanowski (1833-1876)

- Rhynchocypris dementjevi (Turdaakov & Piskarev 1954)
in honor of recently deceased ichthyologist Petr Petrovich Dementiev, who worked in Kyrgyzstan (type locality)

- Rhynchocypris deogyuensis Lee & Sim 2017
  -ensis, suffix denoting place: Deogyusan National Park, South Korea, where it occurs

- Rhynchocypris lagowskii lagowskii (Dybowski 1869)
patronym not identified, probably in honor of Siberian revolutionary Mikhail Fedorovich Lagowski (1856-1903)

- Rhynchocypris lagowskii chorensis (Rendahl 1928)
  -ensis, suffix denoting place: Chor River, Ussuri River drainage, Russia, type locality

- Rhynchocypris lagowskii yamamotois (Jordan & Hubbs 1925)
  -is, genitive singular of: Senzi Yamamoto, Imperial University of Kyoto, who helped Jordan acquire specimens from Japanese fish markets

- Rhynchocypris percnurus percnurus (Pallas 1814)
etymology not explained; name was published as both percnurus and perenurus, the difference presumably due to a typographical error, but percnurus appears to be the intended name since it translates (percnos, eagle; ourus, tail, allusion not evident) whereas perenurus does not

- Rhynchocypris percnurus sachalinensis (Berg 1907)
  -ensis, suffix denoting place: southern Sakhalin Island, Russia, where it is endemic

Tribolodon Sauvage 1883
tribulos, harrow (an agricultural tool consisting of many spikes, tines or discs used for breaking up and smoothing the
surface of the soil); odon, tooth, presumably referring to curved hook on pharyngeal teeth, resembling the curved spikes or discs of some harrows

_Tribolodon brandtii brandtii_ (Dybowski 1872)
patronym not identified but probably in honor of German naturalist Johann Friedrich von Brandt (1802-1879)

_Tribolodon brandtii maruta_ Sakai & Amano 2014
traditional local name for this subspecies in the Kanto District, Japan

_Tribolodon ezo Okada & Ikeda 1937_
of Ezo (also spelled Yezo or Yeso), a name historically used for the northern Japanese island of Hokkaido, type locality

_Tribolodon hakonensis hakonensis_ (Günther 1877)
-ensis, suffix denoting place: Lake Hakone, Japan, type locality

_Tribolodon hakonensis phalacrocorax_ (Jordan & Fowler 1903)
_phalacro-, bald; corax, raven (genus name of cormorant), referring to how type specimens were obtained “through the efforts of trained cormorants”

_Tribolodon nakamura_ Doi & Shinzawa 2000
in honor of Morizumi Nakamura (1914-1998), for his contribution to our knowledge of the classification of Japanese cyprinid fishes

_Tribolodon sachalinensis_ (Nikolskii 1889)
-ensis, suffix denoting place: Saghalin Island, Russia, where it is endemic

**Subfamily Leuciscinae** European Minnows
37 genera/subgenera · 333 species/subspecies

_Abramis_ Cuvier 1816
ancient Greek for bream or mullet

_Abramis brama_ (Linnaeus 1758)
derived from _abramis_, ancient Greek for bream or mullet

_Acanthobrama_ Heckel 1843
_acanthos, thorn or spine, referring to thickened, spine-like last unbranched dorsal fin ray; brama, derived from _abramis_, ancient Greek for bream or mullet, i.e., a “spiny bream”

_Acanthobrama centisquama_ Heckel 1843
_centum, hundred; _squama, scale, referring to 100 scales on lateral line of holotype (ranges from 90 to 100 on specimens examined since description)

_Acanthobrama hadiyahensis_ Coad, Alkahem & Behnke 1983
-ensis, suffix denoting place: Wadi Hadiyah, near Hadiyah, Saudi Arabia, type locality

_Acanthobrama isissneri_ Tortonese 1952
in honor of the late H. Lissner, a “keen ichthyologist who greatly furthered the investigations on the fishes of Lake Tiberias” (or Sea of Galilee), Israel, type locality

_Acanthobrama marmid_ Heckel 1843
Arabic vernacular for this species

_Acanthobrama microlepis_ (De Filippi 1863)
_micro-, small; _lepis, scale, “Squamae exiguae,” with 82 along the lateral line

_Acanthobrama ononis_ Heckel 1843
latinization of Orontes, river basin in Turkey, where Lake Antioch (or Amik), type locality, is situated
Acanthobrama persidis (Coad 1981)
-is, genitive singular of: the Greek persis, a province of Persia or Iran, now known as Far, where it is endemic

Acanthobrama telavivensis Goren, Fishelson & Trewavas 1973
-ensis, suffix denoting place: Tel Aviv, Israel, near type locality at Yarkon springs

Acanthobrama thisbeae Freyhof & Özuluğ 2014
named for Thisbe, who was in love with Pyramus in Ovid’s Metamorphoses; Pyramus is the ancient Greek and Latin name for the Ceyhan River, southern Anatolia, where this species is endemic

Acanthobrama tricolor (Lortet 1883)
tri-, three, referring to “remarkable” (translation) coloration of living specimens: reddish-brown above lateral line, pearly whitish-pink below, the fins a silvery yellow

Acanthobrama urmianus (Günther 1899)
-anus, belonging to: Urmı River, Iran, one of the type localities

Achondrostoma Robalo, Almada, Levy & Doadrio 2007
a-, without; chondros, cartilage; stoma, mouth, referring to absence of horny plate on mouth as seen in Chondrostoma

Achondrostoma arcsii (Steindachner 1866)
in honor of zoologist Laurerano Pérez Arcas (1824–1894), University of Madrid, who shared specimens with Steindachner

Achondrostoma occidentale (Robalo, Almada, Sousa Santos, Moreira & Doadrio 2005)
western, referring to Oeste (West in English), Portugal, where it is endemic

Achondrostoma oligolepis (Robalo, Doadrio, Almada & Kottelat 2005)
oligo-, few; lepis, scale, referring to larger and therefore fewer scales compared to A. arcsii

Achondrostoma salmantinum Doadrio & Elvira 2007
-inum, adjectival suffix: Salmantia, Roman name for Salamanca, Spanish city and province inhabited by this species

Alburnoides Jeitteles 1861
-oides, having the form of: Alburnus, referring to original placement of A. maculatus in that genus

Alburnoides bipunctatus (Bloch 1782)
br-, two; punctatus, spotted, referring to each scale of anterior half of lateral line with a pair of black specks, each composed of minute dots

Alburnoides coadi Mousavi-Sabet, Vatandoust & Doadrio 2015
in honor of Brian W. Coad (Canadian Museum of Nature, Ottawa), the “most famous ichthyologist who studied Iranian freshwater fishes, especially the genus Alburnoides”

Alburnoides damghani Roudbar, Eagderi, Esmaeili, Coad & Bogutskaya 2016
of the Damghan River system at Cheshmeh Ali, Semnan Province, Iran, type locality

Alburnoides devollii Bogutskaya, Zupančič & Naseka 2010
of Devoll River, upper Seman River drainage, Albania, type locality

Alburnoides diclensis Turan, Bekaťa, Kaya & Bayçelebi 2016
-ensis, suffix denoting place: Dicle, Turkish name for Tigris River, where it is known from two streams in the river’s upper drainage

Alburnoides economoui Barbieri, Vukić, Šanda & Zogaris 2017
in honor of Alcibiades N. Economou, for “significant” contributions to the biogeography and ecology of Greek fishes

Alburnoides eichwaldii (De Filippi 1863)
in honor of geologist-zoologist Charles Edward von Eichwald (also known as Karl Eduard von Eichwald, 1795–1876), who had previously reported this species as a variety of Alburnus alburnus

Alburnoides emineae Turan, Kaya, Ekmeği & Doğan 2014
in honor of Emine Turan, “beloved” mother of first author

Alburnoides fangfangae Bogutskaya, Zupančič & Naseka 2010
in memory of cyprinid taxonomist Fang Fang Kullander (1962–2010), Swedish Museum of Natural History

Alburnoides fasciatus (Nordmann 1840)
banded, referring to double longitudinal dark black band

Alburnoides freyhofi Turan, Kaya, Bayçelebi, Bekaťa & Ekmeği 2017
in honor of Jörg Freyhof (b. 1964), Leibniz Institute of Freshwater Ecology and Inland Fisheries (Berlin), for his contribution to the knowledge of the fishes of the Middle East

Alburnoides gmelini Bogutskaya & Coad 2009
in honor of Samuel Georg Gotlieb Gmelin (1744–1774), Russian naturalist who traveled through the River Don area
and the Caucasus region and along the western and southern Caspian Sea coasts (1768-1774); he was captured by Usmey-Khan, held for ransom and died in captivity; the results of his expedition were published posthumously

**Alburnoides holciki** Coad & Bogutskaya 2012  
in honor of the late Juraj Holcik (1934-2010), Bratislava, colleague and friend, for his many contributions to ichthyology

**Alburnoides idignensis** Bogutskaya & Coad 2009  
* -ensis, suffix denoting place: Idigna, Sumerian name for Tigris River, referring to distribution in Tigris River system of Iran

**Alburnoides kossowigi** Turan, Kaya, Bayçelebi, Bektas & Ekmekci 2017  
in honor of Curt Kosswig (1903-1982), the “father of ichthyology in Turkey” (where this cyprinid occurs)

**Alburnoides kubanicus** Banarescu 1964  
-icus, belonging to: Kuban River drainage, Russia, type locality (also occurs in Laba River drainage)

**Alburnoides kubanicus** Turan, Kaya, Bayçelebi, Bektas & Ekmekci 2017  
in honor of Mustafa Kuru (b. 1940), Başkent University (Ankara), for his contribution to the knowledge of the fishes of Turkey (where this cyprinid occurs) [not to be confused with *Alburnus kubanicus*]

**Alburnoides maculatus** (Kessler 1859)  
spotted, referring to scales on sides of body with black spots that also outline lateral line

**Alburnoides manyasensis** Turan, Ekmekçi, Kaya & Gúcľ 2013  
-ensis, suffix denoting place: Lake Manyas basin, Turkey, where it is endemic

**Alburnoides namaki** Bogutskaya & Coad 2009  
of Namak Lake basin, Iran, where it is endemic to a qanat (underground water channel)

**Alburnoides nicolausi** Bogutskaya & Coad 2009  
named after the Latin male name Nicolaus, alluding to (but not specifically named for) sons of both authors, Nikolay (Bogutskaya’s eldest son) and Nicholas (Coad’s)

**Alburnoides oblongus** Bulgakov 1923  
oblong, presumably referring to “elongated, somewhat slender” (translation) body

**Alburnoides ohridanus** (Karaman 1928)  
-anus, belonging to: Lake Ohrid, Macedonia and Albania, where it is endemic

**Alburnoides parhami** Mousavi-Sabet, Vatandoust & Doadrio 2015  
generally in honor of all the Iranian conservation officers who sacrificed their lives in order to protect the environment, but specifically for Saeid Parham (1980-2009), a conservation officer in Khorasan-e-Shomali Province, who was killed in a battle with illegal hunters near the type locality of this species near the Iran-Turkmenistan border

**Alburnoides petrubanarescui** Bogutskaya & Coad 2009  
in honor of the late Petru Banărescu (1921-2009), Institute of Biology, Bucharest, “a great freshwater ichthyologist who contributed significantly to our knowledge of fishes of Eurasia”

**Alburnoides prespensis** (Karaman 1924)  
-ensis, suffix denoting place: Lake Prespa and tributaries, Macedonia, type locality (also occurs in Albania and Greece)

**Alburnoides qanati** Coad & Bogutskaya 2009  
of a qanat (an underground water channel), referring to habitat in which it was found, “now fast disappearing with the use of pump wells, and in recognition of the contribution to civilization made by the Iranian people through this innovative irrigation technique”

**Alburnoides rossicus** Berg 1924  
Russian, referring to type localities in Dnieper and Volga rivers, Russia

**Alburnoides samii** Mousavi-Sabet, Vatandoust & Doadrio 2015  
in honor of Majid Samii (b. 1937), world-famous neurosurgeon and medical scientist, who was born in Rasht, Iran, capital city of Guilan Province, region where type locality (Sefidroud River) of this species is situated

**Alburnoides smyrnae** Pellegrin 1927  
from a stream near Smyrna, Turkey, type locality

**Alburnoides tabarestanensis** Mousavi-Sabet, Anvarifar & Azizi 2015  
-ensis, suffix denoting place: Tabarestan, historical name of Mazandaran Province, Iran, which includes the Tajan River, type locality

**Alburnoides taeniatus** Kessler 1874  
banded, referring to wide, straight dark band running along sides above lateral line
Alburnoides taeiniatus drjagini Turdakov & Piskarev 1955
patronym not identified, probably in honor of Petr Ampholikhovitch Drjagin (1893-?), ichthyologist, hydrobiologist and fisheries specialist, a pioneer of fisheries research in Russia and management of inland waters, who authored a study of Chu River (where this subspecies occurs) fishes in 1936

Alburnoides thessalicus Stephanidis 1950
-icus, belonging to: Thessaly, Greece, where Rivers Pinios and Sperchios, type localities, are situated (also occurs in Macedonia and Bulgaria) [not to be confused with Alburnus thessalicus Stephanidis 1950]

Alburnoides tzanevi Chichkoff 1933
in honor of Panayot Tzanev, a former assistant at the Zoological Institute of the Russian Academy of Sciences, who collected large ichthyological samples (but there is no direct indication he collected type)

Alburnoides varentsovi Bogutskaya & Coad 2009
in honor of Petr Aleksandrovich Varentsov, who lived and traveled in the Transcaspian Province of the former Russian Empire, collected type in 1896, and wrote a book on the geography and natural history of the area in 1907

Alburnoides velioglu Turan, Kaya, Ekmekci & Dogan 2014
in honor of Hasan Basri Velioglu, M.D., who “eased” and contributed to the authors’ earlier and present studies through the use of radiography

Alburnus Rafinesque 1820
proposed for European species but no species mentioned; type (Cyprinus alburnus) by absolute tautonymy

Alburnus adanensis Battalgazi 1944
-ensis, suffix denoting place: Adana, southern Turkey, near type locality at Seyhan River (probably extinct) [note: Battalgazi is same author as Battalgil; see next species]

Alburnus akili Battalgil 1942
in honor of Akil Muhtar Ozden (1877-1949), professor of pharmacodynamics and clinical therapy at Istanbul University Medical School and internal medicine expert

Alburnus albidus (Costa 1838)
whitish, referring to silvery-white coloration

Alburnus alburnus alburnus (Linnaeus 1758)
Latin for whitefish, from albus, white, referring to pale, silvery coloration; name also reflects British vernacular, bleak, a little-used synonym for pale

Alburnus alburnus charusini Herzenstein 1889
in honor of Alexei N. Charusin (also spelled Alexey N. Kharuzin, 1864-1932), Russian ethnographer, anthropologist and statesman, who collected type

Alburnus arborella (Bonaparte 1841)
presumably a misspelling of albobrella, Italian vernacular for this species

Alburnus atropatenae Berg 1925
of Atropatene, ancient kingdom that includes modern-day Iran, Azarbaijan and Kurdistan, referring to distribution in northwestern Iran

Alburnus attalus Özuluğ & Freyhof 2007
named for Attalus I (269-197 BC), who ruled Pergamon, a Hellenistic polis in contemporary Turkey, where it is endemic

Alburnus baliki Bogutskaya, Küçük & Ünlü 2000
in honor of Suleyman Balik, for contributions to the knowledge of fishes of West Anatolia and the Mediterranean region of Turkey

Alburnus battalgilae Özuluğ & Freyhof 2007
in honor of Fahire Battalgil (later Battalgazi, 1902-1948), author of five papers on Anatolian fishes

Alburnus belvica Karaman 1924
Macedonian vernacular for this species at Lake Prespa (type locality), meaning “white fish”

Alburnus caeruleus Heckel 1843
sky-blue, referring to color of horizontal stripe on side

Alburnus carianorum Freyhof, Kay, Baycelebi, Geiger & Turan 2019
named for the Carians, inhabitants of the ancient province of Caria in the southern Anatolian Aegean basin, where this species occurs [replacement name for A. kurui Mangit & Yerli 2018, which became a secondary homonym when Leuciscus kurui Bogutskaya 1995 was moved to Alburnus; proposed in 2018 but redescribed the next year with validly designated holotype, so name dates to 2019]

Alburnus carinatus Battalgil 1941
keeled, referring to well-developed ventral keel
**Alburnus chalcoides** (Güldenstädt 1772)
-oides, having the form of: chalkos, copper, alluding to Greek vernacular, *Harengus chalcois* (copper herring), perhaps referring to copper sheen of head and opercular region of some specimens

**Alburnus danubicus** Antipa 1909
-icus, belonging to: Danube River Delta, described as a Danube variety of *A. chalcoides*

**Alburnus demiri** Özuluğ & Freyhof 2007
in honor of Muzafer Demir, for great contributions to the knowledge of Turkish benthic invertebrates and marine fishes

**Alburnus derjugini** Berg 1923
in honor of oceanographer Konstantin Mikhailovich Deryugin (1878-1938), who recognized this shemaya as a distinct form in 1899 but did not name it

**Alburnus doriae** De Filippi 1865
in honor of zoologist Giacoma Doria (1840-1913), president of the Italian Geographic Society, who led (or at least supported) expedition that collected type

**Alburnus escherichii** Steindachner 1897
in honor of entomologist Karl L. Escherich (1871-1951), who collected type

**Alburnus filippii** Kessler 1877
patronym not identified but clearly in honor of Filippo de Filippi (1814-1867), presumably for his work on Central Asian fishes

**Alburnus goekhani** Özuluğ, Geiger & Freyhof 2018
in honor of Staff Col. Gökhan Peker, cousin of the first author, one of 13 Turkish soldiers who died when their helicopter hit high-voltage power lines and crashed in 2017

**Alburnus heckeli** Battalgil 1943
patronym not identified but clearly in honor of Austrian ichthyologist Johann Jakob Heckel (1790-1857), whose 1843 *Ichthyologie* included many Turkish fishes

**Alburnus hohenackeri** Kessler 1877
in honor of Swiss-German missionary and botanist Rudolph Hohenacker (1798-1874), who collected part of the type series

**Alburnus istanbulensis** Battalgil 1941
-ensis, suffix denoting place: Istanbul, Turkey, near type locality at Kâathane (Kagithane) stream, Bosphorus River drainage

**Alburnus kotschyi** Steindachner 1863
in honor of botanist and explorer Theodor Kotschy (1813-1866), who collected type

**Alburnus kurui** (Bogutskaya 1995)
in honor of ichthyologist Mustafa Kurui (b. 1940), Başkent University (Ankara, Turkey), who collected type [not to be confused with *Alburnoides kurui*]

**Alburnus leobergi** Freyhof & Kottelat 2007
in honor of Soviet ichthyologist Lev (also Leo) Semyonovich Berg (1876-1950), who first realized (1949) that there were different shemayas in the Black and Azov Sea basins

**Alburnus macedonicus** Karaman 1928
Macedonian, referring to type localities in Lake Dojran and Vardar River, Macedonia (also occurs in Greece)

**Alburnus magnificus** Freyhof & Turan 2019
named for its "magnificent" color in life (flank pattern of bold black, grey or brown scales on a silvery or brown background with orange or hyaline fins)

**Alburnus mandrensis** (Drensky 1943)
-ensis, suffix denoting place: Lake Mandras drainage, Black Sea basin, Bulgaria, type locality

**Alburnus maximus** (Fatio 1882)
greatest or largest, referring to larger size compared to *A. arborella*

**Alburnus mento** (Heckel 1837)
etymology not explained, probably mentus, chin, referring to lower jaw considerably projecting beyond upper

**Alburnus mentoides** Kessler 1859
-oides, having the form of, referring to "very close" (translation) similarity to *A. mento*

**Alburnus nasreddini** Battalgil 1943
in honor of Nasrettin Hoca (also spelled Nasreddin Hodja), 13th-century populist philosopher and humorist, whose hometown (Aksehir, Turkey) is the type locality
Alburnus neretvae Buj, Šanda & Perea 2010
of the the Neretva River drainage, where it is endemic

Alburnus nicaeensis Battalgil 1941
-ensis, suffix denoting place: Nicaea, ancient Greek name for what is now Iznik, Turkey, referring to Lake Iznik, where it is endemic (and feared extinct)

Alburnus orontis Sauvage 1882
latinization of Orontes, principal river in Syria, type locality

Alburnus qalilus Krupp 1992
Arabic word for few, referring to low number of lateral line scales and anal fin rays compared to congers

Alburnus sarmaticus Freyhof & Kottelat 2007
-icus, belonging to: the Sarmatians, a group of tribes that inhabited southern Russia, Ukraine and eastern Balkans from 5th century BC to 4th century AD, referring to distribution in Rivers South Bug and Danube (Bulgaria, Croatia, Romania, Slovenia, Ukraine)

Alburnus sava Bogutskaya, Zupančič, Jelič, Diripasko & Naseka 2017
referring to the Sava River drainage, Black Sea basin, where it appears to be endemic

Alburnus schischkovi (Drensky 1943)
in honor of Bulgarian biologist Georgi Chichkoff (also spelled Chichkov and Schischkov), who reported this cyprinid as unique in 1935 but assigned it to Chalcalburnus chalcoides derjugini (=Alburnus derjugini) in 1935

Alburnus scoranza Heckel & Kner 1858
vernacular for this species in Lake Skadar (border of Montenegro and Albania), type locality

Alburnus sellal Heckel 1843
vernacular for this species in Aleppo, Syria

Alburnus tarichi (Güldenstädt 1814)
Georgian vernacular for this species (given in English as tarek)

Alburnus timarensis Kuri 1980
-ensis, suffix denoting place: Yumrutepe-Timar, Turkey, where Karasu River (only known area of occurrence) is situated

Alburnus thessalicus Stephanidis 1950
-icus, belonging to: Thessaly, Greece, where Rivers Pinios and Sperchios, type localities, are situated [not to be confused with Alburnoides thessalicus Stephanidis 1950]

Alburnus vistonicus Freyhof & Kottelat 2007
-icus, belonging to: Lake Vistonis, Greece, only known area of occurrence

Alburnus zagrosensis Coad 2009
-ensis, suffix denoting place: Zagros Mountains, Iran, where it is endemic to Karun River basin

Anaecypris Collares-Pereira 1983
Anas, Latin name of Guadiana River, Spain, type locality of A. hispanica; cypris, a small carp, a common suffix for cyprinid genera

Anaecypris hispanica (Steindachner 1866)
Hispanic, a term that originally denoted a relationship to Hispania (now Iberian Peninsula), referring to distribution in Spain and Portugal
Aspiolucius Berg 1907
*aspies*, asp (see *Aspius*, below); *lucius*, pike, i.e., an *Aspius*-like cyprinid with a pike-like shape

**Aspiolucius esocinus** (Kessler 1874)
pike-like, referring to elongate shape, similar to pikes (*Esox*, Esocidae)

**Ballerus Heckel 1843**
tautonymous with *Cyprinus ballerus*

**Ballerus ballerus** (Linnaeus 1758)
latinization of *baleros*, ancient Greek name for this species, first mentioned by Aristotle (Ronald Frick, pers. comm.)

**Ballerus sapa** (Pallas 1814)
latinization of Russian vernacular for this species, *ssapà* or *ssopa*

**Blicca Heckel 1843**
tautonymous with *Cyprinus blicca* Bloch 1782 (= *B. bjoerkna*), based on the German vernacular *Blicke*

**Blicca bjoerkna** (Linnaeus 1758)
latinization of *björkna*, Swedish vernacular for this species

**Chondrostoma Agassiz 1832**
*chondros*, cartilage; *stoma*, mouth, referring to presumed content of horny layer on lower lip

**Chondrostoma angorense** Elvira 1987
-*ensis*, suffix denoting place: Angora (Ankara), capital of Turkey, country where it is endemic (name was coined by Franz Steindachner while labeling type specimens but never published)

**Chondrostoma beyschirensis** Bogutskaya 1997
-*ensis*, suffix denoting place: Beyshehir Lake, Turkey, where it is endemic

**Chondrostoma ceyhanense** Küçük, Turan, Güçlü, Mutlu & Çiftci 2017
-*ensis*, suffix denoting place: Ceyhan River, Turkey, only known area of occurrence

**Chondrostoma colchicum** Derjugin 1899
-*icum*, belonging to: Colchis, ancient name for eastern coast of Black Sea in Georgia, type locality

**Chondrostoma esmaeilii** Eagderi, Jouladeh-Roudbar, Birecikligil, Çiçek & Coad 2017
in honor of Hamid Reza Esmaeili, for “long and outstanding” contributions in biology and systematic studies of Iranian freshwater fishes

**Chondrostoma fahirae** (Ladiges 1960)
in honor of Turkish zoologist Fahire Battalgazi (formerly Battalgil, 1902-1948), under whose research program type was collected

**Chondrostoma holmwoodii** (Boulenger 1896)
in honor of Frederic Holmwood, British Consul-General at Smyrna (now Izmir, Turkey), who collected type

**Chondrostoma kinzelbachi** Krupp 1985
in honor of Ragnar Kinzelbach, who placed holotype at Krupp’s disposal, for his contributions to the knowledge of Middle East zoology

**Chondrostoma knerii** Heckel 1843
patronym not identified but certainly in honor of Heckel’s Vienna colleague, ichthyologist Rudolf Kner (1810-1869)

**Chondrostoma kubanicum** Berg 1914
-*icum*, belonging to: Kuban River drainage, Black Sea basin, where it is endemic

**Chondrostoma meandrense** Elvira 1987
-*ensis*, suffix denoting place: Büyük Menderes river basin, western Anatolia, where it is endemic

**Chondrostoma nasus** (Linnaeus 1758)
nose, referring to its prominent snout (“rostro prominente”)

**Chondrostoma orientale** Bianco & Bănărescu 1982
eastern, being the easternmost member of the genus

**Chondrostoma oxyrhynchum oxyrhynchum** Kessler 1877
*oxy*, sharp; *rhynchus*, snout, referring to slightly prominent snout

**Chondrostoma oxyrhynchum cyri** Kessler 1877
of the Kura River (*Cyrus* in Latin), Georgia, type locality

**Chondrostoma phoxinus** Heckel 1843
referring to shape and scales similar to those of *Cyprinus* (= *Phoxinus*) *phoxinus*
Chondrostoma prespense Karaman 1924
-ensis, suffix denoting place: Lakes Prespa basin (Greece, Macedonia and Albania)

Chondrostoma regium (Heckel 1843)
royal, translation of Zurri, Arabic vernacular for this species in Mosul

Chondrostoma scodrense Elvira 1987
-ensis, suffix denoting place: Scodra, Latin name of Lake Scutari, border of Montenegro and Albania, where it is endemic

Chondrostoma soetta Bonaparte 1840
presumably a latinization of savetta, Italian vernacular for this species

Chondrostoma toros Küçük, Turan, Güçlü, Mutlu & Çiftci 2017
Turkish for Taurus, referring to the Central Taurus Mountains of Turkey, where it occurs

Chondrostoma turnai Güçlü, Küçük, Turan, Çiftçi & Mutlu 2018
in honor of Ismail Ibrahim Turna (Suleyman Demirel University), for his “great contribution” to hydrobiology in Turkey

Chondrostoma vardarense Karaman 1928
-ensis, suffix denoting place: Vardar River, Macedonia, type locality (occurs throughout Aegean and Adriatic basins in Turkey, Bulgaria, Greece, Macedonia and Albania)

Chondrostoma variabile Yakovlev 1870
variable, referring to “inconsistency of species characteristics, which vary more or less highly” (translation), e.g., shape of pharyngeal bone, number of pharyngeal teeth, head and body shape, position of fins, coloration, and meristic counts

Delminichthys Freyhof, Lieckfeldt, Bogutskaya, Pitra & Ludwig 2006
Delminium, capital of pre-Roman Dalmatia, Croatia, where all species occur; ichthys, fish

Delminichthys adspersus (Heckel 1843)
besprinkled, “densely studded with black dots” (translation)

Delminichthys ghetaldii (Steindachner 1882)
in honor of Croatian mayor and horticulturalist Francesco Ghetaldi-Gondola (1833-1899), who apparently facilitated the collection of type from an underground cave in Herzegovina

Delminichthys jadovensis (Zupančič & Bogutskaya 2002)
-ensis, suffix denoting place: Jadova River at Ploca, Croatia, type locality

Delminichthys krbavensis (Zupančič & Bogutskaya 2002)
-ensis, suffix denoting place: Krbava, Croatia, type locality

Iberochondrostoma Robalo, Almada, Levy & Doadrio 2007
referring to Iberian Peninsula, where this genus, formerly recognized as Chondrostoma, is distributed

Iberochondrostoma almacai (Coelho, Mesquita & Collares-Pereira 2005)
in honor of Carlos Almaca (1934-2010), University of Lisbon, “for his long and outstanding contributions to the study of differentiation patterns and evolutionary processes of Euro-Mediterranean cyprinids"

Iberochondrostoma lemminigii (Steindachner 1866)
patronym not identified nor able to infer from available evidence (originally spelled leminigii by Steindachner, apparently in error)

Iberochondrostoma lusitanicum (Collares-Pereira 1980)
-icus, belonging to: Lusitania, ancient name of Portugal, where it is endemic

Iberochondrostoma olisponense (Gante, Santos & Alves 2007)
-ensis, suffix denoting place: Oliispo, archaic name for Lisbon, Portugal, general vicinity where it occurs

Iberochondrostoma oretanum (Doadrio & Carmona 2003)
-anum, adjectival suffix: referring to Oretania, area in south-central Spain formerly inhabited by the Oretano people, corresponding to its range

Ladigesocypris Karaman 1972
in honor of aquarist and ichthyologist Werner Ladiges (1910-1984), director, Zoologisches Staatsinstitut und Zoologischen Museum in Hamburg, who helped Karaman with the “linguistic structure” (translation) of his manuscript, and who described two of the three species of the genus; cypris, a small carp, a common suffix for cyprinid genera

Ladigesocypris ghigii (Gianferrari 1927)
in honor of zoologist Alessandro Ghigi (1875-1970), who collected type

Ladigesocypris irideus (Ladiges 1960)
rainbow-like, referring to coloration in life, with reddish-golden sides, iridescent purple on shoulder, and silver belly
Ladigesocypris mermere (Ladiges 1960)  
referring to Mermere (Lake Marmara), Turkey, type locality

**Leucalburnus Berg 1916**  
described as being intermediate between the genera *Leuciscus* and *Alburnus*

**Leucalburnus satunini** (Berg 1910)  
in honor of zoologist Konstantin Alekseevich Satunin (1853-1916), who collected type

**Leucaspis Heckel & Kner 1858**  
combining pharyngeal teeth morphology of *Leucas* and lower jaw placement (entering depression of upper jaw) of *Aspius*

**Leucaspis delineatus** (Heckel 1843)  
*de-* , opposite of or removed; *lineatus*, lined, referring to seeming absence of lateral line (just 8-12 pored scales)

**Leuciscus Cuvier 1816**  
tautonymous with *Cyprinus leuciscus*

**Leuciscus aspius aspius** (Linnaeus 1758)  
latinization of *asp*, derived from *esp* or *esping*, Swedish vernacular for this species, perhaps alluding to how its spectacular April spawning run coincides with the blooming of the asp tree, *Populus tremula* (Sven O. Kullander, pers. comm.)  
[sometimes placed in the genus *Aspius*, treated here as a synonym of *Leuciscus*]

**Leuciscus aspius taeniatus** (Eichwald 1831)  
banded, referring to several longitudinal black bands on sides

**Leuciscus baicalensis** (Dybowski 1874)  
*ensis*, suffix denoting place: Lake Baikal basin, Russia, where it is endemic

**Leuciscus bearnensis** (Blanchard 1866)  
*ensis*, suffix denoting place: Béarn, French province that is home to Lake Mariscot, near Biarritz, type locality

**Leuciscus bergi** Kashkarov 1925  
in honor of Lev (also Leo) Semyonovich Berg (1876-1950), an “eminent scientist in general, and ichthyologist in particular” (translation)

**Leuciscus burdigalensis** Valenciennes 1844  
*ensis*, suffix denoting place: Burdigala, ancient name of Bordeaux, France, area of Gironde estuary, type locality

**Leuciscus chuanchicus** (Kessler 1876)  
*chuanchi*, belonging to: Chuanche (or Chuan Che, “Yellow”) River, Yangtze River drainage, Qinhuai Province, China, type locality

**Leuciscus dzungaricus** Paepke & Koch 1998  
*dzungaricus*, belonging to: Dzungarian Gobi (Mongolia and China), where it occurs

**Leuciscus idus** (Linnaeus 1758)  
latinization of Swedish vernacular *id*, a reference to its bright color

**Leuciscus latus** (Keyserling 1861)  
wide or broad, possibly referring to “broad, flat face” (translation)

**Leuciscus lehmanni** Brandt 1852  
in honor of Russian biologist Alexander Lehmann, who led 1841-1842 expedition that collected type

**Leuciscus leuciscus** (Linnaeus 1758)  
*leukiskos*, Greek word for chub, possibly derived from *leukos*, white, referring to silvery sides

**Leuciscus lindbergi** Zanin & Eremejev 1934  
in honor of ichthyologist Georgii Ustinovich Lindberg (1894-1976), Russian Academy of Sciences, who supervised the authors’ work

**Leuciscus merzbacheri** (Zugmayer 1912)  
in honor of German geographer, mountaineer and explorer Gottfried Merzbacher (1843-1926), who collected type

**Leuciscus oxyrrhis** (La Blanchère 1873)  
*oxy*, sharp; *rrhis*, nose, referring to long snout, “jutting out in a sharp point in front of mouth” (translation)

**Leuciscus schmidtii** (Herzenstein 1896)  
in honor of P. Schmidt (presumably Russian ichthyologist Petr Yulievich Schmidt [1872-1949]), who collected type
**Leuciscus vorax** (Heckel 1843)
voracious, translation of Arabian name kaschschasck, referring to how it “consumes everything it finds” (translation) [sometimes placed in the genus Astinus, treated here as a synonym of Leuciscus]

**Leuciscus waleckii** (Dybowski 1869)
patronym not identified but likely in honor of Dybowski’s Polish colleague, zoologist Antoni Walecki

**Leuciscus Heckel 1843**
leucos or leukos, white, allusion not explained, perhaps referring to silver-white body color of L. cisalpinus (=L. aula) and/or congeners in life, or perhaps an abridgement of Leuciscus or Leucosomus (=Notemigonus), both derived from leukkos, Greek word for chub

**Leucos albus** (Marić 2010)
white, referring to silver-white color in life

**Leucos aula** (Bonaparte 1841)
etymology not explained, possibly a latinization of avola, Italian or Venetian vernacular for a bleak (Alburnus sp.) but perhaps historically applied to this species as well

**Leucos basak** (Heckel 1843)
Croatian vernacular for this species

**Leucos panosi** (Bogutskaya & Iliadou 2006)
in honor of Greek ichthyologist Panos Economidis, who recognized this species as an undescribed taxon in 1991

**Leucos ylikiensis** (Economidis 1991)
-ensis, suffix denoting place: Lake Yliki, Greece, type locality

**Mirogrex Goren, Fishelson & Trewavas 1973**
mirus, wonderful; grex, flock or shoal, referring to a “miraculous draught” of fishes (one of two miracles attributed to Jesus), which may have been M. terraesanctae or Sarotherodon galilaeus (Cichlidae)

**Mirogrex hulensis** Goren, Fishelson & Trewavas 1973
-ensis, suffix denoting place: Lake Huleh, Israel (now extinct due to deliberate draining of lake in the 1950s)

**Mirogrex terraesanctae** (Steinitz 1952)
of the Holy Land (terra, land; sancta, holy), referring to distribution in Lake Tiberias (or Sea of Galilee), Israel, where it is endemic

**Notemigonus Rafinesque 1819**
notos, back; [h]emi-, half; gonia, angle, referring to obtusely angled, or carinated, back, from which it differs from the superficially similar herring genus Clupea

**Notemigonus crysoleucas crysoleucas** (Mitchell 1814)
chrysos, golden, referring to color of eyes and gill cover and “tinge of the same along the belly”; leukos, white, referring to "shining white scales"

**Notemigonus crysoleucas auratus** Rafinesque 1819
gilded, referring to silver and golden sheen

**Pachychilon Steindachner 1882**
pachys, thick; cheilos, lip, referring to thick lips, the lower extending across the symphysis as a distinctly continuous fold

**Pachychilon macedonicum** (Steindachner 1892)
Macedonian, referring to distribution in Macedonia (and Greece)

**Pachychilon pictum** (Heckel & Kner 1858)
painted, probably referring to numerous dark brown marks of various shapes and sizes on body

**Parachondrostoma Robalo, Almada, Levy & Doadrio 2007**
para-, near, referring similarity to Chondrostoma

**Parachondrostoma arrigonis** (Steindachner 1866)
-ri, genitive singular of: Steindachner’s “dear friend” Prof. Arrigo of Valencia (forename not given), who died of cholera in 1865 in the “prime of his years and work” (translation)

**Parachondrostoma miegii** (Steindachner 1866)
patronym not identified, possibly in honor of Swiss-Spanish naturalist Juan Mieg (1779-1839)

**Parachondrostoma toxostoma** (Vallot 1837)
toxo-, bow; stoma, mouth, referring to curved, or crescent-shaped, mouth

**Parachondrostoma turieno** (Elvira 1987)
-ensis, suffix denoting place: Turia River, Chulilla, Valencia, Spain, type locality
Pelagrus Kottelat & Freyhof 2007

based on the Pelasgians, groups of people who inhabited lands around Aegean Sea before arrival of Indo-European and proto-Greek-speaking invaders during the 2nd millennium BC, referring to distribution in Balkan Peninsula

*Pelagrus epiroticus* (Steindachner 1895)
-icus, belonging to: Epirus, historical and geographical region straddling Greece and Albania (described from Albania but presently known only from Lake Pamvotis, Epirus, Greece)

*Pelagrus laconicus* (Kottelat & Barbieri 2004)
-icus, belonging to: Lakonias District, Greece, type locality

*Pelagrus marathonicus* (Vinciguerra 1921)
-icus, belonging to: Marathon, Greece, type locality

*Pelagrus minutus* (Karaman 1924)
small, referring to smaller scales compared to other members of *Pseudophoxinus* (genus in which it was described) and/or small size (up to 53 mm SL), the latter of which may have caused Steindachner to overlook its distinctiveness in an earlier collection

*Pelagrus prespensis* (Karaman 1924)
en-sis, suffix denoting place: Lake Prespa and tributaries, Macedonia, type locality (also occurs in Albania and Greece)

*Pelagrus stymphalicus* (Valenciennes 1844)
-icus, belonging to: Lake Zaraco, Greece, type locality, where a mythological man-eating bird, *stymphalis*, was slain by Hercules

*Pelagrus thesproticus* (Stephanidis 1939)
-icus, belonging to: Thesprotia District, Greece, type locality (also occurs in Albania)

*Pelecus* Agassiz 1835
etymology not explained, probably from *pelekys*, axe, referring to knife-like shape

*Pelecus cultratus* (Linnaeus 1758)
knife-shaped, referring to knife- or razor-like shape

*Petroleuciscus* Bogutskaya 2002
latinization of Petr, forename of “famous freshwater ichthyologist” Petru Bănărescu (1921-2009) and of Bogutskaya’s son, Petr Naseka; *Leuciscus*, being leuciscine cyprinids previously placed in that genus

*Petroleuciscus borysthenicus* (Kessler 1859)
-icus, belonging to: Borysthenes, name from classical antiquity usually referring to the Dnieper River, type locality

*Petroleuciscus ninae* Turan, Kalayci, Kaya, Bektaş & Küçük 2018
in honor of ichthyologist Nina G. Bogutskaya (b. 1958), Russian Academy of Sciences, for her contribution to the knowledge of the fishes of Europe and Asia

*Petroleuciscus squaliusculus* (Kessler 1872)
diminutive of *Squalius* (genus in which it was described) or *squalus*, probably referring to small size (95-130 mm) compared to *S. squalus* (up to 600 mm)

*Petroleuciscus ulanus* (Günther 1899)
-anus, belonging to: Ula (town) on the Zola Chai (river), northwestern Iran, type locality

*Phoxinellus* Heckel 1843
diminutive of *Phoxinus*, referring to similarity of size and shape of *P. alepidotus* to the common *Cyprinus (= Phoxinus) poecinus* of Europe

*Phoxinellus alepidotus* Heckel 1843
a-, not; *lepidotus*, scaly, referring to scaleless body except for lateral line

*Phoxinellus dalmaticus* Zupančić & Bogutskaya 2000
-icus, belonging to: Dalmatia, region in southern Croatia where it is endemic

*Phoxinellus pseudalepidotus* Bogutskaya & Zupančić 2003
pseuo-, false, i.e., although similar to *P. alepidotus* in body shape and scalelessness (except for lateral line), such an appearance is false

*Protochondrostoma* Robalo, Almada, Levy & Doadrio 2007
proto, first, referring to basal position of this genus among group of genera that formerly comprised *Chondrostoma*

*Protochondrostoma genei* (Bonaparte 1839)
in honor of Giuseppe Géné (1800-1847), zoology professor and director of the Royal Zoological Museum at Turin
**Pseudochondrostoma** Robalo, Almada, Levy & Doadrio 2007

pseudo-, false, i.e., although this genus is similar to *Chondrostoma* (as a “consequence of homoplasy in multiple traits”), such an appearance is false

**Pseudochondrostoma duriense** (Coelho 1985)

-ensis, suffix denoting place: Douro River basin, Portugal, type locality (also occurs in Tambre River basin)

**Pseudochondrostoma polyplepis** (Steindachner 1864)

poly, many; lepis, scale, presumably referring to 69-74 scales along lateral line, more than *Chondrostoma nasus*, with which, Steindachner later noted, this species had been confused

**Pseudochondrostoma willkommii** (Steindachner 1866)

patronym not identified but probably in honor of German botanist Heinrich Moritz Willkomm (1821-1895), who studied the flora of Spain and Portugal, where it occurs

**Pseudophoxinus** Bleeker 1860

pseudo-, false, presumably referring to similarity of *P. zeregi* to the common *Cyprinus (=Phoxinus) phoxinus* of Europe

**Pseudophoxinus alli** Küçük 2007

in honor of Ali, Küçük’s father

**Pseudophoxinus anatolicus** (Hankó 1925)

Anatolian, geographic and historical term denoting westernmost protrusion of Asia, comprising most of the Republic of Turkey, where it is endemic

**Pseudophoxinus antalyae** Bogutskaya 1992

of Antalya, Turkey, town near type locality in Stream Kirkgöz

**Pseudophoxinus atropatensis** (Derjavin 1937)

referring to Atropatena, ancient Greek name for a region of southern Azerbaijan, where it occurs

**Pseudophoxinus battalgilae** Bogutskaya 1997

in honor of Fahire Battalgil (later Battalgazi, 1902-1948), “who contributed considerably to the knowledge of Turkish freshwater fishes”

**Pseudophoxinus burduricus** Küçük, Gülle, Güçlü, Çiftçi & Erdoğan 2013

-icus, belonging to: Burdur Province, Turkey, type locality

**Pseudophoxinus callensis** (Guichenot 1850)

-ensis, suffix denoting place: La Calle, Algeria, type locality

**Pseudophoxinus caralis** (Battalgil 1942)

etymology not explained, perhaps latinization of karali, Turkish for “painted with black,” referring to dark streaks along sides

**Pseudophoxinus chaignoni** (Vaillant 1904)

in honor of the viscount H. de Chaignon, vice president, Société d’Histoire naturelle d’Autun, who collected type

**Pseudophoxinus crassus** (Ladiges 1960)

thick or fat, presumably referring to much stouter body compared to *P. meandricus*

**Pseudophoxinus drusensis** (Pellegrin 1933)

-ensis, suffix denoting place: Jabal al-Druze, an autonomous state in the French Mandate of Syria from 1921 to 1936, where Al-Mazra’a, type locality, is situated (also occurs in Israel)

**Pseudophoxinus egridiri** (Karaman 1972)

of Lake Egirdir basin, Turkey, type locality

**Pseudophoxinus elizavetae** Bogutskaya, Küçük & Atalay 2006

in honor of Elizaveta Bogutskaya (relationship to senior author not explained)

**Pseudophoxinus evliyae** Freyhof & Özuluğ 2010

in honor of Evliya Çelebi (1611-1683), the “most famous Ottoman traveler,” whose travel notes were published in the 10-volume *Seyahatname* (*Book of Travels*)

**Pseudophoxinus fahrettini** Freyhof & Özuluğ 2010

in honor of Turkish zoologist Fahrettin Küçük, Süleyman Demirel University, for his contribution to the knowledge of Central Anatolian fishes

**Pseudophoxinus firati** Bogutskaya, Küçük & Atalay 2006

of Firat Nehri (Turkish name for Euphrates River), referring to distribution in Euphrates River drainage

**Pseudophoxinus handlirshi** (Pietschmann 1933)

in honor of Pietschmann’s Vienna colleague, entomologist Anton Handlirsch (1865-1935)
*Pseudophoxinus hasani* Krupp 1992
of Nab' Hasan, source of Nahr Marqiya, where it is endemic

*Pseudophoxinus hittitorum* Freyhof & Özuluğ 2010
-orum, commemorative suffix, plural: named for the Hittites, an ancient Anatolian culture (~1750-1180 BC), referring to a 13th-century Hittite monument built at Eflatun Pınar, Turkey, type locality

*Pseudophoxinus iconii* Küçük, Gulle & Güçlü 2016
of Iconium, ancient name of Konya Province, Central Anatolia, Turkey, where this species occurs

*Pseudophoxinus libani* (Lortet 1883)
of Liban (Lebanon), where it is endemic

*Pseudophoxinus maeandi* (Ladiges 1960)
of Menderes River headwaters, near Isikli, Turkey, type locality

*Pseudophoxinus maeandricus* (Ladiges 1960)
-icus, belonging to: Menderes River, near Isikli, Turkey, type locality

*Pseudophoxinus mehmeti* Ekmekçi, Atalay, Yögurtçuoğlu, Turan & Küçük 2015
in honor of hydrological engineer Mehmet Ekmekçi, for contributions to studies in hydrological description and characterization and interpretations of drainage networks and watersheds, plus his full support as the husband of the first author

*Pseudophoxinus ninae* Freyhof & Özuluğ 2010
in honor of ichthyologist Nina G. Bogutskaya (b. 1958), Russian Academy of Sciences, author of “important” papers on Anatolian *Pseudophoxinus* and other leuciscins

*Pseudophoxinus punicus* (Pellegrin 1920)
Latin for Phoenician, referring to Carthage in North Africa, region in modern-day Tunisia where it is endemic

*Pseudophoxinus sojuchbulagi* (Abdurakhmanov 1950)
of Sojuch-Bulag, a tributary of the Kura River, Azerbaijan, type locality

*Pseudophoxinus syriacus* (Lortet 1883)
Syrian, referring to country where it is endemic

*Pseudophoxinus turani* Küçük & Güçlü 2014
in honor of Turkish ichthyologist Davut Turan, for his contributions to our knowledge of the fishes of Anatolia

*Pseudophoxinus zekayi* Bogutskaya, Küçük & Atalay 2006
in honor of Zekay Atalay (relationship to third author not explained)

*Pseudophoxinus zeregi* (Heckel 1843)
Syrian vernacular for this species

*Rutilus* Rafinesque 1820
tautonymous with *Cyprinus rutilus*

Subgenus *Rutilus*

*Rutilus caspicus* (Yakovlev 1870)
Caspian, referring to distribution in Caspian Sea basin

*Rutilus heckelii* (Nordmann 1840)
in honor of Nordmann’s friend, Johann Jakob Heckel (1790-1857), curator of fishes, Naturhistorisches Museum in Vienna, for advice and assistance

*Rutilus ohridanus* (Karaman 1924)
-anus, belonging to: Lake Ohrid, Macedonia, type locality (also occurs in Albania and Montenegro)

*Rutilus pigus* (Lacepède 1803)
latinization of *pigo*, Italian name for this species, dating back to at least Rondelet in the 1550s

*Rutilus prespensis* (Karaman 1924)
-e less, suffix denoting place: Lakes Prespa (Albania, Greece, Macedonia), type locality (also occurs in Lake Skadar, Montenegro and Albania)

*Rutilus rutilus rutilus* (Linnaeus 1758)
ruddy, referring to general color of fins

*Rutilus rutilus mariza* Drensky 1926
referring to Mariza River, Bulgaria, type locality

*Rutilus rutilus schelkovnikovi* Derjavin 1926
in honor of A. B. Shelkovnikov (spelling as given in English abstract), director of the Armenian Museum, who
helped Derjavin collect type

*Rutilus stoumboudae* Bianco & Ketmaier 2014
in honor of ichthyologist, colleague and friend, Maria Stoumboudi, for her research on the ecology and conservation of the freshwater fishes of Greece

*Rutilus virgo* (Heckel 1852)
maiden, probably referring to German vernacular, *Fraufisch* (womanfish)

Subgenus *Pararutilus* Berg 1912
*para-*, near, referring to similarity to *Rutilus*, differing in how posterior portion of swim bladder is elongated and conical (as opposed to rounded)

*Rutilus frisii* (Nordmann 1840)
in honor of Scandinavian biologist B. F. Fries, whose multi-volume work on Scandinavian fishes (authored with C. U. Ekström) is cited in Nordmann's description of this species

*Rutilus kutum* (Kamensky 1901)
Russian vernacular for this species

*Rutilus meidingeri* (Heckel 1851)
in honor of Baron Carl von Meidinger, who illustrated this species under the name *Cyprinus grislagine* (=*Leuciscus leuciscus*) circa 1794

*Sarmarutilus* Bianco & Ketmaier 2014
*sarma*, referring to Sarma Sea, an ancient European freshwater sea, where *S. rubilio* probably had its evolutionary roots; *Rutilus*, referring to previous placement in that genus

*Sarmarutilus rubilio* (Bonaparte 1837)
prehominate of *rubella*, referring to similarity of head shape and head proportion to *Leuciscus rubella* (now considered conspecific)

*Scardinius* Bonaparte 1837
probably latinization of *scardafa*, Roman and Italian vernacular for rudd

*Scardinius acarnanicus* Economidis 1991
-*icus*, belonging to: Acarnania, region of west-central Greece that encompasses Acheloos River basin, type locality

*Scardinius dergle* Heckel & Kner 1858
cumacular for this species in Dalmatia (southern Croatia)

*Scardinius elmaliensis* Bogutskaya 1997
-*ensis*, suffix denoting place: Elmali, in Vilayet Antalya, southern Turkey, type locality

*Scardinius erythrophthalmus* (Linnaeus 1758)
*erythros*, red; *ophthalmus*, eye, referring to red fleck on iris

*Scardinius graecus* Stephanidis 1937
Greek, referring to its country of origin

*Scardinius hesperidicus* Bonaparte 1845
-*icus*, belonging to: the Hesperides, nymphs in Greek mythology who tend a blissful garden in a far western corner of the world, perhaps referring to type locality in the lakes of Piedmont in the far western corner of Italy (also occurs in Slovenia and Switzerland)

*Scardinius knezevici* Bianco & Kottelat 2005
in honor of the late Borivoj Knezevic (1948-1988), who dedicated his life to the study and conservation of the freshwater fishes of Montenegro

*Scardinius plotizza* Heckel & Kner 1858
local vernacular for this species, and perhaps for all species of “Weißfische” (whitefish) in Croatia and/or Bosnia-Hercegovina

*Scardinius racovitzai* Müller 1958
in memory of Romanian biospeologist E. G. Racovitza on the tenth anniversary of his death

*Scardinius scardafa* (Bonaparte 1837)
Roman and Italian vernacular for rudd

*Squalius* Bonaparte 1837
-*ius*, having the nature of *squalus*, referring to type species, *Leuciscus squalus*

*Squalius adanaensis* Turan, Kottelat & Doğan 2013
-*ensis*, suffix denoting place: city and eponymous province of Adana, Turkey, type locality
**Squalius agdamicus** Kamensky 1901
-ics, pertaining to: near Agdam, Kuyra River basin, Azerbaijan, type locality

**Squalius albus** (Bonaparte 1838)
white, referring to silvery-white or ashen lateral surface

**Squalius anatolicus** (Bogutskaya 1997)
Anatolian, deriving from old name of Asia Minor: Anatolia

**Squalius aphipsi** (Aleksandrov 1927)
of Aphips River above Krepostnaya, Kuban Basin, Russia, type locality

**Squalius aradensis** (Coelho, Bogutskaya, Rodrigues & Collares-Pereira 1998)
-ensis, suffix denoting place: Arade River, Silves, Arade basin, Portugal, type locality

**Squalius aristotelis** Özuluğ & Freyhof 2011
named for Aristotle (384–322 BC), Greek philosopher who lived from 348-245 BC in Assos, Turkey, type locality

**Squalius berak** Heckel 1843
Syrian vernacular for this species

**Squalius cappadocicus** Özuluğ & Freyhof 2011
-icus, belonging to: Cappadocia, region in Central Anatolia where it occurs

**Squalius carinus** Özuluğ & Freyhof 2011
nut-brown, referring to dark brown color in life

**Squalius carolitertii** (Doadrio 1988)
latinization of Carlos III, in honor of the Spanish King who founded in 1777 the Museo Nacional de Ciencias Naturales, Madrid (where Doadrio and type are located)

**Squalius castellanus** Doadrio, Perea & Alonso 2007
-anus, belonging to: Castille, Spanish region where it occurs

**Squalius cephaloides** Battagil 1942
-oides, having of: referring to similarity to *S. cephalus*

**Squalius cephalus** (Linnaeus 1758)
head, referring to its large, broad head, a name that dates back to *capito* of Ausonius (ca. 310-ca. 395)

**Squalius cii** (Richardson 1857)
of Cius, ancient name of Gemelik River, northwestern Turkey, type locality (also occurs in Greece)

**Squalius fellowesii** (Günther 1868)
in honor of archaeologist Charles Fellowes (1799-1860), who presented type to the British Museum (Natural History)

**Squalius illyricus** Heckel & Kner 1858
-icus, belonging to: Illyria, ancient name for western part of Balkan Peninsula, referring to type locality in Dalmatia, Croatia

**Squalius janae** Bogutskaya & Zupančič 2010
in honor of Jana Zupančič, whose “enormous patience and assistance” made the authors’ study possible

**Squalius keadicus** (Stephanidis 1971)
-icus, belonging to: Keadas (or Kaidas), a chasm or precipice tributary to the Evrotas River (type locality), where ancient Spartans threw disabled and deformed babies to die

**Squalius kosswigi** (Karaman 1972)
in honor of Turkish zoologist and geneticist Curt Kosswig (1903-1982), who collected type

**Squalius kottelati** Turan, Yilmaz & Kaya 2009
in honor of Swiss ichthyologist Maurice Kottelat (b. 1957), for his contributions to knowledge of the fishes of Europe and Asia

**Squalius laietanus** Doadrio, Kottelat & de Sostoa 2007
-anus, belonging to: the Laietani, a Bronze-Age tribe inhabiting an area partly corresponding to present-day Catalonia, Spain, where it occurs (also occurs in France)

**Squalius lepidus** Heckel 1843
elegant, allusion not explained, perhaps referring to its reddish fins

**Squalius lucumonis** (Bianco 1983)
latinization of *Lucumone*, a person of authority to the ancient Etruscans, the type locality being the former Etruscan region of Italy

**Squalius malacitanus** Doadrio & Carmona 2006
-anus, belonging to: province of Málaga (Malaca in Latin), Spain, where it occurs
**Squalius microlepis** Heckel 1843  
*micro*-, small; *lepis*, scale, referring to small scales, 74 along lateral line

**Squalius moreoticus** (Stephanidis 1971)  
-*icus*, belonging to: Morea, ancient name of Peloponnese peninsula in southern Greece, general area of type locality, Stymphalis Lake, Peloponnesus

**Squalius namak** Khaefi, Esmaeili, Savyadzadeh, Geiger & Freyhof 2016  
named for the Namak Lake basin, one of two basins in Iran where it occurs (the other is the Kavir basin)

**Squalius orientalis** (Nordmann 1840)  
eastern, referring to type locality east of Europe (Abkhazia)

**Squalius orpheus** Kottelat & Economidis 2006  
Orpheus, legendary Thracian musician and poet, son of Thracian river-god Oagogros and the Muse Calliopte (also spelled Calliope), referring to occurrence in Thrace, Greece

**Squalius pamvoticus** (Doadrio 1980)  
in honor of Fernando Palacios Arribas, Museo Nacional de Ciencias Naturales (Madrid, Spain), for his “tireless” (translation) research of Spanish vertebrates [sometimes placed in *Iberocypris*, treated here as a synonym of *Squalius*]

**Squalius peloponensis** (Valenciennes 1844)  
-*ensis*, suffix denoting place: Peloponnes, Greece, where it is endemic

**Squalius platycps** Zupančič, Marić, Naseka & Bogutskaya 2010  
*platys*, broad or wide; *ceps*, head, referring to wide head (52-59% of head length)

**Squalius prespensis** (Fowler 1977)  
-*ensis*, suffix denoting place: Lake Prespa basin (Greece, Macedonia, Albania), where it is endemic

**Squalius pursakensis** (Hankó 1925)  
-*ensis*, suffix denoting place: probably from Pursaklar, Ankara Province, Central Anatolia region of Turkey, where it appears to be endemic

**Squalius pyrenaicus** (Günther 1868)  
-*icus*, belonging to: the Pyrenees, mountain range separating Iberian Peninsula from rest of continental Europe, presumably referring to distribution in Portugal (also occurs in Spain)

**Squalius recurvirostris** Özuluğ & Freyhof 2011  
*recurvus*, curved upwards; *rostris*, snout, referring to upturned snout in large individuals

**Squalius ruffoi** (Bianco & Recchia 1983)  
in honor of naturalist Sandro Ruffo (1915-2010), former Director of Museo Civico di Storia Naturale di Verona

**Squalius semae** Turan, Kottelat & Bayçelebia 2017  
in honor of Sema Turan, “beloved” wife of first author

**Squalius seyanensis** Turan, Kottelat & Doğan 2013  
-*ensis*, suffix denoting place: Seyhan River drainage, Turkey, where it is endemic

**Squalius spurius** Heckel 1843  
false, probably referring to close similarity to *S. cephalopsis* (= *Leuciscus cephalus*)
Squalius squalus (Bonaparte 1837)
ancient name for this species, dating back to at least the Roman scholar Varro (116 BC -27 BC), possibly derived from *squalor*, used by Pliny to denote a fish “delighting in muddy and impure places” (name also means shark)

Squalius svallize Heckel & Kner 1858
Croatian vernacular for this species

Squalius tenellus Heckel 1843
delicate, allusion not explained, perhaps referring to small scales, 80 along lateral line

Squalius torgalensis (Coelho, Bogutskaya, Rodrigues & Collares-Pereira 1998)
-*ensis*, suffix denoting place: Torgal River, Mira basin, Portugal, type locality

Squalius turcicus De Filippi 1865
Turkish, referring to country to where it is endemic

Squalius valentinus Doadrio & Carmona 2006
-*inus*, adjectival suffix: Roman name of Valencia, Spanish region where it occurs

Squalius zrmanjae Karaman 1928
-*ensis*, suffix denoting place: Zrmanja River, Croatia, type locality

Telestes Bonaparte 1837
etymology not explained; Jordan (1877) reports that the word means “perfect” but we see nothing in Bonaparte’s text to match that definition (Telestes is also a murdered king of ancient Corinth [748 B.C.]) and a poet of 5th-century Greece

Telestes alfiensis (Stephanidis 1971)
-*ensis*, suffix denoting place: Alfios River drainage, Peloponnesus, type locality (also occurs in Pnios and Vergas drainages)

Telestes beoticus (Stephanidis 1939)
-*icus*, belonging to: Boeotia, Greece, where Lake Yliki (type locality) is situated

Telestes comes (Costa 1838)
companion, referring to how it almost always occurs with (or accompanies) Cyprinus dobula (=Leuciscus leuciscus)

Telestes croaticus (Steindacher 1866)
Croatian, referring to country where it is endemic

Telestes dabar Bogutskaya, Zupančič, Bogut & Naseka 2012
referring to Dabarsko, or Dabar Polje, Bosnia-Herzegovina, type locality

Telestes fontinalis (Karaman 1972)
living in or near springs, referring to spring habitat (also occurs in clearwater streams and enters subterranean waters during winter and droughts)

Telestes karsticus Marčić & Mrakovčić 2011
karstic, referring to karst region in Croatia, where it is endemic

Telestes metohiensis (Steindachner 1901)
-*ensis*, suffix denoting place: Metohia, Dalmatia, Yugoslavia (now Croatia and Bosnia-Herzegovina), type locality

Telestes miloradi Bogutskaya, Zupančič, Bogut & Naseka 2012
in honor of Croatian zoologist Milorad Mrakovčić, University of Zagreb, for his many contributions to the study of freshwater fishes in the Adriatic basin

Telestes montenigrinus (Vukovic 1963)
-*inus*, pertaining to: Montenegro, where Drina River, Moraca, type locality, is situated (also occurs in Albania)

Telestes muticellus (Bonaparte 1837)
etymology not explained, probably latinization of *muticello*, Tuscan vernacular for this species in Italy

Telestes pleurobipunctatus (Stephanidis 1939)
pleuro-, side; bi-, two; punctatus, spotted, referring to a “double melanic or melanophore dotted line” (translation) along the sides

Telestes polyplepis Steindachner 1866
poly, many; lepis, scale, referring to “small, extremely delicate scales” (translation), 68-71 along lateral line

Telestes savigny Bonaparte 1840
based on a manuscript or museum name (spelled *savignii*) coined by Valenciennes, in honor of French zoologist Marie Jules César Savigny (1777-1851), who collected type (spelled *savignyi* on accompanying plate)
**Telestes souffia** (Risso 1827) 
derived from *soufie* and *soufia*, vernaculars for this species in France

**Telestes turskyi** (Heckel 1843) 
in honor of Gen. Ritter von Tursky, governor of Dalmatia, whose support allowed Heckel to study the little-known fishes of present-day Croatia

**Telestes ukliva** (Heckel 1843) 
presumably Croatian vernacular for this species

**Tropidophoxinellus** Stephanidis 1974
“very close” to *Phoxinellus* but *tropidos*, keeled, referring to scaleless keel between ventral fins and vent

**Tropidophoxinellus albumoides** (Steindachner 1866) 
-oides, having the form of *Alburnus*, referring to similarity of elongate body shape, narrow upward-facing mouth, and strongly notched teeth

**Tropidophoxinellus hellenicus** (Stephanidis 1971) 
Hellenic (i.e., Greek), referring to the only country where it occurs

**Tropidophoxinellus spartiaticus** (Schmidt-Ries 1943) 
Spartan, referring to Sparta, prominent city-state in ancient Greece, situated on banks of the River Eurotas (also spelled Evrotas), referring to distribution in present-day Peloponnese

**Vimba** Fitzinger 1873

tautonymous with *Cyprinus vimba*

**Vimba elongata** (Valenciennes 1844) 
presumably referring to elongate body

**Vimba melanops** (Heckel 1837) 
*melanos*, black; *ops*, appearance, presumably referring to overall dark coloration

**Vimba mirabilis** (Ladies 1960) 
striking or remarkable, referring to distribution in western Anatolia, far from normal distribution of *Acanthobrama* (e.g., eastern Anatolia, Syria, Palestine), genus in which it had initially been placed

**Vimba vimba vimba** (Linnaeus 1758)
likely derived from its Swedish vernacular, *vimma*

**Vimba vimba persa** (Pallas 1814)
Persia, referring to distribution in Iran (southern Caspian Sea drainage)

**Vimba vimba tenellus** (Nordmann 1840) 
delicate, referring to small size (“barely reaching five inches,” the smallest *Abramis* [original genus] Nordmann knew of), and/or its small, thin scales

**Subfamily Phoxininae** Eurasian Minnows

1 genus, 27 species/subspecies

**Phoxinus** Rafinesque 1820

*phoxinus*, Greek for minnow, perhaps derived from *phoxos*, pointed or tapered (proposed for European species but no species mentioned; type [*Cyprinus phoxinus*] by absolute tautonymy

**Phoxinus apollonicus** Bianco & De Bonis 2015

-icus, belonging to: Apollonia, ancient name of Albania (i.e., ichthyographic district), where this species is endemic

**Phoxinus bigerri** Kottelat 2007

name of Gaul tribe that inhabited area more or less corresponding with Adour drainage (France), type locality (also occurs in Spain)

**Phoxinus brachyurus** Berg 1912

*brachyurus*, short; *oura*, tail, presumably referring to short, compressed caudal peduncle

**Phoxinus brachyurus tchuenensis** Pivnev 1985

-tchuenensis, suffix denoting place: Chu River, Kyrgyzstan, where it appears to be endemic

**Phoxinus colchicus** Berg 1910

-*colchicus*, belonging to: Colchis, ancient name for eastern coast of Black Sea in Georgia, type locality (also occurs in Russia)

**Phoxinus grumi** Berg 1907

in honor of lepidopterist Grigory Grumm-Grzhimaylo (1860-1936), who led Chinese expedition that collected type

**Phoxinus issykulensis** issykulensis Berg 1912

-ensis, suffix denoting place: Lake Issyk-Kul, Kyrgyzstan, type locality
**Phoxinus issykkulensis relictus** Turdakov & Piskarev 1954  
a relict form of *P. issykkulensis* from Upper Chu River, Kyrgyzstan (possibly extinct)

**Phoxinus karsticus** Bianco & De Bonis 2015  
karstic, referring to the Karstic Popovo Polje-Trebinje endorheic river system of Bosnia-Herzegovina, where it appears to be endemic

**Phoxinus ketmaieri** Bianco & De Bonis 2015  
in honor of Valerio Ketmaier, a molecular biologist and friend with a long collaborative history with the senior author

**Phoxinus keumkang** (Chyung 1977)  
referring to Ku-umkangsan, a mountain on the west coast of North Korea, near a stream where it was collected (and described but not named) by Uchida in the 1930s

**Phoxinus kuldschiensis** Warpachowski 1887  
-ensis, suffix denoting place: probably referring to Kuldja River at Kazakhstan-China border, near type locality at Lake Balkhash

**Phoxinus likai** Bianco & De Bonis 2015  
of the Lika-Dinaric karstic region of Croatia, where it appears to be endemic

**Phoxinus lumaireul** (Schinz 1840)  
etymology unknown; name dates to an unpublished ms. by Bonnelle, recorded in 1835 by Agassiz without description

**Phoxinus oxycephalus oxycephalus** (Sauvage & Dabry de Thiersant 1874)  
oxy, sharp; cephalus, head, allusion not explained, perhaps referring to fleshy snout that protrudes beyond premaxilla

**Phoxinus oxycephalus jouyi** (Jordan & Snyder 1901)  
in honor of ornithologist Pierre Louis Jouy (d. 1894), who collected type

**Phoxinus oxyrhynchus** (Mori 1930)  
oxy, sharp; rhynchus, snout, referring to long, much-produced snout, with a “pointed fleshy cone” that projects beyond lower lip

**Phoxinus phoxinus phoxinus** (Linnaeus 1758)  
phoxinos, Greek for minnow, perhaps derived from phoxos, pointed or tapered

**Phoxinus phoxinus tumensis** Luo 1996  
-ensis, suffix denoting place: Tumen River, border between Jilin Province in Manchuria and North Hamgyong and Yanggang provinces in North Korea, type locality

**Phoxinus poljakowii** Kessler 1879  
in honor of Siberian explorer and conservator J. S. Poljakow (d. 1887), who collected type

**Phoxinus semotilus** (Jordan & Starks 1905)  
marked, referring to spot at dorsal fin base

**Phoxinus septimaniae** Kottelat 2007  
of Septimania, a region of the Roman province Galia Narbonensis more or less corresponding with present-day Languedoc-Roussillon (France), where it is distributed

**Phoxinus steindachneri** Sauvage 1883  
patronym not identified but almost certainly in honor of Austrian ichthyologist Franz Steindachner (1834-1919)

**Phoxinus strandsiae** Drensky 1926  
of Strandscha mountain range, Bulgaria, type locality (also occurs in Turkey)

**Phoxinus strymonicus** Kottelat 2007  
-icus, belonging to: Strymon, river in Macedonia, Greece, type locality

**Phoxinus tchangi** Chen 1988  
in honor of Tchunlin (or Tchung-Lin) Tchang (1897-1963), Beijing Normal University, for his achievements in ichthyology

**Phoxinus uimonensis** Kaschenko 1899  
-ensis, suffix denoting place: Uimon village, Siberia, Russia, near type locality in Katun River, Ob River basin