

A Partial Nomenclatural Review of *Hybopsis* (Pisces: Cyprinidae)

HARLEY W. RENO, Baylor University, Waco, Texas

Since 1854, the nomenclatural history of *Hybopsis* (Agassiz) has been confused. Past taxonomists apparently indiscriminately added or subtracted species from *Hybopsis* without much regard to possible interspecific and intergeneric relationships. This paper reviews the major taxonomic changes in *Hybopsis*, but is in no way considered a complete systematic review of the genus.

In 1854, Agassiz noticed among some Alabama cyprinids, a new type "... remarkable for its slender elongated form, its long head, its obtuse, prominent snout, its inferior mouth and the advanced position of the anal." To this new generic form he attached the name *Hybopsis gracilis*. Two years later, Girard (1856) described the minnow, *Nocomis nebrascensis*, from Nebraska. *Ceraticthys hyalinus*, described by Cope (1868) from Virginia, was placed in the new monotypic genus *Erinemus* by Jordan (1876a). Gill (1876) attached the name *Platygobio communis* to a new generic type from the Missouri River drainage.¹ Jordan (1878), after examining fish collections from North and South Dakota and Montana, described *Couesius milneri*, which he had earlier (1877) recognized as *Nocomis milneri*. In 1882, Jordan erected the monotypic genus *Erimystax* for *Luxilus dissimilis* Kirtland, 1841. Thus, prior to 1896, six closely related barbelled minnows, each akin to *Notropis Rafinesque* (1818) and *Semotilus Rafinesque* (1820), were described (Jordan and Evermann, 1896).

In 1896, Jordan and Evermann consolidated the genera *Hybopsis*, *Nocomis*, *Ceraticthys*, *Erinemus*, and *Erimystax* into the genus *Hybopsis*. After consolidation, they divided *Hybopsis* into four subgenera and noted "... a greater number of subordinate groups could be recognized." The genera *Hybopsis*, *Nocomis*, and *Erimystax* were thus given subgeneric status along with the newly created *Yuriria* Jordan and Evermann, erected specifically for *H. (Yuriria) altus* (Jordan, 1880) of Mexico. The genus *Erinemus* was not mentioned, perhaps being accidentally omitted, for they listed *Ceraticthys hyalinus* Cope, 1868, under the newly acknowledged *Hybopsis amblops* (Rafinesque, 1820).² This species, described as *Rutilus amblops* Rafinesque, is the type species for *Hybopsis*; consequently, *Erinemus hyalinus* (Cope) is a junior synonym. Other species placed in the subgenus *Hybopsis* by Jordan and Evermann (1896) were *H. labrosus* (Cope 1871b), *H. hypsinotus* (Cope, 1871b), *H. rubrifrons* (Jordan, 1876b), and *H. storerianus* (Kirtland, 1842).

¹Evidently, the original listing of *Platygobio communis* by Hayden (1868) is a synonym of *Hybopsis communis*, since the fishes from the Hayden expedition were identified but not diagnosed by Gill. The valid description of *Platygobio communis*, however, based on fish from the earlier Simpson expedition, was not published by Gill until 13 years later (1876).

²*Hybopsis amblops* (Rafinesque) (= *H. gracilis* Agassiz, 1854).

Jordan and Evermann (1896) listed *Hybopsis kentuckiensis* (Rafinesque) as the only species in the subgenus *Nocomis* (*N. nebrascensis* was preceded by the senior synonym *Luxilus kentuckiensis* Rafinesque, 1820). They noted that *Semotilus biguttatus* Kirtland, 1841; *Nocomis dellicus* Girard, 1856; *Ceratichthys leptocephalus* Girard, 1856; and *Ceratichthys micropogon* Cope, 1865, were synonymous with *Hybopsis kentuckiensis*.

The subgenus *Erimystax* acquired several species of questionable relationship. In particular, *Hybopsis tetranemus* Gilbert, 1887; *H. aestivalis* (Girard, 1856); *H. hyostomus* (Gilbert, 1885); *H. gelidus* (Girard, 1856); *H. meeki* Jordan and Evermann, 1896; *H. monacus* (Cope, 1868); *H. dissimilis* (Kirtland, 1841); and *H. watauga* Jordan and Evermann (In: Jordan, 1888). *Couesius* and *Platygobio* were also changed: *Couesius milner* (Jordan, 1878) became *Couesius plumbeus* by virtue of description of *Gobio plumbeus* by Agassiz, 1850; and *Platygobio communis* became *Platygobio gracilis* when it was recognized as a junior synonym of *Cyprinus gracilis* Richardson, 1836.

In their lepidological study of some cyprinids, Cockerell and Allison (1909) placed *Hybopsis gelidus* (Girard, 1856) in their new subgenus *Macrhybopsis*. *Macrhybopsis* remained a subgenus until Jordan (1920) listed it as a full genus with *Macrhybopsis gelidus* (Girard) the type species. Jordan (1918) formed the monotypic genus *Extrarius* for *Hybopsis tetranemus* Gilbert, 1887. Later Jordan (1924) reviewed the genus *Hybopsis*, recognizing *Extrarius*, *Macrhybopsis*, *Erimystax*, *Erinemus*, *Yuriria*, and *Nocomis* as full genera and also erecting the new monotypic genus *Erimonax* for *Ceratichthys monacus* Cope, 1868, previously listed as *Hybopsis monacus* (Cope, 1868) by Jordan and Evermann (1896). In the same review, Jordan said, "The name *Hybopsis*, in my judgement, should be restored to the *Alburnops* group [of *Notropis*], in which the name *gracilis* has priority over *blennius*, *stramineus*, *deliciosus*, *missuriensis* and other recognized synonyms." Hubbs (1926) concurred with Jordan's generic revision of *Hybopsis* and further noted that *Erimystax* contained two species, *E. dissimilis* and *E. watauga*. Hubbs also recognized *Erinemus hyalinus* and stated, "This is the species usually but apparently wrongly called *Hybopsis amblops*."

Jordan's decision to change the species composition of *Hybopsis* must have been partly influenced by others, because, in his analysis of *Hybopsis* (Jordan, 1929), he commented, "The analysis of the species of *Hybopsis*, *Hydrophlox*, and *Cyprinella* found within our limits is mainly furnished by Carl Leavitt Hubbs. These genera, with *Luxilus* and *Lythrurus*, Mr. Hubbs prefers to unite with *Notropis*, the oldest name applied to any of these small minnows." Those species formerly of *Hybopsis*, i.e., *H. amblops*, *H. labrosus*, *H. rubrifrons*, *H. hypsinotus*, and *H. storerianus*, were placed in the newly restored genus *Erinemus*. Unfortunately, the transposition resulted in some confusion, since Jordan (1929) listed *Erinemus* as containing only *E. hyalinus*, *E. labrosus*, *E. hypsinotus*, and *E. storerianus*. Why *E. hyalinus* was listed in favor of *Hybopsis amblops* was clarified by Hubbs and Ortenburger (1929b) and Hubbs (1930). They noted that a color sketch of *Hybopsis gracilis* made by Burkhardt for Agassiz made certain that *Ceratichthys hyalinus* Cope was conspecific with *H. amblops*. Hubbs (1930) concluded, chiefly on the basis of Burkhardt's sketch, that *H. gracilis* and *H. amblops* were the same species, and that *H. gracilis* and *H. amblops* were considered as *Erinemus hyalinus* by Jordan (1929).

The genus *Extrarius*, formerly monotypic, acquired two species from *Erimystax*, namely *Extrarius aestivalis* and *E. hyostomus*. The genus was further enlarged by Hubbs and Ortenburger (1929a) after inclusion of *Extrarius stericus* (Cope, 1876), *E. marconis* (Jordan and Gilbert, 1877) and the new species *E. australis* Hubbs and Ortenburger, 1929a.

The species *Erimystax meeki* in Jordan and Evermann (1896) failed to appear in Jordan (1929); only two species of *Erimystax*, *E. dissimilis* and *E. watauga*, were recognized therein.

Nocomis kentuckiensis was not listed in Jordan (1929), whereas both *Nocomis biguttatus* (Kirtland, 1841) and *N. micropogon* (Cope, 1865) were listed under *Nocomis*. This was doubtless based on Hubbs' (1926) nomenclatural revision of *N. kentuckiensis*, wherein *N. biguttatus*, *N. micropogon*, and the east coast relative, *N. leptcephalus*, were accorded full specific status. *Macrhybopsis*, *Platygobio*, and *Couestus* remained unchanged through 1929.

In Jordan, Evermann, and Clark (1930) the species of *Hybopsis* were still those of the *Alburnops* and *Chriope* groups, although *Hybopsis gracilis*, the type species of *Hybopsis*, was listed among them. Furthermore, *Erinemus hyalinus*, a junior synonym of *H. gracilis* Agassiz, was listed among the species of *Erinemus* recognized earlier by Jordan (1929). Perhaps the conclusions in Hubbs and Ortenburger (1929b) and Hubbs (1930), concerning the Burkhardt sketch of *Hybopsis gracilis*, were not available to Jordan, Evermann and Clark before their check-list went to press. If the conclusions had been available, the nomenclatural problem created by the two listings could have been averted.

According to Jordan, Evermann, and Clark (1930), the genus *Macrhybopsis* included *Macrhybopsis gelida*, *M. aestivalis*, *M. marconis*, *M. sterletus*, *M. montana* (Meek),² and *M. hyostoma*, most of which were taken out of *Estrarius*.⁴ After loss of most forms, *Estrarius* again became monotypic with *E. tetranemus* the only species listed. The species *Nocomis biguttatus* listed in Jordan (1929) was synonymized with *N. kentuckiensis*; however, *N. micropogon* was still considered a distinct species. *Couestus* acquired additional forms, namely: *C. squamulentus* (Cope, 1871a); *C. greeni* Jordan, 1894; *C. dissimilis* (Girard, 1856); and *C. adustus* Woolman, 1895, most of which were revived synonyms of *C. plumbeus*. Two additional species, *Platygobio physignathus* (Cope, 1876) and *P. pallidus* Forbers, 1883, were listed with *Platygobio gracilis*. The genera *Yuriria* and *Erimonax*, represented by *Y. alta* and *E. monacus*, respectively, remained monotypic as in Jordan (1924). The genus *Erimystax* remained as in Hubbs (1926) with *E. dissimilis* and *E. watauga* the only species.

A new genus *Oregonichthys* Hubbs, erected for *Hybopsis crameri* Snyder, 1907, appeared in Jordan, Evermann, and Clark (1930) accompanied by a reference to a paper by C. L. Hubbs which was never published. Schultz and Hubbs (1961), in clarifying this nomenclatural problem, noted that the genus had been mentioned earlier in Schultz (1929), and that a diagnosis appeared in Schultz (1931). *Oregonichthys crameri* was next listed without a diagnosis in Schultz and De Lacy (1935, fide Schultz and Hubbs, 1961), and, shortly thereafter, in Schultz (1936). The species *O. cumingii* (Günther, 1868), formerly *Ceraticthys cumingii*, listed in Jordan, Evermann, and Clark (1930) from the type only, was not listed in Moore (1957) or mentioned by Schultz and Hubbs (1961). No reason, other than dubious locality data, has been given for ignoring this name.

²In a footnote Hubbs and Ortenburger (1929a) noted that *Hybopsis montana* Meek was a synonym of the barbelless *Netropis dorsalis* piptolepis.

⁴Jordan, Evermann, and Clark (1930) changed the spelling of *Macrhybopsis gelida*, *M. montana*, and *M. hyostoma* from that in Jordan and Evermann (1896) so that the specific names were of the same gender as *Macrhybopsis*. For the same reason, similar spelling changes were made in other genera.

Except for minor shifts and groupings (e.g., *Notropis harperi* Fowler changed to *Erimystax harperi*¹), the species composition of *Hybopsis*, *Erimystax*, *Nocomis*, *Extrarius*, *Couesius*, *Platygobio*, *Oregonichthys*, and *Yuriria* remained rather stable for the next 20 years. Then, in 1951, Bailey placed these separate genera in the single genus *Hybopsis*, which he said, ". . . is properly to be treated as feminine." Although skeptical of the merger, Hubbs and Crowe (1956) reviewed the subgenus *Erimystax* and described the species *Hybopsis cahni*, *H. insignis*, and *H. x-punctata*. In the same paper, the spelling of *Hybopsis monacha* (formerly *Erimonax monachus*) was discussed. Thus, according to Moore (1957), the genus *Hybopsis* consists of the following species in the United States: *H. aestivalis*, *H. amblops*, *H. bellica*, *H. biguttata*, *H. cahni*, *H. crameri*, *H. disimilis*, *H. gelida*, *H. gracilis*, *H. harperi*, *H. hypsinota*, *H. insignis*, *H. leptocephala*, *H. meeki*, *H. micropogon*, *H. plumbea*, *H. rubrifrons*, *H. storeriana*, and *H. x-punctata*. The Mexican species *H. alta* was not treated by Moore (1957). More recently, Lachner and Jenkins (1967) elevated *Nocomis* to full generic status and described the new species *Nocomis effusus*.

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¹*Erimystax harperi*, originally described as *Notropis harperi* by Fowler (1941), was listed as *Erimystax harperi* by Bangham (1941). This listing was regarded as a nomen nudum by Hubbs and Crowe (1956). Marshall (1947) next used *Erimystax harperi*, but without nomenclatural justification.

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