

Case 3131

***Hybognathus stramineus* Cope, 1865 (currently *Notropis stramineus*; Osteichthyes, Cypriniformes): proposed conservation of the specific name**

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Abstract. The purpose of this application is to conserve the specific name of *Notropis stramineus* (Cope, 1865) for a freshwater fish known as the sand shiner (family CYPRINIDAE) from eastern and central North America. The name is widely used and almost universally accepted but is threatened by the little used *Cyprinella ludibunda* Girard, 1856 which in 1989 was rendered a senior subjective synonym. It is proposed that the name *ludibunda* be suppressed, together with the unused putative senior synonym *Alburnus lineolatus* Putnam, 1863.

Keywords. Nomenclature; taxonomy; Osteichthyes; Cypriniformes; CYPRINIDAE; freshwater fish; North America; sand shiner; *Notropis stramineus*; *Cyprinella ludibunda*.

1. Girard (1856; see BZN 51: 262–263, September 1994, for the date of publication) described 23 new genera and 133 new species of catostomid and cyprinid fishes, chiefly from the central and western United States, but including some from the eastern U.S. and northern Mexico. Girard's work is cited repeatedly and, although a majority of the new taxa are currently in synonymy, many are presently accepted as valid (nine genera, 37 species and several subspecies). No holotypes were designated, but syntypes were preserved and deposited in the United States National Museum (now the National Museum of Natural History, Smithsonian Institution) and the Academy of Natural Sciences of Philadelphia (ANSP). From these, specimens were distributed to several other museums, especially the Museum of Comparative Zoology, Cambridge, Massachusetts. The materials were collected by naturalists attached to the expeditions of the United States and Mexican Boundary Commission and the Pacific Railroad Survey. Collection data are often vague or obviously in error, and specimens are often poorly preserved. Subsequent study of syntypes indicates that many series are composite, including two or more species (see Suttkus, 1958; Bailey & Uyeno, 1964; C.R. Gilbert, 1978). Many descriptions are readily identifiable, but the quality of others is debatable, and some species were described under several names (about 12 for *Cyprinella lutrensis*).

2. Girard (1856, p. 35) described *Cyprinella ludibunda* as a new species. All the specimens found were said to be immature and the locality was 'not precisely known'. In 1989, R.L. Mayden and C.R. Gilbert discovered a long overlooked syntype (ANSP 2841, ex USNM 132) of *C. ludibunda* which they designated as the lectotype. The lectotype is, however, a specimen of *Notropis stramineus* (Cope, 1865), the sand

shiner (family CYPRINIDAE), a widely distributed, abundant and familiar fish from southern Canada, eastern and central United States, and northern Mexico. Mayden & C.R. Gilbert's (1989, p. 1085) lectotype designation rendered the specific name of *N. stramineus* a junior subjective synonym of *C. ludibunda* Girard, 1856, and they adopted the latter little-used name as valid.

3. For a period in the late 19th century, *Cyprinella ludibunda* was occasionally cited with brief, often confusing, statements drawn in part from Girard (1856). Jordan & C.H. Gilbert (1883, p. 171), using the name *Cliola ludibunda*, commented 'a dubious species, from Cottonwood Creek, Utah'. Jordan (1885, p. 124), using *Notropis ludibundus*, listed a specimen (S.I. 132) from Cottonwood Creek in the Museum of the Academy. Jordan & Evermann (1896, pp. 56, 273), using *N. ludibundus*, recorded the locality as unknown; the characterization is in part discordant with those of Girard (1856) and Jordan & C.H. Gilbert (1883). Without additional information, these accounts are not identifiable with the sand shiner.

4. Fowler (1910, p. 280, pl. 17, fig. 23) illustrated a 'cotype' of *Cyprinella ludibunda*, without locality, clearly the fish listed by Jordan (1885, p. 124) said to be S.I. [USNM] 132 in the Academy (ANSP 2841; see Böhlke, 1984, p. 82; C.R. Gilbert, 1998, p. 106). This is the lectotype of *C. ludibunda* designated by Mayden & C.R. Gilbert (1989). C.R. Gilbert (1978, pp. 48, 56–57) investigated the confusion about the type locality of *C. ludibunda* (and two other nominal species) and concluded that it should properly be 'Cottonwood River, ca 5 mi. NW of Durham, Marion Co., Kansas', a credible provenance for the sand shiner. C.R. Gilbert (1978) had regarded *C. ludibunda* as a senior synonym of both *Notropis stramineus* (Cope) and *Notropis volucellus* (Cope, 1865) since both species are included among the syntypes, but he considered it 'best to defer action on the problem at this time'.

5. Cope (1865, p. 283) described *Hybognathus stramineus* from Grosse Isle, Detroit River, Michigan on 'many specimens'. The species, which is currently regarded as having two subspecies (see Bailey & Allum, 1962; Tanyolac, 1973), had a troubled early nomenclatural history that included such names as *Alburnops blennius* Girard, 1856 (i.e. *Notropis blennius*, the river shiner) and *Moniana deliciosa* Girard, 1856. The history was reviewed by Hubbs (1926) who employed *Notropis deliciosus*, and Suttkus (1958) who resolved the earlier confusion by showing that the lectotype of *Moniana deliciosa* is a specimen of *Cyprinella texana* (Girard, 1856) (i.e. *Notropis texanus*), which name has since been generally adopted for the weed shiner (see C.R. Gilbert, 1978, p. 83). For the sand shiner, Suttkus (1958, p. 317) employed *Notropis stramineus* (Cope, 1865), which is defined by the lectotype specimen ANSP 4131 designated by Fowler (1910, p. 274, pl. 15, fig. 5), five paralectotypes ANSP 4132–4136 (see Böhlke, 1984, p. 92), and five paralectotypes UMMZ 213806 in the Museum of Zoology of the University of Michigan. Since 1958, the sand shiner has been termed *Notropis stramineus* (Cope) in scores of publications throughout its extensive geographic range (mapped by C.R. Gilbert in Lee et al., 1980, p. 314). These include four editions (1960 to 1991) of the American Fisheries Society's list of *Common and Scientific Names of Fishes from the United States and Canada*, widely followed by fishery workers. The fifth edition (Robins et al., 1991, pp. 23, 77) employed *Notropis stramineus* and noted: 'R.L. Mayden & C.R. Gilbert, 1989,

Copeia (4): 1084, showed that this name is a junior synonym of *Cyprinella ludibunda* Girard, 1856 (= *Notropis ludibundus*). However, this name has been unused since its proposal. A petition has been submitted to the International Commission on Zoological Nomenclature to conserve the familiar name *stramineus*. Until a decision is rendered, existing usage is retained under Article 80 of the Code'. However, the present case was not submitted until June 1999.

6. Additional treatises that employ *Notropis stramineus* for the sand shiner include:

General references: Eddy (1969); Eddy & Underhill (1974); Hocutt & Wiley (Eds., 1986); Moore (1968); Schmidt & Gold (1995).

Regional references: **Arkansas** — Robison & Buchanan (1988); **Canada** — Scott & Crossman (1973), McAllister (1990); **Great Lakes** — Hubbs & Lagler (1964, pp. vii, 77); **Illinois** — Smith (1979); **Indiana** — Nelson & Gerking (1968); **Kansas** — Metcalf (1966), Cross (1967); **Kentucky** — Clay (1975), Burr & Warren (1986); **Manitoba** — Fedoruk (1971); **Mexico** — Espinosa Pérez, Gaspar Dillanes & Fuentes Mata (1993); **Minnesota** — Phillips, Schmid & Underhill (1982); **Missouri** — Pflieger (1975); **Montana** — Brown (1971), Holton & Johnson (1996); **Nebraska** — Morris, Morris & Witt (1972); **New Mexico** — Sublette, Hatch & Sublette (1990); **New York** — Smith (1986); **Ohio** — Trautman (1981); **Ohio River** — Pearson & Krumholz (1984); **Oklahoma** — Miller & Robison (1973); **Ontario** — Mandrak & Crossman (1992); **Pennsylvania** — Cooper (1983); **Saskatchewan** — Atton & Merkowsky (1983); **South Dakota** — Bailey & Allum (1962); **Tennessee** — Etnier & Starnes (1993); **Utah** — Sigler & Sigler (1996); **Virginia** — Jenkins & Burkhead (1994); **Wisconsin** — Becker (1983); **Wyoming** — Baxter & Stone (1994). Although most of the publications above date from 1960 to 1988, ten appeared after Mayden & C.R. Gilbert's (1989) resurrection of *N. ludibundus*.

7. A few publications that appeared after 1989 have followed Mayden & C.R. Gilbert's recommended use of *Notropis ludibundus*. They include:

General references: Eschmeyer, Ferraris, Hoang & Long (1998); C.R. Gilbert (1998); Mayden, Burr, Page & Miller (1992); Page & Burr (1991); Rohde, Arndt, Lindquist & Parnell (1994); and Warren, Burr & Grady (1994).

Regional references: **Kansas** — Cross & Collins (1995); and **West Virginia** — Stauffer, Boltz & White (1995).

8. Putnam (1863, p. 9) established the new species *Alburnus lineolatus*, using a manuscript name assigned by Agassiz to specimens in the MCZ, Cambridge, Massachusetts in 1854. Putnam's brief description was: 'Body light brown with a broad silvery band having dark points, extending from the head to the caudal fin. Average length, two and a half inches. From the Osage River. Collected by Mr. G. Stolley'. Günther (1868, pp. 259–260) redescribed the species using the name *Leuciscus lineolatus*. *Alburnus lineolatus* was regarded as a questionable synonym of *Notropis scylla* (Cope, 1871) (= *N. stramineus*) by Jordan & Evermann (1896, p. 263). The cited description is certainly insufficient for definite identification. However, as C.R. Gilbert (1978, p. 55) indicated, C.L. Hubbs in 1958 identified a specimen in the Natural History Museum, London (BMNH 1867.4.12.15) received from the MCZ and likely to be a syntype of *A. lineolatus*, as *Notropis deliciosus* auct. (= *N. stramineus*). If the London specimen is a syntype of *Alburnus lineolatus* Putnam, its identification with *Notropis stramineus* is adequately confirmed by Günther's

redescription and Hubbs's determination. *Alburnus lineolatus* has not been employed as the name of the sand shiner during the 20th century.

9. The specific name of *Notropis stramineus* (Cope, 1865) is a familiar name in considerable use, retention of which will ensure nomenclatural stability for the species. Replacement by the senior synonym *Notropis ludibundus* (Girard, 1856) would considerably hinder communication among workers; some authors would adopt it while others would retain *stramineus*. I refer this application to the Commission in accord with Article 23b of the 1985 Code and Article 23.9.3 of the 4th Edition, which comes into effect on 1 January 2000.

10. Although there is no 'case law' in zoological nomenclature, it may be noted that the present case is completely analogous to the replacement of another name in use (*Notropis topeka* (C.H. Gilbert, 1884)) by an almost unused name (*Moniana tristis*) published by Girard (1856); that replacement was also by Mayden & C.R. Gilbert (1989) and again was dependant on their lectotype fixation for the unused name. In Opinion 1821 (September 1995) the Commission conserved the name *N. topeka*.

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
 - (a) *ludibunda* Girard, 1856, as published in the binomen *Cyprinella ludibunda*;
 - (b) *lineolatus* Putnam, 1863, as published in the binomen *Alburnus lineolatus*;
- (2) to place on the Official List of Specific Names in Zoology the name *stramineus* Cope, 1865, as published in the binomen *Hybognathus stramineus* and as defined by the lectotype designated by Fowler (1910);
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
 - (a) *ludibunda* Girard, 1856, as published in the binomen *Cyprinella ludibunda* and as suppressed in (1)(a) above;
 - (b) *lineolatus* Putnam, 1863, as published in the binomen *Alburnus lineolatus* and as suppressed in (1)(b) above.

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