

Scientific name*Ptychocheilus lucius***Common name**

Colorado Pikeminnow

Bison code 010465

Official status**Federal (USDI): endangered****State AZ: endangered****State NM: endangered**

Endemism**Colorado River Basin****Status/threats**

Extirpated in all free-flowing rivers in Arizona. Present in the San Juan River, extreme northwestern New Mexico. Damming of mainstream rivers and introduction of nonnative, predaceous species, especially catfish and bass are and continue to be the major threat to the species.

Distribution

Once widespread and abundant in the Colorado Basin. Records scarce after late 1940s, with the last collected specimens collected in Arizona in 1950 in the Salt River near mouth of Cibique Creek. Declined abruptly between 1930-35 during closure of Hoover Dam and the extreme drought in 1934. Exists in Arizona only as repatriated populations and naturally in the San Juan River, New Mexico.

Habitat

Waters deeper than a meter with moderate to strong currents. Young inhabit backwaters or various substrate types.

Life history and ecology

The "top carnivore" in the Colorado River Basin and one of the world's largest minnows, reaching lengths of 6 feet and 200 pounds. So abundant in the lower Colorado in the early 1900s that it was pitchforked from canals along with razorback sucker in the Phoenix area. The species becomes piscivorous at 30 mm total length and becomes progressively more so with age. Associated with other large river fishes (ie. razorback, bonytail, bluehead and flannelmouth sucker). Foods of young squawfish (30 mm or less) consist of crustaceans and aquatic diptera. With increasing size (50-100 mm) more aquatic and terrestrial insects are consumed. Over 100 mm fishes predominate the diet.

Breeding

Breeding behavior unreported largely due to turbidity during spring runoff. Based on hatchery observations probably similar to northern squawfish. Larvae appear to drift downstream to nursery areas comprised of backwaters and embayments.

Key Habitat Components: deep riffles, pools

Breeding season

Breeding parallels spring runoff in the upper Colorado river as hydrograph recedes and water temperatures warm (10C or greater). Spawning aggregations run up to 100 km to suitable spawning sites, typically riffles and shallow runs.

Grazing effects

Occupation of deeper riffles and pools in large rivers precludes any direct effect of grazing on this species. Indirect, watershed effects in form of changes in hydrograph and water quality are conceivable, but undefinable due to the cumulative effects of many factors affecting larger, downstream reaches of river.

Selected references

Minckley, W. L. 1973. Fishes of Arizona. Arizona Game and Fish Department. Phoenix, Arizona. 293 pp.

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Tyus, H. M. 1991, Ecology and management of Colorado Squawfish, pp 379-404. In, W. L. Minckley and J. E. Deacon (eds) Battle against extinction: Native fish management in the American West. Univ. of Arizona Press. Tucson.

