

THE MOST ENDANGERED FISH IN NEVADA: The White River Spinedace
(*Lepidomeda albivallis*) by Larry Newman, Reno, Nevada

The most endangered fish in Nevada right now (early 1993) is the White River Spinedace, *Lepidomeda albivallis* Miller and Hubbs). A study by Donna Withers, field biologist with the U.S. Fish & Wildlife Service, estimated that less than 50 fish remain, in a single spring in northeast Nevada.

The Spinedace historically occupied seven habitats in northern White River Valley in both Nye and White Pine Counties, but a combination of stream and spring channelizations, diversions, impoundments, the removal of riparian vegetation, and the introduction of non-native species reduced the fish to two populations. In 1985, it was designated an endangered species, but by 1991, one other spring population was extirpated due to irrigation diversion.

The remaining population of White River Spinedace is in a single coolwater (65°-71°F) spring in Kirch Wildlife Area, owned and controlled by the Nevada Dept. of Wildlife. But all is not rosy for these Spinedace, as Largemouth Bass released into downstream reservoirs have found their way upstream to become predators of the Spinedace. Fish barriers have been erected and initial habitat improvements completed to improve survivability. Captive breeding programs have been suggested (by the author, for one), but placed on hold because of unknown effects on the remaining small population.

White River Spinedace have been described as the most brightly colored of the four species of *Lepidomeda*, with the male sporting bright, brassy green above, with silver-green sides with sooty splashes. Females are more subdued in color. Both sexes reach 4" in total length. (The Audubon field guide has a picture of the Little Colorado Spinedace, *L. vittata* [federally Threatened], which is similar).

The study suggests that this species faces very serious threats, but also high recovery potential if the threats (the bass) are removed. The Spinedace historically co-exist with three other native species which the U.S. Fish & Wildlife Service considers candidates for future listing: The White River Desert Sucker (*Catostomus clarki intermedius*), the White River Speckled Dace (*Rhinichthys osculus* ssp.), and the Preston White River Springfish (*Crenichthys baileyi albivallis*). Therefore, any recovery plan has to consider the long-term viability of these species together.

The recovery plan, when implemented, would include further enhancements of the single remaining habitat; further study of the life history and habitat requirements of the spinedace and the other three species and their interaction. Eventually, the re-establishment of populations in historic springs and streams (or

other secure habitats). These tasks are on a 15-year timetable with an estimated cost of \$185,000.

With the combined efforts of the U.S. Fish & Wildlife Service and the Nevada Department of Wildlife, it is hoped that the recovery plan will be successful, and self-sustaining populations in other historic habitats will result.

Bibliography

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