

QUESTIONS AND ANSWERS ABOUT THE CRITICAL HABITAT DESIGNATION FOR THE *SPIKEDACE* AND *LOACH MINNOW*

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Q: What are the spikédace and loach minnow?

A: The spikédace is a small (<3 in.), slim fish. It is characterized by very silvery sides and spines in the dorsal and pelvic fins. The loach minnow is a small (<3 in.), slender fish, olive-colored (males have a brilliant spawning coloration) with upward-directed eyes. Both were listed (separately) as threatened in 1986.

Q: What is spikédace and loach minnow habitat?

A: Spikédace live in flowing water with moderate to fast velocities over sand, gravel, and cobble substrates. The loach minnow is a bottom-dwelling inhabitant of shallow, swift water over gravel, cobble, and rubble substrates. Both species require perennial streams with substrates free of fine sedimentation, and moderate to swift currents as well as swift pools over sand or gravel substrates. Recurrent natural flooding is important in maintaining their habitat and also helps them maintain a competitive edge over invading non-native aquatic species.

Q: What is critical habitat?

A: Critical habitat is defined as areas of land and water with physical and biological features essential to the conservation of a threatened or endangered species, and which may require special management considerations or protection.

Q: How does critical habitat affect my private land?

A: Requirements for consultation on critical habitat do not apply to private actions on private lands that do not require a federal permit or are federally funded. Critical habitat designations only apply to Federal lands or federally funded or permitted activities on private lands.

Q: Does a 'critical habitat' designation mean an area is considered a wildlife refuge or sanctuary?

A: Critical habitat was not designated to stop development or to establish a nature preserve. The critical habitat designation identifies areas that are important to the conservation of federally listed threatened or endangered species. The critical habitat designation requires Federal agencies to consult with the Fish and Wildlife Service (Service) on any of their actions that may affect critical habitat in designated areas. The Service can then recommend ways to minimize any adverse effects.

Q: What has the Service designated as critical habitat for the spikédace and loach minnow?

A: The designation includes approximately 898 river miles of critical habitat including areas potentially inundated by high flow events in portions of the Gila, San Francisco, Blue, Black, Verde, San Pedro rivers and some tributaries in Apache, Cochise, Gila, Graham, Greenlee, Pima,

Pinal, and Yavapai counties, Arizona, and Catron, Grant, and Hidalgo counties, New Mexico. Specific critical habitat areas are identified and mapped in the April [21], 2000, *Federal Register* Rule.

Q: How does the Service determine what areas to designate?

A: The Service considers habitat features needed for life and successful reproduction of a species. These include but are not limited to:

- space for individual and population growth, and for normal behavior
- cover, food, water, and other nutritional/physiological requirements
- sites for breeding and rearing offspring

The Desert Fishes Recovery Team (a group of Federal, State, and university biologists) have recommended conservation of river locations that will be required for the recovery of these species. Once these areas were identified, the Service determined where significant threats exist and therefore which areas would benefit most from protection provided by critical habitat designation.

Q: What habitat considerations has the Service evaluated in the determination to designate critical habitat for the spokedace and loach minnow?

A: Critical habitat should be in geographic complexes of sufficient size to provide habitat for spokedace and/or loach minnow populations large enough to be self-sustaining over time, despite fluctuations in habitat conditions. Complexes must have connectivity within them, so that spokedace and/or loach minnow can move between areas, at least during certain flows or seasons.

Critical habitat areas by definition require "special management considerations and protections." A relatively intact floodplain, along with periodic flooding in a relatively natural pattern, are important elements necessary for long-term survival and recovery of spokedace and loach minnow. Among other things, the floodplain and its riparian vegetation provide space for natural flooding patterns, latitude for necessary natural channel adjustments to maintain appropriate channel morphology and geometry, provide nutrient input and buffering from sediment and pollutants, store water for slow release to maintain base flows, and provide protected side channel and backwater habitats for larval and juvenile spokedace and loach minnow.

Q: Did the Service only designate currently occupied locations as critical habitat?

No. If areas outside the geographic area presently occupied by the spokedace and loach minnow were determined to be essential to the conservation and recovery of the species, they were considered for the critical habitat designation. Because conservation and recovery of the spokedace and loach minnow may rely upon a landscape of interconnected appropriate habitat, we have designated critical habitat areas that will link a network of presently occupied and unoccupied stream stretches.

Q: Has the Service designated all historically occupied habitat as spikedace and loach minnow critical habitat?

A: No. We have not designated all spikedace and loach minnow historical or potential habitat. We have only designated areas that we believe are essential for the conservation and recovery of the two species and in need of special management or protection.

Q: Do all listed species have critical habitat designated for them?

A: No. The Service doesn't designate critical habitat if doing so would jeopardize the species or make it susceptible to collection. To qualify as critical habitat, an area must contain the physical and biological elements essential to the species, and be in need of special management or protection. A final critical habitat decision is the result of our reevaluation of the habitat needs of the spikedace and loach minnow, National Environmental Policy Act review, compliance with Executive Orders, public and industry comments, local and regional economic analyses, and a comparison of the costs and benefits of designating areas within critical habitat.

Q: Where do the spikedace and loach minnow occur today?

A: Current known distribution for spikedace includes upper Gila River (Grant, Catron, and Hidalgo counties, New Mexico), middle Gila River (Pinal County, Arizona), lower San Pedro River (Pinal County, Arizona), Aravaipa Creek (Graham and Pinal counties, Arizona), Eagle Creek (Graham and Greenlee counties, Arizona) and the Verde River (Yavapai County, Arizona). Spikedace is common only in Aravaipa Creek and some parts of the upper Gila River.

Current known distribution for loach minnow includes upper Gila River (Grant, Catron, and Hidalgo counties, New Mexico), the San Francisco and Tularos rivers and their tributaries Negrito and Whitewater creeks (Catron County, New Mexico), the Blue River and its tributaries Dry Blue, Campbell Blue, Little Blue, Pace and Frieborn creeks (Greenlee County, Arizona, and Catron County, New Mexico), Aravaipa Creek and its tributaries Turkey and Deer creeks (Graham and Pinal counties, Arizona), Eagle Creek (Graham and Greenlee counties, Arizona), the White River (Apache, Gila, and Navajo counties, Arizona), and the Black River (Apache and Greenlee counties, Arizona). Loach minnow is common only in Aravaipa Creek and the Blue River, and limited portions of the San Francisco, upper Gila, and Tularosa rivers.

Q: What was the historic range of the spikedace and loach minnow?

A: Both the spikedace and loach minnow are limited to the Gila River system of Arizona and New Mexico, USA, and Sonora, Mexico. Spikedace was widely distributed among moderate-sized, intermediate-elevation streams in the Gila River system. It was historically abundant in the San Pedro River, Arizona. Although spikedace was never collected in the San Pedro River in Sonora, Mexico, the species probably occurred there also. Loach minnow was recorded in Mexico only in Rio San Pedro, in extreme northern Sonora. It is no longer believed to occur in Mexico, although the Gila River drainage in that country lacks adequate surveys.

Q: What is required for the recovery of the spokedace and loach minnow?

A: Protection of existing populations and restoration of depleted and former populations of spokedace and loach minnow *and their habitats*, and ensuring the species' non-endangered, self-sustenance in perpetuity are required for delisting these species. The Desert Fishes Recovery Team has detailed plans and specific objectives to attain the goal of species recovery. (Copies of the recovery plans are available by contacting the Service's Arizona Ecological Services Office.)

Q: Critical habitat was already designated for these species, why is it being designated again?

A: The Service established critical habitat protection for the two species in 1994. However, the 10th Circuit Federal Court determined that such habitat protection decisions need to comply with the National Environmental Policy Act (NEPA) which requires that environmental, economic, alternative possibilities, and public concerns be considered. As a result, in March 1998 the Service rescinded the habitat protection. Responding to a Center for Biological Diversity suit, on September 20, 1999, the U.S. District Court ordered the Service to reconsider the designation of critical habitat and perform all NEPA compliance requirements and develop Endangered Species Act biological and economic justifications in a 150-day period (by February 17, 1999)(this was later extended until April 21, 2000).

Q: Will livestock grazing be affected by critical habitat designation?

A: Livestock grazing is not necessarily incompatible with maintaining critical habitat for spokedace and loach minnow, provided habitat is maintained in good condition. Formal consultation under the Endangered Species Act is required only when federally- permitted grazing may adversely affect critical habitat. Federal land management agencies are required to evaluate the effect grazing has on federally managed critical habitat areas.

Q: Why are the spokedace and loach minnow listed as threatened species?

A: Both species are threatened due to habitat destruction and the introduction of non-native fishes. Both spokedace and loach minnow are in danger of extinction in the foreseeable future. In 1994, the Fish and Wildlife Service made a finding on a petition to reclassify spokedace and loach minnow from threatened to endangered, that the reclassification was warranted; however, action on it was precluded by other higher priority listing actions (59 FR 35303-35304). Although additional populations of loach minnow have been found since that time, they are small and are offset by declines in other populations.

Q: What can a landowner do to enhance habitat for the spokedace and loach minnow?

A: The U.S. Fish and Wildlife Service is able to provide assistance to landowners who want to improve or restore habitat on their property through the Partners for Fish and Wildlife Program.