
50 CFR Part 17

**Endangered and Threatened Wildlife
and Plants; Determination of
Endangered Status and Designation of
Critical Habitat for the White River
Spinedace**

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Final rule.

SUMMARY: The Service determines a
fish, the White River spinedace
(*Lepidomeda albivallis*), to be an
endangered species and designates its
critical habitat under the authority

contained in the Endangered Species Act of 1973, as amended. This action is being taken because five populations of this species have been eliminated and the remaining two populations have declined due to habitat destruction through channelization and diversion of their spring habitats, and due to the introduction of exotic fishes, which compete with and prey on the White River spinedace. The White River spinedace occurs in remnant waters of the pluvial White River system in southern White Pine County and extreme northeastern Nye County, Nevada. A determination that the White River spinedace is an endangered species and designation of its critical habitat will implement the protection provided by the Endangered Species Act of 1973, as amended.

DATES: The effective date of this rule is October 15, 1985.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Lloyd 500 Building, 500 NE Multnomah Street, Suite 1892, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

The White River spinedace (*Lepidomeda albivallis*) was described by Miller and Hubbs (1960) based on material collected in 1934. It is one of six species belonging to the Plagopterini, a unique tribe of cyprinid fishes noted for their adaptations to small, swift-water desert streams. Members of the Plagopterini are restricted to the lower Colorado River system and are characterized by the possession of two spinal rays in the dorsal fin and a reduction in scalation in certain taxa (Miller and Hubbs 1960, Uyeno and Miller 1973). The White River spinedace is a relatively large species of *Lepidomeda*, and often attains a length of 4 to 5 inches (10-13 cm). It can be distinguished from other species of *Lepidomeda* by its possession of a pharyngeal tooth formula of 5-4 in the main row, typically fewer than 90 lateral-line scales, a moderately oblique mouth, a dorsal fin of moderate height, and distinctive body coloration. The species exhibits a bright green to olive color dorsally, brassy over bright silver laterally, and silvery-white ventrally. The head is coppery-red to red on the sides with gilt reflections on the cheeks and opercles (Miller and Hubbs 1960).

The White River spinedace is the only representative of the tribe within the upper White River system of southern White Pine County and extreme northeastern Nye County, Nevada. During pluvial times, 10,000 to 40,000 years ago, the White River was tributary to the Colorado River by way of the Virgin River (Hubbs *et al.* 1974). As the pluvial waters desiccated because of the more xeric climates, the White River spinedace was restricted to permanent waters such as springs or perennial sections of the White River. Currently, the White River is dry for much of its course. In the mid 1900's, the White River spinedace was known from Preston Big, Nicholas, Arnoldson, Cold, Lund, and Flag Springs as well as from the White River near its confluence with Ellison Creek (Miller and Hubbs 1960, Williams and Wilde 1981).

Presently, viable populations of the White River spinedace are found only in Lund Spring and Flag Springs. Lund Spring is privately owned and Flag Springs is State owned and within a wildlife management area. The former locality contains established populations of exotic species. Both spring systems have been altered by human activities. The primary threats to the continued existence of the White River spinedace are the channelization and diversion of water within the spring habitats as well as the introduction of exotic fishes such as guppies (*Poecilia reticulata*), mosquitofish (*Gambusia affinis*), and goldfish (*Carassius auratus*) into spinedace habitat. The exotic fishes compete with and, in some instances, prey on the spinedace.

On December 30, 1982, the Service published a vertebrate Notice of Review (47 FR 58454) and included the White River spinedace as a category 1 species. Category 1 indicates that the Service has substantial information to support the biological appropriateness of listing the species as threatened or endangered.

On April 12, 1983, the Service received a petition from the Desert Fishes Council requesting that the White River spinedace along with 16 other fish species be added to the List of Endangered and Threatened Wildlife. The Service published in the *Federal Register* (48 FR 27273) on June 14, 1983, a finding that the petition presented substantial information and that the petitioned action may be warranted. Publication of the proposed rule on May 29, 1984 (49 FR 22359), constituted the required 12-month petition finding in accordance with section 4(b)(3)(ii) of the Act.

Summary of Comments and Recommendations

In the May 29, 1984, proposed rule (49 FR 22359) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notice were published in the *Ely Daily Times* on June 26, 1984, *The Las Vegas Sun* on June 26, 1984, and the *Las Vegas Review Journal* on June 13, 1984, which invited general public comment. Six comments were received and are discussed below. No public hearing was requested or held.

Supportive comments were received from the International Union for Conservation of Nature and Natural Resources (IUCN), American Society of Ichthyologists, Nevada Department of Conservation and Natural Resources (NDCNR), and Thomas M. Baugh, University of Nevada. In addition, a comment was received from the Nevada Department of Wildlife (NDOW) supporting the listing of the Lund Spring population and the designation of critical habitat at Lund Spring and Preston Big Spring. However, NDOW withheld support for the listing of the Flag Springs population and designation of critical habitat at Flag Springs. The Nevada Department of Wildlife felt that its management of the wildlife area afforded the White River spinedace adequate protection at this site and that because of its management policies the population was not endangered. The Flag Springs population is small and vulnerable to any habitat disturbance. In the past, the springs have been modified and adverse effects to the species' habitat have resulted. It is the position of the Service that State management of the spinedace habitat is not sufficient to allow complete recovery of the species and its habitat. Designation of this site as critical habitat will provide full protection for the species including future recovery actions. In addition, due to the importance of this small site as one of only two existing locations for the fish, the exclusion of this site from critical habitat designation is not considered prudent.

One opposing comment was received from the Regional Planning Commission, White River County. The main concern was the effect the rulemaking might have on the private landowners in this agricultural area. In response to the

above concern, the only activities that may be affected by the listing of the White River spinedace and the designation of critical habitat are Federal activities that might adversely affect the species or its critical habitat and the "taking" of the fish itself, a prohibition already enforced under the State of Nevada's regulations regarding protected species. Private or county activities, unless undertaken with assistance from Federal sources, will not be affected by this rule, and there are no known or anticipated activities involving Federal funds or permits for these lands.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the White River spinedace (*Lepidomeda albivallis*) should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the White River spinedace (*Lepidomeda albivallis*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* When the White River spinedace was described by Miller and Hubbs in 1960, the species was present in large numbers throughout its range. By 1979, the spinedace was considered rare in all localities surveyed (Hardy 1980). Physical and biological habitat alteration have precipitated this decline. During the latter half of this century, agricultural and residential use increased within the White River spinedace range because of the abundant water supply found there. The available suitable habitat for the spinedace has been reduced by channelization of spring flows and the development of diversion structures around outflow creeks, activities that made water available for residential and agricultural uses. Continued channelization and diversion of the water supply threatens the remaining habitat of the White River spinedace.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* No such threats are known.

C. *Disease or predation.* Introduction of exotic fish, such as guppies (*Poecilia reticulata*), mosquitofish (*Gambusia*

affinis), and goldfish (*Carassius auratus*), into the aquatic habitats of the White River spinedace has occurred. The establishment of guppies and mosquitofish in habitats occupied by the White River spinedace has been particularly harmful. It is thought that some of these exotic fish prey upon the spinedace and have led to population declines. In general, the introduction of exotic fishes is usually detrimental to native fishes because of competition, predation, or the introduction of exotic parasites and diseases (Deacon *et al.* 1964, Hubbs and Deacon 1964).

D. *The inadequacy of existing regulatory mechanisms.* The State of Nevada has placed the White River spinedace on its Protected Species List. However, this action does not provide protection to the species' habitat. Through Federal listing, protection for the species and its habitat will be implemented as provided by the Endangered Species Act.

E. *Other natural or manmade factors affecting its continued existence.* The use of copper sulfate for control of algae may have been partly responsible for the elimination of the species from Preston Big Spring and may threaten the remaining populations (Courtenay *et al.* ms).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list the White River spinedace as endangered. The elimination of five populations, and the reduction of the remaining two by channelization and diversion activities in their spring habitats, as well as competition and predation from exotic species, indicate that the species is imminently threatened with extinction. Therefore, endangered status is warranted. The reasons for designation of critical habitat are discussed below.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act means: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection, and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being designated for the White River spinedace (*Lepidomeda albivallis*) to include three areas in Nevada. Preston Big Spring (approximately 4.0 acres) and Lund Spring (approximately 1.3 acres) are critical habitat areas in White Pine County and Flag Springs (3.0 acres) is located in northeastern Nye County. Preston Big Spring is included in the critical habitat designation as an area outside the present geographical range occupied by the species but essential for the species' conservation and within the historic range of the species. The White River spinedace is thought to have been extirpated from this spring shortly before 1980 (Courtney *et al.* ms). Efforts to reestablish the spinedace at this recent historical site are planned and are considered necessary to increase the species' numbers, the population numbers, and the genetic viability of this species. Constituent elements at all sites include consistently high quality cool (55°-70°F) springs and outflows with a sufficient quantity of water, and surrounding land areas that provide vegetation for cover and habitat for insects and other invertebrates on which the species feeds. A precise description of the critical habitat can be found in the "Regulations Promulgation" section.

The areas proposed as critical habitat for the White River spinedace satisfy all known criteria for its ecological, behavioral, and physiological requirements. The most critical element to the survival of the spinedace is a consistent quality and quantity of springflow. The critical habitat being designated includes the springs and associated outflows as well as the immediately surrounding riparian areas. These narrow riparian land areas are essential for vegetative cover that contributes to the uniform water conditions preferred by the spinedace and provides habitat for insects and other invertebrates that constitute a substantial portion of the spinedace diet.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. Activities that may adversely affect the critical habitat of the White River spinedace include pollution of the

springwater (such as through the use of chemicals to control algae), introduction of exotic species, excessive pumping of water from nearby aquifers, and further physical modification of the spring areas (such as through channelization and diversion of springflows or clearing of the surrounding vegetation).

Agriculture is the primary activity on private lands near the two White Pine County springs proposed as critical habitat. The water from these two springs enters pipes after an open area near the spring head and is used for irrigating crop lands. The springs system on State lands within the proposed critical habitat is part of the Kirch Wildlife Management Area and is relatively unmodified. Two impoundments occur away from the spring heads for wildlife use. Currently, there are no known activities involving Federal funds or permits that may affect or be affected by the designation of critical habitat for this species. If a landowner seeks Federal assistance in activities such as modification of the springs or their immediate outflows the Federal agency involved must enter into consultation with the Service to ensure that such activities do not adversely affect the White River spinedace or its habitat.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. No additional information has been received as a result of the proposed rule on economic or other impacts that might result from designation of the critical habitat. The critical habitat area is approximately 8.3 acres and includes three spring systems and their outflows. One of these spring areas is owned by the State of Nevada and has been maintained in a relatively pristine condition as part of a wildlife management area. The two other springs are in private ownership. There is no known or anticipated involvement of Federal funds or permits for the private and State lands included in the critical habitat designation. Therefore, no significant economic or other impacts are expected as a result of the designation.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups and individuals. The Endangered Species

Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. No such Federal involvement is known for White River spinedace.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National

Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The critical habitat designation as defined in the proposed rule did not bring forth economic or other impacts to warrant consideration of revising the critical habitat. One spring included as critical habitat is located within a wildlife management area owned by the State and the two other springs designated as critical habitat are in private ownership. There is no known or planned involvement of Federal funds or permits for the State and private lands included in the critical habitat designation. Also, no direct costs, enforcement costs, or information collection or recordkeeping requirements are imposed on small entities by this designation. These determinations are based on a Determination of Effects that is available at the U.S. Fish and Wildlife Service, at the address found in the "Addresses" section.

Literature Cited

- Courtenay, W.R., S.E. Deacon, D.W. Sada, R.C. Allan and G.L. Vinyard. Manuscript. Comparative status of fishes along the course of the pluvial White River, Nevada.
- Deacon, J.E., C. Hubbs and B.J. Zaharanec. 1964. Some effects of introduced fishes on the native fish fauna of southern Nevada. *Copeia* 1964:384-388.
- Hardy, T. 1980. The Inter-basin area report—1979. *Proc. Desert Fishes Council* 11:5-21.
- Hubbs, C.L. and J.E. Deacon. 1964. Additional introductions of tropical fishes into southern Nevada. *Southwestern Nat.* 9:249-251.
- Hubbs, C.L., R.R. Miller and L.C. Hubbs. 1974. Hydrographic history and relict fishes of the north-central Great Basin. *Memoirs California Acad. Sci.* 7:1-259.
- Miller, R.R. and C.L. Hubbs. 1960. The spiny-rayed cyprinid fishes (Plagopterini) of the Colorado River system. *Misc. Publ. Mus. Zool., Univ. Michigan* 115:1-39.
- Uyeno, T. and R.R. Miller. 1973. Chromosomes and the evolution of the Plagopterin fishes (Cyprinidae) of the

Colorado River system. Copeia 1973:776-782.
 Williams, J.E. and G.R. Wilde. 1981. Taxonomic status and morphology of isolated populations of the White River springfish, *Crenichthys baileyi* (Cyprinodontidae). Southwestern Nat. 25:485-503.

Author

The primary author of this final rule is Carol A. Wilson, Endangered Species Staff, at the address in the "ADDRESSES" section.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife. Fish. Marine mammals. Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under "Fishes," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

(h)

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Spinedace, White River	<i>Lepidomeda albivallis</i>	U.S.A. (NV)	Entire	E		17.95(e)	NA

3. Amend § 17.95(e), by adding critical habitat of the White River spinedace (*Lepidomeda albivallis*), as follows: The position of this entry under § 17.95(e) will follow the same alphabetical sequence as the species occurs in § 17.11.

§ 17.95 Critical habitat—fish and wildlife.

(e)

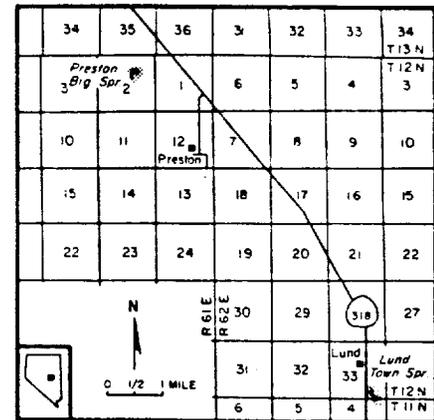
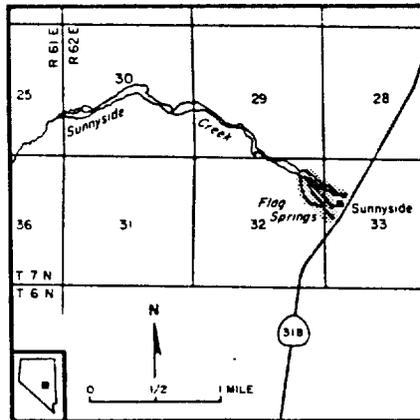
WHITE RIVER SPINEDACE (*Lepidomeda albivallis*)

Nevada, White Pine County. Each of the following springs and outflows plus surrounding land areas for a distance of 50 feet from these springs and outflows:

Preston Big Spring and associated outflows within T12N, R61E, NE ¼ Sec. 2.

Lund Spring and associated outflows within T11N, R62E, NE ¼ of NE ¼ of Sec. 4; T12N, R62E, S ½ of SE ¼ Sec. 33.

Nevada, Nye County. Flag Springs and associated outflows plus surrounding land areas for a distance of 50 feet from the springs and outflows within the following areas: T7N, R62E, E ½ of NE ¼ Sec. 32, SW ¼ of NW ¼ Sec. 33.



Known constituent elements for all areas of critical habitat include consistently high quality and quantity of cool springs and their outflows, and surrounding land area that provide vegetation for cover and habitat for insects and other invertebrates on which the species feeds.

Dated: August 13, 1985.

P. Daniel Smith,

Acting Deputy Assistant Secretary for Fish and Wildlife and Parks.

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