

50 CFR Part 17**Endangered and Threatened Wildlife and Plants; Proposed Threatened Status and Critical Habitat for the Desert Dace (*Eremichthys acros*)**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to list *Eremichthys acros* (the desert dace) as a threatened species with a special rule to allow take in accordance with State law, and to designate its critical habitat. Known only from an area of thermal springs and their immediate outflow creeks in Humboldt County, Nevada, the species still survives in about 8 of more than 20 springs in 6 square miles of the area known as Soldier Meadows. Habitat alterations have eliminated much former habitat, necessitating this action. The proposed rule would extend protection under provisions of the Endangered Species Act of 1973, as amended, to this fish. This proposal constitutes a required finding in regard to a petition filed with the Service on April 12, 1983 by the Desert Fishes Council. Comments and data related to this proposal are solicited. The Service also requests information on the species and on environmental and economic impacts and effects on small entities that would result from designating critical habitat for the desert dace.

DATES: Comments from the public and the State of Nevada must be received by July 30, 1984. A public hearing on this

proposal will be held if requested by July 13, 1984.

ADDRESSES: Interested persons or organizations are requested to submit comments to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232.

Comments and materials relating to this proposed rule are available for public inspection during normal business hours at the Service's Endangered Species Office, at the above address.

FOR FURTHER INFORMATION CONTACT: For further information on the proposed rule, contact Mr. Don King, Great Basin Complex, U.S. Fish and Wildlife Service, 4600 Kietzke Lane, Building C, Reno, Nevada 89502 (702/784-5227) or Mr. John L. Spinks Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington D.C. 20240 (703/235-2771).

SUPPLEMENTARY INFORMATION:**Background**

The desert dace, *Eremichthys acros*, is endemic to a series of thermal spring habitats in the Soldier Meadows area of Humboldt County, Nevada, where it was discovered in 1939 and described in 1948 by Carol Hubbs and R. R. Miller. This species is the only representative of the distinct genus *Eremichthys*, which is notable in its extended period of isolation and relict distribution. The species has apparently survived in the Soldier Meadows area for at least tens of thousands of years. The species and genus is characterized by the presence of prominent horny sheaths on the jaws. No other cyprinid possesses such a remarkable feeding adaptation. The species is also notable for its high temperature tolerance.

Desert dace typically occur in water 67° to 97°F, but have been recorded from

water as hot as 100.4°F (Nyquist 1963). Water temperature appears to be a major factor controlling the distribution of desert dace within a spring system. If temperature at the spring headpool exceeds 100°F, desert dace are restricted to the somewhat cooler outflow creeks below the springs.

Many of the thermal springs and their outflow creeks inhabited by the desert dace occur on private land. The local landowner has modified much of the habitat of the species by diverting water away from natural channels into man-made ditches. The diversion of outflow water away from natural channels is especially detrimental in spring system where the headpool temperature exceeds 100°F and the species can only occupy the outflow creeks.

Two reservoirs were recently constructed in the Soldier Meadows area approximately three miles from springs and creeks inhabited by desert dace. Channel catfish (*Ictalurus punctatus*) and smallmouth bass (*Micropterus dolomieu*) have been introduced into one of the reservoirs. If these exotics are introduced into nearby habitats occupied by the desert dace, they would probably compete with and prey on the desert dace. Exotic species may also introduce diseases or parasites to which the native species has not been previously exposed. Presence of the exotics makes disease a greater threat than it would otherwise be.

The Soldier Meadows area has been designated a Known Geothermal Resource Area. Geothermal exploration occurred in the area several years ago but was later abandoned. If geothermal exploration and development are resumed, these activities could impact the desert dace by interfering with the

aquifers that supply water to thermal springs in the area.

Because of the threats from agricultural activities, primarily water diversion, exotic species, and geothermal exploration and development, the Service proposes to list the desert dace as a threatened species. The low priority presently accorded geothermal development is a factor that indicates threatened, rather than endangered, is the most appropriate listing status.

In a petition dated April 4, 1983, and received April 12, 1983, the Desert Fishes Council requested that the desert dace be added to the list of Endangered and Threatened Wildlife. An administrative finding that the requested action may be warranted was made May 9, 1983, and reported in the *Federal Register* on June 14, 1983 (48 FR 27273). Publication of this proposed rule signifies that the requested action is warranted, and constitutes a required finding in accordance with Section 4(b)(3)(B)(ii) of the Act as amended in 1982.

Summary of Factors Affecting the Species

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 (codified at 50 CFR Part 424; see proposed revisions to accommodate 1982 amendments in the *Federal Register* for August 8, 1983) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of five factors described in Section 4(a)(1). These factors and their application to the desert dace (*Eremichthys acros*) are as follows:

A. *The present or threatened destruction, modification or curtailment of its habitat or range.*

The desert dace is endemic to warm springs and their outflow creeks in the Soldier Meadows area of Humboldt County, Nevada. Approximately eight warm springs with water temperatures as high as 100.4 °F are occupied by the species. Many of the springs' outflow creeks have been diverted from their natural channels into man-made ditches. The diversions are for agricultural activities, such as irrigation, providing water for cattle, and washing alkali out of the soil on the Soldier Meadows Ranch. These diversions have reduced habitat available to the desert dace. Diversion of spring outflows is especially serious in those spring systems where the water in the spring headpool is too hot to be tolerated by the desert dace. In these systems the

species exists only in the natural outflows, or crenons. The man-made ditches do not provide suitable habitat for the species.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.*

Not applicable to this species.

C. *Disease or predation.*

There is no evidence that either disease or predation has contributed to the threatened status of this species. Disease and predation could both result from the introduction of the species not native to this area (see Factor E. below).

D. *The inadequacy of existing regulatory mechanisms.*

At this time there are no regulations applicable to the desert dace.

E. *Other natural or manmade factors affecting its continued existence.*

Reservoirs have recently been constructed on the north and south end of the Soldier Meadows area. Channel catfish and smallmouth bass have been introduced into the southernmost reservoir. If these exotics enter habitat occupied by the desert dace they could further reduce dace numbers. The presence of exotic fishes is usually detrimental to native fishes in the western United States due to competition and predation (Deacon *et al.* 1964), as well as the introduction of exotic parasites and disease (Wilson *et al.* 1966). Much of the area proposed for critical habitat is included in the Soldier Meadows Known Geothermal Resource Area. Although no exploration or drilling is currently occurring in the Soldier Meadows area, the resumption of such activity could result in interference with the thermal aquifers that supply water to springs in the area.

Critical Habitat

Critical habitat as defined by Section 3 of the Act and at 50 CFR Part 424, means: (1) The specific area 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 conservation of the species and (II) that may require special management consideration 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.

The Act in Section 4(a)(3) requires that critical habitat be designated to the maximum extent prudent and determinable concurrent with the determination that a species is endangered or threatened. Proposed critical habitat for the desert dace

includes all thermal springs and their outflows located within determinable section and fractional section boundaries in the Soldier Meadows area of Humboldt County, Nevada. The designated aquatic habitat within these boundaries is somewhat evanescent, shifting in response to seasonal and other climatic factors. The area enclosed by the determinable boundary is approximately 4 miles long and varies from 1 to 2½ miles wide. Mud Meadow Creek is near its eastern edge. The southern edge is approximately 1 mile north of Fly Creek.

Listing regulations of the Service, 50 CFR 424.12(b), state that when considering the designation of critical habitat, the Service shall focus on the biological or physical constituent elements within the defined area that are essential to the conservation of the species. Known primary constituent elements are to be listed with the critical habitat description.

With respect to the desert dace, the thermal springs and their outflows proposed as critical habitat satisfy all known criteria for ecological, behavioral, and physiological requirements of the species. The quantity and quality of water in the pools and outflow streams inhabited by this fish are the most important factors in its conservation. A range of favored temperatures between about 70° and 102°F restricts the fish to areas of the streams near the headwater pools, but these areas expand in summer, when pool temperatures are too high to be tolerated, and contract in winter, when temperatures in the lower streams drop below the favored range. These specialized requirements are met only in limited but seasonally variable portions of this one thermal spring area. Breeding and the growth of offspring are likewise confined to certain parts of the area. The species is native to these springs and outflows and is found nowhere else.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public and private) that may adversely modify such habitat or may be affected by such designation. Such activities are identified for the desert dace as follows.

In the past, water diversions from spring outflow creeks have modified or eliminated much suitable habitat for this species. Additional modification of springs or their outflow creeks without regard for the species could further jeopardize the species. In addition, the manipulation of water flows and surface disturbance associated with ranching,

and geothermal energy exploration or development, could adversely modify remaining habitat of the desert dace.

It should be emphasized that critical habitat designations only affect activities of Federal agencies through section 7 of the Act. Federal actions that could possibly be affected by this rule include actions of the Bureau of Land Management associated with aquatic habitat modification, grazing, and leasing of lands for geothermal exploration and/or development. Such activities could result in adverse modification of desert dace habitat. Section 7 consultation is designed, however, to explore alternatives or modifications to proposed activities that could avoid jeopardizing the continued existence of listed species or adversely modifying their critical habitat. The consultation process could possibly provide recommendations for conservation measures which if adopted, could insure compliance with Section 7 of the Act.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of specifying a particular area as critical habitat. The Service will reevaluate the geographic critical habitat designation at the time of the final rule, after considering all additional information obtained.

Available Conservation Measures

Conservation measure 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 land acquisition and cooperation with States and requires that recovery actions be carried out for all listed species, actions that are initiated by the Service following listing. The protection required by Federal agencies and taking and harm prohibitions 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. 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 29989; June 29, 1983). Section 7(a)(4) requires Federal agencies to informally confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or

adverse modification of proposed critical habitat. This provision will affect the Bureau of Land Management (BLM) in the administration of its portion of the proposed critical habitat area.

When a species is listed, 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 such a species or to destroy or adversely modify its critical habitat. If an adverse effect is expected, the Federal agency must enter into consultation with the Service. These provisions will also affect the Bureau of Land Management due to its administration of a portion of the proposed critical habitat area.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of prohibitions which generally apply to all threatened wildlife species. 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 to sell or offer for sale a threatened species in interstate or foreign commerce. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies. General regulations governing the issuance of permits to carry out otherwise prohibited activities involving threatened animal species under certain circumstances are set out at 50 CFR 17.32.

The above discussion generally applies to threatened species of fish and wildlife. However, the Secretary has discretion under Section 4(d) of the Act to issue special regulations for a threatened species that are necessary and advisable for its conservation. The desert dace is threatened primarily by habitat disturbance or alteration, not by intentional, direct taking of the species or by commercialization.

Given this fact and the fact that the State currently regulates direct taking of the species through the requirement of State collecting permits, the Service has concluded that the State's collection permit system is more than adequate to protect the species from excessive taking, so long as such takes are limited to: educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purpose consistent with the Endangered Species Act. A separate Federal permit system is not required to address the current threats to the

species. Therefore, the special rule allows takes to occur for the above-stated purposes without the need for a federal permit if a State collection permit is obtained and all other State wildlife conservation laws and regulations are satisfied. It should be recognized that any activities involving the taking of this species not otherwise enumerated in the special rule are prohibited.

Without this special rule, all of the prohibitions of 50 CFR 17.31 would apply. This special rule would allow for more efficient management of the species, and thus would enhance the conservation of the species. For these reasons, the Service concludes that this regulatory proposal is necessary and advisable for the conservation of the desert dace.

The proposed rule would also bring Sections 5 and 6 of the Endanger Species Act into effect with respect to the desert dace. Section 5 authorizes the acquisition of lands or interests therein for the purposes of conserving endangered and threatened species. Pursuant to Section 6, the Fish and Wildlife Service would be able to grant available funds to the State of Nevada for management actions aiding the protection and recovery of this species.

Listing the desert dace as threatened would provide for development of a recovery plan for this fish. Such a plan would draw together the State and Federal agencies having responsibility for conservation of the dace. The plan would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan would set recovery priorities and estimate the cost of the various tasks necessary to accomplish them. It would assign appropriate functions to each agency and time frame within which to accomplish them.

The Service also will now review the desert dace to determine whether it should be considered for placement upon the Annex of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, and whether it should also be considered for other appropriate international agreements.

Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and effective as possible in the conservation of any endangered or threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the

scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial, or other relevant data concerning any threat (or the lack thereof) to the species included in this proposal;

(2) The location of and the reasons why any habitat of this species should or should not be designated as critical habitat as provided for by Section 4 of the Act;

(3) Additional information concerning the range and distribution of this species;

(4) Current or planned activities that may adversely modify the subject areas being considered for critical habitat; and

(5) The foreseeable economic and other impacts of the critical habitat designation on federally funded or authorized projects, private individuals, etc.

Final promulgation of the regulations on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing and

addressed to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232.

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).

References

Deacon, J. E., C. Hubbs, and B. J. Zahuranec. 1964. Some effects of introduced fishes on the native fish fauna of southern Nevada. *Copeia*. 1964:384-388.

Hubbs, C.L. and R.R. Miller. 1948. Two new, relict genera of cyprinid fishes from Nevada. *Occ. Pap. Mus. Zool., Univ. Mich.* No. 507. 30pp.

La Rivers, I. 1962. Fishes and fisheries of Nevada. Nevada State Fish and Game Commission. 782pp.

Nyquist, D. 1963. The ecology of *Eremichthys acros*, an endemic thermal species of cyprinid fish from northwestern Nevada. M. S. Thesis, Univ. Nevada, Reno. 247pp.

Wilson, B.L., J.E. Deacon, and W.G. Bradley. 1966. Parasitism in the fishes of the Moapa River, Clark County, Nevada. *Trans. California-Nevada Wildlife Soc.* 1966:12-23.

Author

The primary author of this proposed rule is Dr. Jack E. Williams, U.S. Fish and Wildlife Service, Sacramento Endangered Species Office, Sacramento, California (916/440-2791). Dr. George E. Drewry of the Service's Washington Office of Endangered Species served as editor.

List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

PART 17—(AMENDED)

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I Title 50 of the U.S. Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads 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. It is proposed to amend § 17.11(h) by adding the following entry alphabetically to the table under the heading "Fishes" as set forth below:

§ 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						
Dace, desert	<i>Eremichthys acros</i>	U.S.A (NV)	Entire	T		17.95(e)	17.44()

3. It is further proposed to amend § 17.95(e) *Fishes* by adding Critical Habitat of the desert dace as follows:

§ 17.95 Critical habitat-fish and wildlife.

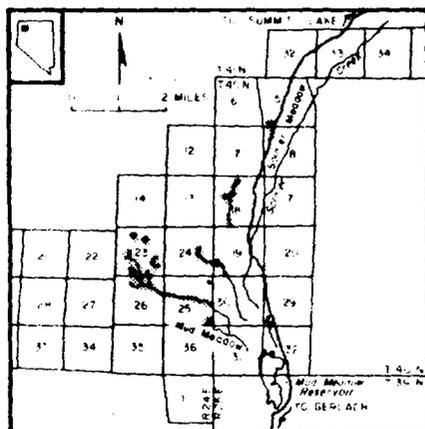
(e) *Fishes* * * *

Desert Dace

(*Eremichthys acros*)

Nevada, Humboldt County. Thermal springs and their outflows plus surrounding riparian areas for a distance of 50 feet from these springs and outflows in T40N, R25E, SW¼ Section 5, NW¼NW¼ Section 8, W½ Section 18, W½SW¼ Section 19; T40N R24E, Section 23, N½SE¼ and S½NE¼ Section 24, SE¼ Section 25, and N½ Sec. 25, and N½ Section 26.

Primary constituent elements of this habitat are considered to be quantity, and thermal and chemical quality of water in headpools and spring outflow streams; presence of a stable, natural substrate supporting food plants for the fish; and length of outflow streams adequate for seasonal movements in response to changes of water temperature.



4. It is further proposed to amend § 17.44 by adding a new special rule as follows:

(h) **Desert dace**

(*Eremichthys acros*)

(1) No person shall take the species, except in accordance with applicable State fish and wildlife conservation laws and regulations in the following instances: for educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act.

(2) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to the taking of this species will also be a violation of the Endangered Species Act.

(3) No person shall possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any such species taken in violation of applicable State fish and wildlife conservation laws or regulations.

(4) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (1) through (3) above.

* * * * *

Dated: May 9, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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