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**DEPARTMENT OF THE INTERIOR**
**Fish and Wildlife Service**
**50 CFR Part 17**
**Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Bufo hemiophrys baxteri* (Wyoming Toad)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine *Bufo hemiophrys baxteri* (Wyoming toad), to be an Endangered species. This toad is presently known from only one 40-acre area in Albany County, Wyoming. Formerly abundant in the Laramie Basin, the toad had apparently disappeared from all but one breeding site. The cause of its precipitous decline is not known although habitat alteration and the use of various biocides may be contributing to the decline. The Service is requesting biological information on the species. This proposal, if made final, would implement Federal protection provided by the Endangered Species Act of 1973, as amended.

**DATES:** Comments must be received by March 28, 1983. Public hearing requests must be received by March 14, 1983.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225. Comments and materials received will be available for public inspection by appointment during normal business hours at the Service's Endangered Species Office, 134 Union, 5th Floor, Lakewood, Colorado.

**FOR FURTHER INFORMATION CONTACT:** Mr. Olin Bray, Endangered Species Office, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225 (303/234-2496).

**SUPPLEMENTARY INFORMATION:** *Bufo hemiophrys baxteri* (Wyoming toad) was discovered by Dr. George T. Baxter

in 1946 (Porter, 1968). A related toad, *Bufo hemiophrys hemiophrys* (Canadian toad) still occurs in Manitoba, Minnesota, and North and South Dakota. The Wyoming toad is thought to be a relict population left behind as glaciers retreated. Some (i.e., Packard, 1971) argue that the Wyoming toad is a valid species, but Porter (1968) recommended subspecific status and most subsequent workers have followed his designation (Baxter and Stone, 1980). The toad is small (2-inches) with cranial crests fused into a medial "boss" (Baxter and Stone, 1980). It is the only toad in the Laramie Basin. Since its discovery, Dr. George Baxter has taken students in summer from the University of Wyoming to observe the Wyoming toad. Known breeding places have been visited regularly for over 30 years. Baxter's field notes indicate that the toad was common in the Laramie Basin from the 1950's through the early 1970's. However, Baxter and Stromberg (1980) noted that since 1975 populations have declined. Toads became extremely rare between 1976 and 1978; field work in 1979 did not reveal any toads (Stromberg, 1981).

An intensive survey was conducted throughout the Laramie Basin in 1980 (Vankirk, 1980). A reward for information on the toad was advertised in the local newspaper and it resulted in one population being located on private land in Albany County, Wyoming. Only a few males were heard calling, and no females were found nor were any tadpoles or egg masses found when the area was checked later in the summer. The population exists within a 40-acre area and has an estimated size of no more than 25 individuals. Surveys in 1981 revealed only one male and one female calling at this site (Baxter and Meyer, 1982); in 1982, no toads were located. The reasons for the basin-wide disappearance of the Wyoming toad are unknown. The leopard frog (*Rana pipiens*) has also been found to be suddenly absent from the Laramie Basin; however, the northern chorus frog (*Pseudacris triseriata*) remains abundant. Baxter *et al.* (in press) have reviewed possible causes for the species' disappearance.

**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; under revision to accommodate 1982 amendments) states that the Secretary of the Interior shall determine whether any species is an Endangered Species or a Threatened

Species due to one or more of the five factors described in Section 4(a)(1) of the Act. This authority has been delegated to the Assistant Secretary for Fish and Wildlife and Parks. These factors and their application to *Bufo hemiophrys baxteri* (Wyoming toad) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** Historic ranching practices involved flooding the plains adjacent to the Little Laramie River. Changes in irrigation practices due to current increased demand for irrigation water may have resulted in the drying of former habitat before tadpole development was complete. The specific use and timing of irrigation waters is largely left up to landowners. Local irrigation districts control regional water use.

Drainage of habitat for non-irrigated uses may have contributed to the decline of the toad.

The use of the herbicide Atrazine is known to decimate *Bufo* populations (Beebee, 1973) and can be introduced into watersheds in sufficient levels to kill *Bufo* eggs or tadpoles. Atrazine is widely available throughout the Laramie Basin. Other herbicides, such as Tordon, are more commonly used than Atrazine, but the effects of these chemicals on amphibians are largely unknown. Herbicides are often used by the Weed and Pest Districts, Wyoming Department of Agriculture, for "noxious" weed control in roadside ponds and along field edges typically used by the Wyoming toad. Basinwide aerial application of Baytex (Fenthion) with diesel fuel began in 1975. This mosquito control technique, applied with little control on drift of the spray, may be highly toxic to bufonids. Some evidence shows that diesel alone is toxic to amphibians.

**B. Overutilization for Commercial, recreational, scientific, or educational purposes.** Not applicable for this species.

**C. Disease or predation.** Disease in *Bufo hemiophrys baxteri* has not been studied. Because the extremely small population exists in a very small area, a disease outbreak could be catastrophic. Predation, however, may be a threat to the Wyoming toad. The California gull (*Larus Californicus*) population has increased dramatically in recent years. Local ranchers report that the fields are literally white with gulls in early spring. Raccoons, foxes, and skunks have all shown population increases. All these factors combined could be a serious threat to the Wyoming toad, especially due to the small population size.

**D. The inadequacy of existing regulatory mechanisms.** The use of herbicides and other chemicals in Wyoming is regulated with regard to effect on fish, but not amphibians. In fact, bioassay data are lacking on the effects that widely applied chemicals have on amphibians. This perceived inadequacy in regulations is probably due to the lack of recognition of a problem with amphibians. The only protection provided by the State is that a scientific collecting permit is required before it can be collected for commercial uses.

**E. Other natural or manmade factors affecting its continued existence.** None are known.

#### Critical Habitat

Section 4(a)(3) of the Act requires the Secretary to designate Critical Habitat for a species, to the maximum extent prudent and determinable, concurrent with the determination that such species is an Endangered or Threatened species. Critical Habitat is presently considered neither prudent nor determinable for the Wyoming toad for the following reasons:

1. The Wyoming toad was last reported in 1981 from two individuals located in the Laramie Basin; surveys in 1982 did not reveal any toads. The Service therefore believes that Critical Habitat is not determinable. The Service notes, however, that only a relatively small amount of the potential habitat in the Laramie Basin has been surveyed. The Wyoming Game and Fish Department has also noted the need for thorough surveys. Should future surveys discover significant breeding populations, these areas could then be considered as Critical Habitat.

2. The Wyoming toad is considered an extremely rare amphibian. The publication of the exact area where the toads last bred could lead to jeopardy to any remaining individuals through collection. The best available biological data indicate that, due to apparent low population size, removal of any individuals from the population other than for purposes directly related to conservation could be detrimental to the species' survival.

#### Effects of this Proposal

In addition to the effects discussed above, the effects of this proposal if published as a final rule would include, but would not necessarily be limited to, those mentioned below.

The Act and implementing regulations published in the June 24, 1977, **Federal Register** (42 FR 32372-32381) set forth a series of general prohibitions and

exceptions which apply to all Endangered wildlife. These regulations are found at § 17.21 of 50 CFR and are summarized below.

With respect to the Wyoming toad, all prohibitions of Section 9(a)(1) of the Act, as implemented by § 17.21, would apply. These prohibitions, in part, would 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 this species in interstate or foreign commerce. It would also be 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.

Permits may be issued to carry out otherwise prohibited activities involving Endangered species under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, the enhancement or propagation or survival of the species, and economic hardship.

Subsection 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species which is proposed or listed as Endangered or Threatened. Agencies are required under Section 7(a)(3) to confer informally with the Service on any action that is likely to jeopardize the species. If published as a final rule, this action would require Federal agencies to consult with the Service concerning any action that may affect the species, to insure that activities they authorize, fund, or carry out, are not likely to jeopardize the continued existence of the Wyoming toad. Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

#### National Environmental Policy Act

A draft Environmental Assessment has been prepared in conjunction with this proposal. It is on file in the Service's Regional Endangered Species Office, 134 Union, Lakewood, Colorado, and may be examined during regular business hours (7:45-4:15pm). A determination will be made at the time of a final rule as to whether this is a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (implemented at 40 CFR Parts 1500-1508).

#### 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 this proposed rule are hereby solicited. Comments particularly are sought concerning:

1. Biological or other relevant data concerning any threat (or the lack thereof) to the Wyoming toad;
2. The location of any habitat of this species and the reasons why it should or should not be determined to be Critical Habitat;
3. Additional information concerning the range and distribution of this species; and
4. Current or planned activities in the subject area and the probable impact of such activities on the Wyoming toad.

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 request should be made in writing to the Regional Director, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225.

Final promulgation of the regulations on *Bufo hemiophrys baxteri* will take into consideration the comments and any additional information received by the Service, and such communications may lead it to adopt a final rule that differs from this proposal.

#### Author

The primary author of this proposed rule is Mr. Olin E. Bray, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225, with technical assistance from Dr. Mark R. Stromberg, The Nature Conservancy, Denver, Colorado. Dr. C. Kenneth Dodd, Jr., Office of Endangered Species, Washington, D.C., served as editor.

#### References

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**List of Subjects in 50 CFR Part 17**

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

**Proposed Regulation Promulgation**

**PART 17—[AMENDED]**

Accordingly, it is hereby proposed to amend Part 17, Subpart 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. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; and Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531, *et seq.*)

2. It is proposed to amend § 17.11(b) by adding, in alphabetical order, the following to the list under amphibians:

**§ 17.11 Endangered and threatened wildlife.**

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Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Toad, Wyoming.....	<i>Bufo hemiophrys baxteri</i> .	USA (WY)	Entire	E	NA	NA	NA

Dated: December 28, 1982.

**J. Craig Potter,**

Acting Assistant Secretary for Fish and Wildlife and Parks.

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