

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status and Critical Habitat for the Yaqui Chub, Proposed Threatened Status and Critical Habitat for the Beautiful Shiner and the Yaqui Catfish**AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Proposed rule.

SUMMARY: The Service proposes to determine the Yaqui chub (*Gila purpurea*) to be an Endangered species and the beautiful shiner (*Notropis formosus*) and the Yaqui catfish (*Ictalurus pricei*) to be Threatened species. Critical Habitat on the San Bernardino National Wildlife Refuge is proposed for these three fishes. A special rule to allow take in accordance with State law is proposed for the Threatened species. This action is being taken because populations of these species have been seriously reduced by habitat modifications including arroyo cutting, water diversion, impoundment construction, development of canal systems for irrigated agriculture, and excessive pumping of underground aquifers. An imminent threat to the remaining populations of Rio Yaqui fishes is the possible release of exotic fish such as the red shiner and channel catfish which may result in intense competition and/or genetic swamping. The Rio Yaqui fishes occur in the Rio Yaqui Basin which drains western Sonora, portions of eastern Chihuahua, and the extreme southeastern corner of Arizona. The Yaqui chub also has been recorded from the Rio Sonora and Rio Matape on the Pacific slope, and the beautiful shiner formerly inhabited small drainages in the closed Guzman Basin, including Rio Mimbres (New Mexico), Casas Grandes, Santa Maria, and Del Carmen, just east of the Rio Yaqui. This action would provide protection to wild populations of these species. Comments and information are sought from the public.

DATE: Comments from the State of Arizona and the public must be received by September 13, 1983. Public hearing requests must be received by August 29, 1983.

ADDRESSES: Interested persons or organizations are requested to submit comments and requests for a public hearing to the Regional Director, U.S. Fish and Wildlife Service, 500 Gold Avenue, S.W., P.O. Box 1306, Albuquerque, New Mexico 87103. Comments and materials relating to this proposed rule are available for public

inspection by appointment during normal business hours at the Service's Regional Office in Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: For further information on the proposal, contact Mr. Conrad Fjetland, Assistant Regional Director, U.S. Fish and Wildlife Service, Albuquerque, New Mexico 87103 (505/766-2321 or FTS 474-2321) 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**

All of the Rio Yaqui fishes addressed in this proposal were first collected and described from San Bernardino Creek just south of the Arizona-Sonora border in the latter half of the 19th century. Adult Yaqui chubs are known to inhabit pools and undercut banks in permanent streams. The beautiful shiner is found in a variety of habitats, but the largest populations occur in the riffles of small streams. Yaqui catfish are usually found in large rivers in areas of medium to slow current. Besides the above information on basic habitat preferences, little is known about the biology of the Rio Yaqui fishes. The biology of the beautiful shiner and the Yaqui catfish is thought to be similar to that of the red shiner and the channel catfish, respectively.

In the past, these fishes were found throughout the Rio Yaqui basin and in a few smaller adjacent drainages. The range of these species has been significantly reduced, primarily due to habitat destruction. Remaining populations are in danger of being subjected to intense competition and genetic swamping through the indiscriminate release of closely related exotics (e.g., red shiner and the channel catfish).

The Yaqui chub was recommended for listing in 1966 and 1973, but no action was taken because its status in Mexico was undetermined (Bur. Sport Fish. Wildl. Res. Pubs. 34 and 114). A list published in March of 1979 by the Endangered Species Committee of the American Fisheries Society recommended special concern for the status of the beautiful shiner and the Yaqui catfish, and described the Yaqui chub as endangered (Fisheries 4:29-44).

In 1978, the Fish and Wildlife Service contracted with biologists from Arizona State University and the University of Michigan to survey the status of fishes in the Rio Yaqui system of Mexico. These workers found only one specimen of the Yaqui chub after extensive

collection efforts throughout the Rio Yaqui drainage. Their final report, *Fishes of the Rio Yaqui, Mexico and United States, 1979*, also noted range reductions for the beautiful shiner and the Yaqui catfish and expressed concern for these species.

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 at 50 CFR Part 424.11(b) (under revision to accommodate 1982 amendments to the Act) set forth the procedures for adding species to the Federal list. The Secretary of Interior shall determine whether any species is Endangered or Threatened due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to these species are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.*—All three species of Rio Yaqui fish are seriously affected by a variety of habitat modifications. These species existed in San Bernardino Creek, Arizona, until the spring flows supporting the creek diminished and the remaining aquatic habitat was destroyed by cattle. Arroyo cutting, diverting stream headwaters, construction of impoundments, and excessive pumping of underground aquifers are responsible for the reduction of permanent stream habitat and failing springs. The remaining United States populations of Yaqui chub are limited to a few springs on the San Bernardino Ranch and Leslie Creek, both in southeastern Arizona, and are threatened by a gradually dwindling spring flow. The shiner and catfish have been extirpated from the United States. Many river systems in Mexico, especially in lowlands areas, have been highly modified into canal systems for irrigation agriculture. These alterations destroy pool habitats and have adverse impacts on fish populations.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.*—These fishes are not used for any commercial purposes, and past scientific collecting has had no impact on existing populations.

C. *Disease or predation.*—Introduced exotics, such as largemouth bass, bluegill, and black bullhead, would probably prey on the Yaqui chub and beautiful shiner if they had the opportunity. There are no plans to introduce any fishes within the Critical Habitat of this species.

D. The inadequacy of existing regulatory mechanisms.—The Yaqui chub is listed as a Group II species on the threatened and unique wildlife list of Arizona. Species listed as Group II are defined as being endangered or being eliminated from the State. Arizona law requires persons to obtain a scientific collecting permit before taking specimens of Group II species. The beautiful shiner and the Yaqui catfish are listed in Group I (species extirpated from Arizona that may possibly be reestablished) of the Arizona list of threatened and unique wildlife. Because Group I species do not exist in the State, Arizona law does not officially protect them. However, if reestablished, these fishes would probably be relisted as Group II species and permits would be required to collect them. Arizona law does not provide protection of essential habitat. The Yaqui fishes receive no protection in Mexico.

E. Other natural or manmade factors affecting its continued existence.—Extant populations of the beautiful shiner and the Yaqui catfish are seriously threatened by the introduction of closely related exotic species. Future releases of the red shiner (currently widely established in Arizona) into the rio Yaqui system may reduce beautiful shiner populations through competition or by genetic swamping. The Yaqui catfish may be similarly affected by expanding populations of the channel and blue catfish that have already been established in the Rio Yaqui drainage. The rapid elimination of native Yaqui topminnow (listed as Endangered and found in the same drainage) populations after introductions of the closely related common mosquitofish (*Gambusia affinis*) has been documented by Dr. W. L. Minckley (1973) and others. The introduction of exotics in Mexico is expected to continue at an increased rate as the interior portions of Sonora and Chihuahua are developed. The establishment of exotic species in Mexico may also result in intense competitive pressure on existing populations of the Yaqui chub.

Critical Habitat

50 CFR Part 424 defines "Critical Habitat" to include areas within the geographical area occupied by the species at the time the species is listed which are essential to the conservation of the species and which may require special management considerations or protection and specific areas outside the geographic area occupied by the species at the time of listing, upon a determination by the secretary that such areas are essential for the conservation of the species.

Proposed Critical Habitat for the Rio Yaqui fishes is as follows:

Arizona, Cochise County: All aquatic habitats of San Bernardino National Wildlife Refuge in S ½ Sec. 11; Sec. 14; S½ and NE ¼ Sec. 15; T24S R30E.

Subsection 4(b)(8) of the Act requires, to the maximum extent practicable, that any proposal to determine Critical Habitat be accompanied by a brief description and evaluation of those activities which, in the opinion of the Secretary, may adversely modify such habitat if undertaken, or may be affected by such designation. Any activity which would lower the groundwater level to the extent that the water flow from springs on San Bernardino National Wildlife Refuge would be reduced could adversely impact the proposed Critical Habitat. The activities include but are not limited to pumping of groundwater for irrigation and/or livestock and drilling activities associated with geothermal exploration. The other activity which could adversely impact Critical Habitat is the release of exotic or nonnative fishes. Predation and competition from these introductions could reduce or eliminate populations of the Endangered and Threatened fishes.

The aquatic habitats of San Bernardino National Wildlife Refuge, proposed as Critical Habitat, provides habitat for one of the two existing populations of Yaqui chubs. Additionally, the aquatic habitats on San Bernardino Refuge provide expansion habitat for the Yaqui chub and are considered prime reintroduction sites for the beautiful shiner and Yaqui catfish.

Available Conservation Measures

Regulations already published in Title 50, §§ 17.21 and 17.31, of the U.S. Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to Endangered and Threatened species. With respect to the Yaqui chub, beautiful shiner, and Yaqui catfish, all prohibitions of the Act, as implemented by 50 CFR 17.21 and 17.31 will 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 these species in interstate or foreign commerce. It also would 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.

Regulations codified at 50 CFR 17.22, 17.23, and 17.32 provide for the issuance

of permits to carry out otherwise prohibited activities involving Endangered and Threatened species under certain circumstances. Such permits are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available. The two species proposed as Threatened, Yaqui catfish and beautiful shiner, have a proposed special rule which would allow take in accordance with applicable State law. Any violation of State law would be a violation of the Endangered Species Act. This special rule will allow these fishes to be managed as Threatened species. Without the special rule, all prohibitions of an Endangered species status would apply.

If published as a final rule, this proposal would require Federal agencies not only to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the Yaqui chub, beautiful shiner and Yaqui catfish, but also would require them to insure that their actions do not result in the destruction or adverse modification of these Critical Habitats which have been determined by the Secretary. Provisions for interagency cooperation are codified at 50 CFR Part 402.

Subsection 4(b)(8) of the Act requires that, to the maximum extent practicable, any proposal to determine Critical Habitat be accompanied by a brief description and evaluation of those activities which in the opinion of the Secretary may adversely modify such habitat if undertaken or may be impacted by such designation.

The only proposed activity with Federal involvement that may potentially affect the proposed Critical Habitat is geothermal exploration. This activity beyond the boundary of the San Bernardino National Wildlife Refuge, could possibly affect underground aquifers supplying surface waters to this proposed Critical Habitat. These activities in the San Bernardino Valley will be regulated and licensed primarily by the Bureau of Land Management. They will be allowed to proceed in the Critical Habitat vicinity as long as artesian and surface water supplies at San Bernardino Ranch are adequately protected.

Subsection 4(b)(4) requires the Service to consider economic and other impacts of specifying a particular area as Critical Habitat. Listing these species as Endangered and Threatened does not

specifically preclude geothermal development in the area. It should be emphasized that Critical Habitat designation may not affect the Federal activity previously mentioned. If appropriate, the impact will be addressed during conferral or consultation with the Service as required by Section 7 of the Endangered Species Act of 1973, as amended. Consultation is presently required for actions that may affect the waters of the San Bernardino Wildlife Refuge because populations of the Endangered Gila Topminnow are currently found there.

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 these species should or should not be determined to be Critical Habitat as provided for by Section 7 of the Act;
- (3) Additional information concerning the range and distribution of these species;
- (4) Current or planned activities which may adversely modify the subject area which are being considered for Critical Habitat; and
- (5) The foreseeable economic and other impacts of the Critical Habitat designations on federally funded or authorized projects.

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, 500 Gold Avenue, S.W., P.O. Box 1306, Albuquerque, New Mexico 87103.

National Environmental Policy Act

An Environmental Assessment has been prepared in conjunction with this proposal. It is on file in the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia, and in the Regional Office (see address section) and may be examined, by appointment, during regular business hours. This assessment will be used as a

basis for a decision whether this is or is not 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).

Primary Author

The primary author of this rule is Mr. Jim Bednarz and Dr. Jim Johnson, U.S. Fish and Wildlife Service, Regional Office, Albuquerque, New Mexico (505/766-2321 or FTS 474-3974).

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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 1, 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(h), subchapter B of Chapter 1, Title 50 of the

U.S. Code of Federal Regulations, by adding the following entry

alphabetically to the table under the heading "FISHES" as set forth below.

§ 17.11 Endangered and threatened wildlife.

* * * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Catfish Yaqui.....	<i>Ictalurus pricei</i>	U.S.A. (AZ), Mexico (Sonora & Chihuahua).	Entire.....	T.....		17.95(e).....	17.44(g)
Chub, Yaqui.....	<i>Gila purpurea</i>	U.S.A. (AZ), Mexico (Sonora).	Entire.....	E.....		17.95(e).....	N/A
Shiner, beautiful.....	<i>Notropis formosus</i>	U.S.A. (AZ), Mexico (Sonora & Chihuahua).	Entire.....	T.....		17.95(e).....	17.44(g)

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§ 17.95 [Amended]

3. It is further proposed that Title 50 CFR Section 17.95(e), fishes, be amended by adding Critical Habitat of the Yaqui chub after that of the Spotfin chub as follows:

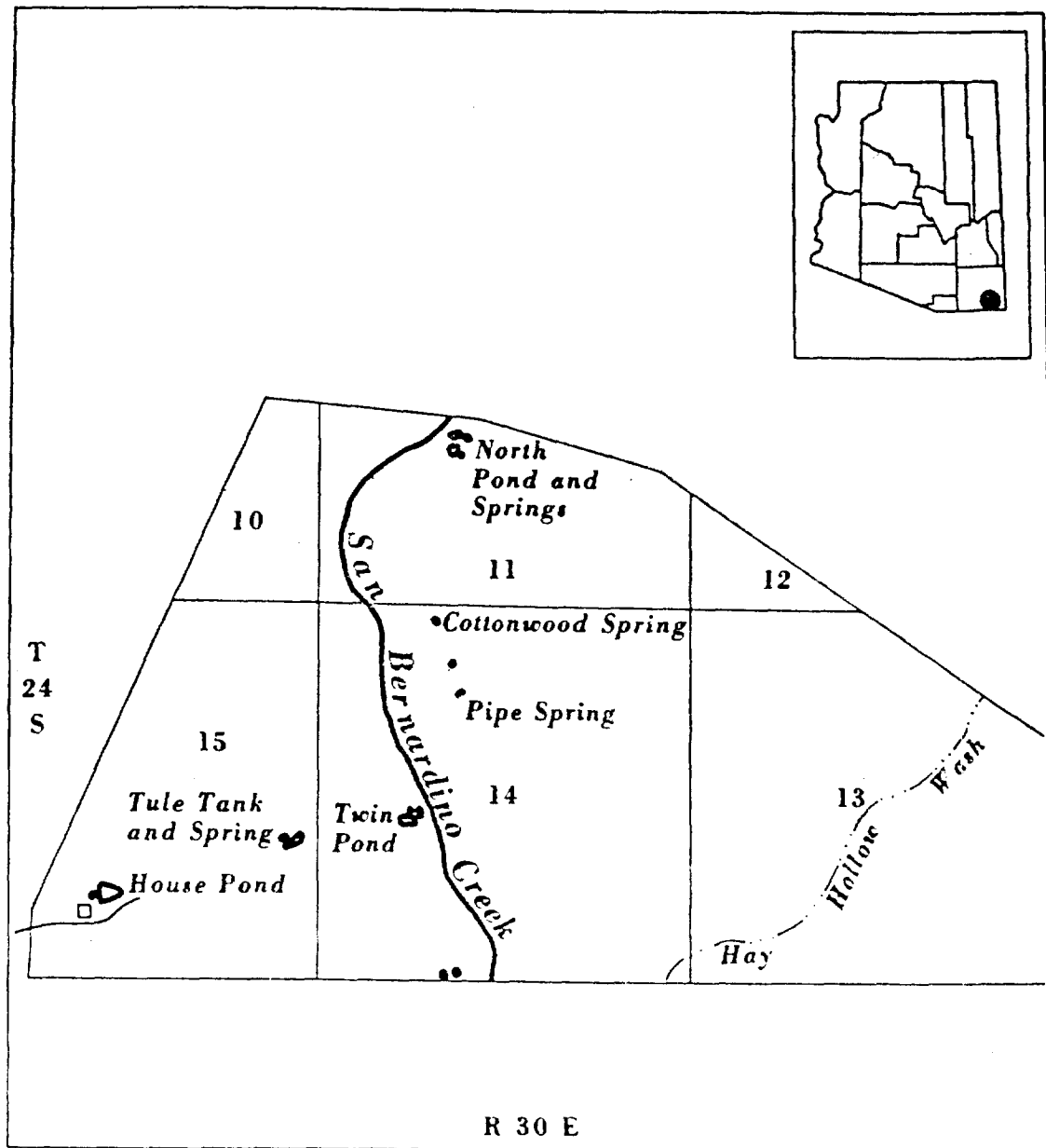
Yaqui Chub

(Gila purpurea)

Arizona, Cochise County: All aquatic

habitats of San Bernardino National Wildlife Refuge in S½ Sec. 11; Sec. 14: S½ and NE¼ Sec. 15; T24S, R30E. Known primary constituent elements include clean permanent water with deep pools and intermediate riffle areas, areas of detritus or heavy overgrown cut banks in the Rio Yaqui drainage, and absence of introduced exotic fishes.

**BEAUTIFUL SHINER
YAQUI CATFISH
YAQUI CHUB
Cochise County, ARIZONA**



4. The Service further proposes that § 17.95(e), fishes, be amended by adding Critical Habitat of the beautiful shiner after that of the Yaqui chub as follows:

Beautiful Shiner

(Notropis formosus)

Arizona, Cochise County: All aquatic

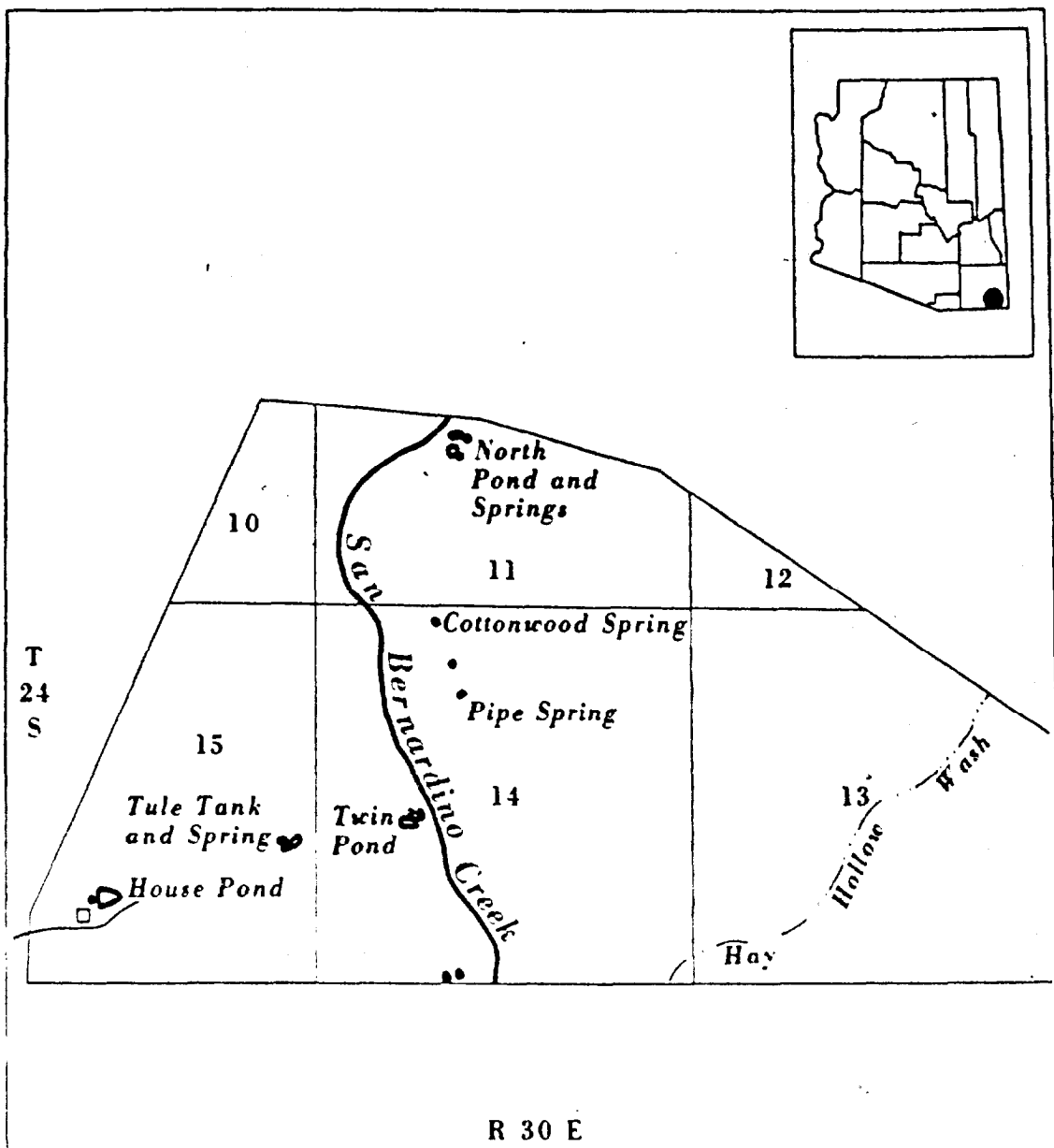
habitats of San Bernardino National Wildlife Refuge in S½ Sec. 11; Sec. 14; S½ and NE¼ Sec. 15; T24S, R30E. Known primary constituent elements include small permanent streams with riffles or intermittent creeks with pools and riffles in the Rio Yaqui drainage with clean water. These waters should be free of introduced exotic fishes.

BEAUTIFUL SHINER

YAQUI CATFISH

YAQUI CHUB

Cochise County, ARIZONA



5. The Service further proposes that § 17.95(e), fishes, be amended by adding Critical Habitat of the Yaqui catfish after that of the beautiful shiner as follows:

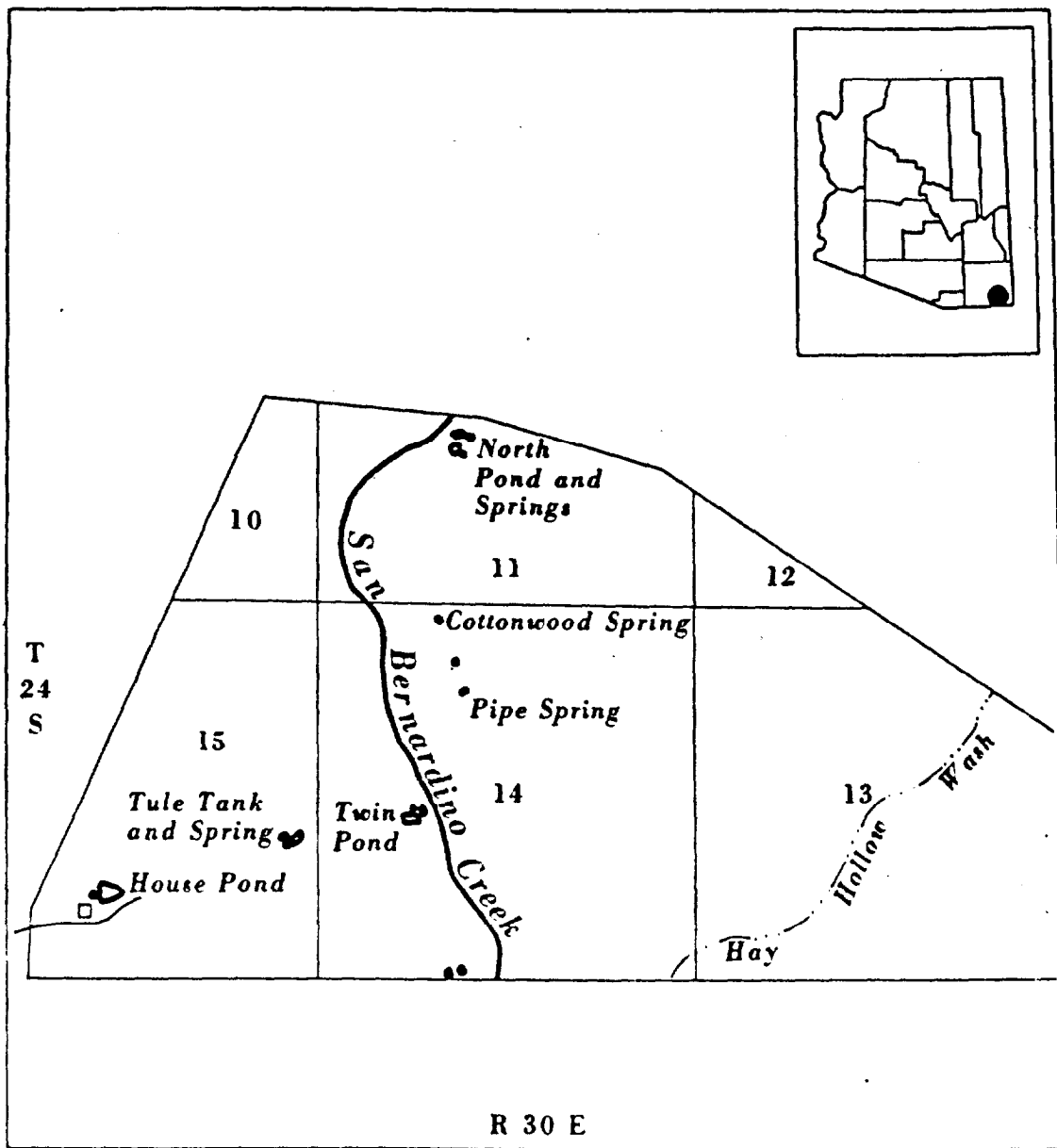
Yaqui Catfish

(Ictalurus pricei)

Arizona, Cochise County: All aquatic

habitats of San Bernardino National Wildlife Refuge in S½ Sec. 11; Sec. 14; S½ and NE¼ Sec. 15; T24S, R30E. Known primary constituent elements include clean streams of medium current with clear pools in the Rio Yaqui drainage without introduced exotic fishes.

**BEAUTIFUL SHINER
YAQUI CATFISH
YAQUI CHUB
Cochise County, ARIZONA**



§ 17.44 [Amended]

6. It is further proposed that Title 50 CFR § 17.44 be amended by adding a new paragraph (g) to read as follows:

* * * * *

(g) Yaqui catfish (*Ictalurus pricei*) an beautiful shiner (*Notropis formosus*).

(1) All provisions of Section 17.31 apply to these species, except that they may be taken in accordance with applicable State law.

(2) Any violation of State law will also be a violation of the Endangered Species Act.

Dated: May 20, 1983.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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