
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB38

**Endangered and Threatened Wildlife
and Plants; Endangered Status
Determined for the Fish Cahaba Shiner
(*Notropis Cahabae*)**

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Cahaba shiner (*Notropis cahabae*) to be an endangered species. The Cahaba shiner is found only in Alabama in about 60 miles (formerly 76 miles) of the Cahaba River in Perry, Bibb and Shelby Counties, with the stronghold of the population restricted to 15 river miles. The Cahaba shiner is vulnerable to adverse habitat alteration from residential, industrial, and commercial development because of its restricted range and occurrence in small, scattered populations.

EFFECTIVE DATE: November 28, 1990.

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, 6578 Dogwood View Parkway, Suite A, Jackson, Mississippi 39213.

FOR FURTHER INFORMATION CONTACT: Mr. James H. Stewart at the above address (601/965-4900 or FTS 490-4900).

SUPPLEMENTARY INFORMATION:

Background

The Cahaba shiner (*Notropis cahabae*) is a small delicate bodied, silvery colored shiner about 2.5 inches (6.35 centimeters) long with a peach colored narrow stripe over the dark lateral stripe. The species was described in 1989 (Mayden and Kuhajda 1989). The Cahaba shiner differs from the mimic shiner (*N. volucellus*) (a closely related species) by a lateral stripe that does not expand before the caudal spot, the absence of a predorsal dark blotch, the dorsal caudal peduncle scales are uniformly dark and pigmented and predorsal scales broadly outlined and diffuse (Mayden and Kuhajda 1989).

The Cahaba shiner has been collected in Alabama in about 76 miles (121 km) of the Cahaba River from 3 miles (4.8 km) northeast of Heiberger in Perry County to Highway 52 bridge near Helena in Shelby County (Ramsey 1982, Pierson *et al.* 1989a). Ramsey (1982) speculates that the Cahaba shiner had a wider historical distribution that possibly included the Coosa River. The present known range of about 60 miles (96 km) extends from 3 miles (4.8 km) northeast of Heiberger (Pierson *et al.* 1989a) to 3.75 miles (2.34 km) above Booth Ford (Howell *et al.* 1982). This range reduction of over 20 percent occurred between 1969 and 1977 (Ramsey 1982). Further reductions in total populations are evident, with the stronghold for the species now limited to about 15 river miles between the Falk Line and Piper Bridge or 20 percent of the historic range.

The habitat of the Cahaba shiner appears to be large shoal areas of the main channel of the Cahaba River. The species is found in the quieter waters less than 1.64 feet (0.5 meters) deep just below swift riffle areas (Howell *et al.* 1982). The Cahaba shiner seems to prefer patches of sandy substrate at the edge of or scattered throughout gravel beds or downstream of larger rocks and boulders. Many different types of habitats have been surveyed by ichthyologists to identify Cahaba shiner habitat. Ramsey (1982) searched large tributaries of the Cahaba River and small rivers of the upper Mobile River system. Howell *et al.* (1982) stated that the Cahaba shiner did not occupy deep water habitats or any other sites other than that of large, shallow shoals. The Cahaba shiner is found in streams with a stable riparian zone and water quality parameters of 11° to 29°C, 5 to 10 milligrams/liter dissolved oxygen, 7.2 to 8.9 pH, and 4 to 375 Jackson Turbidity Units. It probably requires a river with sufficient small crustaceans, insect larvae, and algae for food, similar to its close relative, the mimic shiner (Gilbert and Burgess 1980).

The Cahaba shiner seems consistent with other fish in the mimic shiner group, spawning much later than do other North American cyprinids. They appear to spawn from late May through June and seem to have a more limited spawning period than do many fish which reach a rather small adult size. Pre-spawning aggregations have been observed at the tail of a long pool, in a moderate current at 1.2 to 2.0 feet (0.36 to 0.61 meters) depth, just before the current quickened at the head of the main riffle (Ramsey 1982).

Of 56 collection records from 1958 through 1985, 22 records were collections of single specimens and 30 other records were collections of less than 15 specimens. These few collections resulted from at least 260 collections of 48,000 specimens of fish using nine different techniques over a 27 year period (Howell *et al.* 1982, Ramsey 1982; Stiles 1978; Howell, personal communication 1982; Pierson, *in litt.* 1984; Stiles, personal communication 1985). In addition, Ramsey (1982) used six associates of the Cahaba shiner as indicator species to identify collections for examination from over nine river systems in at least seven museums. No Cahaba shiners were found in any of these collections.

In more recent sampling, Stiles (1990) collected at known population sites for the Cahaba shiner in 1989 and 1990. In February and March 1989, sampling at the mouths of tributaries under the most favorable collecting conditions, he captured from one to nine Cahaba shiners at three of four sites. During September and October 1989, he sampled six sites on the mainstem, including the usually productive site at Bibb County Highway 27, and did not capture any Cahaba shiners. A series of six collections were made near Little Ugly Creek during January to March 1990 under conditions and at sites that have yielded the largest numbers of Cahaba shiners. From two to six Cahaba shiners were captured in five of the six collections. In comparing the results of Stiles' 1989-90 sampling with historic collections, the decreasing population trend is evident. Within the stronghold of the species, Stiles captured an average of 3.2 Cahaba shiners as compared with an average of 38.5 during the period of 1961-86. The ratio of Cahaba shiners to the closely related and more widespread mimic shiner in the earlier sampling was about 1 to 1. In Stiles' recent survey, the ratio was about 16 mimic shiners to each Cahaba shiner. In addition to the change in ratio, the abundance of both species has decreased, with the Cahaba shiner possibly the less adaptable of the two species.

The limited range, scattered populations, and low numbers of the Cahaba shiner have been known since its discovery (Miller 1972, Ramsey *et al.* 1972, Ramsey 1976, Stiles 1978, Howell *et al.* 1982, Ramsey 1982, Ramsey 1986). O'Neil (1983) and the Environmental Impact Statement for the Cahaba River Wastewater Facilities, Jefferson, Shelby, and St. Clair Counties, Alabama (U.S. Environmental Protection Agency 1979) identified past, present, and future water

quality problems in the Cahaba River. Water quality impacts have apparently extirpated the blue shiner (*N. caeruleus*) from the Cahaba River (Pierson and Krotzer 1987) and reduced the historic range of the Cahaba shiner by over 20 percent. The Cahaba shiner appears to have specialized habitat requirements and is vulnerable to adverse changes in its environment.

A proposal to list the Cahaba shiner as endangered was published in the Federal Register on November 29, 1977 (42 FR 60765). A notice that extended the comment period and provided a date for a public hearing was published on February 6, 1978 (43 FR 4872). Following the public hearing on March 15, 1978, the Service published a critical habitat correction and again extended the comment period on April 7, 1978 (43 FR 14687). The 1978 Endangered Species Act Amendments required the withdrawal of any rule that was not finalized within 1 year of the Amendments' enactment. In accordance with the Amendments, the still pending proposal to list the Cahaba shiner was withdrawn, effective November 29, 1979, and announced in the Federal Register on January 24, 1980 (45 FR 5782). Among new information that has been received since the proposal was withdrawn are two studies contracted by the Service. Dr. Mike Howell (Howell *et al.* 1982) was contracted to survey the Cahaba River for this species from Booth Ford to Trussville. The Alabama Geological Survey, under contract, conducted an historical water quality analysis of the Cahaba River above Centreville (O'Neil 1983). Other data received since the 1977 proposal are status reports by Ramsey (1982), Stiles (1978) and Pierson *et al.* (1989a, 1989b). The Cahaba shiner was again proposed as endangered in the Federal Register (56 FR 10083) on March 19, 1990. A notice of public hearing and reopening of the comment period was published in the Federal Register (55 FR 24133) on June 14, 1990, and the public hearing was held on July 10, 1990.

A petition dated January 22, 1990, was received by the Service from Mr. Ned Mudd, Jr., requesting that the Service protect the Cahaba shiner as an endangered species and also designate critical habitat. However, the petition was not accepted since it represented a request for action on which the Service had in essence already reached a decision, as reflected in the content of this final rule.

Summary of Comments and Recommendations

In the March 19, 1990, proposed rule and associated notifications, all

interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. The comment period was reopened and extended until July 20, 1990, to accommodate the public hearing. Appropriate Federal and State agencies, county governments, scientific and conservation organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the *Montgomery Advertiser* on April 6, 1990, and the *Birmingham News* on April 8, 1990. The newspaper notice of the public hearing and reopening of the comment period was published in the *Birmingham News* on June 24, 1990. A total of 455 comments and a petition with 289 signatures were received on the proposed rule. Two Federal agencies commented, with one in support and one expressing no position. Two State agencies commented in support of the proposed rule. There were six comments from local government agencies expressing concerns about the proposed rule, but none opposed it. Seven comments were received from conservation organizations in support of the rule. Four professional ichthyologists commented in support of the proposed rule. Thirty individuals commented on the need to protect the Cahaba River without specifically mentioning the Cahaba shiner. The remaining 404 comments were from individuals in support of the proposed rule as was the petition with 289 signatures.

A public hearing was requested by the Environmental Economics Committee of the Birmingham Chamber of Commerce, the Birmingham Water Works and Sewer Board, and the Jefferson County Commission. The hearing was held at the Dwight Beeson Hall Auditorium on the campus of Samford University, Birmingham, Alabama, on July 10, 1990, with 83 attendees. Comments were received from 25 individuals following a statement by the Service. Representatives from one State and two local government agencies commented without expressing a position on the proposed rule. Fifteen conservation organization representatives, six individuals and one professional ichthyologist commented in support of the proposed rule. A question and answer session resulted in only three questions, with only one of these pertaining directly to the Cahaba shiner.

Written comments and oral statements presented at the public hearing and received during the comment periods are covered in the following summary. Comments of a similar nature or point are grouped into

a number of general issues. These issues and the Service's response to each, are discussed below.

Issue 1: The Cahaba shiner warrants emergency listing. Response: Based upon all available information, the Service does not believe the Cahaba shiner requires emergency listing. There has been no data provided to the Service to indicate this species is in immediate danger of extinction. The shiner is surviving in low numbers in portions of its historical range, as it has over the past decade or more. It is expected to remain relatively stable for the immediate future. This negates the need for emergency protection.

Issue 2: List the Cahaba shiner as a threatened species. Response: Based upon communication with the Alabama Wildlife Federation, these commenters were using language provided to them in error. According to the Federation, the intent of the commenters was to list the species as proposed, rather than downlist it. Endangered status was chosen for reasons discussed elsewhere in this rule.

Issue 3: Critical habitat should be designated. Response: The basis for not determining critical habitat is discussed in that section.

Issue 4: Some data relative to sewage treatment plants is outdated. Response: The Service has corrected the data in this rule based upon information provided by various commenters.

Issue 5: Improve water quality standards for the Cahaba River. Response: Water quality standards are determined by the Environmental Protection Agency and various State agencies.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Cahaba shiner 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 (50 CFR part 424) promulgated to implement the listing provisions of the Act 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 Cahaba shiner (*Notropis cahabae*) are as follows:

A. *The present or threatened destruction, modification or curtailment of its habitat or range.* Degradation of water quality in the Cahaba River has and continues to have the greatest adverse impact to the Cahaba shiner.

Howell *et al.* (1982), during their study of the upper Cahaba River, observed adverse impacts to water quality from the Cahaba and Patton Creek Sewage Treatment Plants, limestone quarries on Buck Creek, and strip-mining in the area of Piney Woods Creek and Booth Ford. Historic populations of the Cahaba shiner have been seriously affected by urbanization, sewage pollution, and strip-mining activities in the upper Cahaba River Basin. Observations in the Howell *et al.* (1982) report and other reports that increased pH levels from limestone quarries and high inorganic nitrogen levels are apparently not adversely affecting the water quality of the Cahaba River and the Cahaba shiner have been demonstrated to be incorrect. This is evidenced by the continued decrease in the range and population of the Cahaba shiner.

Ramsey (1982) in his study of the Cahaba River observed an increase in blue-green algae, an indicator of water quality degradation, at several localities since he began collecting on the Cahaba River in 1962. One location in particular, just below the Shelby County Highway 52 bridge, has been adversely affected by a diminution of riverweed, apparently displaced by a substantial growth of blue-green algae on much of the rock and rubble substrate. This has resulted in the extirpation of Cahaba shiners, goldline darters, and blue shiners from this area since 1969. The effect on the fauna of water rich in dissolved nutrients can be magnified in still pools during low flows and high temperatures when dissolved oxygen drops to low levels. Virtually all of the water flow in the Cahaba River below the Cahaba Sewage Treatment Plant during low flows consists of treated sewage effluent until augmented by tributaries downstream.

Siltation from construction, agriculture, forestry, and strip-mining activities can have an adverse effect on water quality. Recent fish collections in the Cahaba River have shown a significant decrease in species diversity and numbers of specimens with an apparent increase in siltation (Howell *et al.* 1982, Ramsey 1982, Pierson and Krotzer 1987, Pierson *et al.* 1989a, Stiles 1990). Water quality degradation has apparently contributed to the extirpation of the blue shiner from the Cahaba River and the reduction in range and population of the Cahaba shiner. Collections at Booth Ford have shown a significant decrease in species diversity and numbers of specimens (Stiles 1978).

Because of the number of sewage treatment plants within the Cahaba River system, chlorination could have an

adverse impact on the Cahaba shiner. Observations by Ramsey (1982) of Cahaba shiners in aquaria indicate it is possibly more sensitive to chlorine than other *Notropis* species. There are efforts ongoing to dechlorinate some wastewater prior to release. This will undoubtedly be beneficial to the Cahaba shiner, provided the species used for toxicity monitoring are similarly susceptible to chlorine. In that regard, the use of the fathead minnow (*Pimephales promelas*) as the toxicity test species is questionable. The fathead minnow is acknowledged as a hardy species and likely more tolerant to toxicity than the Cahaba shiner. For the dechlorination effort to have maximum benefit to the Cahaba shiner, a more appropriate test species would be the mimic shiner.

The Environmental Impact Statement for the Cahaba River Wastewater Facilities, Jefferson, Shelby, and St. Clair Counties, Alabama, (U.S. Environmental Protection Agency 1979) identified and projected water quality problems in the Cahaba River. Relatively high levels of total inorganic nitrogen and total phosphorus were found at several locations through the basin. Algal biomass, increased production, high diurnal oxygen fluctuations, and decreased oxygen were found at lower water depths. The U.S. Environmental Protection Agency (EPA) found there was not enough water flow in the Cahaba River to handle sewage needs and that alternative water supplies to increase flow could have an adverse effect on the biota.

At the time of the EPA study there were 4 municipal wastewater treatment plants and 13 private wastewater treatment systems in the study area. The proposed rule for listing the Cahaba shiner stated that the Patton Creek Sewage treatment plant contributes nutrients to and affects the Cahaba River below the mouth of Patton Creek. That was an error. Sewage flow from the Patton Creek plant was diverted to the Cahaba River plant in December 1987, and the Patton Creek plant was shutdown. The Cahaba River plant has been upgraded to tertiary treatment. While this is certainly an improvement, the upgrade of the Cahaba River plant has not eliminated all the problems. Sewage that has received tertiary treatment is still high in nutrients and can contribute to eutrophication of an aquatic system. This plant is designed for 12 million gallons per day and receives an average of 9 million gallons per day. During periods of heavy inflows, i.e. rainfall, etc., the capacity of the plant is exceeded and sewage

bypasses some treatment stages (Leigh Pegues, Alabama Department of Environmental Management, *in litt.*). Since the improvements in December 1987, there have been 14 reportable periods of time when some sewage bypassed the treatment at the Cahaba River plant. These reportable periods were of 1 to 14 days duration with an estimated bypass of 520 million gallons of raw sewage. This periodic addition of organic matter to the Cahaba River from the Cahaba Wastewater Treatment Plant and other smaller wastewater treatment systems continues many of the problems identified by the EPA report, albeit at a reduced scale. Further EPA findings included 55 coal and iron surface mined areas, 22 deep mines, and 15 open pit mines and mine tailings that may contribute to siltation of the Cahaba River. While some of the EPA findings have been corrected, the Cahaba shiner has declined as a result of these impacts and continues to be affected by many of them.

Methane gas extraction is of considerable interest in the Cahaba River Basin. The Alabama Department of Environmental Management (ADEM) has issued three permits for the discharge of wastewater into the Cahaba River from methane gas wells. One of these permits has been returned to ADEM as a result of a permit violation, and neither of the other permittees are currently discharging wastewater (Tim Forester, Alabama Department of Environmental Management, pers. comm. 1990). Available information indicates the Cahaba shiner can tolerate the permitted chloride levels. However, the potential for the discharge of wastewater from these wells in excess of permitted levels and the impact on the Cahaba shiner is of concern. The impact of other pollutants that may be in wastewater from methane gas wells is unknown.

B. Overutilization for commercial, recreational, scientific, or educational purposes. According to Ramsey (1982), incidental take and occasional collecting are not considered to have a bearing on the Cahaba shiner's status. However, when a population is stressed by other factors, the removal of individuals under any circumstances becomes more significant.

C. Disease or predation. No adverse impacts from this factor are documented in the literature. However, the Cahaba shiner is a prey species for larger fish and when the population is stressed by other factors, the removal of individuals by predation or disease becomes more significant.

D. The inadequacy of existing regulatory mechanisms. The species is not given any special consideration under Federal environmental law when project design and potential impacts are considered. The determination of endangered status will provide that special consideration. Scientific Collectors Permits are required by the State of Alabama to collect Cahaba shiners for scientific purposes. Enforcement of this requirement is difficult.

E. Other natural or manmade factors affecting its continued existence. Approximately 700 specimens (one collection of 370) of the Cahaba shiner were collected from 1958 through 1985 in 56 collections (Ramsey 1982; Howell *et al.* 1982; Howell, personal communication 1982; Stiles, personal communication 1985; Pierson, *in litt.*). Of these 56 collections, 22 were of single specimens and all but 4 of the remaining collections contained fewer than 15. These low numbers of specimens and few successful collection localities illustrate the species' low abundance despite intensive collection effort. Stiles' (1990) more recent collecting documents a continuing decline in the population of this uncommon species.

The low numbers, scattered populations, restricted range, and unusually limited spawning interval (Ramsey 1982) of the Cahaba shiner make this species especially susceptible to any natural or manmade factors that adversely affect it. As the range is reduced, the populations become more scattered and isolated. This isolation increases the difficulty of successful reproduction and lessens the probability of genetic exchange between populations. As genetic diversity is reduced, the ability of a species to adapt to adversity is also reduced. As successful reproduction becomes more difficult, the susceptibility to environmental perturbation increases. The reduced population of the Cahaba shiner in those areas that have historically produced good numbers may be the effect of increased siltation and other environmental degradation acting synergistically with consecutive years of abnormally low rainfall to impact the ability of this species to reproduce (Stiles 1990).

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 Cahaba shiner as endangered, defined under the Act as being in danger of extinction

throughout all or a significant portion of its range. This preferred action is chosen due to the restricted range, scattered populations, low numbers, unusual biological traits, and water quality problems. Critical habitat is not designated for reasons discussed in that section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary may designate any habitat of a species that is considered to be critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. All involved Federal and State agencies are aware of the existence of this species in the Cahaba River and the importance of protecting its habitat. The designation of critical habitat will not provide significant net benefits to the Cahaba shiner above and beyond species listing when combined Federal and State protections are considered. Any activity in the Cahaba River Basin that is within or upstream of the range of the Cahaba shiner that adversely affects this species will be carefully reviewed. Protection of this species' habitat will be addressed through the recovery process and through the Section 7 jeopardy standard.

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. 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. 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 to 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.

Federal involvement is expected to include the Environmental Protection Agency in consideration of the Clean Water Act's provision for pesticides registration, and waste management actions. The Corps of Engineers will include this species in project planning and operation and during the permit review process. The Federal Highway Administration will consider impacts of bridge and road construction at points where known habitat is crossed. Urban development within the drainage basin may involve the Farmers Home Administration and their loan programs.

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 (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of 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 has 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.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of 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 Cited

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- Stiles, R.A. 1978. A report on the status of the goldline darter, *Percina aurolineata*, and the Cahaba shiner, *Notropis D.*, in the Cahaba River system of Alabama. Cahaba River Study Project. 6 pp. + Maps and Appendices.

Stiles, R.A. 1990. A preliminary report on the current status of the goldline darter, *Percina aurolineata*, and the Cahaba shiner, *Notropis cahabae*, in the Little Cahaba and Cahaba Rivers of Alabama. A report to the U.S. Fish and Wildlife Service. 28 pp.

U.S. Environmental Protection Agency. 1979. Final environmental impact statement for Cahaba River wastewater facilities Jefferson, Shelby, and St. Clair Counties, Alabama. 95 pp. + Transcript, Comments, Correspondence, and Appendices (1978).

Author

The primary author of this rule is

James H. Stewart (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species. Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Regulation 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: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Public Law 99-625, 100 Stat. 3500, unless otherwise noted.

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.

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(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Shiner, Cahaba	<i>Notropis cahabae</i>	U.S.A. (AL)	Entire	E	405	NA	NA

Dated: October 12, 1990.

Bruce Blanchard,

Acting Director, Fish and Wildlife Service.

[FR Doc. 90-25215 Filed 10-24-90; 8:45 am]

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