

pertaining to this proposal are sought from the public.

**DATES:** Comments from all interested parties must be received by September 9, 1986. Public hearing requests must be received by August 25, 1986.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to Field Supervisor, Endangered Species Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Richard G. Biggins, at the above address (704/259-0321 or FTS 672-0321).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Cape Fear shiner (*Notropis mekistocholas*), the only endemic fish known from North Carolina's Cape Fear River drainage, was discovered in 1962 and described by Snelson (1971). This fish has been collected from nine stream reaches in North Carolina (Bear Creek, Rocky River, and Robeson Creek, Chatham County; Fork Creek, Randolph County; Deep River, Moore and Randolph Counties; Deep River, Chatham and Lee Counties; and Cape Fear River, Kenneth Creek, and Parkers Creek, Harnett County (Snelson 1971, W. Palmer and A. Braswell, North Carolina State Museum of Natural History, personal communication 1985, Pottern and Huish 1985, 1986). Based on a recently completed Service-funded study (Pottern and Huish 1985, 1986) involving extensive surveys in the Cape Fear River Basin (including all historic sites) and a review of historical fish collection records from the Cape Fear, Neuse, and Yadkin River systems, the fish is now restricted to only three populations. The strongest population (101 individuals collected in 1984 and 1985) is located around the junction of the Rocky River and Deep River in Chatham and Lee Counties where the fish inhabits the Deep River from the upstream limits of the backwaters of Locksville Dam upstream to the Rocky River then upstream from the Rocky River to Bear Creek and upstream from Bear Creek to the Chatham County Road 2156 Bridge. A few individuals were collected just downstream of the Locksville Dam, but because of the limited extent of Cape Fear shiner habitat at this site, it is not believed this is a separate population. Instead, it is thought these fish represent a small

number of individuals that periodically drop down from the population above Locksville Dam pool.

The second population, represented by the collection of a specimen near State Highway Bridge 902 in Chatham County, is located above the Rocky River Hydroelectric Dam. This population was historically the best, but the area yielded only the one specimen after extensive surveys by Pottern and Huish (1985). The third population was found in the Deep River system in Randolph and Moore Counties. This population is believed to be small (Pottern and Huish 1985, 1986). Three individuals were found above the Highfalls Hydroelectric Reservoir; one in Fork Creek, Randolph County, and two in the Deep River, Moore County. The species was also found downstream of the highfalls Dam. However, the extent of suitable habitat in this stream reach is limited, and it is thought that these individuals likely result from downstream movement from above the reservoir where Cape Fear shiner habitat is more extensive.

The Cape Fear shiner is small, rarely exceeding 2 inches in length. The fish's body is flushed with a pale silvery yellow, and a black band runs along its sides (Snelson 1971). The fins are yellowish and somewhat pointed. The upper lip is black, and the lower lip bears a thin black bar along its margin. The Cape Fear shiner, unlike most other members of the large genus *Notropis*, feeds extensively in plant material, and its digestive tract is modified for this diet by having an elongated, convoluted intestine. The species is generally associated with gravel, cobble, and boulder substrates and has been observed to inhabit slow pools, riffles, and slow runs (Snelson 1971, Pottern and Huish 1985). In these habitats, the species is typically associated with schools of other related species, but it is never the numerically dominant species. Juveniles are often found in slackwater, among large rock outcrops in mid-stream, and in flooded side channels and pools (Pottern and Huish 1985). No information is presently available on breeding behavior, fecundity, or longevity.

The Cape Fear shiner may always have existed in low numbers. However, its recent reduction in range and its small population size (Pottern and Huish 1985, 1986) increases the species' vulnerability to a catastrophic event, such as a toxic chemical spill. Dam construction in the Cape Fear system has probably had the most serious impact on the species by inundating the species' rocky riverine habitat. Dams

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**Endangered and Threatened Wildlife and Plants; Proposal to List the Cape Fear Shiner as an Endangered Species with Critical Habitat**

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

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to list the Cape Fear shiner (*Notropis mekistocholas*) as an endangered species with critical habitat under the Endangered Species Act of 1973, as amended. This fish has recently undergone a reduction in range and population. It is currently known from only three small populations in the Cape Fear River drainage in Randolph, Moore, Lee, and Chatham Counties, North Carolina. Due to the species' limited distribution, any factor that degrades habitat or water quality in the short river reaches it inhabits—e.g., land use changes, chemical spills, wastewater discharges, impoundments, changes in stream flow, or increases in agricultural runoff—could threaten the species' survival. Comments and information

presently under study by the U.S. Department of the Army, Corps of Engineers (COE), for the Deep River and changes in flow regulation at existing hydroelectric facilities could further threaten the species. The deterioration of water quality has likely been another factor in the species' decline. The North Carolina Department of Natural Resources and Community Development (1983) classified water quality in the Deep River, Rocky River, and Bear Creek as good to fair, and referred to the Rocky river below Siler City as an area where their sampling indicates degradation. That report also stated: "Within the Cape Fear Basin, estimated average annual soil losses from cropland ranged from 3 tons per acre in the lower basin to 12 tons in the headwaters." The North Carolina State Division of Soil and Water Conservation considers 5 tons of soil loss per acre as the maximum allowable.

The Cape Fear shiner was one of 29 fish species included in a March 18, 1975, Notice of Review published by the Service in the *Federal Register* (40 FR 12297). On December 30, 1982, the Service announced in the *Federal Register* (47 FR 58454) that the Cape Fear shiner, along with 147 other fish species, was being considered for possible addition to the list of Endangered and Threatened Wildlife. On April 4, 1985, the Service notified Federal, State, and local governmental agencies and interested parties that the Asheville Endangered Species Field Station was reviewing the species' status. That notification requested information on the species' status and threats to its continued existence. Twelve responses to the April 4, 1985, notification were received. The COE, Wilmington District; North Carolina Division of Parks and Recreation, Natural Heritage Program; and the North Carolina State Museum of Natural History provided for the species. Concern for the species' welfare was also expressed by private individuals. The other respondents provided no information on threats, and did not take a position on the species' status. The Cape Fear shiner was included in the Services' September 18, 1985, Notice of review of Vertebrate Wildlife (50 FR 37958) as a category 1 species, indicating that the Service had substantial biological data to support a proposal to list the species as endangered or threatened.

#### Summary of Factors Affecting the Species

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 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 the five factors described in section 4(a)(1). These factors and their application to the Cape Fear shiner (*Notropis mekistocholas*) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** A review of historic collection records (Snelson 1971, W. Palmer and A. Braswell personal communication 1985), along with recent survey results (Pottern and Huish 1985, 1986), indicates that the Cape Fear shiner is presently restricted to only three populations (see "Background" section). Three historic populations have apparently been extirpated (Pottern and Huish 1985, 1986). Robeson Creek, Chatham County, was believed lost when Jordan Lake flooded part of the creek. The reasons for the loss of populations from Parkers Creek and Kenneth Creek in Harnett County are not known. The shiner has also not been recollected (Pottern and Huish 1985) from the Cape Fear River in Harnett County. However, review of historical and current collection records reveals that only one specimen has ever been collected from this river, and the fish likely was a stray individual from an upstream or tributary population. Since much of the Deep, Haw, and Cape Fear Rivers and their major tributaries has been impounded for hydroelectric power, and much of the rocky shoal habitat inundated, other populations and population segments that were never discovered have likely been lost to these reservoirs.

Of the three remaining populations, only the one located around the confluence of the Deep and Rocky Rivers in Chatham and Lee Counties (inhabiting a total of about 7.3 river miles) appears strong (Pottern and Huish 1985). The second population in the Rocky River, above the Rocky River hydroelectric facility, was the source of the type specimens used to describe the species (Snelson 1971). Historic records (W. Palmer and A. Braswell, personal communication 1985) reveal that collections of 15 to 30 specimens could be expected in this stretch of the Rocky River (State Route 902 or Chatham County Road 1010 Bridge) during a sampling visit in the late 1960s and early 1970s. Pottern and Huish (1985) sampled the Rocky River throughout this reach on numerous occasions and were able to collect only one specimen. The reason for the apparent decline in this

population is unknown. The third population, located in the Deep River system in Moore and Randolph Counties, is represented by the collection of six individuals (Pottern and Huish 1986). Three individuals were taken from below the dam. As the available habitat below the dam is limited, it is believed these fish are migrants from the upstream population.

Potential threats to the species and its habitat could come from such activities as road construction, stream channel modification, changes in stream flows for hydroelectric power, impoundments, land use changes, wastewater discharges, and other projects in the watershed if such activities are not planned and implemented with the survival of the species and the protection of its habitat in mind. The species is also potentially threatened by two U.S. Army Corps of Engineers projects presently under review for the Deep River. The Randleman Dam project would consist of a reservoir of the Deep River in Randolph County, above known Cape Fear shiner habitat. The Howards Mill Reservoir would be on the Deep River in Moore and Randolph Counties and would flood presently used Cape Fear shiner habitat.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** Most of the present range of the Cape Fear shiner is relatively inaccessible and overutilization of the species has not been and is not expected to be a problem.

**C. Disease or predation.** Although the Cape Fear shiner is undoubtedly consumed by predatory animals, there is no evidence that this predation is a threat to the species.

**D. The inadequacy of existing regulatory mechanisms.** North Carolina State law (Subsection 113-272.4) prohibits collecting wildlife and fish for scientific purposes without a State permit. However, this State law does not protect the species' habitat from the potential impacts of Federal actions. Federal listing will provide protection for the species under the Endangered Species Act by requiring a Federal permit to take the species and requiring Federal agencies to consult with the Service when projects they fund, authorize, or carry out may affect the species.

**E. Other natural or manmade factors affecting its continued existence.** The major portion of the best Cape Fear shiner population is located at the junction of the Deep and Rocky Rivers in Chatham and Lee Counties. A major toxic chemical spill at the U.S. Highway 15-105 Bridge upstream of this site on

the Rocky River could jeopardize this population, and as the other populations are extremely small and tenuous, the species' survival could be threatened.

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 propose this rule. Based on this evaluation, the preferred action is to list the Cape Fear shiner (*Notropis mekistocholas*) as an endangered species. Because of the species' restricted range and vulnerability of these isolated populations to a single catastrophic accident, threatened status does not appear to be appropriate for this species [see "Critical Habitat" section for a discussion of why critical habitat is being proposed for the Cape Fear shiner].

#### Critical Habitat

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

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is being proposed for the Cape Fear shiner to include: (1)

Approximately 5 miles of the Rocky River in Chatham County, North Carolina; (2) approximately 8 miles of Bear Creek, Rocky River, and Deep River in Chatham and Lee Counties, North Carolina; (3) approximately 6 miles of Fork Creek and Deep River in Randolph and Moore Counties, North Carolina.

(See "Regulation Promulgation" section for this proposed rule for the precise description of critical habitat.) These stream sections contain gravel, cobble, and boulder substrates with pools, riffles, and shallow runs for adult fish and slackwater areas with large rock outcrops and side channels and pools for juveniles. These areas also provide water of good quality with relatively low silt loads.

Section 4(b)(8) requires, for any proposed or final regulation that

designates critical habitat, a brief description and evaluation of those activities (public or private) that may adversely modify such habitat or may be affected by such designation. Activities which presently occur within the designated critical habitat include, in part, fishing, boating, scientific research, and nature study. These activities, at their present use level, do not appear to be adversely impacting the area.

There are also Federal activities that do or could occur within the Deep River Basin and that may be affected by protection of critical habitat. These activities include, construction of impoundments (in particular, U.S. Army Corps of Engineers reservoirs under study for the upper Deep River), stream alterations, bridge and road construction, and discharges of municipal and industrial wastes, and hydroelectric facilities. These activities could, if not carried out with the protection of the species in mind, degrade the water and substrate quality of the Deep River, Rocky River, Bear Creek, and Fork Creek by increasing siltation, water temperatures, organic pollutants, and extremes in water flow. If any of these activities may affect the critical habitat area and are the result of a Federal action, section 7(a)(2) of the Act, as amended, requires the agency to consult with the Service to ensure that actions they authorize, fund, or carry out, are not likely to destroy or adversely modify critical habitat.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service will consider the critical habitat designation in light of all additional relevant information obtained at the time of final rule.

#### Available to Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 (see revision at 51 FR 19926; June 3, 1986). Section 7(a)(4) requires Federal agencies to confer informally 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. If a species is subsequently 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 a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service. The Service is presently aware of only two Federal actions under consideration (Randleman and Howard Mill Reservoirs) that may affect the species and the proposed critical habitat. The Service has been in contact with the U.S. Army Corps of Engineers concerning the potential impacts of these projects on the species and its habitat. The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of 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 would apply to agents of the Service at State conservation agencies.

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

**Public Comments Solicited**

The Service intends that any final action from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species;
  - (2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
  - (3) Additional information concerning the range and distribution of this species;
  - (4) current or planned activities in the subject area and their possible impacts on this species; and
  - (5) Any foreseeable economic and other impacts resulting from the proposed designation of critical habitat.
- 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 adoption of 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 must be made in writing and addressed to the Endangered Species Field Office, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

**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**

North Carolina Department of Natural Resources and Community Development. 1983. Status of Water Resources in the Cape Fear River Basin. 135 pp.

Pottern, G.B., and M.T. Huish. 1985. Status survey of the Cape Fear shiner (*Notropis mekistocholas*). U.S. Fish and Wildlife Service Contract No. 14-16-0009-1522. 44 pp.

Pottern, G.B., and M.T. Huish. 1986. Supplement to the status survey of the Cape Fear shiner (*Notropis mekistocholas*). U.S. Fish and Wildlife Service Contract No. 14-16-0009-1522. 11 pp.

Snelson, F.F. 1971. *Notropis mekistocholas*, a new cyprinid fish endemic to the Cape Fear River basin, North Carolina. *Copeia* 1971:449-462.

**Author**

The primary author of this proposed rule is Richard G. Biggins, Endangered Species Field Office, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

**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 Code of Federal Regulations, as set forth below:

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

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-150, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (18 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under "FISHES," to the List of Endangered and Threatened Wildlife:

**§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Shiner, Cape Fear	<i>Notropis mekistocholas</i>	U.S.A. (NC)	Entire	E		17.95(e)	NA

3. It is further proposed to amend § 17.95(e) by adding critical habitat of the "Cape Fear shiner," in the same alphabetical order as the species occurs in § 17.11(h).

§ 17.95 Critical habitat—fish and wildlife.  
(e) \* \* \*

**Cape Fear Shiner**

(*Notropis mekistocholas*)

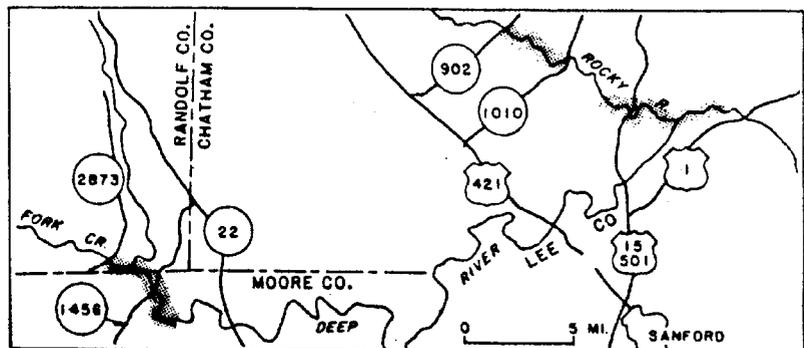
(1) *North Carolina*. Chatham County. Approximately 4.1 miles of the Rocky River from North Carolina State Highway 902 Bridge downstream to Chatham County Road 1010 Bridge;

(2) *North Carolina*. Chatham and Lee Counties. Approximately 0.5 miles of Bear Creek, from Chatham County Road 2156 Bridge downstream to the Rocky River, then downstream in the Rocky River (approximately 4.2 miles) to the

Deep River, then downstream in the Deep River (approximately 2.6) in Chatham and Lee Counties, to a point 0.3 river miles below the Moncure, North Carolina, U.S. Geological Survey Gaging Station; and

(3) *North Carolina*. Randolph and Moore Counties. Approximately 1.5

miles of Fork Creek, from a point 0.1 creek miles upstream of Randolph County Road 2873 Bridge downstream to the Deep River then downstream approximately 4.1 miles to the Deep River in Randolph and Moore Counties, North Carolina, to a point 2.5 river miles below Moore County Road 1456 Bridge.



Constituent elements include clean streams with gravel, cobble, and boulder substrates with pools, riffles, shallow runs and slackwater areas with large rock outcrops and side channels and pools with water of good quality with relatively low silt loads.

Dated: May 30, 1986.

**P. Daniel Smith,**

*Acting Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 86-15643 Filed 7-10-86; 8:45 am]

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