

threatened species under section 7 of the Act is essentially the same as for endangered species. Protection for threatened species under section 9 of the Act is much the same as for endangered species except for those items discussed under Factor D in the "Summary of Factors Affecting the Species" section of this rule. Recovery provisions are the same for threatened species as for endangered species.

This action is not an irreversible commitment on the part of the Service and reclassifying *Pediocactus sileri* to endangered would be possible should changes in management, habitat, or other factors occur that alter the species' present likelihood of survival and recovery.

National Environmental Policy Act

The Service has determined that Environmental Assessments and Environmental Impact Statements, 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).

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Authors

The primary authors of this rule are Bruce Palmer and Sus Rutman (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED].

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

Authority: 16 U.S.C. 1361-1467; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 96-225, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.12(h) by revising the entry for *Pediocactus sileri*, under the family Cactaceae, to read as follows:

§ 17.12 Endangered and threatened plants
 * * * * *
 (h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rule
Scientific name	Common name					
Cactaceae—Cactus family.						
<i>Pediocactus sileri</i> <i>Echinocactus s.</i> , <i>Utahia s.</i>	(= Siler pincushion cactus.	U.S.A. (AZ, UT) ..	T	64,524	NA	

Dated: November 22, 1993.
 Richard N. Smith,
 Acting Director, Fish and Wildlife Service.
 [FR Doc. 93-31426 Filed 12-23-93; 8:45 am].
 BILLING CODE 4310-55-P

50 CFR Part 17
RIN 1018-AB83
Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Relict Darter and Bluemask (=Jewel) Darter
AGENCY: Fish and Wildlife Service, Interior

ACTION: Final rule.
SUMMARY: The Service determines endangered status for the relict darter (*Etheostoma chienense*) and bluemask (=jewel) darter (*Etheostoma (Dorabius) sp.*) under the Endangered Species Act of 1973, as amended (Act). The relict darter, which is endemic to the Bayou du Chien drainage in western Kentucky

has been collected from only five sites within this drainage and is known to spawn in only one Bayou du Chien tributary. The relict darter has been and continues to be impacted by water quality and habitat deterioration resulting from stream channelization, siltation contributed by poor land use practices, and water pollutants. The bluemask darter is believed to be endemic to the Caney Fork River system (above Great Falls), Cumberland River basin, in central Tennessee. Based on historic records, the species was known from five rivers in the Caney Fork River system. The bluemask darter is now known from four stream reaches. Its distribution has been reduced by such factors as impoundments, water withdrawal, and the general deterioration of water quality resulting from siltation and pollutants contributed by coal mining, gravel mining, poor land use practices, and waste discharges; these factors continue to impact the species and its habitat.

EFFECTIVE DATE: January 26, 1994.

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, Asheville Field Office, 330 Ridgefield Court, Asheville, North Carolina 28806.

FOR FURTHER INFORMATION CONTACT: Mr. Richard G. Biggins at the above address (704/665-1195 Ext. 228).

SUPPLEMENTARY INFORMATION:

Background

Relict Darter

The relict darter is endemic to the Bayou du Chien watershed in extreme western Kentucky. This darter, which is one of 10 recognized species in the *Etheostoma squamiceps* complex of the subgenus *Catonotus*, was described by Page et al. (1992). It is a small (2½-inch) fish. Females and nonbreeding males have light tan colored backs and sides, with brown mottling and six to eight dark brown saddles. They have white unmarked undersides. Breeding males have gray to dark brown sides and backs and light tan undersides.

Warren and Burr (1991) reviewed all known recent and historical literature regarding the relict darter and surveyed known collection sites and potential habitat within the Bayou du Chien watershed. They reviewed fish collection records from adjacent watersheds and also surveyed these areas for the relict darter. They speculated that the fish was once more widespread in the Bayou du Chien system. However, based on historic and

current records, they reported that the fish has only been documented from nine sites in Graves and Hickman Counties, Kentucky; only one spawning site is known.

The relict darter's distribution has apparently been reduced by such factors as channelization and the general deterioration of water and habitat quality resulting from siltation and pollutants contributed by poor land use practices and by waste discharges. These factors continue to impact the species and its habitat. Because the species presently inhabits only limited areas and is known to spawn in only one small tributary, it is very vulnerable to extirpation from toxic chemical spills. Additionally, because of its small population size, the species' long-term genetic viability is questionable.

On October 29, 1991, the Service notified by mail (22 letters) potentially affected Federal and State agencies, local governments within the species' present range, and interested individuals that a status review of the relict darter was being conducted. Three comments were received as a result of this notification. The Tennessee Valley Authority and the Kentucky State Nature Preserves Commission supported the species' potential Federal protection and the Kentucky Department of Fish and Wildlife Resources provided information on fish collections in the watershed. No objections to the potential listing of the relict darter were received.

The relict darter does not appear as a candidate in the Service's notice of review for animal candidates that was published in the *Federal Register* on November 21, 1991 (56 FR 58804). However, based on status information gathered in 1991, this species was approved as a category 1 candidate by the Service's Director on April 29, 1992. A category 1 species is a species for which the Service has sufficient information to propose for protection under the Act.

Bluemask Darter

The bluemask darter (*Etheostoma (Doration) sp.*), which is closely related to *E. stigmaeum*, is being described as a full species by Steven Layman (University of Alabama, personal communication, 1992). The bluemask darter is a small (1 3/4-inch) fish. Breeding males are nearly covered by a bright blue color. Females and nonbreeding males are not as brightly colored. They have six dark saddlelike markings across the back and seven to eight lateral blotches. This species inhabits areas with slow to moderate current over sand and fine gravel. This

habitat type is very limited in some of the inhabited streams.

The bluemask darter is endemic to the Caney Fork River system (above Great Falls), Cumberland River basin, in central Tennessee. Based on current and historic records reviewed by Layman (1991), the species has been collected from five rivers in the Caney Fork River system—Upper Caney Fork River, Collins River, Rocky River, Calfkiller River, and Cane Creek in Grundy, Warren, Van Buren, and White Counties.

A 1991 fish survey (Layman 1991) of the Caney Fork River system above and below Great Falls revealed that the species is now restricted to isolated populations in reaches of four rivers in the Caney Fork River system—Cane Creek, Van Buren County; Collins River, Warren and Grundy Counties; Rocky River, Van Buren County; and Upper Caney Fork River, White County.

The bluemask darter has been impacted by such factors as impoundments, water withdrawals, and the general deterioration of water and substrate quality resulting from siltation and pollutants contributed by coal mining, gravel mining, poor land use practices, water withdrawal, and waste discharges; these factors continue to impact the species and its habitat.

In the Service's notice of review for candidate animals, published in the *Federal Register* of November 21, 1991 (56 FR 58804), the bluemask (=jewel) darter was identified as a category 2 candidate, i.e., a species that is being considered for possible addition to the Federal List of Endangered and Threatened Wildlife, but for which there is insufficient data to make a final decision on the need for listing. Based on the subsequent acquisition of additional status information, the Service's Director approved this species for elevation to category 1 in April 1992.

On February 28, 1992, the Service notified by mail (40 letters) potentially affected Federal and State agencies and local governments and interested individuals within the species' present range that a status review of the bluemask darter was being conducted. Three agencies responded. The Tennessee Wildlife Resources Agency said it would help protect the darter during the status review period and would continue this protection if it were listed. The U.S. Soil Conservation Service and the Department of the Air Force responded to the bluemask darter notification letter but did not take a position on the potential listing. No objections to the potential listing of the bluemask darter were received.

Summary of Comments and Recommendations

In the December 11, 1992, proposed rule (57 FR 58774), and through associated notifications, all interested parties were requested to submit factual reports and information that might contribute to the development of a final rule to list the relict darter and bluemask darter as endangered species. Appropriate Federal and State agencies, county governments, scientific organizations, and interested parties were contacted by letter dated December 17, 1992, and were requested to comment. Legal notices were published in the Southern Standard, McMinnville, Tennessee, on December 27, 1992, and the Paducah Sun, Paducah, Kentucky, December 31, 1992.

Relict Darter

In response to four formal requests, a public hearing on the Service's proposal to list the relict darter as an endangered species was held on April 6, 1993, at Purchase Area Development District, 1002 Medical Drive, Mayfield, Kentucky. The comment period was reopened from March 22, 1993, through April 20, 1993. A notice of the hearing and reopening of the comment period was published in the Federal Register on March 4, 1993 (58 FR 12353) and in the Mayfield Messenger, Mayfield, Kentucky, on March 29, 1993.

The Service received 29 written comments and 7 oral comments (at the public hearing) regarding the proposed listing. Six commenters (The Tennessee Valley Authority, Kentucky Department of Fish and Wildlife Resources, Kentucky State Nature Preserves Commission, Association of Concerned Environmentalists, and two individuals) supported the listing, most of the others did not. Following is a summary of the comments, concerns, and questions (referred to as "Issues" for the purpose of this summary) expressed in writing and orally at the public hearing. Issues of similar content have been grouped together. These issues and the Service's response to each are presented below.

Issue 1: Numerous commenters opposed the listing primarily because of perceived impacts to farm-related activities.

Response: The Service can understand the fears of local farmers regarding the potential impact to them resulting from listing the relict darter. However, based on the results of listing other aquatic species in Kentucky, the Service does not believe there will be any major impact to local farming activities as a result of listing the relict

darter. (See responses to Issues 2 and 5 below.)

Issue 2: If the relict darter is federally listed, landowners along the Bayou du Chien may not be allowed to keep the creek clear of blockages or maintain field drainage ditches, tile drains, and grass waterways.

Response: Landowners will be required to apply for the same Corps of Engineers (Corps) permits that are currently required. If the permit request were to involve a project that may affect the relict darter, the Corps would be required, under section 7 of the Act, to consult with the Service to ensure that the project is not likely to jeopardize the relict darter's continued existence. The Service has consulted with the Corps and other Federal agencies on many projects in areas inhabited by federally listed species. It has been the Service's experience that in nearly all cases the project objectives can be met and the species can be protected.

The Service does not see the need to consult with the Corps, under section 7 of the Act, for the periodic removal of downed trees for normal creek-flow maintenance and flood prevention. However, the Service would encourage that (1) the trees be removed with a minimum of stream-bank and streambed disturbance and that, where possible, any portion of the tree that is embedded in the streambed remain in place and (2) the removal work be done in the summer, fall, or early winter to lessen the impact on relict darter spawning. The relict darter uses the undersides of tree trunks and branches and other stable substrate for spawning and cover. Also, tree trunks and large branches on the stream bottom help to stabilize the streambed.

Issue 3: Several commenters suggested that the Service move the relict darter to other streams controlled by the Service.

Response: One of the primary purposes of the Act (section 2(b) is " * * * to provide a means whereby the ecosystem upon which endangered and threatened species depend may be conserved." Propagation and stocking of a species can be positive conservation tools, and are often used to help recover a species when unoccupied historic habitat is present. However, introduction of the relict darter outside its native range would not meet the Act's objective of preserving both the species and its habitat.

Issue 4: One commenter wanted to know the Service's position on the designation of critical habitat for the relict darter.

Response: The Service does not intend to designate critical habitat for

the relict darter (see the "Critical Habitat" section of this rule). This species exists in a very short reach of Bayou du Chien and is known to spawn in only one tributary. The Service believes that the identification of species-specific habitat as part of the critical habitat designation process could expose the species to an increased threat of vandalism, and it would not otherwise be beneficial to the species.

Issue 5: Numerous commenters were concerned about new restrictions that would be placed on farming activities and projects in the Bayou du Chien watershed, how they would be affected if the relict darter were federally listed, and the extent of unforeseen future impacts.

Response: New restrictions would primarily involve a requirement that Federal agencies review their actions and determine if their actions would adversely affect the relict darter. (See the "Available Conservation Measures" section of this rule.)

The Service recognizes that some landowners may consider the listing of the relict darter to be a threat to their livelihood. However, many Kentucky landowners have been dealing with federally listed aquatic species for a number of years, and the lack of reports of landowner conflicts indicates that the Federal protection of species has had minimal impacts on private landowners. The blackside dace, which was placed on the Federal list in 1987, occurs in about 30 streams in the upper Cumberland River basin in eastern Kentucky. Some mussels of the Green and Barrens Rivers in central Kentucky have been federally listed as endangered since the late 1970s. The fanshell mussel, which also exists in the Green and Barrens Rivers, as well as the Licking River in northeastern Kentucky, was listed in 1990. The Service is not aware of any cases where these species have caused significant conflicts with private landowners.

This does not mean that there will never be a conflict between the Service and landowners if the relict darter is federally listed. However, these examples indicate that, based on a historical perspective, the level of conflict involving federally listed aquatic species and private landowners has been minimal in Kentucky.

Issue 6: A number of commenters objected to the fact that the Service does not evaluate economic or other impacts when a species is listed, and also to the fact that landowners are not compensated if listing a species affects the use of their land.

Response: The Act requires the Service to list species based on the best

biological information available. The Act allows the Service to consider only the species' status when determining if a species should be protected under the Act. However, once a species is listed and the Service consults with Federal agencies on projects that are likely to adversely affect the species, the Service is required to work with Federal agencies and landowners to try and develop alternatives that will allow project objectives to be met and at the same time protect the species from extinction. In the rare case where no reasonable and prudent alternative can be identified, the affected individual may apply to the Secretary of the Interior for an exemption under provisions of section 7(g) of the Act.

As stated in the response to Issue 1, the Service does not expect any major impact to local landowners to arise from the relict darter listing. In the highly unlikely event of a bona fide taking of private property, as established by Fifth Amendment case law, such a loss would be reimbursable through the Federal court system.

Issue 7: Several commenters questioned the extent of the relict darter survey, the possibility that the relict darter might exist in other streams, and whether the Service would consider conducting additional surveys before listing the species.

Response: During 1991, recent and historical fish collection records from Bayou du Chien and adjacent watersheds (Mayfield Creek, Obion Creek, Clarks River, and Obion River) were reviewed, and 41 visits were made to sites in the Obion Creek and Bayou du Chien watershed. (See the "Background" section of this rule for a more detailed description of the survey.) Based on fish collections in the Bayou du Chien and historic and recent collection records from adjacent watersheds, the Service concludes that it is not likely that additional relict darter populations will be discovered outside the Bayou du Chien watershed. There is always a possibility that this fish does exist elsewhere. However, based on the extensive surveys described above, the Service is satisfied that no additional surveys are needed.

Issue 8: Several landowners wanted to know if government employees or Service contractors had the right to trespass on private property to study the relict darter.

Response: Neither government biologists nor Service contractors have the right to violate trespass laws to study the relict darter.

Issue 9: Several commenters questioned whether safeguards were in place to ensure that the designation of

the relict darter as a distinct species is based on sound scientific principles.

Response: Publication of a species description in scientific journals and a review of the description by the Service and other scientists is the primary safeguard to ensure that species descriptions are based on scientific data. The relict darter was described as a distinct species by Dr. Lawrence Page, Illinois Natural History Survey, Champaign, Illinois. Dr. Page is a noted authority on North America's freshwater fish. In preparing his description of the relict darter, Dr. Page examined the morphological and genetic characteristics of 17 species in the darter subgenus *Catonotus*. His description of the relict darter appeared in a major scientific journal (*Copeia*) and was subject to review by other scientists familiar with this species group and the taxonomy of fishes. The Service is satisfied, based on the present understanding of the relationships among the darters within this group, that the relict darter is a distinct species.

Issue 10: Several commenters wanted to know if farmers along the Bayou du Chien would be able to continue to use agricultural chemicals according to the label.

Response: The Service consults with the Environmental Protection Agency to determine if pesticides they register are likely to jeopardize the continued existence of listed species. When the use of a chemical is likely to jeopardize a listed species, the use of that chemical is restricted. Thus, it is possible that the use of a pesticide could be restricted to avoid jeopardizing the relict darter.

Issue 11: A number of commenters were concerned that the listing would affect current farming methods in the watershed.

Response: The Service has no authority under the Act to require changes in farming practices. However, the Service would encourage the use of buffer strips along water courses, reductions of pesticide and herbicide applications, and soil conservation practices that help control soil loss and siltation.

Issue 12: Several commenters wanted to know what involvement they would have in recovery planning, what actions would be required of local landowners in the recovery process, and how long recovery would take.

Response: The Service is required by the Act to provide an opportunity for public review and input into recovery plans. The Service, through provisions of the Act, can identify species and ecosystems that need special attention. However, without local support, the species and its habitat may be lost.

Recovery, to be successful, must be a cooperative venture among willing participants. The Service cannot force landowners to participate in recovery. However, the Service would seek willing landowners to participate in habitat restoration for the relict darter.

Recovery is a long and complex process, and it is difficult to estimate when recovery will be reached. It has taken many years to adversely impact the relict darter and its habitat, and it will take many years to recover it.

Issue 13: Several individuals felt there might be a connection between the listing of the relict darter and a Service plan to create a refuge in western Kentucky.

Response: The Service is in the very early stages of considering a possible refuge in the Clarks River watershed near Benton, Kentucky. The relict darter is not known from this basin. There is no connection between this listing and planning for the refuge.

Issue 14: Several agencies, organizations, and individuals provided information regarding the efforts by local farmers to conserve the quality of the Bayou du Chien watershed, and one individual suggested that a cooperative effort among farmers and government agencies might be used to protect the fish without listing it.

Response: The Service recognizes and applauds the conservation efforts of many farmers in the Bayou du Chien watershed and emphasizes that it will take a coordinated effort to recover the relict darter. However, the Service believes the relict darter is in serious danger of extinction and that it was the intent of Congress to federally protect such species. Since the species meets the definition of endangered, it must be listed under the Act.

Issue 15: One individual suggested that the Service consider listing the relict darter as a threatened species.

Response: The Service has evaluated the status of the relict darter in making a determination as to whether to list the species as endangered or threatened. Based on the species' limited range, significant threats to its continued existence, and the fact that a single toxic spill could cause extinction, the Service believes that endangered status is appropriate.

Bluemask Darter

Six written comments were received on the proposal to list the bluemask darter as an endangered species. The Tennessee Valley Authority, Tennessee Wildlife Resources Agency, Tennessee Department of Environment and Conservation, and a private individual supported listing the bluemask darter.

On January 20, 1993, the Collins River Preservation Association (CRPA) requested a public hearing on the bluemark darter proposal. A biologist with the Service's Asheville Field Office met with members of the CRPA to discuss the proposed rule and explain the potential implications of listing the bluemark darter to local residents. As a result of this meeting, the CRPA withdrew its request for a public hearing (letter dated February 5, 1993) and provided clarification regarding threats to the species. That information is included in this final rule.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the relict darter and bluemark darter should be classified as 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 endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to the relict darter (*Etheostoma chienense*) and the bluemark darter (*Etheostoma (Doration) sp.*) are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The relict darter is endemic to the Bayou du Chien system in extreme western Kentucky (Warren and Burr 1991). Webb and Sisk (1975) indicated that this darter was "fairly common" in the high gradient reaches of the Bayou du Chien in the early 1970s. Warren and Burr (1991) speculated that in presettlement times the species was likely more widespread within the Bayou du Chien watershed in areas upstream of the Mississippi floodplain (upstream of Moscow, Kentucky).

Warren and Burr (1991) surveyed the system in 1991 and collected the species at five sites but found it abundant at only two sites (18 were collected at one site and 46 at another). The other three sites yielded a total of only eight relict darters. They and other researchers have been able to locate only one spawning area in a small tributary stream located in Graves County.

Adult relict darters are concentrated in the headwater areas in slow-flowing pools, usually associated with gravel, sand, and leaf litter substrates near fallen tree branches, undercut banks, or overhanging stream-bank vegetation

(Warren and Burr 1991). Warren and Burr (1991) noted that the Bayou du Chien system has been extensively channelized. Much of the streams' sinuosity was eliminated, undercut banks were lost, stream-bank vegetation and instream cover were removed, and some smaller streams now flow only intermittently. This massive alteration of the relict darter's habitat reduced both relict darter numbers and the amount of suitable habitat. Aside from past channelization impacts, the area is extensively farmed, and much of the watershed has been deforested. These alterations result in a fairly high silt load within the Bayou du Chien system that continues to degrade the habitat and further impact the species.

The bluemark darter has only been collected from the Caney Fork River system (above Great Falls), Cumberland River basin, in central Tennessee. Layman (1991) reviewed historic collection records and reported that the species has been collected from five rivers in the Caney Fork River system—Upper Caney Fork River, Collins River, Rocky River, Calfkiller River, and Cane Creek in Grundy, Warren, Van Buren, and White Counties. Historic fish collection records are sparse for this area. However, considering the extent of the fish's preferred habitat (slow to moderate current, with sand and fine gravel substrates (Layman 1991)), which was inundated by Great Falls Reservoir in the 1910s, the species was once likely more widely distributed within this portion of the Caney Fork system than available records indicate. The belief that the species has undergone a range reduction is also supported by Starnes and Etnier (1980).

In 1991, Layman (1991) surveyed the Caney Fork River system above and below Great Falls. He found the fish restricted to isolated populations in short reaches of four rivers in the Caney Fork River system—Cane Creek, Van Buren County; Collins River, Warren and Grundy Counties; Rocky River, Van Buren County; and upper Caney Fork River, White County. Layman (1991) estimated that the bluemark darter currently inhabits about 500 feet of Cane Creek, 25 miles of the Collins River, 2 miles of the Rocky River, and 2.5 miles of the upper Caney Fork River.

The species was historically taken from two sites in the Calfkiller River, White County. However, Layman (1991) made collections at both of these historic sites and four other Calfkiller River sites, but no specimens were taken. It is believed that the species has now been extirpated from this river. Also, the fish was not taken (Layman 1991) in collections made in other

Caney Fork tributaries—Barrens Fork River, Falling Water River, Charles Creek, Laurel Creek, Hickory Creek, Town Creek, and Mountain Creek.

The bluemark darter's distribution has been reduced by such factors as impoundments, water withdrawal, and the general deterioration of water quality resulting from siltation and pollutants contributed by coal mining (coal mining-related impacts do not occur in the Collins River); gravel mining; poor land use practices related to agriculture, road construction, etc.; water withdrawal, and waste discharges. These factors continue to impact the species and its habitat.

B. Overutilization for commercial, recreational, scientific, or educational purposes. The specific areas inhabited by both fish are presently not known to the general public. As a result, there has not been a problem with the general public taking these fish. However, both fish exist in very small, restricted areas; and the relict darter is known to spawn in only one short stream reach. If the specific inhabited stream reaches were to become public knowledge through critical habitat designation, it would be extremely easy for vandals to seriously impact the species. Although scientific collecting is not presently identified as a threat, take by private and institutional collectors could pose a threat if specific inhabited locations are revealed. Federal protection, through listing, will help to minimize the negative impact of illegal or inappropriate take.

C. Disease or predation. Although the relict and bluemark darters are undoubtedly consumed by predators, there is no evidence that predation is a threat to the species. Disease is not known to be a problem for either species.

D. The inadequacy of existing regulatory mechanisms. The States of Kentucky and Tennessee prohibit taking fish and wildlife for scientific purposes without a State collecting permit. These permits provide some protection for these fish. However, the species are generally not protected from other threats. Federal listing will provide additional protection for the species under the Act by requiring Federal permits to take the species and by requiring Federal agencies to consult with the Service when projects they fund, authorize, or carry out may adversely affect them.

E. Other natural or manmade factors affecting its continued existence. Because the existing relict and bluemark darter populations inhabit only short stream reaches, they are vulnerable to extirpation from accidental toxic

chemical spills. This is especially true of the only known relict darter spawning site. Additionally, because the relict darter population has been drastically reduced in size, the species' long-term genetic viability is questionable.

All bluemask darter populations are now isolated by the Great Falls Reservoir. As the populations in Cane Creek and the Upper Caney Fork are extremely small and the reservoir restricts gene flow among populations, the long-term genetic viability of these populations is questionable.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by both fish in determining to make this rule final. Based on these evaluations, the preferred action is to list the relict darter (*Etheostoma chienense*) and bluemask darter (*Etheostoma (Doration) sp.*) as endangered. The relict darter is now known from only five sites in the Bayou du Chien system in western Kentucky. The bluemask darter is currently known from only four streams in the Caney Fork River system in central Tennessee. These fish and their habitat have been and continue to be impacted by habitat destruction and range reduction. Their limited distribution also makes them very vulnerable to toxic chemical spills. Because of their restricted distributions and their vulnerability to extinction, endangered status appears to be the most appropriate classification for these species.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service's regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other activity and the identification of critical habitat can be expected to increase the degree of threat to the species or (2) such designation of critical habitat would not be beneficial to the species. The Service finds that designation of critical habitat is not prudent for these species. Such a determination would result in no known benefit to the relict and bluemask darters, and designation of critical habitat could further threaten these two species.

Section 7(a)(2) and regulations codified at 50 CFR part 402 require Federal agencies to ensure, in consultation with and with the

assistance of the Service, that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or destroy or adversely modify their critical habitat, if designated. (See the "Available Conservation Measures" section for a further discussion of section 7.) As part of the development of this final rule, Federal and State agencies were notified of the fishes' general distribution, and they were requested to provide data on proposed Federal actions that might adversely affect the two species. No specific projects were identified. Should any future projects be proposed in areas inhabited by these fish, the involved Federal agency will already have the general distributional data needed to determine if the species may be impacted by their action, and, if needed, more specific distributional information would be provided.

Critical habitat also would not be beneficial in terms of adding additional protection for the species under section 7 of the Act. Regulations promulgated for the implementation of section 7 provide for both a "jeopardy" standard and a "destruction or adverse modification" of critical habitat standard. Due to the highly precarious status of the bluemask and relict darters, any Federal action likely to adversely affect the species would trigger both standards. Under these conditions, the "destruction or adverse modification" standard adds no additional benefit to protection of the species.

In addition, both fish are very rare, and taking for scientific purposes and private collection could pose a threat if specific site information were released. The publication of critical habitat maps in the Federal Register and local newspapers and other publicity accompanying critical habitat designation could increase the collection threat and increase the potential for vandalism during the often controversial critical habitat designation process. The locations of populations of these species have consequently been described only in general terms in this final rule. If needed, any existing precise locality data would be available to appropriate Federal, State, and local governmental agencies from the Service office described in the "ADDRESSES" section; the Service's Cookeville Field Office, 446 Neal Street, Cookeville, Tennessee 38501; the Kentucky Department of Fish and Wildlife Resources; Kentucky State Nature Preserves Commission; Tennessee Wildlife Resources Agency; and Tennessee Department of Environment and Conservation.

For the foregoing reasons the Service believes that critical habitat designation is not prudent for these species, and that their protection can be adequately accomplished through the section 7 jeopardy standard and section 9 prohibitions against take.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the 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 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.

The Service notified Federal agencies that may have programs affecting these species. No specific proposed Federal actions were identified that would likely affect the species. Federal activities that could occur and impact the species include, but are not limited to, the carrying out or issuance of permits for reservoir construction, stream alterations, wastewater facility development, pesticide registration, and road and bridge construction. It has been the experience of the Service, however, that nearly all section 7 consultations can be resolved so that the species is protected and the project objectives are met.

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 is also 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. In some instances, permits may be issued for a specified time to relieve undue economic hardship that would be suffered if such relief were not available. These species are not in trade, and such permit requests are not expected.

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

Layman, S. R. 1991. Status survey for the dirty darter (*Etheostoma olivaceum*) and the jewel darter (*Etheostoma (Doration) sp.*) in the Caney Fork and Cumberland Rivers, Tennessee. Final report submitted to the U.S. Fish and Wildlife Service, Asheville, NC. 35 pages.

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Starnes, W. C., and D. A. Etnier. 1980. Fishes. Pages B1-B134 in D. C. Eagar and R. M. Hatcher (eds.). Tennessee's Rare Wildlife Volume 1: The Vertebrates. Tennessee Heritage Program.

Warren, M. L. 1991. Survey of the relict darter (*Etheostoma (Catonotus) sp. cf. E. neopterygum*). Final report submitted to the U.S. Fish and Wildlife Service, Asheville, NC. November 1991. 33 pp.

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Author

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List of Subjects in 50 CFR Part 17

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

Regulations Promulgation

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

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; Pub. L. 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, to read as follows:

§ 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							
Darter, bluemask(=jewel)	<i>Etheostoma (Doration) sp.</i>	U.S.A. (TN)	Entire	E	525	NA.	
Darter, relict	<i>Etheostoma chienense.</i>	U.S.A. (KY)	Entire	E	525	NA.	

Dated: November 22, 1993.
Richard N. Smith,
 Acting Director, Fish and Wildlife Service.
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