DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB42

Endangered and Threatened Wildlife and Plants; Proposal To List the Ouachita Rock-Pocketbook (mussel) as an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to list the Ouachita rock-pocketbook (mussel) (*Arkansia-Arcidens wheeleri*) as an endangered species under the Endangered Species Act of 1973 (Act), as amended. Critical habitat is not being proposed. This species, which was once known from the Kiamichi River in Oklahoma, the Little River in southwestern Arkansas, and the Ouachita River in central Arkansas, is presently known to survive only in an approximately 80-mile reach of the Kiamichi River above Hugo Reservoir in Oklahoma and a 5-mile segment of the Little River in southwestern Arkansas. The species' range has been seriously restricted by the construction of reservoirs, water quality degradation, and other impacts to its habitat. Owing to the species' limited distribution, any factors that adversely modify habitat or water quality in these stream segments could further threaten the species. Comments and information pertaining to this proposal are sought from the public.

DATES: Comments from all interested parties must be received by September 21, 1990. Public hearing requests must be received by September 6, 1990.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Ecological Services Field Office, 222 South Houston, suite A, Tulsa, Oklahoma 74127. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Allen Ratzlaff at the above address (918/581-7458 or FTS 745-7458).

SUPPLEMENTARY INFORMATION:

Background

The Ouachita rock-pocketbook, previously known as Wheeler's pearly mussel, was originally described as *Arkansia wheeleri* by Ortmann and Walker (1912), who erected the new monotypic genus *Arkansia* to contain *A. wheeleri*. The species was subsequently placed in the genus *Arcidens* by Clarke (1981). While it is undoubtedly related to *Arcidens confragosus*, the Service is following Turgeon et al. (1988) in retaining it in the monotypic genus *Arkansia* in this proposed rule. The shell is quadrate-ovate or subinflated, up to 100 millimeters (mm) (4.3 inches) long, 73 mm (2.9 inches) high, and 48 mm (1.9 inches) wide, moderately heavy, somewhat thickened anteriorly (up to 6 mm (0.24 inches) thick), and half as thick posteriorly. The umbos (beaks) are prominent. The periostracum is chestnut-brown to black with a silky texture. The shell has a well defined lunule depression. There is heavy sculpturing only on the posterior half of the shell and barely perceptible beak sculpturing. The external membrane of the outer demibranch is openly porous, like a loosely woven net. The glochidia are unknown (Branson 1982, Clarke 1981).

Ortmann and Walker (1912) designated the type locality (*loc cit*) as "Old River, Arkadelphia, Arkansas". Wheeler (1918) published a map of this locality showing that it corresponds to a series of interconnected narrow lakes (probably oxbows) near Arkadelphia, Clarke County, Arkansas. Wheeler gave the Ouachita River as another locality, but stated it was rare in that area. Ortmann (1921) and Iseley (1925) reported specimens being collected in the Kiamichi River, Pushmataha, Oklahoma, near Antlers and Tuskahoma, respectively. Few other records were reported until recently.

Valentine and Stansbery (1971) reported the mussel from the Kiamichi River at Spencerville Crossing, Pushmataha County, Oklahoma. This site has since been flooded by Hugo Reservoir. Johnson (1980) and Clarke (1981) added to additional localities by surveying museum specimens: Little River, White Cliffs, Little River County, Arkansas, and the Kiamichi River 1.2 miles south of Clayton, Pushmataha County, Oklahoma. Harris and Gordon (1987) report that several fairly old empty shells were found in 1983, four

miles northwest of the U.S. Highway 59 and 71 crossing of Millwood Lake, Little River County-Sevier County border, Arkansas. A single valve of this species was found in an archaeological site in Jack Fork Valley, Pushmataha County, Oklahoma (Bogan and Bogan 1983).

Populations are only known to exist in the Kiamichi River from the extreme southwestern corner of LeFlore County (Oklahoma Natural Heritage Inventory 1989) to Antlers, Pushmataha County, Oklahoma (estimated to be about 1000 individuals), and the Little River from the Oklahoma border 5 miles east along the border of Little River and Sevier Counties, Arkansas (less than 100 individuals). However, Harris and Gordon (1987) failed to find living specimens in this portion of the Little River in 1983. In a survey of the Kiamichi River, Mehlhop-Cifelli and Miller (1989) documented *A. wheeleri* in an additional 30 mile stretch of river, for a total documented species range of 80 river miles. *Arkansia wheeleri* occurs in very low densities at all documented sites.

Very little is known about the habitat requirements of the Ouachita rock-pocketbook. It is typically found in stream-side channels and backwaters with little or no flow in muddy or rocky substrate near riffles. Mehlhop-Cifelli and Miller (1989) found that backwater areas are usually next to sand/gravel/cobble bars that either are scoured clean or support emergent aquatic vegetation.

No information is available on the life history of the species. However, another member of the same subfamily, *Arcidens confragosus*, is a long-term breeder, becoming gravid in the fall and releasing glochidia (larvae) in the spring. The glochidia attach to the fins, tail, or scales of fish. The fish hosts of *Arcidens confragosus* include the American eel, gizzard shad, rock bass, white crappie, and freshwater drum (Clarke 1981).

Arkansia wheeleri (known then as Wheeler's pearly mussel), was included in the May 22, 1984, Review of Invertebrate Wildlife for Listing as Endangered or Threatened Species (49 FR 21664) as a Category 2 species. Category 2 comprises taxa for which information indicates that proposing to list the species as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently available to support a proposed rule. In the January 6, 1989, Animal Notice of Review (54 FR 554–579), the Ouachita rock-pocketbook (*Arkansia wheeleri*) was moved to Category 1, which comprises taxa for which the Service currently has substantial information to support the biological appropriateness of proposing to list 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 Ouachita rock-pocketbook (*Arkansia wheeleri*) are as follows:

A. *The present or threatened destruction, modification or curtailment of its habitat or range.* Two factors, water pollution and reservoir construction, have apparently been the principal reason for this species' precipitous decline. On the Ouachita River, the type locality has been polluted to the extent that it is unlikely any mussel could now survive in the stream. The Ouachita River has also been impacted by several reservoirs and Clarke (1987) states that these have likely contributed to the species' decline in this drainage.

Hypolimnetic discharge from Pine Creek Dam and periodic pollution discharge into the Rolling Fork Creek has caused the downstream loss of many mussel species, including the Ouachita rock-pocketbook, in the Little River. Below the confluence of the Rolling Fork Creek on the Little River, approximately 5 miles east of the Oklahoma-Arkansas State line, water quality is now so poor that the mussel apparently cannot survive there. There is also a threat from hypolimnetic discharge from Broken Bow Reservoir, McCurtain County, Oklahoma. If constructed, the authorized Tuskahoma Reservoir, on the Kiamichi River, Pushmataha County, Oklahoma, would inundate areas used by the Ouachita rock-pocketbook and affect remaining habitat and populations downstream of the reservoir. The proposed addition of hydropower to the existing Sardis Reservoir on Jackfork Creek (a tributary to the Kiamichi River, Pushmataha County, Oklahoma) would also be a threat to this mussel from potential cold water discharge and fluctuating water levels. Colder water probably has a direct impact on mussel growth by reducing metabolic rates (Mehlhop-Cifelli and Miller 1989). Altered conditions could also cause a decrease in nutrients and changes in the availability of fish hosts for glochidia (Mehlhop-Cifelli and Miller 1989).

Seqage discharge from the City of Idabel, McCurtain County, Oklahoma, and scattered gravel dredging operations affect water quality in the Little River where this mussel is found. In one *A. wheeleri* site on the Kiamichi River, gravel is being mined, and similar activities may be planned elsewhere along the river. Construction of a bridge upstream of another site caused considerable siltation (Mehlhop-Cifelli and Miller 1989), which likely has an adverse effect on this species. Elevated levels of mercury have been found in fish samples from the Kiamichi River near Big Cedar, Oklahoma (EPA, in litt.). The source of this mercury is presently unknown, but it could pose a serious threat to this species.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* This rare species occurs in such low number that removal for private collections and scientific purposes poses an additional threat. Its rarity and some unusual features of its shell make it a desirable species to private collectors. Considering the historic rarity of this species and its significant loss of historic habitat, collection of live specimens could result in the loss of a significant portion of the surviving population.

C. *Disease or predation.* Although the Ouachita rock-pocketbook is undoubtedly consumed by predatory animals, there is no evidence that predation threatens the species. Disease is not an apparent threat.

D. *The inadequacy of existing regulatory mechanisms.* The State of Oklahoma lists the Ouachita rock-pocketbook as a State endangered species, but this listing does not provide habitat protection for the species. The species is not protected in Arkansas. The Act would provide additional protection and encourage active management through the "Available Conservation Measures" discussed below.

E. *Other natural or manmade factors affecting its continued existence.* The exotic Asiatic clam (*Corbicula fluminea*) occurs in Hugo Resevoir and portions of the Kiamichi River and populations are moving slowly upstream (M. Mather, in litt.). This environmentally adaptive and tolerant mollusk could impact *A. wheeleri* and other native mussel fauna. In addition, the low densities of *A. wheeleri* result in reduced fertility and breeding success for this species.

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 Ouachita rock-pocketbook (*Arkansia wheeleri*) as endangered. Historic records reveal that while the species is extremely rare, it was once considerably more widespread than it is today. Presently only two small populations, possibly only one, are known to survive. These populations are threatened by a variety of factors including reservoir construction, cold water discharge from existing reservoirs, stream alteration, and pollution. Owing to the species' history of population losses and the vulnerable nature of the populations, threatened status does not appear appropriate for this species. Critical habitat is not being proposed for the Ouachita rock-pocketbook for reasons discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for the Ouachita rock-pocketbook. Loss of even a few individuals to activities such as collection for scientific purposes or private use could extirpate the species. Publication of critical habitat descriptions and maps would increase the vulnerability of the species without significant increasing protection. All Federal and State agencies involved with this species are aware of the species' distribution and precarious situation and realize the importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not now be prudent to determine critical habitat for the Ouachita rock-pocketbook.

Available Conservation Measures

Conservation measures provided to species listed an 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 codifed at 50 CFR part 402. 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 destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, 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 formal consultation with the Service.

Federal involvement is expected to include the U.S. Army Corps of Engineers' multipurpose reservoir activities and Environmental Protection Agency pollution control and pesticide use programs. The Corps of Engineers has proposed and received authorization to construct Tuskahoma Reservoir on the Kiamichi River; the dam will be located south of the town of Albion. This reach of the river and areas downstream are crucial to the recovery and survival of *A. wheeleri*. Furthermore, the Corps of Engineers has studied the addition of hydropower at Sardis Reservoir, located on Jackfork Creek, a primary tributary of the Kiamichi River near Clayton, Oklahoma. The Environmental Protection Agency would be involved with efforts to prevent water quality degradation and to approve the use of pesticides within the known range of the species.

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.

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule 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, distribution, and population size of this species; and

(4) Current or planned activities in the subject area and their possible impacts on this species.

Final promulgation of the regulation on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to 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 received within 45 days of the date of publications of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Ecological Services Field Office, Tulsa, Oklahoma (see **ADDRESSES**).

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).

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Author

The primary authors of this proposed rule are J. Allen Ratzlaff (see **ADDRESSES**) and Sonja E. Jahrsdoerfer, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record-keeping requirements, and Transportation.

Proposed Regulation 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: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1543; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under "CLAMS", 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						
CLAMS							
*	* *	*	*	*	*		
Rock-pocketbook, Ouachita (=Wheeler's pearly mussel).	*Arkansia* (=*Arcidens*) *wheeleri*	U.S.A. (AR, OK)	NA	E		NA	NA
*	* *	*	*	*	*		

Dated: June 7, 1990.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

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