DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; U.S. Breeding Population of the Wood Stork Determined To Be Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the U.S. breeding population of the wood stork (*Mycteria americana*) to be an endangered species pursuant to the Endangered Species Act. This action is being taken because U.S. breeding populations of the wood stork have declined over 75 percent from their 1930 levels. If this trend continues, the birds are likely to become extirpated as U.S. breeders by the turn of the century. The final rule will provide the protection of the Endangered Species Act to this species. The Service will initiate recovery efforts for the U.S. breeding population of the wood stork.

DATE: The effective date of this rule is March 29, 1984.

ADDRESSES: The complete file for this rule is available for inspection during business hours (7 a.m.–4:30 p.m.) at the Service's Endangered Species Field Station, 2747 Art Museum Drive, Jacksonville, Florida 32207 (904/791–2580).

FOR FURTHER INFORMATION CONTACT: Mr. David Wesley, Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207 (904/791–2580).

SUPPLEMENTARY INFORMATION:

Background

The wood stork (*Mycteria americana*) is a large, long-legged, white wading bird with an unfeathered gray head and a stout dark bill. It is the only species of true stork breeding in the U.S. Wood storks frequent freshwater and brackish wetlands, feeding primarily on small fishes which they locate by groping with their beaks (Kahl, 1964). The wood stork usually nests in cypress and mangrove swamps. The U.S. breeding population of the wood stork declined from an estimated 20,000 pairs in the 1930's to about 10,000 pairs by 1960. Since 1978, fewer than 5,000 pairs have bred each year. If this trend continues, it is predicted that the U.S. breeding population of the wood stork will be near extinction by the turn of the century (Ogden and Patty, 1981).

A notice of review of the status of the U.S. breeding population of the wood stork was published in the February 16, 1982, **Federal Register** (47 FR 6675–77). The notice solicited biological information on the status of the wood stork, as well as information on activities which might be detrimental to this species or be affected by Federal listing of, or critical habitat designation for, the species.

On February 28, 1983, the Service published a proposed rule in the **Federal Register** (48 FR 8402–04) advising that sufficient information was on file to support a determination that the U.S. breeding population of the wood stork (*Mycteria americana*) was an endangered species pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). The proposal solicited comments from any interested parties concerning threats to this species, its distribution and range, whether or not critical habitat should be designated, and activities which might impact the species.

Summary of Comments and Recommendations

In the February 16, 1982, notice and the February 28, 1983, proposal all interested parties were requested to submit information on the status of the wood stork that might contribute to the development of a final rule. Subsequently, letters were sent to appropriate State resource agencies in Alabama, Arizona, California, Florida, Georgia, Louisiana, Mississippi, South Carolina and Texas, and to appropriate Federal agencies, local governments and other interested parties notifying them of the proposal and soliciting their comments and suggestions.

Officials comments were received from the resource agencies of all the above States, three counties, one Florida Water Management District, and seven Federal agencies. Resource agencies in the States of Arizona, Louisiana, Mississippi, and Texas stated that the wood storks in their States were migrants from Mexican breeding colonies. California, Florida, Georgia and South Carolina supported Federal listing of the wood stork.

Alabama's Department of Conservation and Natural Resources commented that the wood stork should not be Federally listed unless it could be shown that the action would increase nesting sites and improve feeding habitat for this species. Alabama also stated that the birds in their State should not be included in the listing action unless it could be shown that they are part of the U.S. breeding population. Service response: Improving productivity of current existing wood stork rookeries is probably more important and more attainable than increasing the number of rookeries. Listing the U.S. breeding population of the stork will result in the development of a recovery plan for this species. The plan will address problems affecting both rookeries and feeding grounds, and recommend possible solutions. Prejudging the chances of recovery success, however, is not included in the five factors used to determine federally endangered or threatened species. Due to the proximity of Alabama to northern Florida wood stork rookeries, it appears most likely that the Alabama wood storks represent the U.S. breeding population rather than migrants from Central America or Mexico.

The U.S. Environmental Protection Agency and the National Park Service supported the proposed designation. The Jacksonville District of the U.S. Army Corps of Engineers provided information about a variety of their activities in areas used by the wood stork for nesting or feeding. The Savannah District reported that their present and planned activities would not affect wood stork rookeries.

The St. Johns River Water Management District supported the proposal and offered to consider management techniques in the District that might benefit the wood stork.

The State of South Carolina recommended that threatened rather than endangered status be given the U.S. breeding population of the wood stork. Service response: The number of adult birds is difficult to monitor, since not all nest each year. The present population is believed to number about 10,000 adults. The traditional large protected rookeries in south Florida (four rookeries in Everglades National Park, one rookery in the National Audubon Society's Corkscrew Swamp Sanctuary) have experienced frequent nesting failures in recent years due to unfavorable feeding conditions during the nesting season. While these rookeries are "secure" in the sense that the rookery sites are protected from disturbance, the feeding areas on which the rookeries depend are highly subject to modification. In this sense, it is difficult to consider any wood stork rookeries as secure, because nesting success depends on feeding areas that may be located some distance from rookeries. The five percent annual rate of decline in U.S. breeding wood storks from 1975 to 1980 indicates that this species is continuing a long-term decline observed since the 1930's. A continued decline at the same rate would place the

U.S. breeding population of the wood stork near extinction by the turn of the century. It will require extensive, long-term planning to alleviate the principal factor responsible for the decline of the U.S. breeding population of the wood stork, i.e., the alteration of natural hydrologic regimes in Florida. For these reasons, the Service believes that the U.S. breeding population of the wood stork meets the definition of "endangered" as specified in Section 3 of the Endangered Species Act.

The administrations of Lee County, Florida, and Beaufort County, South Carolina supported the proposal. The Environmental Services Department of Sarasota County, Florida, provided information about wood stork feeding areas in that County. Comments were also received from three private companies, five conservation groups, and 52 individuals.

Stockton, Whatley, Davin and Company (SWD), a land development company, examined a wood stork rookery on their property and based on this examination felt there was no need for the wood stork to be Federally listed. They recommended that if the wood stork were listed, an environmental impact statement should be prepared on the action to determine if any economic impact might result. Service response: SWD's observations of the rookery on their property do not address the factors supporting the determination of the U.S. breeding population of the wood stork to be an endangered species nor do they provide sufficient information to indicate that the wood stork should not be listed. In July 1983, Gate Lands Company, a division of Gate Petroleum Company of Jacksonville, Florida, acquired the properties formerly held by SWD. The property is now being considered for acquisition by the State of Florida under its Conservation and Recreation Lands program. Moreover, the Service is not required to prepare environmental impact statements on determinations to list species under Section 4(a) of the Endangered Species Act. *See* "National Environmental Policy Act" discussion, below. Furthermore, the Service may not consider economic factors in determining whether to list species. *See* Section 4(b)(1)(A) of the Act.

Florida Power and Light Company (FPL) supported the listing proposal but expressed fears that listing this species, and especially designating critical habitat, would delay or prevent Federal permitting for planned FPL generating plant expansion. The site in question is in Martin County, Florida, near a wood stork rookery on FPL land. Service response: Critical habitat is not being determined in this regulation. This, however, does not indicate a lesser degree of protection for the U.S. breeding population of the wood stork given the "jeopardy prohibition" in section 7(a)(2) of the Endangered Species Act. As for the FPL lands, the Service does not foresee a conflict with the planned expansion of the Martin County site generator facilities. Anticipated conflicts should be brought to the Service's attention as early as possible in the planning process.

W. R. Grace and Company provided information on a rookery on their property in Polk County, Florida.

A wildlife biologist provided considerable data on the status of wood storks in east-central Florida, based on his research in that area.

The 52 private individuals and the five conservation groups all supported the proposal; a few of these letters also provided information about feeding activities and other general information on wood storks at various localities in Florida.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the U.S. breeding population of the wood stork should be classified as an endangered species. Procedures found at Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1533 et seq.) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; see proposed revision to accomodate 1982 amendments: 48 FR 36062–36069, August 8, 1983) 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 U.S. breeding population of the wood stork are as follows:

A. *The present or threatened destruction, modification or curtailment of its habitat or range.* The decline of the wood stork as a U.S. breeding bird is believed to be primarily due to the loss of suitable feeding habitat (Ogden and Patty, 1981). This is especially true for the south Florida rookeries, where repeated nesting failures have occurred despite protection afforded the rookeries. Feeding areas in south Florida have decreased by about 35 percent since 1900 due to man's alteration of wetlands. Additionally, manmade levees, canals, and floodgates have greatly changed natural water regimes in south Florida. Optimal water regimes for the wood stork involve periods of flooding, during which prey (fish) populations increase, alternating with drying periods, during which fish are concentrated at high densities coinciding with the nesting season. Loss of nesting habitat (primarily cypress swamps) may be affecting wood storks in central Florida, where nesting in non-native trees and in manmade impoundments has been occurring recently.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not applicable.

C. *Disease or predation.* Raccoon predation has sometimes been severe at certain central Florida rookeries. In 1981, raccoons destroyed all 168 wood stork nests at a rookery in Hillsborough County. Water levels dropped under nest trees, providing easy access for the raccoons.

D. *Inadequacy of existing regulatory mechanisms.* The wood stork is protected by the Migratory Bird Treaty Act of 1918 and is State-listed as endangered in Florida, threatened in South Carolina, and as a species of special concern in Alabama. The Migratory Bird Treaty Act prohibits taking or possession of the wood stork except by permit but does not prohibit the adverse modification of the stork's habitat, which is the primary threat to its existence. The Alabama designation presently provides no protection to the wood stork. The Florida and South Carolina designations prohibit take, except by permit, and provide for certain conservation efforts. The Florida Game and Fresh Water Fish Commission currently has one biologist studying the wood stork in order to recommend conservation measures. South Carolina has no specific recovery efforts but intends to continue monitoring nesting in the State. No coordinated recovery efforts among the States are presently in effect. The Endangered Species Act will add additional protection to the species.

E. *Other natural or manmade factors affecting its continued existence.* Prolonged periods of drought in Florida have probably adversely affected wood stork reproduction for the past few years. Heavy rainfall during the nesting season, causing flooding of the feeding areas, apparently caused almost complete nest abandonment at one rookery (Moore Island) in the spring of 1982.

Disturbance by humans during the nesting season has been observed to cause adult wood storks at some rookeries to leave their nests. This exposes eggs and young birds to

predation by gulls and fish crows and can result in heavy mortality.

Significant pesticide levels have been reported in this species, with some eggshell thinning, but this apparently has not yet adversely affected reproduction (Ohlendorff *et al.*, 1978).

Critical Habitat

The Endangered Species, Act, as amended, requires that to the maximum extent prudent and determinable the Secretary designate critical habitat at the time any species is determined to be endangered or threatened. The Service finds that designation of critical habitat is neither prudent nor determinable for the following reasons:

1. Since localities of some wood stork rookeries and feeding areas change over time, rigidly defined critical habitat boundaries around presently utilized nesting and feeding areas may not be adequate for long-term conservation of this species. Continuing environmental changes, both manmade and natural, are expected to cause further changes in wood stork nesting and feeding sites. Therefore, it is not presently possible to enclose all areas which may be necessary to the wood stork's long-term survival with critical habitat boundaries.

2. The wood stork's feeding areas may be separated by large (up to 130 km) distances from its rookeries. Additionally, post-breeding dispersal of the U.S. breeding birds extends throughout most of the southeastern U.S. critical habitat inclusions of such large areas, even though they may be important in the bird's biology, would be misleading because the stork uses only very limited resources over these large areas.

3. Wood storks are sensitive to disturbance during the breeding season. Observers have often avoided publicizing exact locality data, particularly for recently discovered rookeries. Publication of critical habitat maps in the **Federal Register**, as required by Section 4(b)(5) of the Act, would increase the chance that wood stork rookeries would be subjected to human disturbance or vandalism, causing decreased productivity and, perhaps, increased mortality.

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 other Federal, State, and private agencies, groups, and individuals. The Endangered Species Act requires the preparation of a recovery plan outlining actions that may be taken to recover a listed species. The protection required by Federal agencies and taking and harm prohibitions are discussed 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. Section 7(a)(4) requires Federal agencies to informally confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species. When a species is actually listed, Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species. If a proposed Federal action may affect a listed species, the Federal agency must enter into formal consultation with the Service.

With respect to the U.S. breeding population of the wood stork, the principal agency affected would be the U.S. Army Corps of Engineers, which issues permits for the discharge of dredged or fill material in U.S. waters under Section 404 of the Clean Water Act of 1977. The listing of this species will in some cases influence Corps decisions concerning dredge and fill permits. Corps activities involving water projects in Florida will also have to take the wood stork into account if any such projects might adversely affect this species.

Similarly, permitting activities by the Environmental Protection Agency under Section 402 of the Clean Water Act (National Pollutant Discharge Elimination System) will have to consider the welfare of this species.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions which apply to all endangered species. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. It also would be illegal to process, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Under Section 10(a) of the Endangered Species Act and 50 CFR 17.22 and 17.23, permits may be issued under certain circumstances to carry out otherwise prohibited activities involving endangered species. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, or to take species incidental to otherwise lawful activities.

National Environmental Policy Act

In accordance with a recommendation from the Council on Environmental Quality (CEQ), the Service does not prepare NEPA documentation for actions under Section 4(a) of the Endangered Species Act. The recommendation from CEQ was based, in part, upon a decision by the Sixth Circuit Court of Appeals, which held that the preparation of NEPA documentation is not required as a matter of law for actions under Section 4(a). *PLF* v. *Andrus*, 657 F.2d 829 (6th Cir. 1981).

References

Kahl, M. P. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. Ecol. Monogr. 34:97–117.

Ogden, J. C., and B. W. Patty. 1981. The recent status of the wood stork in Florida and Georgia. Georgia Dept. Nat. Res. Game and Fish Div. Tech. Bull. WL 5:97–101.

Ohlendorff, H. M., E. E. Klaas, and T. E. Kaiser. 1978. Organochlorine residues and eggshell thinning in wood storks and anhingas. Wilson Bull. 90(4):608–618.

Author

The primary author of this final rule is Dr. Michael M. Bentzien, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

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 reads 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. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding, in alphabetical order the following to the List of Endangered and Threatened Wildlife under "Birds":

§ 17.11 [Amended]

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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						
Birds							
Stork, wood	Mycteria americana	U.S.A. (CA, AZ, TX to Carolinas), Mexico, Central and South America.	U.S.A. (AL, FL, GA, SC)	E	144	NA	NA.

Dated: February 23, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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