

50 CFR Part 17**Proposed Delisting of Bahama Swallowtail Butterfly and Reclassification of Schaus Swallowtail Butterfly from Threatened to Endangered**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule and finding on petition.

SUMMARY: The Service proposes to remove the Bahama Swallowtail Butterfly (*Heraclides* [= *Papilio*] *andraemon bonhotei*) from the U.S. list of Endangered and Threatened species, and to reclassify the Schaus swallowtail butterfly (*Heraclides* [= *Papilio*] *aristodemus ponceanus*) from Threatened to Endangered status. The proposals are made under the authority of the Endangered Species Act of 1973, as amended. Both species occur in Dade and Monroe Counties, Florida, and were

listed as Threatened species in 1976. A review of the status of each species indicates that the Bahama swallowtail is only a sporadic resident of the U.S. It is not subspecifically distinct from the non-threatened Bahaman populations of this species, and does not qualify for listing under the Endangered Species Act, as amended. The Schaus swallowtail has declined in numbers and range since the time of its listing. This proposal is consistent with a petition filed with the Service on March 9, 1983, by the Florida Game and Fresh Water Fish Commission. If made final, this proposed rule would remove the protection of the Endangered Species Act of 1973 from the Bahama swallowtail butterfly, and would afford the Schaus swallowtail butterfly the protection of Endangered status. Neither species would remain eligible for a special rule at 50 CFR 17.47 that permits non-commercial take of adults, so that special rule would be deleted.

Comments and information related to this proposal are solicited.

DATE: Comments from the public and the State of Florida must be received by October 28, 1983. Public hearing requests must be received by October 13, 1983.

FOR FURTHER INFORMATION CONTACT: Mr. David Peterson, Acting Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207, phone 904/791-2580.

ADDRESSES: Comments and materials concerning this proposal should be sent to Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207. Comments and materials received will be available for inspection during normal business hours, by appointment, at the Service's Endangered Species Field Station, 2747 Art Museum Drive, Jacksonville, Florida 32207.

SUPPLEMENTARY INFORMATION: The Bahama (*Heraclides andraemon bonhotei*) and Schaus (*Heraclides aristodemus ponceanus*) swallowtail butterflies are representatives of tropical species that reach their limits of distribution in southern Florida. The Bahama swallowtail was described by Sharpe in 1900. It has dark brown wings with a medium yellow band and has two pairs of tails on the hindwings. The Schaus swallowtail was described by Schaus in 1911. Adults have blackish-brown wings with broad rusty patches under the hindwings. Only one pair of tails is present. The primary food of the larval Schaus swallowtail is torchwood (*Amyris elemifera*); the larval Bahama swallowtail feeds on key lime (*Citrus aurantifolia*), sour orange (*C. aurantium*)— and garden rue (*Ruta graveolens*).

The Bahama swallowtail has been recorded from Miami and Elliott Key, Dade County, and from Key Largo and Long Key, Monroe County. Most of the records are from Elliott Key. The best available evidence indicates that this species is not a permanent resident of the U.S., nor is it subspecifically distinct from the *Heraclides andraemon* population resident in the Bahamas. This species has occasionally reproduced in the U.S., but apparently soon dies out. The most recent known breeding in the U.S. was on Elliott Key in 1972 (U.S. Fish and Wildlife Service 1982).

The Schaus swallowtail originally occurred from the Miami area south through the Florida Keys as far as Lower Matecumbe Key. The last records for Miami were in 1924. Presumably, urban development eliminated the habitat of the species there. The last records for Upper and Lower Matecumbe Keys are in the mid-1940's. The disappearance of the species from these keys apparently coincided with heavy collecting pressure, although collecting is not known to have caused the decline. In the early 1970's the butterfly was relatively abundant on north Key Largo, but appears to be rare there now. The known range of the Schaus swallowtail is now Elliott and Old Rhodes Keys in Biscayne National Park, Dade County; and north Key Largo, Monroe County.

Both the Bahama and Schaus swallowtail butterflies are restricted to tropical hardwood hammocks, which constitute the climax vegetation of upland areas in the Florida Keys. Formerly, this vegetation type occurred more widely in south Florida, but has been largely eliminated on the mainland. The hammocks are closely related floristically to those of the West

Indies, and constitute the only tropical upland plant community found in the continental U.S. The Florida Keys contain the largest remaining hammocks, but many of the areas are highly subject to development pressures because development is restricted in lowland (mangrove) areas. Local, State and Federal laws presently limit development of such lowland areas. The hammocks contain a large number of plant species rare in Florida, many of which are considered threatened or endangered by this State. The tropical hardwood hammock plant community is considered to be one of the most restricted and vulnerable habitat types in the U.S.

Both butterflies were proposed for Federal listing as Threatened on April 22, 1975 (40 FR 17757). The proposal was made final on April 28, 1976 (41 FR 17736-40). The final regulation included a special rule (50 CFR 17.47[a]) exempting both species from some of the protective provisions available to Threatened species under 50 CFR 17.31. Non-commercial take of adults was allowed, provided that other local, State and Federal regulations were complied with. Chapter 39-27 of the Florida Administrative Code, however, presently lists the Bahama and Schaus swallowtail butterflies as Threatened, and prohibits take, possession, sale or transport of all life stages of these species, except by permit. The Federal special rule is superseded by Florida State legislation, because the special rule allows take of adults only if all other local, State and Federal regulations are complied with. This is consistent with Section 6(f) of the Endangered Species Act, which authorizes States to be more restrictive than Federal prohibitions regarding the taking of listed species.

Section 4(c)(2) of the Endangered Species Act, as amended, requires that a 5-year review of the list of Endangered and Threatened species be carried out to determine whether any species should be removed from the list or changed in status. A 5-year review notice for the Bahama and Schaus swallowtail butterflies was published by the Service in the February 27, 1981 **Federal Register** (46 FR 14652).

The Florida Game and Fresh Water Fish Commission recently carried out research on the status of the Bahama and Schaus swallowtail butterflies and this information has been available during the review of these species. The studies were funded in part with Federal funds provided under Section 6 of the Endangered Species Act. The results of this research were incorporated into a

recovery plan for the Schaus swallowtail butterfly including recommendations for the Bahama swallowtail (U.S. Fish and Wildlife Service, 1982). Section 4(f) of the Act requires the Secretary to develop and implement recovery plans for listed species. The recovery plan recommended that the Schaus swallowtail be reclassified from Threatened to Endangered, based on its decline in numbers and distribution. Since the U.S. populations of the Bahama swallowtail are not subspecifically distinct from the Bahama populations, and since the subspecies *bonhotei* is not in danger of extinction throughout all or a significant portion of its range, the Act, as amended, requires that this species be removed from the list of Endangered and Threatened species.

In a petition dated February 23, 1983, and received March 9, 1983, The Florida Game and Freshwater Fish Commission requested that the Schaus swallowtail butterfly be reclassified as an Endangered species. An administrative finding that the requested action may be warranted was made on May 9, 1983. Publication of this proposed rule signifies that the requested action is warranted, and constitutes a required finding in accordance with Section 4(b)(3)(B)(ii) of the Act as amended in 1982.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424, presently under revision to accommodate 1982 amendments) set forth the procedures for adding species to the Federal list. A species may be determined to be an Endangered species or a Threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act.

These factors and their application to the Schaus and Bahama swallowtail butterflies are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The Bahama swallowtail occurs throughout the Bahama Islands. There is no information indicating threat to the species throughout its range. On private lands, development for residential and recreational purposes threatens to modify or eliminate the tropical hardwood forest hammocks on which the Schaus swallowtail depends. Uplands in the Florida Keys are limited

in area, but are the site of much development interest because major development is essentially impossible in wetland (mangrove) areas. The entire range of this butterfly is vulnerable to modification or destruction from hurricanes. As the range of the species becomes increasingly limited and fragmented, the likelihood increases of a single hurricane destroying all or most of the remaining population.

B. Overutilization for commercial, recreational, scientific or educational purposes. Both the Bahama and Schaus swallowtail butterflies are popular with collectors. Although a few individuals of the Bahama swallowtail may occasionally be collected when this species appears in Florida, there is no information indicating that the species is threatened by overutilization in the Bahamas.

At the time of the listing of the Schaus swallowtail as a Threatened species, some correspondents believed that collection of this species represented a threat. Since the species was listed, it has decreased in range and numbers. Collecting is now probably a greater threat than at the time of listing.

C. Disease or predation. Not applicable.

D. The inadequacy of existing regulatory mechanisms. The Bahama swallowtail will not qualify for continued listing if this proposed rule is made final. Federal listing as Threatened and similar listing under Chapter 39-27.04 of the Florida Administrative Code both provide regulatory protections for the Schaus swallowtail, but its population has generally declined, even subsequent to listing. If reclassified from Threatened to Endangered, the Schaus swallowtail may benefit from the increased priority given its recovery needs, pursuant to section 4(g)(4) of the Act, as amended.

E. Other natural or manmade factors affecting its continued existence. The Bahaman segment of the Bahama swallowtail populations provides it with insurance against the risk of extinction. The Schaus swallowtail could lose a significant portion of its remaining populations from hurricane or frost. The range of this species has decreased substantially in recent decades. The present restricted range could be greatly reduced or eliminated by a single hurricane. The butterfly is near the limits of its cold-tolerance in South Florida, and a single severe freeze could also greatly reduce the population.

Insecticide application may have adverse effects on the Schaus swallowtail. The Monroe County Mosquito Control District applies insecticides to control adult and larval

mosquitoes. Both ground and aerial applications are made. The large amount of insecticides applied annually in Monroe County (4-5 thousand gallons of Dibrom and Baytex mixed with 50 to 60 thousand gallons of diesel fuel) could adversely affect the Schaus swallowtail as well as other insects native to the hardwood hammocks.

Critical Habitat

The Act requires that Critical Habitat be determined at the time any species is listed as Endangered or Threatened, to the maximum extent prudent and determinable. The Service believes that it would not be prudent to determine Critical Habitat for the Schaus swallowtail butterfly. Section 4(a)(3) of the Act requires publication of a Critical Habitat description in the **Federal Register**. Publication of a Critical Habitat description, with maps, could result in increased collecting pressure being placed on the few remaining sites at which the Schaus swallowtail occurs. Though taking prohibitions exist, effective enforcement is difficult, particularly outside Biscayne National Park. The recovery plan for the Schaus swallowtail butterfly recommends that no publicity be given remaining colonies of this species.

Effects of this Rule

The effects of this proposal, if published as a final rule, would include but would not necessarily be limited to those mentioned below.

Section 7(a) of the Act, as amended, requires that Federal agencies insure that activities they authorize, fund or carry out are not likely to jeopardize the continued existence of any Endangered or Threatened species. Removing the Bahama swallowtail butterfly from the list would eliminate the need for Federal agencies to consider this species in planning or carrying out their activities. Reclassifying the Schaus swallowtail from Threatened to Endangered status would not affect the protection currently available under Section 7(a).

Section 9(a)(1) of the Act prohibits take, import and export, possession or transportation of Endangered species of fish and wildlife. Exceptions are provided through permits pursuant to Section 10 of the Act. In the case of Threatened species, protective regulations under Section 4(d) of the Act guard the species well-being. A special rule (50 CFR 17.47(a)) currently applies to both the Bahama and Schaus swallowtail butterflies. This rule allows non-commercial take and noncommercial interstate movement of adults of both species. These exemptions apply, however, only if

concordant with State and local regulations and ordinances. Florida State law presently prohibits collecting these species except by permit, thus overriding the special rule. The proposed delisting of the Bahama swallowtail would revoke all Section 9 prohibitions for that species. The reclassification of the Schaus swallowtail butterfly from Threatened to Endangered would merely bring the existing Federal regulatory prohibitions into conformance with current State law. Therefore, the Special rule in § 1747(a) is no longer necessary. Few effects are anticipated from this change; the Bahama swallowtail is an occasional migrant to the U.S. and few specimens could be taken here. No additional effects are expected regarding the Schaus swallowtail, because take and trade are already prohibited except under permit. Recovery priority for this species would increase, however, pursuant to Section 4(g)(4) of the Act, as amended.

National Environmental Policy Act

An Environmental Assessment has been prepared in conjunction with this proposal. It is on file in the Service's Endangered Species Field Station, 2747 Art Museum Drive, Jacksonville, Florida 32207, and may be examined by appointment during regular business hours. This assessment will form the basis for a decision as to whether this is or is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (implemented at 40 CFR Parts 1500-1508).

Public Comments Solicited

The Service intends that the rules finally adopted will be as accurate and effective as possible in the conservation of any Endangered or Threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning biological or other relevant data concerning any threat (or the lack thereof) to the Bahama and Schaus swallowtail butterflies, and additional information concerning the range and distribution of these butterflies;

Final promulgation of the regulations on Bahama and Schaus swallowtail butterflies 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.

Author

The primary author of this proposed rule is Dr. Michael M. Bentzien, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207, phone 904/791-2580; FTS 946-2580. Dr. George Drewry of the Service's Washington Office of Endangered Species served as editor.

References

U.S. Fish and Wildlife Service. 1982. Schaus swallowtail recovery plan. U.S. Fish and Wildlife Service, Atlanta, Georgia. 57 pp.
 Loftus, W. F., and J. A. Kushlan. 1982. The status of the Schaus swallowtail and the Bahama swallowtail butterflies in Biscayne National Park. National Park Service South Florida Research Center, Everglades National Park. Report M-849. 18 pp.

List of Subjects in 50 CFR Part 17

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

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter

1, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; 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. It is proposed to amend § 17.11(h) by changing the status of the Schaus

swallowtail butterfly, under "INSECTS", from Threatened to Endangered; changing its scientific name, to reflect current usage; and revising the "special rules" column, 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						
*	*	*	*	*	*	*	*
Butterfly, Schaus swallowtail.	<i>Heracles (= Papilio aristodemus ponceanus.</i>	U.S.A. (Florida)	NA	E	13	NA	NA
*	*	*	*	*	*	*	*

3. It is further proposed to amend § 17.11(h) by removing the Bahama swallowtail butterfly (*Papilio andraemon bonhotei*), under "INSECTS", from the List of Endangered and Threatened Wildlife.

§ 17.47 [Amended]

4. The Service also proposes to amend § 17.47(a) by removing the special rules

for the Bahama and Schaus swallowtail butterflies, and by adding the notation "[Reserved]".

Dated: July 8, 1983.

J. Craig Potter,
Acting Assistant Secretary, Fish and Wildlife and Parks.

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