

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Brassicaceae—Mustard family						
<i>Cardamine micranthera</i>	Small-anthered bittercress.....	U.S.A. (NC).....	E	362	NA	NA

Dated: September 11, 1989.

David L. Olsen,

Acting Director, Fish and Wildlife Service.

[FR Doc. 89-22338 Filed 9-20-89; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Endangered Status for Queen Alexandra's Birdwing Butterfly

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines endangered status for Queen Alexandra's birdwing butterfly (*Troides* [= *Ornithoptera*] *alexandrae*). This species, the world's largest butterfly, occurs only in a small part of Papua New Guinea, where it is rare and is losing its restricted forest habitat to logging and agricultural activity. This rule implements the protection of the Endangered Species Act of 1973, as amended, for this butterfly.

EFFECTIVE DATE: October 23, 1989.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, from 8:00 a.m. to 4:00 p.m., Monday through Friday, at the Office of Scientific Authority, Room 750, 4401 Fairfax Drive, Arlington, Virginia.

FOR FURTHER INFORMATION CONTACT: Dr. Charles W. Dane, Chief, Office of Scientific Authority, Mail Stop: Arlington Square, Room 725, U.S. Fish and Wildlife Service, Washington, DC 20240 (703-358-1708 or FTS 358-1708).

SUPPLEMENTARY INFORMATION:

Background

Queen Alexandra's birdwing butterfly was discovered in 1906. Its distribution is restricted to primary and advanced secondary lowland rain forest in or near the Popondetta Plain, a small area in the Northern Province of Papua New Guinea (Collins and Morris 1985). For many years it was known scientifically as *Ornithoptera alexandrae*, but recently Miller (1987) synonymized the genus *Ornithoptera* with *Troides*.

Troides alexandrae is the largest butterfly in the world. The females have

a wingspan of up to 10 inches (250 millimeters) and are dark brown in color. The males have a wingspan of 6½ to 7½ inches (170 to 190 millimeters) and are light blue, yellow, green, and black (Collins and Morris 1985).

Because of its restricted range, the destruction of much of its habitat by human activity, and its commercial value, *T. alexandrae* has been classified as endangered by the International Union for Conservation of Nature (Collins and Morris 1985; Wells, Pyle, and Collins 1983). The IUCN's Species Survival Commission selected it as one of the 12 most endangered animals in the world (Fitter 1985). It also has been placed on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

On March 30, 1988, the Service received a petition from Ms. Marion Kelly Murphy, requesting that *T. alexandrae* be added to the U.S. List of Endangered and Threatened Wildlife. On July 1, 1988, the Service made a finding that this petition had presented substantial information. The Service also gathered other information through its own status review of the species. In the Federal Register of March 1, 1989 (54 FR 8574), the Service announced its finding that listing of *T. alexandrae* was warranted and also issued a proposed rule to determine endangered status for the species. In that proposal, and associated notifications, all interested parties were requested to submit comments and information that might contribute to development of a final rule. No responses were received.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that Queen Alexandra's birdwing butterfly should be classified as endangered. 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 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 Queen Alexandra's birdwing butterfly (*Troides alexandrae*) are as follows (information from Collins and Morris 1985).

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The greatest current danger is the expanding oil palm industry in the Popondetta region of Papua New Guinea, though development of cocoa and rubber plantations has also been a problem. These activities eliminate the natural forest required by *T. alexandrae*, and have already claimed large tracts of its restricted habitat. Local disappearances of the species are occurring because of clearing of forest to make food gardens. Negotiations to exploit reserves of timber in the region are also underway.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *T. alexandrae* is the world's largest butterfly and is aesthetically very attractive. Birdwing butterflies have long been held in high esteem by insect collectors and are in great demand worldwide. Species such as *T. alexandrae*, which are not only impressive, but restricted in range and hard to obtain, realize extremely high prices. Some illegal trade in *T. alexandrae* has undoubtedly occurred.

C. *Disease or predation.* Adults are subject to little predation, but eggs are attacked by ants and heteropterous bugs. The larvae are preyed upon by toads, lizards, and birds. Parasitism of larvae by unidentified flies, and of pupae by parasitic wasps, has been reported.

D. *The inadequacy of existing regulatory mechanisms.* *T. alexandrae* is completely protected from collection by the laws of Papua New Guinea, and a large wildlife management area has been established within its range, but it is not yet clear that these measures have helped prevent habitat loss, which is the main threat confronting the species.

E. *Other natural or manmade factors affecting its continued existence.* None now known.

The decision to determine endangered status for *T. alexandrae* was based on

an assessment of the best available scientific and commercial information concerning past, present, and probable future threats to the species. A decision to take no action would exclude this butterfly from benefits provided by the Endangered Species Act. A decision to determine only threatened status would not adequately reflect the evident rarity and multiplicity of problems confronting the species. Critical habitat is not being determined, as its designation is not applicable to foreign species.

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 conservation measures by Federal, international, and private agencies, groups, and individuals.

Section 7(a) of the Act, as amended, and as implemented by regulations at 50 CFR Part 402, requires Federal agencies to evaluate their actions that are to be conducted within the United States or on the high seas, 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. 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 consultation with the Service. The Service has not identified any ongoing or proposed projects with Federal involvement that may affect Queen Alexandra's birdwing butterfly.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general trade 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 (within the United States or on the high seas), import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered wildlife 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 codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance propagation or survival, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under 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, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** of October 25, 1983 (48 FR 49244).

References Cited

Collins, N.M., and M.G. Morris. 1985. Threatened swallowtail butterflies of the world. The IUCN Red Data Book. Gland, Switzerland, 401 pp.
 Fitter, M. 1985. Choosing the 24 most endangered species. IUCN Species Survival Commission Newsletter, no. 5, pp. 17-19.
 Miller, J.S. 1987. Phylogenetic studies in the Papilioninae (Lepidoptera: Papilionidae). Bull. Amer. Mus. Nat. Hist. 186:365-512.
 Wells, S.M., R.M. Pyle, and N.M. Collins. 1983. The IUCN invertebrate Red Data Book. Gland, Switzerland, 632 pp.

Author

The primary author of this rule is Ronald M. Nowak, Office of Scientific Authority, U.S. Fish and Wildlife Service, Washington, DC 20240 (703-358-1708 or FTS 358-1708).

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 hereby 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. 1531-1543; 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 "INSECTS," 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						
INSECTS							
Butterfly, Queen Alexandra's birdwing.	<i>Troides (=Ornithoptera) alexandrae</i> .	Papua New Guinea	NA	E	363	NA	NA

Dated: September 11, 1989.
 David L. Olsen,
 Acting Director, Fish and Wildlife Service.
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