

control or eliminate snakes on Guam. The habitat on Guam has been made unsuitable for the rail for the indefinite future due to predation by the snake.

The U.S. Fish and Wildlife Service (Service), in cooperation with the Guam Division of Aquatic and Wildlife Resources (Guam Division) and the Commonwealth Division of Fish and Wildlife (Commonwealth Division), proposes to introduce up to 500 captive-bred Guam rails (*Rallus owstoni*) onto the island of Rota in the Commonwealth of the Northern Mariana Islands over a 5-year period. Although a population of rails now exists in captivity, these birds may lose their ability to survive in the wild after several generations. The establishment of a wild population on Rota would assure that a source of wild birds would be available for future reintroduction to Guam when the brown tree snake has been controlled or eradicated.

The Service proposes that the Rota population be designated a nonessential experimental population according to section 10(j) of the Endangered Species Act of 1973, as amended (Act). The species is currently protected at 13 different captive propagation facilities and nonessential status would provide for flexibility in managing the Rota population.

Accordingly, a special rule describing circumstances under which taking of introduced Guam rails would be permitted is being proposed in conjunction with this proposal to establish the nonessential experimental population.

Permitted management actions involving take within the meaning of the Act would include recapture of rails to replace transmitters, provide veterinary care, return animals to captivity that are severely injured or diseased, or to recapture for reintroduction to Guam.

DATES: Comments on this proposed rule and the draft Environmental Assessment must be received by July 19, 1989.

ADDRESSES: Comments should be sent to the Field Supervisor, Environmental Services, Pacific Islands Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Room 6307, Honolulu, HI 96813. (Telephone: (808) 541-2749 or FTS 551-2749). A draft Environmental Assessment, a draft Finding of No Significant Impact, and other materials relating to this proposed rule are available for public inspection by appointment during normal business hours at the address above.

FOR FURTHER INFORMATION CONTACT: Mr. Ernest Kosaka, Field Supervisor,

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB-26

Endangered and Threatened Wildlife and Plants; Proposed Determination of Experimental Population Status for an Introduced Population of Guam Rails on Rota in the Commonwealth of the Northern Mariana Islands

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Guam rail, an endangered species endemic to Guam, has been extirpated from its entire historical range primarily as a result of predation by the introduced brown tree snake (*Boiga irregularis*). Studies on the snake suggest that it will be many years before techniques can be developed to

Environmental Services at the above address [telephone: (808) 541-2749 or FTS 551-2749].

SUPPLEMENTARY INFORMATION:

Background

Guam, 13 degrees 30 minutes north latitude and 145 degrees east longitude, is 49 kilometers (km) (30 miles) long and 7 to 15 km (1 to 9 miles) wide with an area of approximately 550 square km (212 square miles). It is the largest and most developed island in Micronesia. The entire island is encircled by a fringing reef except at small areas comprised of limestone cliffs. A narrow central portion separates the island into a northern, fairly level limestone plateau, and a southern, mountainous area of volcanic origin. The vegetation has been vastly altered by humans, and much of the original forest has been removed. In general, the northern limestone substrate supports a diverse forest, while the southern volcanic portion consists of extensive savannas on the exposed uplands with native "ravine" forests in the comparatively undisturbed, narrow valleys.

The endemic flightless Guam rail formerly occurred island-wide. It was one of the few native birds that occurred more frequently in weedy fields, scrubby second growth, and mixed forests than in uniform tracts of mature forest. Availability of habitat was not a limiting factor; in fact, man's disturbance of the forests might have created habitat for the rail.

The rail population declined drastically between 1963 and 1973, and by the mid 1970's had disappeared from southern Guam. Bird surveys conducted in June 1981 indicated that a population of about 2,000 rails still persisted in northern Guam. By the summer of 1986, however, the species was considered virtually extirpated from the wild.

Several inimical factors are believed to have caused the demise of the Guam rail, but most important was predation on eggs and young by the brown tree snake. Earlier investigations had eliminated excessive taking, pesticides and herbicides, inter-specific competition, and avian diseases as the causes for the rail's drastic declines in the 1980's and 1970's. More recent studies clearly implicate the snake as the most important factor in the demise of the rail as well as the other native forest birds of Guam.

The ubiquitous distribution and high density of brown tree snakes has now so altered the primary habitat of the Guam rail that this habitat is no longer suitable for sustaining the rail. The basic habitat components required by the rail

on Guam have essentially been made unavailable for the indefinite future due to the pervasive threat of the brown tree snake.

When it was evident that the rail faced imminent extinction, the Guam Division, a consortium of zoos under the auspices of the American Association of Zoological Parks and Aquariums (AAZPA), and the Service embarked on a captive propagation program by capturing as many rails as possible. Agreements were entered into whereby cooperating zoos agreed to develop techniques for propagating the rail in captivity as well as maintaining a viable population with maximum genetic diversity. The captive flock presently consists of more than 112 rails which are being propagated at 13 facilities: the Division's facilities on Guam; National Zoological Park, Front Royal, Virginia; Bronx Zoo, New York, New York; Cincinnati Zoo, Cincinnati, Ohio; Pittsburgh Aviary, Pittsburgh, Pennsylvania; Sedgewick County Zoo and Botanical Garden, Wichita, Kansas; Lowry Park Zoological Garden, Tampa, Florida; Riverbanks Zoological Park, Columbia, South Carolina; Greater Baton Rouge Zoo, Baton Rouge, Louisiana; Trevor Teaching Zoo, Millbrook, New York; Philadelphia Zoological Gardens, Philadelphia, Pennsylvania; San Diego Zoo, San Diego, California; and Kansas City Zoological Garden, Kansas City, Missouri. The number of facilities propagating rails is expected to increase as more zoos in various parts of the country are enlisted as cooperators.

The rail has been so prolific in captivity that it will be possible to use some of the excess progeny for release programs without jeopardizing the continued existence of this species or causing deterioration in genetic diversity of the captive flock. It is estimated that the mainland zoos could produce up to 100 birds for release annually without adversely affecting the remaining captive stock.

The draft Guam and Rota Endangered Forest Birds Recovery Plan (which is in the final stages of the Service approval process) recommends establishment of self-sustaining populations of the Guam rail in other suitable sites outside its historic range because there is no assurance that the snake will be controlled or eliminated on Guam in the foreseeable future. This proposal is intended to result in the release and establishment of Guam rails in previously disturbed but suitable habitats on Rota (i.e., habitats similar to those on Guam prior to the introduction of the snake). Further, this population would be managed with the long-term

objective of providing a source of "wild" rails for reestablishment on Guam when the brown tree snake can be eliminated or controlled. Captive-held rails, while capable of reproducing and surviving in captivity, may, after several generations, lose their ability to survive in the wild. A population of rails on Rota would assure that a source of rails capable of surviving in the wild would be available for reintroduction to Guam. This project is believed to be an effective means for promoting long-term conservation and recovery of the rail.

Status of Experimental Population

The Service proposes that the experimental population of Guam rails on Rota be designated as a nonessential experimental population according to the provisions of section 10(j) of the Act. The population would be treated as a threatened species, rather than an endangered species, for the purposes of section 4(d) and 9 of the Act.

The nonessential status would be appropriate for the following reasons: (1) Although the Guam rail is virtually extinct in the wild, robust captive flocks have been established on Guam and in 12 cooperating zoos and aviaries on the mainland; (2) care and maintenance of the captive flocks are of the highest order and it is not likely that disease or other sources of mortality are likely to threaten the survival of the species; and (3) the Guam rail breeds readily in captivity, resulting in the availability of rails in excess of needs for the captive flock which can be made available for release. The taking of approximately 500 rails over the 5-year duration of this project from these sources of captive-reared progeny would not threaten the survival of this species even if all of the animals released into the wild were to succumb to natural or man-caused mortality.

Designating the Rota population as a nonessential experimental population would enable the Service to propose a special rule which would authorize considerable discretion in managing the population. The proposed protective regulations would be necessary and advisable to provide for the conservation of the rail, especially during the initial stages of the translocation program.

The proposed special rule would stipulate that agents of the Commonwealth Division, the Guam Division, and the Service would be authorized to take animals which need special care or which are causing depredation problems. Taking "problem" rails by killing would be avoided and resorted to only if there

were no other viable alternatives. Live capture and release into other suitable remote habitats would be the preferred form of take whenever possible.

The special rule would also have a provision that would allow for special take by private individuals if the experimental population becomes well established on Rota. This special take would be allowed under regulations drafted by the Commonwealth of the Northern Marianas once the Service has determined that the rail has become well established and occupies all suitable habitat island-wide. These flexible rules would help gain and maintain public support for the project.

The Commonwealth Division has the statutory authority to protect and conserve listed species. As a cooperator in this experimental translocation project, it has agreed to protect the Guam rails proposed for establishment on Rota by promulgating regulations to prohibit the taking of rails, in the Commonwealth. It also has two staff members, a Conservation Officer and a Wildlife Technician, residing on Rota. The Service is satisfied that the Commonwealth's regulatory mechanisms and staff presence are sufficient to provide for conservation of the rail.

Location of Experimental Population

Rota, 50 km (31 miles) north of Guam, is one of the three main islands in the Commonwealth. It is located at 14 degrees 10 minutes north latitude and 145 degrees 12 minutes east longitude. It is 20 km (12 miles) long by 6 km (4 miles) wide with an area of approximately 85 square km (33 square miles). Rota is the third largest island in the Commonwealth after Saipan (the largest) and Tinian. A high plateau dominates the western half of the island, with steep cliffs to the north, west, and south that terminate in a narrow coastal shelf. The eastern side of the plateau is characterized by a gentle slope to a large eastern plain. The steep slopes of the upper plateau support well-developed native forests. Taipingot Peninsula juts out from the extreme western tip of the island.

Most lowland areas were used for agricultural purposes in the past. Sugarcane was grown over most of the level areas of Rota during the Japanese Administration prior to World War II. Many of these fields are now re-vegetated with second-growth forests comprised of native and introduced species. Portions of this area are being opened for grazing, for growing agricultural crops, and for residential home sites. The brown tree snake is not found on Rota, and the many weedy

fields and second-growth forests should provide good habitat for the rail. Experimental releases would be made on Commonwealth-owned lands or on lands belonging to cooperating landowners.

Section 10(j) of the Act requires that an experimental population be geographically isolated from any existing population. The establishment of an experimental population on Rota would comply with this rule. Even if the rail were still extant on Guam, Rota is separated from Guam by 50 km (31 miles) of open ocean and it is unlikely that the flightless rail could cross this geographic barrier.

Rota is outside the known historical range of the Guam rail (although it is probable that some type of rail at one time occurred on Rota). Prior to the establishment of an experimental population outside of its probable historic range, the Service must determine that the primary habitat of the species has been unsuitably and irreversibly altered or destroyed. Although the basic habitat components required by the rail on Guam have not been "irreversibly" altered or destroyed in the strict sense, they have essentially been made unavailable to the rail for the indefinite future due to the pervasive threat of the brown tree snake. There is hope that it will eventually be possible to control or eradicate the brown tree snake on Guam, but there is no assurance that this will be possible in the foreseeable future. This indefinite alteration of the rail's primary habitat is tantamount to the unsuitable and irreversible alteration or destruction of its primary habitat.

Management

Although this experimental translocation project would be conducted cooperatively by the Guam Division, the Commonwealth Division, and the Service, the Guam Division would be the lead agency and would be primarily responsible for its implementation. The Commonwealth Division may provide assistance in maintenance of the release site or in monitoring the release. The Service would coordinate and expedite any procedural matters relating to the project. Follow-up evaluation of the releases would be conducted by Dr. Stuart Pimm and selected graduate students from the University of Tennessee pursuant to a cooperative agreement between the University and the Guam Division. Studies would focus on dispersal patterns, mortality, reproductive success, overall success of the releases, and general health of the population.

Guam rails selected for release in this experimental translocation project would be tested to ensure that they are disease-free before being transported to Rota for release during the rainy season. A Quarantine Entry Permit for Poultry and Birds (Form CNMI-AHI-001) required by the Commonwealth would accompany all shipments of rails. If deemed prudent because of potential avian disease considerations, only progeny produced by the captive flock on Guam could be used for the proposed releases.

Approximately 50 to 100 captive-reared rails comprised of about an even sex ratio would be released annually. The rails would be released using two methods: (1) Half of the rails would be captured from the release pens and transported 1 km away before being released directly into the wild; (2) the remaining half would be permitted to leave the pens at "will" through doors left open for this purpose. Subsequent releases may consist of rails of varying ages to determine whether any age group is more likely to survive and colonize Rota.

All of the rails would be banded before release with numbered aluminum and color-coded bands. Between 25 and 30 rails per year would also have radio transmitters attached to facilitate determination of dispersal patterns, movements, home range, and mortality. Radio monitoring would be most intense during the first two months after release, followed by monthly or semi-monthly tracking.

A public information and education program would be conducted before rails are brought to Rota and during the actual establishment of the experimental population. The Mayor of Rota's wish to help a "neighbor" would serve as the theme for sustaining public support for the project. The program would encourage the public to report sightings of rails throughout the island. These observations would help determine dispersal and survival of released rails.

The Guam Division would provide annual reports on the results of their and the University of Tennessee follow-up studies. The cooperators would meet annually to assess the status of the experimental project so that any appropriate changes and/or adjustments could be made. A more comprehensive assessment of this project would be made at the end of the 5th year, and a public meeting would be held on Rota to assess public attitudes. The three cooperators would then recommend future direction for the project, including feasibility of limited subsistence taking if the rail becomes well established and

occupies all suitable habitats island-wide.

The Service believes that this project would result in the establishment of a "wild" population of rails which could be used to reestablish the species on Guam when the brown tree snake is eliminated or controlled. For this reason the Service finds that the release and establishment of an experimental population of Guam rails on Rota would further the conservation of this species. (See section 10(j)(2)(A) of the Act; 50 CFR 17.81(b).)

Public Comments Solicited

The Service intends that any rule finally adopted be as effective as possible. Therefore, comments or recommendations concerning any aspects of this proposed rule or its accompanying draft Environmental Assessment are hereby invited to be submitted from the public, concerned government agencies, the scientific community, industry, or any other interested party. Comments should be as specific as possible and must be received at the above address within 30 days after publication of this proposed rule in the **Federal Register**. If appropriate, a public meeting may be conducted with interested members of the public.

Final promulgation of a rule to implement this proposed action will take into consideration any comments or additional information received by the Service. The regulation shall, to the maximum extent practicable, represent an agreement between the U.S. Fish and Wildlife Service, the affected State and

Federal agencies, and persons holding any interest in land which may be affected by establishment of an experimental population.

National Environmental Policy Act

A draft Environmental Assessment (EA) and a draft Finding of No Significant Impact (FONSI) have been prepared pursuant to the National Environmental Policy Act. The draft EA and FONSI are available to the public for review and comments at the Service's Pacific Islands Office at the above address. The draft EA will form the basis for a decision as to whether this proposal is 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).

Executive Order 12291, Paperwork Reduction Act, and Regulatory Flexibility Act

The Service has determined that this would not be a major rule as defined by Executive Order 12291. The rule as proposed does not contain any information collection or record keeping requirements as defined in the Paperwork Reduction Act of 1980 (Pub. L. 96-511). The rule would not have a significant economic effect on a substantial number of small entities as described in the Regulatory Flexibility Act (Pub. L. 96-354). The introduction sites would be on comparatively undeveloped areas on the island of Rota. The introduction of a nonessential

experimental population into this area is not expected to have any adverse impact on public use of the immediate and surrounding area. No private entities would be affected by this action.

Author

The principal author of this proposal is Ernest Kosaka, Field Supervisor, Environmental Services, U.S. Fish and Wildlife Service, Pacific Islands Office, Honolulu, Hawaii [(808) 541-2749].

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

Accordingly, it is hereby proposed to amend Part 17, Chapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

PART 17--[AMENDED]

1. The authority citation for Part 17 continues to read 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; and Pub. L. 97-304, 96 Stat. 1411; Pub. L. 100-478, 102 Stat. 2306; Pub. L. 100-653, 102 Stat. 3825. (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. It is proposed to amend § 17.11(h) by revising the existing entry for this species as shown below:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Species rules
Common name	Scientific name						
Birds							
Rail, Guam.....	<i>Rallus owstoni</i>	Western Pacific Ocean, USA.	Western Pacific Ocean, USA.	E	146E, 156	N/A	N/A
Rail, Guam.....	<i>Rallus owstoni</i>	Western Pacific Ocean, USA.	Rota.....	XN	146E, 156	N/A	17.84(f)

3. It is proposed that 50 CFR 17.84 be amended by adding new paragraph (f) as follows:

§ 17.84 Special rules—vertebrates.

(f) *Guam Rail (Rallus owstoni)*. (1) The Guam rail population identified in paragraph (f)(7) of this section is a nonessential experimental population.

(2) No person shall take this species, except:

(i) In accordance with a valid permit issued by the Service under § 17.32 for educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act; or

(ii) As authorized by the laws and regulations of the Commonwealth of the Northern Mariana Islands, after the Service has made the determination that

the experimental population has become well established and occupies all suitable habitat island-wide.

(3) Any employee of the Service, the Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife, or the Guam Division of Aquatic and Wildlife Resources who is designated for such purposes, may take a Guam rail without a permit if such action is necessary to:

- (i) Aid a sick, injured, or orphaned specimen;
 - (ii) Dispose of a dead specimen;
 - (iii) Salvage a dead specimen which may be useful for scientific study;
 - (iv) Take an animal which is responsible for depredations to personal property if it has not been possible to otherwise eliminate such depredations and/or loss of personal property, provided that such taking must be done in a humane manner and may involve injuring or killing the bird only if it has not been possible to eliminate depredations by live capturing and releasing the specimen unharmed in other suitable habitats; or
 - (v) Take birds for approved reintroduction on Guam.
- (4) Any violation of applicable Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife conservation laws or regulations with respect to the taking of this species (other than taking as described in paragraph (f)(2)(ii) of this section) will

also be a violation of the Endangered Species Act.

(5) No person shall possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever, any such species taken in violation of these regulations or in violation of applicable Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife laws or regulations or the Endangered Species Act.

(6) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (f) (2) through (5) of this section.

(7) The sites for introduction of Guam rails on Rota, Commonwealth of the Northern Mariana Islands, are on an island separated from Guam by 50 kilometers of ocean. The last known observation of an individual of this species occurred near the northern tip of Guam which is closest to the island of Rota. No intermingling of these populations will occur since this species

has been extirpated in the wild on Guam. The Rota release sites are of necessity outside the historic range of the Guam rail, as described in this proposed rule, because its primary range has been unsuitably and indefinitely altered by the brown tree snake.

(8) The nonessential experimental population on Rota will be checked periodically by staff of the Commonwealth of Northern Mariana Islands Division of Fish and Wildlife and cooperating staff from the University of Tennessee to determine dispersal patterns, mortality, and reproductive success. The overall success of the releases and general health of the population will also be assessed.

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Dated: May 10, 1989.

Maryanne C. Bach,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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