

ENDANGERED SPECIES

Technical Bulletin Reprint Wildland Management Center
The University of Michigan

From the World Wildlife Fund-U.S.



IMPERIAL PARROT: LAST STAND FOR A SPECTACULAR SPECIES

By Byron Swift

Island ecosystems are especially fragile, and the Caribbean islands have proven no exception. Of the 45 species of birds listed as endangered or threatened in continental North America and the Caribbean, 20 are found in the Caribbean islands.

The pride of several of the Lesser Antillean islands is an endemic species of parrot. Four are found today on the southern islands: the Imperial Parrot (*Amazona imperialis*), Red-necked Parrot (*A. arausiaca*), St. Lucia Parrot (*A. versicolor*) and St. Vincent Parrot (*A. guildingii*). It is believed that up to six more may have formerly existed on the northern islands, but were wiped out shortly after the islands were colonized by the French. These species disappeared before they were described by science, but informal descriptions have been found in cookbooks and other tracts.

Dominica, the "nature island" of the Lesser Antilles, has two endemic *Amazona* parrots, the Imperial Parrot and the Red-necked Parrot. The Red-necked Parrot, currently numbering about 200 individuals, is closely related to the St. Lucia Parrot while the Imperial Parrot, numbering about 50-100 individuals is likely related only to the poorly known, extinct species of Guadeloupe.

The Imperial Parrot, locally named the Sisserou, is the largest of all Amazon parrots, and one of the largest parrots in the world. It is green with a dark purple ruff. Formerly occurring in small numbers in the northern and southern mountains of Dominica, the parrots' breeding population has been reduced to a small area on the north slopes of the island following two devastating hurricanes in 1979 and 1980.

Head Dominican Forester Chris Maximea recently reported: "Habitat protection for our Imperial Parrot appears increasingly problematic, and there appears to be less and less hope for the survival of the species in the wild. There appear to be distinctly fewer birds in the wild than there were even a few years ago." Biologists from the United States and St. Lucia agree with this analysis.

The last refuge of this spectacular species is in a forest reserve in the Picard River Valley on Morne Diablotin. This area is under serious threat because the adjacent forest, on private land, is being rapidly destroyed by a combination of agricultural development and timbering by Rotary Timbers, Inc. Paradoxically, preservation of this forest is important for economic as well as conservation reasons, as Dominica is actually selling the water from this watershed to other countries in the region.

The seriousness of this threat is due to the well documented inability of the Imperial Parrot to tolerate near-

by human activity. Plans for the agricultural development of valleys adjacent to the Imperial Parrot habitat include extensive plantations and human settlement. Possibly the greatest concern is that the increased human presence will lead to even greater illegal hunting and trade in the parrots, which is still poorly controlled. Another factor involves the possible adverse reaction of the Imperial Parrot to the expected influx of Red-necked Parrots which are currently nesting in the areas to be logged, thereby increasing competition for scarce nesting cavities.

The Dominica Forestry Department has been struggling for years to create a protected reserve in this area, but has encountered insurmountable political obstacles. A large part of southern Dominica has already been declared a national park, with help from Canadian organizations and The Nature Conservancy, but it was badly damaged by the hurricanes in 1979 and 1980. While the northern area is critical to the survival of the Imperial Parrot, it has been difficult for Dominican leaders to recognize its value, and it appears the same as any other rain forest to the average person.

The areas being developed are private lands and the government seems unwilling to expand protection for the parrot. Unless logging and permanent agriculture is kept off the slopes and an education program is soon instituted to discourage illegal hunting and trade, it appears that this could be the last stand of the Imperial Parrot.

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Imperial Parrot by Paul Barruel/WWF

The situation in St. Vincent and St. Lucia, however, is brighter. The Forestry Department in St. Lucia, with the help of World Wildlife Fund, has set aside a wildlife and watershed reserve for the 100 remaining St. Lucia Parrots, and implemented a highly successful education program to curb illegal hunting and build public support for the national bird. In St. Vincent, the government has proposed a similar program to be funded by the Wildlife Preservation Trust International and World Wildlife Fund. To protect the 400 St. Vincent Parrots as well as watersheds critical for the populace. With proper foresight, the survival in the wild of each of these striking species could be achieved.

Interior Orders Emergency Listing of the Guam Rail

Interior Secretary William Clark announced April 11 that he has ordered the emergency listing of the Guam rail as an endangered species.

Fewer than 100 Guam rails are estimated to remain in the species' only known habitat, upland grassy areas in the vicinity of Anderson Air Force Base, Guam. Habitat modification, predation by an introduced snake species, and disease are suspected as contributing factors to the species' overall decline in recent years. An Air Force proposal to clear brush for security purposes in an area inhabited by the rails could have resulted in further loss of habitat.

"I alerted Secretary Weinberger of our concerns that the Air Force proposal could result in further loss of rail habitat and he assured me no action will be taken that would harm the birds," Secretary Clark said. "The emergency listing will ensure protection of the rail habitat on Guam while we confer with the military on how best to improve security at the base without causing further loss in the number of Guam rails."

Under the emergency listing, the Guam rails will receive the full protection of the Endangered Species Act for 240 days. The U.S. Fish and Wildlife Service proposed the species for listing as endangered under regular rulemaking procedures on November 29, 1983, and had already concluded a public comment period on the proposal. The emergency listing will ensure protection of the Guam rail until such time as a final rulemaking under normal procedures can be completed.

The Guam rail is a flightless bird with relatively long legs and small wings. The upper parts are largely dark in color, the throat and upper breast are near gray, and the lower parts are blackish with white barrings. The species is known only from the Territory of Guam in the Western Pacific Ocean. It formerly occurred in grassy areas, forests, and marshlands throughout the island. A drastic numerical and distributional decline began about 1971. A 1983 survey indicated that fewer than 100 individuals survive and that these are distributed in several small, discontinuous groups in extreme northern Guam. The reduction probably has resulted in part from destruction of native habitat by human activity, but the overall rapid decline in recent years is suspected to involve some factor in addition to habitat loss, such as predation or disease.

The discovery in late March of a dead California condor is viewed as an unfortunate setback in what researchers in the U.S. Fish and Wildlife Service (FWS) have otherwise characterized as the most successful year to date in the effort to improve the chances for survival of this severely endangered species.

Radio signals led scientists to a remote section in the southern Sierra Nevada Mountains in California on Thursday, March 22, where they discovered a dead male condor, thought to be between 5 and 6 years old. Preliminary results of an autopsy conducted at the San Diego Zoological Park by a zoo veterinarian and a scientist from the Fish and Wildlife Service's National Wildlife Health Laboratory have not established the cause of death. The bird had not been shot. A small (8mm by 1mm) piece of metal, of unknown content and origin, was found in the gizzard and is being analyzed. Tissue analyses will also be conducted to try to pinpoint the cause.

The immature condor had been tagged with two miniature radio transmitters in October 1982 in an effort to track its movements in its range throughout the rugged coastal hill country north of Los Angeles. Scientists became concerned when radio signals indicated the bird's movements had stopped. They discovered its carcass late Thursday afternoon.

"We have no clues yet about the cause of death of this condor," said Robert A. Jantzen, director of the Fish and Wildlife Service, which sponsors the condor recovery project along with the California Department of Fish and Game, National Audubon Society, U.S. Forest Service, and Bureau of Land Management. "The only positive aspect we can take from this situation is that it demonstrates the critical value of radio telemetry in allowing us to investigate condor deaths that we know are occurring in the wild, but that have previously been nearly impossible for us to document."

There are only an estimated 16 California condors known to exist in the wild, with another nine birds in captivity at zoos.

The latest death follows what scientists hail as the most successful season yet in the ongoing attempt to remove condor eggs from breeding pairs in the wild and hatch them in captivity. Six condor eggs have been removed from four wild pairs this season and placed in incubators at the San Diego Zoo, where they are expected to hatch within the next few weeks. Four eggs and two nestlings were removed from the wild last breeding season. Researchers are also heartened by the discovery of a fifth breeding condor pair, thought to be nesting in the most unusual location yet spotted—halfway up a 200-foot giant sequoia tree in Sequoia National Forest. Prospects for discovery of additional condor eggs in the near future are good, scientists say.

Removal of condor eggs to the carefully maintained environment of artificial incubators stimulates production of replacement eggs by breeding pairs, a phenomenon known as "double-clutching." The removal can also significantly lessen the chances that eggs or chicks might fall victim to predators or nesting squabbles between adult condors.

"Egg production has been excellent this year and we anticipate good chick survival," Jantzen said. "The encouragement we take from this news is tempered by our concern over the deaths of two wild condors. We are still in need of a more complete understanding of the reasons for condor mortality."

A young female California condor was also found dead in Kern County, California last November.

ARCTIC PEREGRINE FALCON RECLASSIFIED TO "THREATENED," OTHER PROTECTIONS FOR PEREGRINES EXTENDED

The Arctic peregrine falcon, first listed as an endangered species in 1970, has been reclassified as "threatened." The species is no longer in danger of extinction throughout a significant portion of its range, which extends from Alaska to Greenland in summer and south to South America in winter. The Interior Department's U.S. Fish and Wildlife Service estimates that at least 3,000 pairs of these peregrines are found in the Arctic and sub-Arctic areas of North America.

The Fish and Wildlife Service published the reclassification in the March 20, 1984 *Federal Register*. Under "similarity of appearance" provisions of the Endangered Species Act, the notice also extends legal protections granted to any type of peregrine falcon in the continental United States. A wild peregrine falcon or a captive-bred peregrine released under government or privately sponsored restoration programs will now be fully protected throughout the lower 48 States.

Levels of DDT and its breakdown products have been decreasing in female Arctic peregrines. The number of young falcons produced annually has risen as the pesticide's interference in the species' reproductive processes has diminished. The Arctic peregrine still faces a continuing threat from DDT use in Central and South America, however.

By using the "similarity of appearance" provision to pro-

tect all wild peregrines in the lower 48 States, the Service can clarify the status of birds that are produced in captivity and put its law enforcement activities in behalf of the entire species on an equal basis. Although captive-reared peregrines are indistinguishable in appearance from wild peregrines, their mixed genetic heritage has made them ineligible for full protection under the Endangered Species Act in the past. With this provision, harming any free-flying peregrine would be prohibited by the act, broadening the scope of the protections.

The Fish and Wildlife Service has also clarified the status of the species in western Washington State by determining all peregrines nesting on the Olympic Peninsula to be "endangered" American peregrine falcons which are eligible for full protection under the Endangered Species Act. Both the American peregrine and its non-endangered cousin, the Peale's peregrine, are found in this area. The Service's action now addresses this overlap in range by designating *all* nesting peregrines in this area as an endangered species. The State of Washington already classifies all peregrine subspecies as endangered and does not allow any taking, except under strict permit. Only three active peregrine nest sites are known in western Washington, and this notice of extension of the rule will only apply to a small number of birds.

These rules became effective on April 19, 1984.

Botanic Gardens Conservation Co-ordinating Body

By Jane Lamlein
Smithsonian Institution

In the late 1970's several international conferences were held on the role of botanic gardens in conservation. It was recognized that with the alarming rate of plant extinctions, methods to preserve threatened and vulnerable species outside of their natural habitat should be developed. Botanic gardens had previously been involved in conservation activities, but it became more apparent that they should serve an increasingly important function as "rescue" centers, gene banks, and research institutions to aid in preserving the world's valuable plant species. In 1979 the Botanic Gardens Conservation Co-ordination Body was created as a section of the IUCN's Threatened Plants Unit located at the Royal Botanic Gardens, Kew. Its aim is to assist botanic gardens in their conservation activities by compiling information on where threatened species are in cultivation and by encouraging the exchange of plants between different gardens.

The emphasis in the first 5 years has been to find out which threatened plants are in cultivation and where. This was accomplished by circulating threatened plant lists to member gardens and asking them to annotate the nature of their holdings (e.g. known cultivated source, known wild source, duplicate material available). To date, lists have been circulated on threatened and endemic plants of Hawaii, Europe, South Africa, Juan Fernandez and Galapagos Islands, in addition to reports on Mexican cacti, ferns, cycads and succulents of Madagascar. During

1983 the data was computerized, and the 13,000 plant records provide information on which species are in cultivation; how many or how few gardens have them; whether any garden can offer seeds or duplicate material; and which threatened species are not yet in cultivation. Presently each participating garden is receiving an *in-*
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BOTANIC GARDENS continued . . .

dividual print-out regarding their holdings. Beside each species name is the plant's distribution, its IUCN Red Data Book category to indicate the degree of threat on a world scale, and a record of the number of other gardens cultivating the plant and the nature of its holdings. Comparing the degree of threat to a species with the number of other gardens holding material enables garden managers to assess the conservation value of their collection and establish propagation priorities. IUCN suggests that gardens propagate and distribute as a top priority those

species not recorded in other gardens, especially those in the Endangered and Extinct categories.

News of the Botanic Gardens Conservation Co-ordinating Body is included in the Threatened Plants Newsletter. Articles on propagation methods for certain threatened species and notes on symposia on conservation in botanic gardens are some topics featured. Any botanic garden interested in membership can write the Botanic Gardens Co-ordinator, Winifred Worth, c/o Threatened Plants Unit, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE, England.

Selkirk Mountain Herd of Woodland Caribou Now Endangered

The southern Selkirk Mountain herd of the woodland caribou, considered the Nation's most critically endangered large mammal, has been listed as an endangered species by the Interior Department's U.S. Fish and Wildlife Service. The action became effective on March 30, 1984.

The herd, now estimated to number only about 30 individuals, twice was granted endangered status under emergency provisions of the Endangered Species Act; formal listing will now extend the protections of the act to the species permanently.

The Selkirk Mountain herd is the only caribou population that is found in the lower 48 States, occurring in northern Idaho and northeastern Washington as well as southern British Columbia. Critical habitat for the species has not been designated because the Fish and Wildlife Service feels such a precise description could lead to illegal take of the few remaining animals.

The woodland caribou was once found throughout the northern tier of States that border Canada; by the 1950's the last remaining population had dropped to an estimated 100 animals in the Pacific Northwest. Reasons for the species' decline include once-legal hunting, poaching, habitat degradation, low calf survival, and the absence of immigration from other herds in Canada.

To The Readers:

We are finally getting caught up! We expect to be right on schedule in July so you will be receiving the *Technical Bulletin* just one month behind the U.S. Fish and Wildlife distribution schedule.

We would like to print a series of short articles on university courses dealing with endangered species and on educational programs at zoos that focus on endangered species. If you participate in or teach this type of class or program, please send us a short description of the activity, resources that are used and a way in which readers could contact you. We have already identified a few programs and would like to share this information with you in future issues.

Our subscription base is slowly growing, but we still need subscribers! Please encourage friends, associates, relatives, casual acquaintances to subscribe! We do appreciate the support of our present subscribers. Drop us a line for the next *Technical Bulletin Reprint!*

—Reprint Editor

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