

ENDANGERED SPECIES

Technical Bulletin Reprint

Wildland Management Center
School of Natural Resources
The University of Michigan

King Vulture Conservation and Research Program

by Jack Clinton-Eitniear

The hours passed slowly in my canvas blind erected in the Mountain Pine Ridge Forest Reserve in Belize, Central America. I had earlier placed several dead sheep in a nearby ravine in hopes of observing the feeding behavior of the King Vulture (*Sarcorampus papa*). Suddenly a great rush of air created waves across the top and sides of my blind. Soon the majestic black and white bird with its wing spread of over seven and a half feet and weight of over seven and a half pounds was in full view. Twisting and turning as it descended, it displayed with great precision how these large birds of prey have complete control over the winds and thermal currents. Having just landed, the vultures walked with powerful legs over to the carcasses and began feeding.

Ranging from southern Mexico to northern Argentina, the King Vulture is but one member of the taxonomic family Cathartidae. The name itself was derived from the Greek word "Kathartes" meaning a cleanser, or purifier. Along with the other six members of this family, it plays an important role in the sanitation of our environment. Such a role is vividly depicted in Panama where in the capital city all garbage trucks have paintings of Black Vultures on them.

Unlike the other smaller vultures the King Vulture does not adapt well to human presence. Seldom is the species observed feeding upon road killed animals or in cattle slaughter areas. If however, an animal dies in a cattle pasture some distance from habitation, it will readily attract a number of King Vultures. Although its status is not nearly as critical as its

close relatives the condors, it has certainly decreased in numbers over the past fifty years. In 1948 the renown ornithologists George Lowery and Walter Dalquest visited Mexico and documented the status of birdlife in the State of Veracruz. The following statement was made regarding the King Vulture. "One to ten are in sight, soaring over the jungle, at almost all times of the day. A tapir, killed for a specimen, drew fifty or more of these birds to our camp". Needless to say, the King Vulture is no longer found, except upon rare occasion, within the State of Veracruz today. Except for some of the remote jungle areas in southern Mexico, the King Vulture has gone from one of the commonest to

rarest of birds in Mexico.

As an attempt to prevent the further reduction in the species numbers throughout Mexico and adjacent northern Central America, I began studying the species in the field and in captivity in 1979. During November of 1984, I was joined in Belize, Central America by Mr. James Swigert of the Jackson Zoological Park, Jackson, Mississippi. The Jackson Zoo has over the years established itself as the primary producer of young King Vultures in the United States. It was our hopes that some of the offspring produced at the Jackson Zoo could be used to initially develop the methods required to suc-

Please turn to the next page



Wild King Vultures approaching sheep carcass in Belize.

King Vulture continued

cessfully reintroduce the species into the wild. After the techniques are developed, additional vultures could be released in other areas of Central and South America where the species population is declining. Prior to Mr. Swigert's visit, the first young King Vulture had arrived in Belize from Jackson. This bird, only 8 months old, is currently being used in our education program at the Belize Zoo.

Although the breeding of birds in captivity (as well as Mammals and Reptiles) for release in the wild is not a new concept, it's one that is actually only in its infancy with most species. The remarkable success being achieved by the Peregrine Fund with their introduction of Peregrine Falcons in the United States is a testimony that the technique can and does work. Although King Vultures have never been introduced, several major studies have been conducted with Andean Condors, Black and Turkey Vultures

that indicate that it can be conducted successfully. Birds must have radio transmitters attached so that their exact whereabouts is known. If trouble does arise they must be located and assisted. Unlike birds that hunt their own food, vultures must learn a complex series of behaviors that allow them to find their food items. Scientific data currently supports the theory that only the Turkey Vulture has the ability to "smell" rotting materials. The other species must rely upon their excellent eyesight and certain natural cues, such as following hunters or looking for smaller vultures that have located food.

Raised in captivity the birds to be released have never had to locate food for themselves. The method used to "teach" this behavior involves the placing of the birds in an enclosure within the range of wild birds. As food items are being fed upon by wild vultures, the captive birds are allowed to observe the social nature of the activity. Gradually the captive birds are allowed more freedom, while being fed near their cage, until the day when they leave the area to forage with other wild vultures. The entire process requires a long period of time with continual observation as to the progress being made by the birds.

The results are, however, one of the greatest compliments to be given a zoo. Being consumers of wildlife for centuries, such a debt is slowly being paid by the few dedicated zoos that are taking the final step of attempting to assist the wild populations of wildlife that they breed and display.

More King vultures exist in zoos within the United States than occur naturally in the wild in many countries within the species range. With the efforts of the Jackson Zoo we will hopefully shift the scale in the other direction.

Jack Clinton-Eitniear is the Director of Avian Research of the Belize Zoological Society.

This article appeared earlier in the Jackson Zoological newsletter, *Wild Things*.

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A forum for information
exchange on
endangered species from

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A closer look at the King Vulture.

Wildlife Imperiled on the Tibetan Plateau

George Schaller, Director of Wildlife Conservation International (a division of the New York Zoological Society) recently returned from the Tibetan plateau. In collaboration with Chinese scientists, he has been making the first survey of wildlife resources in these highlands. He reports that one of the world's great wildlife populations has declined drastically in the past two to three decades.

Dr. Schaller, noted for past work in giant panda, mountain gorilla, tiger, lion and others, points to unregulated hunting as the chief cause for the decline.

"The Tibetan plateau is about the size of Alaska and Texas combined. Much of it is bleak and high, lying at 14,000 to 16,000 feet. Yet it harbors a unique assemblage of large hoofed animals, including wild yak, Tibetan gazelle, Tibetan antelope, Tibetan wild ass, Tibetan wild sheep and white-lipped deer. Almost nothing is known about the status of these species and even less about their habits. Brown bear, wolf, and snow leopard also occur there. All are becoming scarce — and in fact vast tracts are already devoid of wildlife — as roads, mining camps, and herdsman penetrate ever deeper into even the most remote wilderness areas," explained Dr. Schaller.

Wildlife is shot for meat and hides; antelope horns and deer antlers are said to have medicinal value. Such

products are mostly exported to the lowlands.

"Once herdsman tolerated wild herbivores," noted Dr. Schaller. "The Buddhist religion, to which Tibetans adhere, teaches compassion toward all living things. But as domestic herds have increased, pastures have in many areas been overgrazed and degraded. Since wild herbivores may compete with domestic yak and sheep for the scant forage, attitudes toward wildlife are changing."

And now wildlife is faced with another crisis as well. Much of the plateau is a high-altitude desert with extreme cold but little snow in winter. On October 17, 1985, a blizzard—the most severe in 30 years—hit the central plateau, covering it with a foot of snow. Usually wind and sun soon clear snow away. However, this time night temperatures dropped to an unseasonal -30° to -40° F and the snow remained. Livestock and wildlife tried to find forage by pawing through the snow, but, obtaining little, many were soon starving. Tibetan herdsman were marooned in snow-bound camps.

Dr. Schaller joined a rescue team of Tibetans and soldiers from the People's Liberation Army to check on the well-being of herdsman in their isolated tents. In a tractor-pulled wagon they went cross-country for some 300 miles. Adapted to a severe climate, the herdsman and their families were surviving well: they had ample mutton for

food and yak dung for fuel.

Most domestic sheep were being slaughtered because they lacked forage. The carcasses are sold to the government. With the cash received, the herdsman will purchase new animals in spring.

The plight of the wildlife was great. "Several thousand antelope and gazelle starved to death—no one knows exactly how many", reported Dr. Schaller. "It was heart-breaking to see these rare and beautiful animals migrate in search of food, their legs rubbed raw by the snow, without our being able to help. Antelope in herds of up to 250 criss-crossed the snow wastes until they stopped from fatigue. Some resting animals were too weak to rise when I approached them."

Wild asses died too, but, being large, they can deal better with snow and that species was not as seriously affected as the others.

"This die-off was a tragedy. But, on the positive side, it drew the attention of the government to the unique fauna on the Tibetan plateau. Given the religious tradition of Tibetans toward wildlife and the interest of China in protecting natural resources, there is some hope for the future. North American lost its great plains herds, but Tibet's can survive if conservation measures are taken now," emphasized Dr. Schaller.

Dr. Schaller will return to Tibet this spring.

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Resources . . .

Audubon Park currently houses 4 (3.1) of the 6 jabiru storks (*Jabiru mycteria*) known to be held in captivity in the United States. Denver and San Antonio each hold a single male. There are 4 young birds at Vogelpark Walsrode in Germany and a single bird in Singapore. Our only female has a strong pair bond with her mate and some reproductive activity has been seen. Although jabirus have not been bred in captivity, we would like to locate additional females in an attempt to establish a captive breeding population. The apparent decline of the jabiru in Central America necessitates work with the species. Anyone who knows of other birds in the U.S. or anywhere else in the world is urged to contact:

Peter Shannon
Curator of Birds
Audubon Park Zoo
P.O. Box 4327
New Orleans, LA 70178
U.S.A.

We would also like to have information from zoos which have kept jabirus in the past concerning husbandry, behavior, original source of the birds, management problems, etc.

LEAST TERNS ARE TO BE COLOR BANDED ON LONG ISLAND, NY as part of a population study being conducted by the Seatuck Research Program of the Cornell University Laboratory of Ornithology in coopera-

tion with the N.Y. State Department of Environmental Conservation. Adult terns will be banded with a combination of three color bands and a U.S.F.W.S. band in order to identify individuals to determine intercolony movements, nesting chronology, and site tenacity in Long Island's least tern population. Chicks will be banded with a single striped color band and a U.S.F.W.S. band to identify them to their natal colony and to determine colony productivity, post-fledgling dispersal and age of first breeding. Anyone observing color banded least terns is asked to contact the Seatuck Research Program, Box 31, Islip, N.Y. 11751 (516) 581-6908 and the U.S.F.W.S. Bird Banding Laboratory.

The University of California has long been concerned with Mexico, and has contributed to the advancement of knowledge about Mexico, United States-Mexican relations and a wide variety of issues important to both countries. In 1981, the University established the University of California Consortium on Mexico and the United States. The UC MEXUS Consortium coordinates and supports University of California activities related to Mexico and the United States in the physical, biological, agricultural and marine sciences. It also produces a journal, a periodic research inventory, and a newsletter for curriculum among UC and Mexican researchers and other in-

terested persons. For more information, write: UC MEXUS, University of California, Riverside, CA 92521.

NEW PUBLICATIONS

Animal Extinction: What Everyone Should Know, (edited by R. J. Hoage), is available for \$9.95 through Smithsonian Institution Press. The book's essays, written by distinguished scientists, discuss the problems mankind faces in determining which species will survive and examines imaginative ways to combat species extinctions and the destruction of habitats on local and global levels.

"Freshwater Mussels of the Upper Mississippi River", is a pamphlet intended as an identification aid for common, rare and endangered species of mussels. It is available by contacting the U.S. Fish and Wildlife Service, Office of Endangered Species, Federal Bldg., Fort Snelling, Twin Cities, MN 55111.

The U.S. Fish and Wildlife Service has issued a revised notice identifying vertebrate animal taxa, native to the U.S., being considered for possible addition to the List of Endangered and Threatened Wildlife. Copies of Federal Register 50(181), Sept. 18, 1985, can be obtained from: Director (OES), 500 Broyhill Bldg., U.S. Fish and Wildlife Service, Washington, D.C. 20240.

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