The Last Days of the Wild Condor?

A debate is raging over whether to capture the few remaining wild California condors for breeding in captivity

Only seven condors soar through the sky of California's San Joaquin Valley these days, their numbers steadily eroded by man's growing imprint on their environment. Whether the wild remnants of this endangered species should remain free is a subject of intense debate among wildlife biologists. Interior Secretary Donald Hodel has indicated he will rule on the matter, if Interior's Fish and Wildlife Service and the State of California do not reach an agreement in the coming weeks.

How best to proceed with saving the California condor is a delicate matter, fraught with political pitfalls. California and federal wildlife agencies are at odds; there is a budgetary squabble on buying a safe feeding ground; and saving the condor has become a highly charged public cause. "I'll tell you, this is a difficult issue," Hodel admitted at a press conference on 30 July, "and I'm ultimately going to have to rely upon the best professional advice I can get."

With a wingspan of 9 to 10 feet and weighing 18 to 22 pounds, the condor (*Gymnogyps californianus*) is one of the largest land birds native to North America. First included on the federal endangered species list in 1967, the population has dropped from about 40 or so birds then to 15 birds in 1984. Another six died between November 1984 and April 1985.

The loss of six birds in less than a year prompted the California Fish and Game Commission in June to call for the remaining wild condors to be temporarily placed in the Los Angeles and San Diego zoos—out of harm's way. An intense captive breeding program could permit condors to be freed by 1990.

"We feel the top priority has to be the physical survival of the species," says Brian J. Kahn, vice president of the California Fish and Game Commission. "Any hope of this small population reestablishing itself by itself is gone," adds Kahn, noting that the condor's fate is tied to the captive flock.

The solution seems obvious—move the remainder of this endangered flock into captivity where their chances of survival are greatest. Indeed, of the 20 condors in captivity, 12 have been hatched in zoos and 5 others have been reared in zoos after being taken between 1982 and 1984 as nestlings or at age 1. Three more condors have been captured in the past 3 years, and a 19-year-old was taken in 1967.

The condor's survival as a species is handicapped by a low reproduction rate—typically one egg every 2 years. Furthermore, it takes 6 to 7 years before a condor reaches reproductive age. The bird also is threatened because its food is being contaminated by lead and other poisons; land developers are encroaching on its 11-million-acre range; and they still may be targets for hunters.

Despite these problems, the Fish and Wildlife Service, the National Audubon Society, and others argue that this is not the time to lock the birds in zoos. The condor's future, they insist, hangs as much on preserving the species' social structure and habitat as on captive breeding. Not only does Fish and Wildlife want six of the free birds to remain in the wild, but it has proposed releasing next year three captive birds whose gene lines are represented by other members of the captive flock.

"We have to leave some birds out there to maintain the condor culture," says Jesse Grantham, an Audubon Society biologist with the Condor Research Center in Ventura, California. There is a need for young, newly released birds, he says, to be shown traditional nesting and roosting sites, and safe foraging areas. While it is likely that condors raised in captivity can be introduced into the wild successfully, "the mortality rate will be higher than if there are some wild condors around," says Grantham. Jan E. Riffe, chief of research for the Fish and Wildlife Service, goes further, contending that "the success of the release program will depend on the presence of wild condors to serve as guides."

California's Fish and Game Commission sees this strategy as a huge gamble. "What is the penalty in terms of the survival of the species if you leave those birds out there?" asks Kahn. "You put the mortality rate on a graph—and exclude this year's losses—and you see that in a few years we are not going to have any more condors." The plan to introduce young birds into the wild before they can reproduce "is totally absurd," says Kahn.

The size of the captive flock is not necessarily indicative of the condor's chances for long-term survival. Fifteen of the 20 birds are 2 years of age or younger—the products of five pairs. Geneticists are uncertain that the gene pool of the captive condors is sufficient. "It's hard to know what to do next without

knowing how much diversity there is," says Steven H. Fritts, head of ecology for endangered species at Interior's Patuxent Wildlife Research Center. Genetic analyses being done for Interior could shed some light on this issue within a month, Fritts says.

Most recently, the growth in the condor population has come from one pair in the wild, the so-called "Santa Barbara pair." Ornithologists have been getting up to three eggs a year from them by taking eggs soon after they are laid. But the California Condor Recovery Team has hopes that two sets of captive adult birds will breed and that a second set of wild condors will mate next year. The team is comprised of federal and state agencies involved in the condor effort, the Audubon Society, and the Western Foundation for Vertebrate Zoology.

The potential for increasing the near-term diversity and rate of reproduction has developed as a consequence of capturing two wild condors this summer. A third wild condor still is being sought. The addition of others could broaden the genetic mix further, and help correct a sex imbalance that exists in both captive and wild flocks. There are 12 females in captivity and only 8 males. The wild flock consists of 4 males and 3 females.

Interning the remaining wild birds has been recommended by a panel of ten geneticists, which reported to the California Condor Recovery Team this spring. This position is generally supported by the American Ornithologists' Union.

But the AOU hesitantly favors leaving three or four members of the existing wild flock free—the Santa Barbara pair and two others. While high mortality rates in the condor population suggest the birds might not survive, the AOU concedes that it will be hard to protect habitat and sustain research efforts if condors are not on the land. Audubon's Grantham says the remaining wild condors should have a good chance of surviving because they carry radio transmitters and can be tracked.

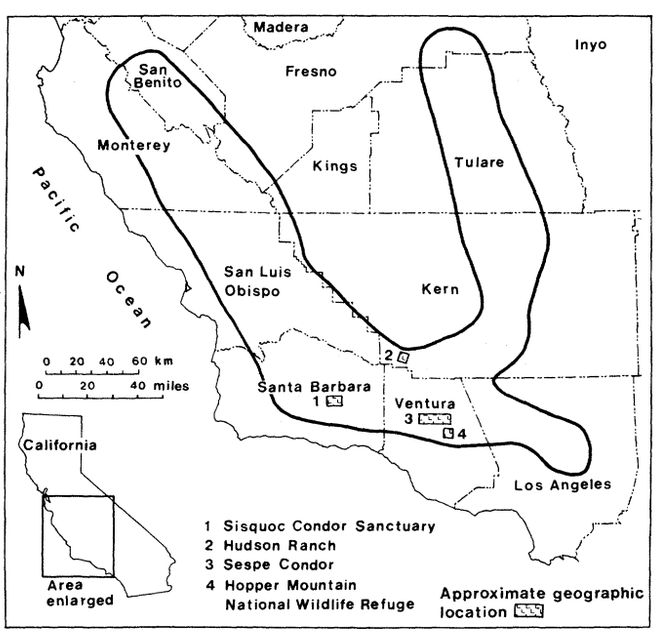
The organization's proposal could be the basis for a compromise among the State of California, the Fish and Wildlife Service, and the Audubon Society when the California Condor Recovery Team meets on 28 August in San Rafael, California. Kahn of the California commission agrees that "Politically, removing the birds from the wild will substantially reduce our ability to protect the condor's habitat."

Linda L. Blum, a habitat specialist at the Condor Research Center, says county and local officials have told her they will have difficulty denying development requests if the condor is absent from the land—even if members of a captive flock are slated to be set free in the future. Similarly, Interior attorneys have told Fish and Wildlife Service officials it may be difficult to protect the condor range using the Endangered Species Act if the birds are removed from the wild.

"Protection of habitat is a key factor in the long-term survival of the condor," says Riffe of the Fish and Wildlife Service. Not only must the needs of the existing population be considered but also the requirements of a flock that ornithologists hope will climb as high as 200. At present the condor's principal nesting and roosting sites fall within Sequoia, Angeles, and Los Padres national forests. Within these areas are the Sisquoc, Sespe, and Hopper condor sanctuaries.

Condor range

The California condor's nesting, roosting, and feeding grounds cover 11 million acres—some 50,000 square miles. The condor is known to travel as much as 150 miles in search of food. The bird once nested as far north as San Francisco, but its range has since receded. The condor population, which in the mid-1800's is estimated to have been around 500, has declined steadily since then.



But while 2 million acres of the condor range encompassing nesting and roosting sites are under federal protection, 90 percent of the bird's foraging area is on private land. And in recent years researchers have concluded that a contaminated food supply is a prime cause of the bird's decline. Lead poisoning caused by feeding on deer or other animals that have been shot by hunters is a major problem. Autopsies revealed lead poisoning to be the cause of death of two of three birds found in the past 3 years. And blood samples of 40 percent of the wild condors tested by the Condor Research Center show elevated lead levels above 0.75 part per million.

To combat this problem, the Audubon Society, California, the AOU, and other organizations have pushed for the establishment of a safe foraging area—the 13,800-acre Hudson Ranch, about 40 miles north of Ventura. The attraction of the site is that it is free of hunting, it is close to nesting sites, and has ample sources of food and water. The Condor Research Center in recent months has managed to get the entire wild flock to feed there. The tract, which historically has been used by condors, also is seen as an ideal release site for the captive condor population.

Congress has appropriated $8.9 million to acquire the ranch from a developer who has sought to subdivide the tract. But the prospect of taking the remaining condors out of the wild may result in the Reagan Administration opposing the purchase of Hudson Ranch. The Office of Management and Budget rejected the Fish and Wildlife Service's request to acquire the property and asked Secretary Hodel to examine the matter.

Although the Fish and Wildlife Service continues to press for the acquisition, Interior's Office of Policy, Budget and Administration, in a 30 July draft decision paper, argues for a delay. It notes that the purchase may be unnecessary if the condors are brought into captivity.

Despite the paper shuffling in Washington, Secretary Hodel appears to sense that there may be more at stake here than just the preservation of the California condor. The loss of the condor, the flagship of the Fish and Wildlife Service's endangered species program, could produce setbacks in other preservation programs and unleash a political firestorm.—**MARK CRAWFORD**