

Bulletin, 1981, VI(5): 6), with recovery teams working to save 68 critical species. It might be easy to refer to some of these species as "doomed," but there are a number of examples showing considerable progress toward recovery. The snail darter was known to be restricted to a short section of the Little Tennessee River. Recently, snail darters have been reported from other streams, and it is believed that researchers have been successful in transplanting this species elsewhere. The black-footed ferret was considered extinct by many scientists, but a recent discovery in Wyoming and a plan developed by a recovery team have brought overwhelming new hope. The Whooping Crane (*Grus americana*) was given minimal hope for survival because of its extremely low numbers and increasing human consumption of its habitat. Studies now show that this species can be fledged by Sandhill Cranes (*G. canadensis*), increasing the Whooping Crane's potential for survival. Would its future be as promising if research had stopped before this discovery? A review of a few issues of the Endangered Species Technical Bulletin (Dept. Interior Fish & Wildl. Serv., Washington, DC) will yield more examples of success stories.

My second point concerns public awareness and the mobilization of poorly informed and unmotivated people in both private enterprise and government. Raising funds to help starving children or save

baby seals requires that people have the visual impact of seeing the condition of these children and seals in order fully to comprehend and have compassion for them. Once such a program is established to solve these problems, there is a bureaucratic tendency for expansion. Eventually, other less stressed children are fed and less attractive animals are saved. The motivational momentum gained through trying to save the Condor may reduce the opportunity for loss of other species.

How do we justify the "large-scale investment" being made by the National Audubon Society (\$500,000 over 5 yr) and the federal government (\$750,000 over 2 yr) of \$1.25 million? This can be put into better perspective by comparing it to the \$463.0 million outlay to the Fish and Wildlife Service for FY1981 (The Budget for Fiscal Year 1983: 8-82) and the \$13,525 million outlay for "Using and Preserving Natural Resources and Improving the Environment" (*ibid.*: 5-52). Finally, where will the funds go if not to the Condor program? The National Audubon Society's share would undoubtedly go to another needy cause, but the funds from the federal government may be "lost through the cracks" (e.g. budget cuts, management costs required to cancel the program, etc.) and thus be unavailable for a similar, useful purpose.

The Condor Case: A Continuing Plea for Realism

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Severinghaus doesn't go along with my skepticism about the Condor recovery program (1981, Auk 98: 634), even though we appear to agree on many basic points. My suspicion is that, if he were closer to the California scene, he would not be so optimistic. One has to live in the State to appreciate the degree to which, inexorably, the Condor is threatened by population growth in the Los Angeles area and the southern San Joaquin Valley. Suitable habitat is slowly being squeezed, and, in the surviving habitat, there are more and more people intruding here and there, often with guns or just messing around. Subtly or not so subtly, this cumulatively depresses the probability of the Condor population's survival.

I alluded to this in my commentary, but the signs then were already more serious than I realized. In the extreme southern Sierra Nevada, between Bakersfield and Los Angeles and mainly to the east of Interstate 5, there is a large area that provides critical roosting sites in the present-day distribution of the

Condor. This is the privately owned Tejon Ranch of 270,000 acres, slated for large-scale real-estate development (see Business Week, 31 August 1981, pp. 75-76). I understand that over at least 6 months of the year, up to 75% of the surviving Condor population uses this area. Kern County authorities have accepted a plan for this development projected to the year 2000. In other words, within the time span already projected by the Fish and Wildlife Service for the Condor's recovery, the prospects for maintaining suitable habitat are more dismal than I earlier realized. This is my estimate of the situation even if the Tejon Ranch plans include provisions to protect roosting sites and a surrounding acreage.

The Tejon Ranch plan depends significantly, however, on water resources yet to be developed. This means that over some years to come, the Condor population may have a breathing spell of continuing access to its indispensable habitat. This may do more to help whatever recovery is possible than all that has been done to date. Even so, there is an irony. If the present five or six reproductive pairs of Condors were successful enough to result in a significant recovery, the population would need a larger area, with

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roosting and breeding sites additional to those presently available. Is this additional space really available? Where are people not in the way? That California specifically needs to limit its human population growth has of course received public notice apart from the Condor question (see, for example, the San Francisco Chronicle, 27 August 1980).

That Severinghaus doesn't appreciate this state-level perspective is shown by his reference to successful or prospectively successful recoveries of endangered species. As far as I know, none of the examples he cites is constrained habitatwise as is the Condor.

Finally, I consider his third point, about the negligible sums of money involved and the bureaucratic vagaries of dollar disposal, to be weak. The total figure given in my commentary, reflecting early-on projections, is surely only the tip of the monetary iceberg. The federal budgetary projections for the Condor program have been discussed publicly at a

level of several tens of millions over the next 2-3 decades. To this must be added state and private contributions. The Condor is the target of the most costly endangered-species program to date. I continue to question the wisdom of this outlay and, more generally, the stumble-bumble approach of government, business interests, and our society toward the environmental conflicts we humans provoke.

In 1907, Theodore Roosevelt had this to say: "In utilizing and conserving the natural resources of the Nation, the one characteristic more essential than any other is foresight. Unfortunately, foresight is not usually characteristic of a young and vigorous people, and it is obviously not a marked characteristic of us in the United States . . ." He died in 1919.

I have enjoyed the kind help of many friends in keeping abreast of the Condor matter. In particular, I want to express my warm thanks to David C. Phillips and the Friends of the Earth office in San Francisco.