

active (U.S. Fish and Wildlife Service 1995a).

The 1991 breeding season produced two condor chicks that met the Team's criteria for release, a male from the SDWAP and a female from the LAZ. However, attempting to apply the Team's third criterion to the 1991 chicks also revealed that it would not be practical in the future, because several founders had died without producing five progeny. The Team, therefore, recommended choosing genetically appropriate chicks for future releases based on pedigree analyses developed for genetic management of captive populations (U.S. Fish and Wildlife Service 1995a).

Prior to capture of the last wild California condor in 1987, the Team recognized that anticipated future releases of captive-reared condors would pose the problem of reintroducing individuals of an altricial bird into habitat devoid of their parents and other members of their own species. Thus, the Team recommended initiation of an experimental release of Andean condors. Research objectives for the experimental release were to refine condor release and recapture techniques; test the criteria being used to select condor release sites; develop written protocols for releases, monitoring, and recapture of condors; field test rearing protocols being used, or proposed for use to produce condors suitable for release; evaluate radiotelemetry packages; supplemental feeding strategies; train a team of biologists for releasing condors; and identify potential problems peculiar to the California environment. The Andean condor experiment began in August 1988 and concluded in December 1991. During that period three release sites were tested and a total of 13 female Andean condors were released. Only one mortality occurred in the field when an Andean condor collided with a power line (U.S. Fish and Wildlife Service 1995a).

In 1991, two California condor chicks were released into Sespe Condor Sanctuary, Los Padres National Forest, Ventura County on January 14, 1992. The male died from ingesting ethylene glycol in October of the same year. The next release of California condors occurred on December 1, 1992, when six more captive-produced California condors chicks were released at the same Sespe Condor Sanctuary site. Socialization with the remaining female from the first release proceeded well, and the "flock" appeared to adjust well to the wild conditions. However, there was continuing concern over the tendency of the birds to frequent zones

of heavy human activity. Indeed, three of these birds eventually died from collisions with power lines between late May and October 1993 (U.S. Fish and Wildlife Service 1995a).

Because of the tendency for the remaining condors to be attracted to the vicinity of human activity and man-made obstacles, especially power lines, another California condor release site was constructed in a more remote area, Lion Canyon, in the Los Padres National Forest near the boundary of the San Rafael Wilderness Area in Santa Barbara County. Five hatch year condors were released at the new site on December 8, 1993. In addition, the four condors that had been residing in the Sespe area were moved to the new site. They were re-released over a period of several weeks in hopes that this approach would reduce the probability that they would return to the Sespe area. Nevertheless, three of these condors eventually moved back to the Sespe area in March 1994, where they resumed the high risk practice of perching on power poles. Because of general concern about the tameness of these birds and the possibility that their undesirable behavior would be mimicked by younger California condors, these condors were retrapped on March 29, 1994 and added to the captive breeding population. On June 24, one of the 1993 California condors died when it collided with a power line. A second condor that was in the company of this condor at the time of its death, was trapped and returned to the LAZ. The three remaining wild condors continued to frequent areas of human activity and were trapped and returned to the zoo the same week the first 1995 release took place (U.S. Fish and Wildlife Service 1995a).

As a result of the deaths due to collisions with power lines and the attraction of newly released young condors to humans and their activities, the 14 young California condors scheduled for release in 1995 were subjected to aversion training in the zoo environment. An electrified mock power pole and natural snag perches were constructed in a large flight pen holding the release candidates. When the young condors landed on the electrified pole they were given a negative experience in the form of a mild shock. When they landed on the natural snag perches they received no shock. After only a few attempts at landing on the electrified power pole and receiving a mild shock, they all avoided the power pole and used the natural perches exclusively (M. Wallace, The Los Angeles Zoo, *in litt.* 1995).

This group of California condors was also subjected to a series of human aversion exercises. Aversion maneuvers were staged in which a person would appear in view of a group of condors at a distance of approximately 100 meters (300 yds). Once it was determined that the condors spotted the person, they would be ambushed and captured by a hidden group of biologists. These condors were then placed in sky kennels, and later released after nightfall (M. Wallace, The Los Angeles Zoo, *in litt.* 1995). The goals of this exercise were to condition the condors to associate this negative experience with humans and increase the distance in which they would flush in future encounters with humans. Six of these young condors were released to the wild on February 8, 1995, at the Lion Canyon release site. To date none of these condors have attempted to land on a power pole and, although they have roosted near campgrounds, they have not approached humans. The one exception was a young condor of this group that was lured into a campground by campers that placed food and water out for it. This condor was subsequently trapped and brought into the zoo. The remaining five continue to avoid both power poles and human activities. On August 29 the remaining eight California condors of this group were released at the Lion Canyon Site. There are now 13 condors flying free in southern California.

*4. Proposed Reintroduction Sites.* To satisfy the objectives of the Plan, at least one subpopulation of non-captive California condors must be established in an area disjunct from the subpopulation already being reestablished in the recent historical range in California. Following a widely publicized solicitation for suggestions for suitable condor release sites outside of California, the Team recommended in December 1991 that California condor releases be conducted in northern Arizona. Because this area once supported California condors, still provides a high level of remoteness, ridges and cliffs for soaring, and caves for nesting, the probability of a successful reintroduction is very good. The Service endorsed this recommendation on April 2, 1992. In collaboration with the Federal initiative to designate a release site in Arizona, the Arizona Game and Fish Department began evaluating a possible California condor reintroduction in 1989. The Arizona Game and Fish Department determined the reestablishment as appropriate and feasible in steps 1 and 2 of the Department's "Procedures for