

THE CALIFORNIA CONDOR AT MOUNT PINOS, CALIFORNIA: THE IMPACTS OF DEER HUNTING

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Abstract: The impact of deer hunting on the California condor near Mount Pinos, California was investigated during the 1975 deer season. Both positive and negative impacts are found. Hunting benefits condors by providing a temporary food supply consisting of abandoned deer carcasses. Hunter disturbance to perched condors at certain sites, although not actually observed, is a definite probability, with possible long-range effects. Condors are demonstrably vulnerable to shooting. Hunting activity at Mount Pinos constitutes a serious local threat to the welfare of the species.

INTRODUCTION

The California condor (*Gymnogyps californianus*) once ranged along the Pacific Coast from the Columbia River south to northern Baja California (Koford 1953). During the last 150 years, condor range has shrunk and numbers have declined because of a variety of human disturbances, including specimen collecting, habitat destruction, accidental poisoning, and shooting (Koford 1953, Carrier 1973). The total of the species is now less than 60 birds, occupying a wishbone-shaped range in the mountains fringing the southern end of the San Joaquin Valley of California (Wilbur et al. 1974). The future of the condor is gloomy and uncertain; although mortality is low (about four birds per year), natality since 1968 has averaged an even lower two birds per year (Wilbur et al. 1974). Efforts to maintain the species are now being coordinated by the Condor Recovery Team.

Deer hunting at certain sites in the condor range has long been suspected to have a serious impact on these birds. In the summer of 1975, I was commissioned by the Condor Recovery Team to investigate this impact.

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METHODS

The study site was located on Mount Pinos, a 2692 meter (8831 feet) peak on the northern boundary of Ventura County, California. Most of the data were collected on Mount Pinos itself, and on Sawmill Mountain, an adjoining lesser peak one mile to the west. In past years condors have frequently been sighted in the area during late summer and early fall (Sanford Wilbur personal communication). The period of concurrent hunter-condor use is August and September, when the opening of deer season brings large numbers of hunters to the mountain.

Data were collected during a seven week period spanning the 1975 deer season in Ventura County. Field observations were begun July 29, several days before the August 2 opening day, and terminated on September 14, the last day of the season.

Data on the activity of condors were obtained principally through direct observation of the birds themselves. In addition, I searched much of the study area on foot, looking for evidence of condor use at perch trees and water sources. Most of my bird sightings were made from the summit of Mount Pinos, a vantage point affording a clear view in most directions.

I monitored deer hunting by systematically interviewing hunters in the two campgrounds located on the east slope of Mount Pinos, and by interviewing or observing them in the field.

RESULTS

Condor Activity

A total of 233 condor sightings were recorded at Mount Pinos. The distribution of condor activity during the seven weeks is shown in Figure 1.

Some of these sightings were of transient birds merely passing through the area; many of these birds were obviously at too great a distance to be affected by deer hunting. The majority of the sightings, however, involved condors specifically using the Mount Pinos area for a number of activities.

Condors perched in the area throughout the study. Nine perch trees were identified; either a perched bird was sighted, or condor feathers and droppings were found beneath a tree. Five of the trees are located on the northwest slope of Mount Pinos, and four are located near the summit of Sawmill Mountain.

Condors roosted (perched all night) in the study area during four consecutive nights, on August 6, 7, 8, and 9. Two areas were used: the northwest slope of Mount Pinos, and the northwest slope of Sawmill Mountain, close to the summit.

I did not personally observe any condors bathing or drinking near Mount Pinos; however, I did locate a springfed pool on the northwest slope of the mountain which condors have frequented in recent years (Sanford Wilbur personal communication).

Although I did not actually record condors feeding in the study area, evidence suggests that feeding did occur. I noted four accounts of fresh deer carcasses (Odocoileus hemionus) in the Mount Pinos vicinity, three of them does; a potential condor food supply does exist. At least one of these deer were killed by hunters. Further, and more significant, I sighted four different condors on the mornings of August 8 and 9 that had a bulging crop; this condition indicates recent feeding. All of these birds were sighted prior to 11:08 a.m. Since condors usually do not forage before 9:00 a.m. (my results and Koford 1953), there is an excellent probability that the

birds were feeding in the study area.

Hunting Activity

I interviewed or observed 206 hunters during the season. Hunting activity was concentrated in opening weekend, August 2 and 3, when almost half (46 percent) of all hunting occurred.

Every slope of Mount Pinos was hunted at one time or another during the season. However, almost half (47.4 percent) of all hunting was concentrated in a relatively small portion of the study area extending along the north and northwest slopes of Mount Pinos, west to the summit of Sawmill Mountain.

Hunter success in the study area was exceedingly poor; of 206 hunters recorded, only one had taken a deer.

There was no evidence of hunters shooting at condors. I talked with many hunters during the study and the prevailing attitude was one of respect for the protected status of the bird. Nevertheless, two incidents were recorded which suggest that a small minority may possess questionable ethics. One incident involved the shooting of five chipmunks with a high-powered rifle. The other incident was the destruction by gunfire of the hiker's register at the summit of one of the peaks in the area.

Although I found no conclusive evidence of hunters flushing condors from a perch or otherwise disturbing the birds, I did record three incidents of disturbance by other humans. The first occurred when I unintentionally flushed three condors from a perch. The second involved a U. S. Forest Service trail crew which flushed two birds from a perch. In the third incident, four condors approached a perch but left because of my presence.

DISCUSSION

A comparison of the distribution of condor activity (Figure 1) with that of hunting activity through the seven weeks shows that 1) condor activity began, essentially, four days after the opening day of deer season and ceased shortly before the closing day of the season, and 2) the peak in condor activity occurred less than one week after the peak in hunting activity.

These parallels--in addition to other supportive evidence--indicate that deer hunting had a beneficial effect on condors by providing the birds with a temporary food supply. It is highly probable that condors are attracted to the area by some of the by-products of the deer harvest, such as abandoned illegal kills and the carcasses of wounded animals that escape and die. The intense shooting pressure of opening weekend creates an exploitable supply of deer carcasses; this logically accounts for the subsequent concentration of condors. The birds remain for several days, probably until the available carcasses are consumed, then disperse to forage elsewhere. By the end of deer season the birds have departed the area altogether. Further study may show that they move east to the Tehachapi Mountains, where deer season opens in September (in 1975, September 13).

Other results support the hypothesis that hunter-provided carcasses have a beneficial impact locally. Four fresh deer carcasses (at least one killed by hunters) show the potential food supply. The early morning sightings of condors with bulging crops show that the birds were feeding in the area; these sightings occurred on the two days of greatest condor activity. Logically, condors feeding in the area would roost nearby. My data agree with this expectation.

The foregoing beneficial impact must be compared to the possible adverse impacts.

Condor activities recorded in the study area include perching, roosting, and probably feeding. In addition, a possible water source is in the immediate area. All of these activities bring the birds close to the ground, where they are vulnerable to disturbance or shooting. No incidents of direct disturbance to condors by hunting were recorded; nevertheless, observations during this study provide indirect evidence that such negative impacts did exist. The three incidents cited show conclusively that perched condors are highly susceptible to disturbance from humans, hunter or non-hunter; the findings of Koford (1953) and Miller et al. (1965) agree with this. Furthermore, perch trees, roost areas, and the water source were located in that portion of the study area where deer hunting was concentrated. Since areas of condor vulnerability coincide with areas of greatest hunting activity, and since the evidence demonstrates that condors are susceptible to disturbance, the conclusion follows that hunter disturbance to condors in the Mount Pinos area is probable. My conclusion is in agreement with the work of Koford (1953) and Miller et al. (1965), who report that disturbance of this nature can have long-term effects on condor behavior.

A second possible negative impact is the vulnerability of these huge birds to shooting when close to the ground; this is discussed at length by Miller et al. (1965). The presence of large numbers of hunters near condor perch trees, roost areas, and water sources greatly increases the chance that somebody will take a shot at a condor. At one point during the study I was approached very closely by four condors intending to perch nearby. The birds circled less than 50 meters above me for at least five minutes; two of them were immatures. I could unquestionably have shot all four of the condors had I been armed and so inclined. The effect of even one such incident on the future breeding population could be disastrous to the survival of the species. That same day, and at the same site, I found the hiker's register destroyed by gunfire. Although condors cannot be equated with a hiker's register, the presence of armed people with questionable ethical values in an area of condor vulnerability constitutes a very real and serious threat to the welfare of this dwindling species.

SUMMATION

Deer hunting at Mount Pinos during the 1975 season had both positive and negative impacts on condor activity.

Hunting benefitted condors by leaving a number of abandoned deer carcasses in the field, thereby creating a temporary food source for the birds.

Certain sites where condors are vulnerable to disturbance, such as perch trees, roost areas, and a water source, were found to be located precisely in that portion of the study area where hunting activity was concentrated. Hunter disturbance to condors using these sites (although not actually observed) is therefore a definite probability. Other investigators have shown that such disturbance can have a long-term effect on condor behavior.

Furthermore, the presence of large numbers of hunters near sites where condors are vulnerable to shooting increases the chance that such an incident will occur, a serious potential threat to the welfare of this species.

Based largely on these conclusions and on the extremely poor hunter success of the 1975 season, the Condor Recovery Team has recommended to the U. S. Forest Service and the California Department of Fish and Game that Mount Pinos be closed to hunting.

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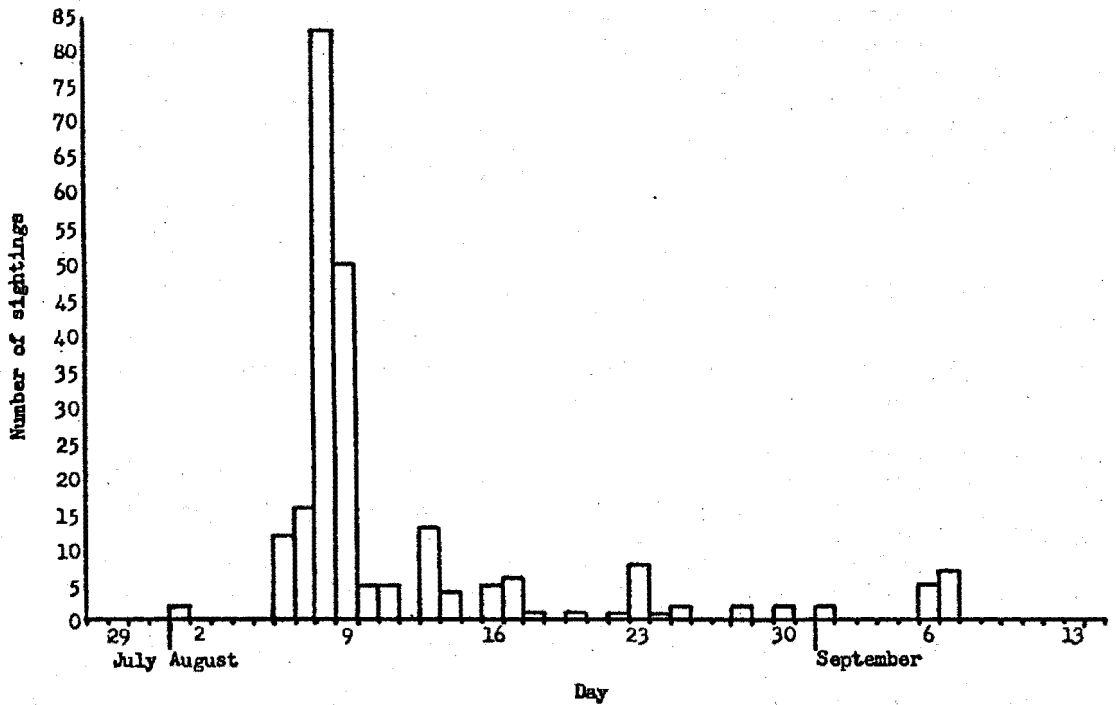


Figure 1. Number of condor sightings recorded per day near Mount Pinos, from July 29 to September 14, 1975.