

State of California
THE RESOURCES AGENCY
Department of Fish and Game

CALIFORNIA CONDOR ACTIVITY STUDY -
SANTA BARBARA COUNTY, CALIFORNIA, 1977^{1/}

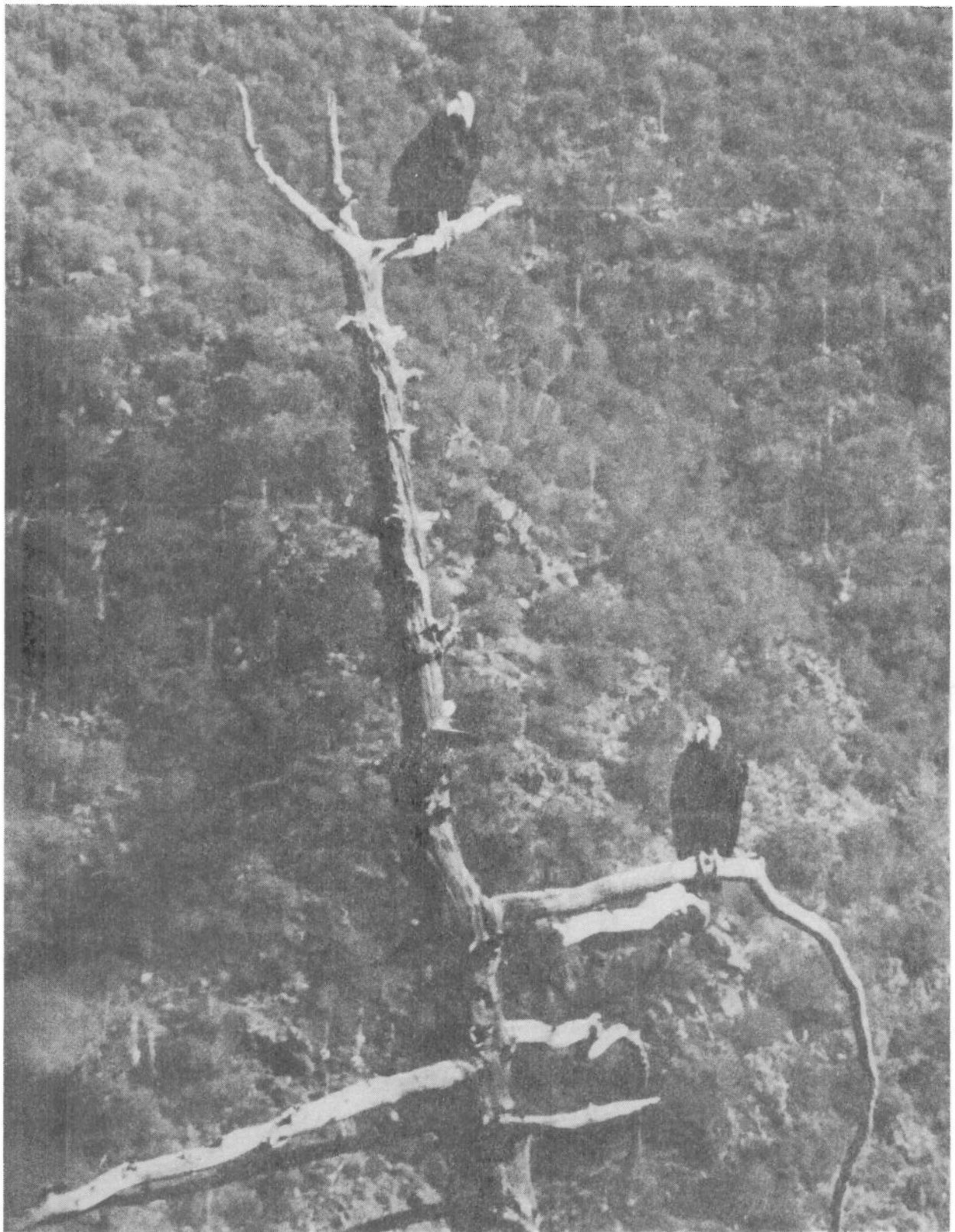
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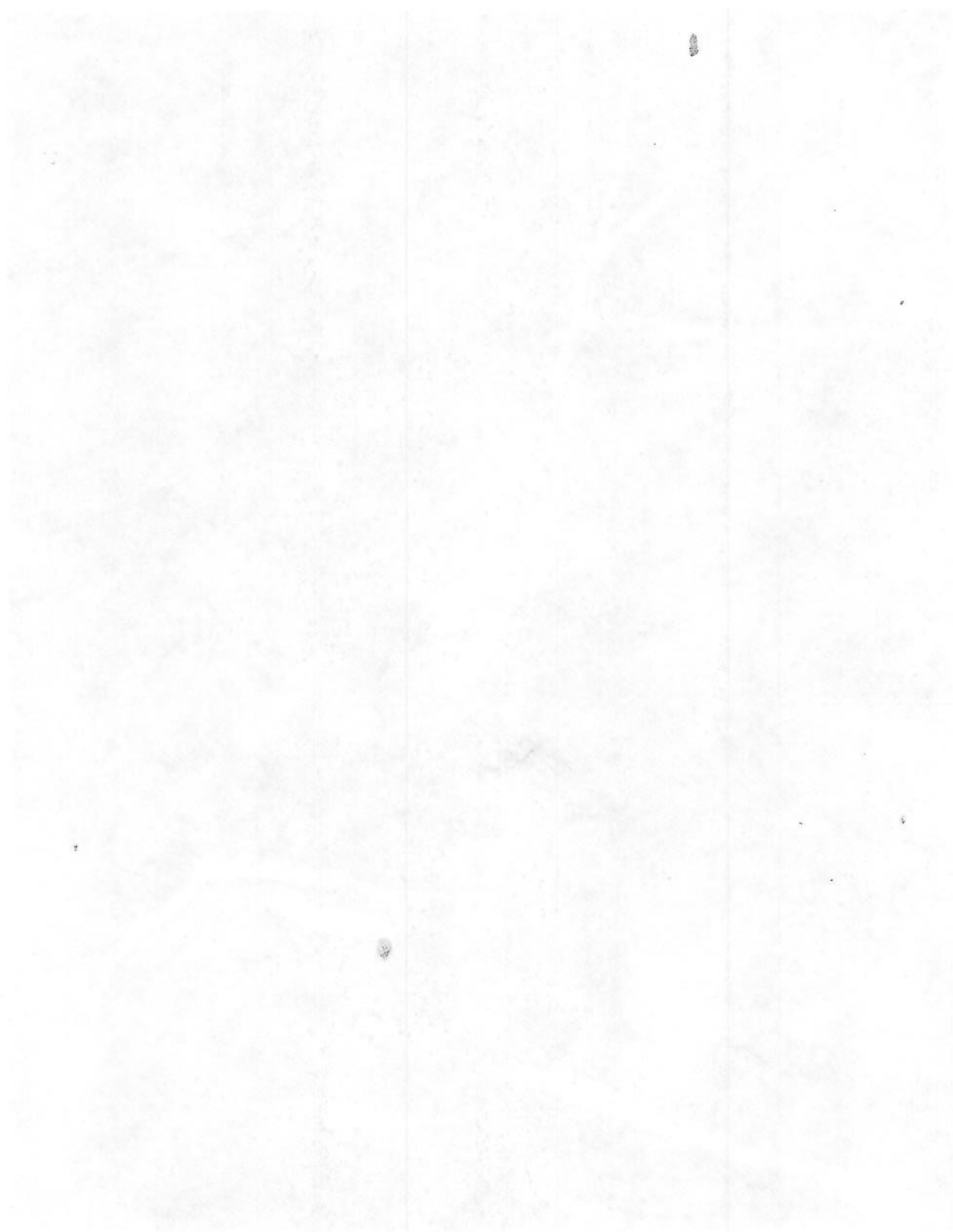
ABSTRACT

A field study was conducted from May through October, 1977, to determine California condor (Gymnogyps californianus) activity in eight areas of the San Rafael Wilderness and Indian and Mono Creek drainages, Santa Barbara County, California. Evidence of condor activity was determined by the presence of birds, whitewash or molted feathers. Fifty-one days were spent in the field. A total of 290 km (180 miles) were covered by foot and 71 km (44 miles) by horseback. Of the eight areas intensively checked, condors were found in two localities. A nest site in the study area was active for the second consecutive year, successfully fledging a young in 1976 and 1977. An evaluation of condor observations indicated that as many as six condors may be using the Santa Barbara back country. Potential disturbance factors were noted and recommendation made to protect condors.

^{1/} Supported by Federal Aid for Endangered, Threatened and Rare Fish and Wildlife, Nongame Wildlife Investigations, Project E-1-1, Study V, Job 1.71, Wildlife Management Branch (November, 1977).



California condors on roost tree in study area. (Photo by Dick Smith)



RECOMMENDATIONS

As a result of this study, it is recommended:

1. Closely coordinate all Forest Service construction activities (road and trail maintenance, fire suppression and emergency entries), in areas delineated as critical condor habitat, with appropriate resource management agencies, with road and trail maintenance near nest sites being done after April 15 and before November 1.
2. Increase California Department of Fish and Game and U. S. Fish and Wildlife Service surveillance to protect condors from disturbances from the public and low flying airplanes.
3. Increase educational efforts within state and federal agencies to assure that condor needs are considered in land management programs and protected during normal agency land administration activities.
4. Evaluate the need for a firearms closure near the active condor nest site.
5. Increase public contact and encourage the reporting of condor sightings, support to protect condors and encourage ranchers to leave dead livestock on the range for condors.
6. Use marking and/or radio telemetry in future research to identify individual birds and determine movement in the remote sections of their range.

INTRODUCTION

Coast Range California condor population is believed to be a subpopulation separate from the Sespe-Sierra population (Wilbur et al., 1974). Condor observations are regularly reported from various locations in Santa Barbara County, but little is known about condor numbers and their use of the back country of Santa Barbara County. A young condor fledged from a nest cave in the study area in 1976. Before the study was initiated, two condors were reported using the area in April, 1977. Documentation is needed to confirm condor activities for this remote section of their range.

Objectives of this study were to: 1) determine California condor activity in eight areas of the San Rafael Wilderness and Indian and Mono Creek drainages, Santa Barbara County, California; 2) delineate essential habitats; and 3) make recommendations to protect condor use areas from disturbance.

STUDY AREA

The study area, roughly 49 km (30 miles) long and 16 km (10 miles) wide, is located in the Los Padres National Forest, Santa Barbara County, California (Figure 1). Study area includes a major portion of the San Rafael Wilderness Area and the drainages of Indian and Mono Creeks. High peaks and ridges, deep gorges, narrow winding canyons and steep brush covered slopes characterize the landscape.

Two major creeks, Indian and Mono, in the eastern portion of the study area, flow south through semi-arid country to the Santa Ynez River. Two streams, the Sisquoc River and Manzana Creek flowing west, cut deep canyons through the San Rafael Mountains. Between these two waterways rise the windswept Hurricane Deck and a knifelike extension to the west called the Dinosaur's Backbone.

Elevations range from 355 meters (1,166 feet) near the Sisquoc River-Manzana Creek junction to 2,081 meters (6,828 feet) at Big Pine Mountain, the highest point in the county.

The vegetative cover varies from vast areas of almost impenetrable chaparral to small open grassy potreros. The Upper Sisquoc River and the Indian and Manzana creeks support a riparian woodland. The areas along the Sisquoc River near its confluence with Manzana Creek, Don Victor Valley and Mono Creek are semi-desert. At the higher elevations coniferous forests are found on Big Pine Mountain and Madulce Peak.

The study area gets most of its moisture during the winter and spring. In summer, the area is hot and dry. Climate is typically Mediterranean, similar to much of Southern California. Most recreational activities take place during the winter and spring months. One exception is the fall hunting seasons. The coastal deer, upland game and bear seasons take place in the late summer and fall. However, a special permit to hunt is required in the western one-quarter of the study area which is open to hunting. The remaining portion of the study area is closed to public entry during the fire season. Some hunting may occur after the fire closure is lifted; however, few hunters venture into the backcountry.



Figure 1. Vicinity map of study area in Santa Barbara County, California.

PROCEDURES

Eight localities within the study area where condors had been reported since 1970 were surveyed to determine condor use. Areas checked were: 1) Don Victor Valley; 2) Mono Narrows-Alamar Hill; 3) Loma Pelona; 4) Big Pine Mountain-Madulce Ridge; 5) Sisquoc Condor Sanctuary; 6) South Fork-White Ledges; 7) Upper Manzana Creek; and 8) Manzana-Sisquoc Junction (Figure 2). Two days were spent in each area from May through July searching for birds or indications of nests or roost sites. Evidence of condor activity in an area was determined by the presence of birds, whitewash (excreta) or molted feathers. All localities, with the exception of Don Victor Valley, were revisited August to October.

Fifty-one days were spent in the field looking for, or signs of, California condors. A journal was kept on all field trips and biological data relating to condor activity and other wildlife was documented. A constant watch for condors along all routes taken into the study area was maintained. Forest Service administrative roads were used to gain access to some areas; however, most areas could be reached only on foot. One trip was made on horseback. A total of 290 km (180 miles) were covered on foot and 71 km (44 miles) by horseback.

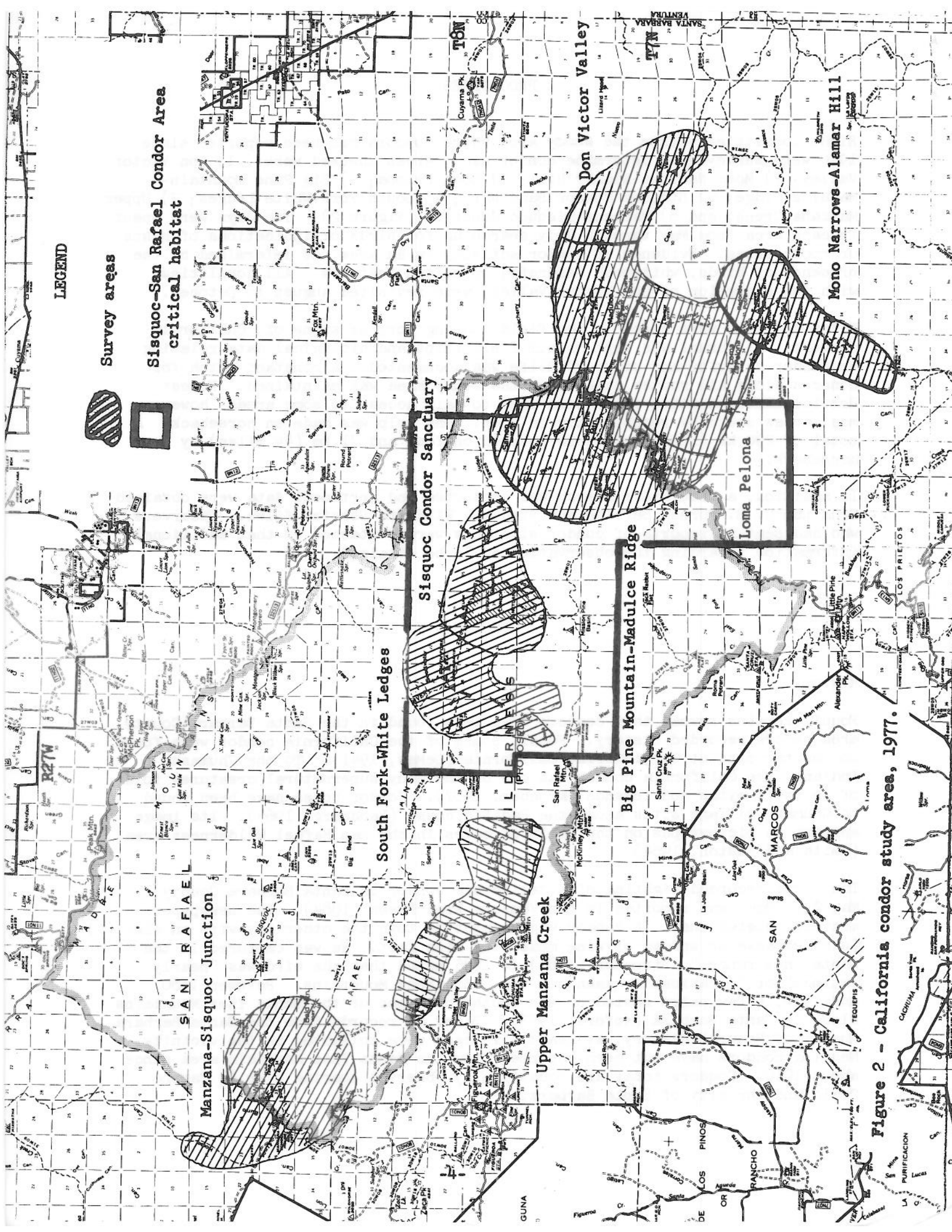
In addition, a literature search was conducted and pertinent data were obtained from the U. S. Forest Service and Fish and Wildlife Service files. Observers who had sent in reports of condor sightings were contacted so that additional information regarding the observation could be obtained.

RESULTS

History

Fossil remains reveal that condors have been found in the Santa Barbara County area before recorded history. Fossil bones of the California condor were found in the tar pits at Carpinteria, California (DeMay, 1941). To the Chumash Indians, the California condor was one of the many supernatural creatures told of in their myths and legends (Kroeber, 1907). Condor bones have been found in Chumash village sites along the Pacific coast (Landberg, 1965). Its image appears in pictographs on the walls of caves in the San Rafael Wilderness area (Smith and Easton, 1964).

The first recorded sighting of a California condor in Santa Barbara County, May 23, 1884, was reported in the Ventura Free Press (1884). The newspaper article relates that, "A condor was brought to town the other day with an aler (?) (sic) expanse or spread of wing measuring nine feet. He was captured in the Santa Ynez range." Streater (1886) in 1885 noted that the bird was "nearly extinct" or "occasionally seen" in the Santa Ynez Mountains. Between 1880 and 1910, a few pairs nested on the southern slopes of the Santa Ynez Mountains close to Santa Barbara (Koford, 1953). Based on records from the Santa Barbara Museum of Natural History, at least five eggs were collected in the vicinity. Nesting condors have not been reported from the Santa Ynez Mountain area since about 1910. Condors today are occasionally observed soaring over El Camino Cielo and the city of Santa Barbara.



LEGEND

Survey areas

Sisquoc-San Rafael Condor Area
critical habitat

Figure 2 - California condor study area, 1977.

Historically, the important nesting and roosting areas in Santa Barbara County, were found in the San Rafael Wilderness and an adjacent area now delineated as critical condor habitat by the U. S. Fish and Wildlife Service (Figure 2). Museum records indicate that at least three eggs were collected from nest caves along the Sisquoc River in the late 1800's and early 1900's and one at Big Pine Mountain in 1902. A young bird was taken from a nest near the upper Sisquoc River in the early 1900's by Harley Wells (Smith and Easton, 1964). Fall Canyon was a major condor roosting area. Seventy-five birds were seen in the area around 1895 by Willet (Koford, 1953). The first study on condors in Santa Barbara County was supervised by C. S. Robinson, Staff Resource Officer, U. S. Forest Service, from 1933 to 1938 (Robinson, 1936 & 1939). In 1936, Robinson assigned Walter Maples to conduct a condor survey of the Fall Canyon area. From May 12 to 29, Maples recorded the date, time, location and numbers of condors observed. He recorded high counts of 21, 24 and 29 birds during the period (Robinson, 1936). As a result of this work, the Sisquoc Condor Sanctuary at Fall Canyon was established in 1937 to protect this important condor nesting, roosting, resting and bathing area (Figure 2). In the mid-1940's the large numbers of birds using the sanctuary area left for unknown reasons.

Since 1938, no more than nine condors were observed at any one time at Fall Canyon. Koford (1953) reported in 1940, 20 condors were seen within 5 miles of the Fall Canyon roosts. Koford indicated "there is no evidence of a general decrease in the condor population in the Sisquoc-Cuyama Valley region between 1900-1940." After Koford's work finished in 1946, there were few reports of condors observed in the Santa Barbara County back country. The condor was essentially forgotten until 1963 when Ian and Eben McMillan began their field studies. They developed a corps of observers to report on condor sightings throughout the condor range. During this study from February, 1963, to the summer of 1964, the high condor counts reported for Santa Barbara County were: 4, including 1 immature, on May 6, 1963, near New Cuyama; 4 on April 12, 1964, near New Cuyama; and 3, including 1 immature, on November 28, 1964, at Zaca Mountain (Miller, et al., 1965). Four days were spent on horseback by the McMillan brothers riding down the Sisquoc River without seeing a condor (McMillan, 1968).

Analysis of condor observations reported for Santa Barbara County from 1966 to 1976 indicate the high count for any given year was four condors. Wilbur, et al. (1974) estimates a total of 10 condors in the entire Coast Range area, which includes the counties of Santa Clara, San Benito, Monterey, San Luis Obispo and Santa Barbara.

Condor Activity

Of the eight areas intensively checked for condor activity during this study, condors were found using two localities; 1) Loma Pelona and 2) Big Pine Mountain-Madulce Ridge areas. A rocky outcropping in the Upper Manzana Creek area showed evidence of large bird use, but further investigation is needed to determine if condors use the site. Dates areas were checked and number of condor sightings reported are provided in Table 1.

* * *

Table 1. California Condor Use Survey, 1977

| <u>Area</u> | <u>Date Visited</u> | <u>Condors Sighted</u> |
|-----------------------------|---------------------|--------------------------------------|
| Don Victor Valley | May 5-11 | None |
| Mono Narrows-Alamar Hill | July 2-4 | None |
| | August 20-22 | None |
| Loma Pelona | May 12-14 | 1 Adult and 1 Immature ^{1/} |
| | July 4-7 | 1 Adult |
| | August 22-23 | None |
| Big Pine Mtn.-Madulce Ridge | July 7-9 | 2 Adults |
| | August 24-27 | 2 Adults & 1 Immature |
| | September 23-25 | 2 Adults & 1 Immature |
| | October 12-13 | 2 Adults & 1 Immature |
| Sisquoc Condor Sanctuary | June 19-25 | 1 unknown age |
| | October 14-20 | None |
| South Fork-White Ledges | June 22 & 23 | None |
| | October 15-17 | None |
| Upper Manzana Creek | August 10-11 | None ^{2/} |
| | September 2-4 | None |
| Manzana-Sisquoc Junction | July 30-August 1 | None |
| | September 5-7 | None |

^{1/} Believed to be immature fledged in 1976 from the Big Pine Mtn.-Madulce Ridge area.

^{2/} One outcropping showed considerable deposit of excrement, further checks needed to confirm condor use in area.

* * *

Condors nested for the second consecutive year in the Big Pine-Madulce Ridge area. On August 24, 1977, a nestling was discovered at nest site #135 just outside the same cavity used in 1976. The young had fledged by October 12. Two roost trees near the nest site were located.

On May 13, one adult and one immature condor were observed roosting on a dead snag just east of nest site #313 in the Loma Pelona area. Another roost tree to the southwest of that site used by an adult bird was located in early July. The condors seen on these roost trees are believed to be the nesting pair and their young from the 1976 breeding season. A single condor, unclassified as to age, was observed briefly on June 20, 1977, near the Sisquoc Condor Sanctuary.

A rocky outcropping in the Upper Manzana Creek area showed recent use by large birds. A more thorough investigation of the area is needed before it can be determined if condors were using the site. No evidence of condor activity was found in the four other areas under study; Don Victor Valley, Mono Narrows-Alamar Hills, South Fork-White Ledges and Manzana-Sisquoc Junction areas.

Condor Population

An analysis of the observations of condors reported 1976 to 1977 in the Big Pine Mountain-Madulce Ridge area indicates that a minimum of six condors may use the area. On January 9, 1976, three adults and one immature were seen over Big Pine Mountain. A nest site in the area produced one young in 1976 and one in 1977. Assuming the birds observed in 1976 were present in 1977 the total population using this remote section of Santa Barbara County would be estimated at six condors, three adults and three immatures. Since 1972, it is reported that four young were fledged from nest sites in this area (Wilbur, pers. comm.). During the same period, 1972-1977, the Sespe Condor Sanctuary, Ventura County, considered to be the most important condor nesting area, also produced four young. It is possible that other birds in the area escaped detection and the 1977 sightings of adults and immatures may not have been sightings of the same birds reported in 1976. Periods of observation time during this study were short and large regions of this section of the county (Hildreth Peak, Matilija Condor Area, and Sierra Madre Mountains) were not included in this study.

Critical Habitat

A more thorough investigation of the study area is needed before a complete picture regarding condor use can be made. However, the Sisquoc-San Rafael Condor Area Critical Habitat as defined in the Federal Register September 24, 1976, adequately covers the areas believed to be critical to condors presently nesting and roosting in this portion of Santa Barbara County (Figure 2).

Disturbance

The problem of disturbance to condors must be evaluated based on the magnitude, duration, frequency, time of occurrence and distance from the nest site or roosting area.

The Sisquoc Condor Sanctuary (Figure 2) is closed to public entry all year. Except for the Manzana-Sisquoc Junction area the other seven areas are within an area closed during the fire season from approximately June through October or until the first rains of the fall season. Thus, public entry is restricted for at least 5 months of the year.

Sibley (1969) found the minimum distances condors nested or used roost sites near roads and foot trails were as follows: 1) lightly used dirt roads - 1.3 km (.8 mile) when unshielded from sight and sound of autos, occasionally closer when completely shielded; 2) regularly used dirt roads - 1.9 km (1.2 miles) when unshielded from sight and sound of autos; 3) condors have nested very near foot trails used intermittently by hikers; and 4) condors will apparently tolerate more disturbance at roosts than at a nest. One roost was found 91.4 meters (100 yards) of a well shielded lightly used dirt road.

Potential disturbances in or near critical condor habitat, including the nest site active in 1976 and 1977, were noted:

1. A U. S. Forest Service road, used for administrative purposes but closed to the public, is within line of sight of nest and approximately 2.17 km (1.35 miles) from the nest cave. Traffic is very light and only authorized vehicles are permitted (motorized equipment to maintain road should be used after April 15). Critical period to avoid condor disturbance at nest sites is believed to be November 15 - April 15 (Wilbur, pers. comm.).
2. A hiking trail in view of the nest site is approximately 2 km (1.25 miles) away. Another trail located above the nest is hidden behind a ridge. Neither trail is heavily used by hikers. Maximum single day use noted in two years was 9 hikers in two parties during Easter vacation in 1977. Hikers were rarely encountered during the study. However, a campfire and 17 shell casings from a .22 cal. rifle were found on the ridge above the nesting site on July 7, 1977.
3. The Neighborhood Youth Corps visited the area near the nest site twice in 1976 and 1977. Leader was aware of condors being in the area and presumably kept the group controlled. (On December 8, 1977, Forest Supervisor issued a directive to terminate this type of activity near condor nest sites.)
4. A Forest Service helicopter was reported to be close to the nest site for a short time in August while looking for deer hunters and September, 1976, when fighting a fire caused by a lightning strike. No helicopter sightings were reported in 1977.
5. Study investigator with cooperators, usually 2-4 people, made up two teams of observers used to monitor and document condor activities. Observations of condor activities at the nest site were conducted .8 km (.5 mile) away. Studies were made in cooperation with the U. S. Fish and Wildlife Service and Forest Service authorization. No discernible disturbance of birds occurred.
6. A spur road located near the active nest site #135 has been abandoned. Unauthorized motorized vehicles are not permitted closer than 7.2 km (4.5 miles).

ACKNOWLEDGEMENTS

I am grateful to Sanford Wilbur, United States Fish and Wildlife Service, for providing information on condors, field assistance and review of the manuscript. My thanks go to personnel of the Los Padres National Forest for their cooperation in all phases of this study, especially; DeLoy Esplin, Resource Management Officer, in obtaining permits; Bruce Van Zee and Denny Bungarz, Santa Lucia and Santa Barbara District Rangers, for placing Forest Service personnel and facilities at my disposal; and Stephen Bishop, Range Conservationist, who assisted in field studies. I would like to thank Robert Mallette, California Department of Fish and Game, for his advice and support of this study and John Borneman, National Audubon Society, for field assistance. To those who helped in a myriad of ways, my thanks to John Cody, Dennis Cogan, Scott Collins, Ynez Haase, Mel McNice, Susan Mockenhaupt, Harold Pfeiffer, Ann Puddicombe and Gertrude Reyes. To Dick Smith, Santa Barbara Museum of Natural History Trustee, a very special note of appreciation for teaching me about the Santa Barbara County back country and for providing information he gained through the years about the California condor. I am grateful to my husband, Hank, for without his support and assistance this study would never have been completed.

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