

JOB COMPLETION REPORT  
RESEARCH PROJECT SEGMENT

STATE California NAME Special Wildlife Investigations  
PROJECT NO. W-54-R-1 TITLE Life History and Environmental  
Factor Studies of Rare and Endangered  
WORK PLAN II Species  
JOB NO. 2 TITLE Raptor Survey  
PERIOD COVERED: July 1, 1968 to June 30, 1969

Abstract

A raptor reporting program has been in effect since May 1966. This consisted of reporting sightings of selected raptor species and their nests observed by Department employees. A total of 3,906 sightings of 13 species of raptors and 24 nests were reported May 1968 to April 1969. This compares with 3,944 raptor sightings and 34 nests for May 1967 to April 1968 and sightings of 1,868 bird and 44 nest reports for May 1966 to April 1967.

Analysis made of the Department's raptor reporting program reveals noticeable limitation relative to usefulness of the program. In general, the data provides information on distribution of selected raptor species, and encourages departmental personnel to become acquainted with these birds. Such random survey has a number of variables which prevents the data from being used for a population index or to estimate population or relative abundance.

It is recommended that the special wildlife species reporting program as it is now being conducted be supplemented with a raptor survey program. This program would be to provide knowledge of the current status of raptors through survey of known eyries and raptor census routes. These routes would be predetermined transects in areas known for high raptor populations or in areas frequented by rare or endangered species.

Objectives

Establish population trends through indices and determine distribution of selected raptor species.

Techniques Used

A raptor reporting program was initiated by the Department in May 1966 through use of a Special Wildlife Species Reporting Card. This consisted of reporting the sightings of 7 species of raptors and their nests by department personnel while conducting regular field work. Sightings were reported monthly to regional offices and summarized on a monthly and annual basis. A sighting is an observation of a bird or its active nest. Two or more birds seen at one time are tabulated as two or more sightings.

After one year, the program was reviewed and the reporting program was revised to include 13 species. Other than providing for use of the cards in reporting rare sightings of other species, the program is essentially the same as in 1966. Attached are instructions for recording observations and a sample of the reporting card.

After the program was in effect 3 years, it was critically reviewed. Comments and recommendations are included.

### Results

A total of 3,906 sightings of 13 species of raptors and 24 nests were reported for the period May 1968 to April 1969. This compares with a reported sighting of 3,944 raptors and 34 nests during May 1967 to April 1968 and 1,868 raptors and 44 nests in May 1966 to April 1967. Recording of these sightings by species and by county on a California map over the past 3 years has revealed raptor distribution.

Table 1

Reported Sightings of Special Wildlife Species  
by Department of Fish and Game Personnel  
May 1966 - April 1969

<u>Species</u>	<u>Sightings</u> <u>May 1966 - April 1967</u>		<u>Sightings</u> <u>May 1967 - April 1968</u>		<u>Sightings</u> <u>May 1968 - April 1969</u>	
	<u>Birds</u>	<u>Nests</u>	<u>Birds</u>	<u>Nests</u>	<u>Birds</u>	<u>Nests</u>
Condor	54	0	52	0	144	0
White-tailed kite	-	-	1,501	6	1,746	7
Goshawk	-	-	25	0	38	1
Red-shouldered hawk	92	2	129	2	212	0
Swainson's hawk	-	-	103	0	153	3
Rough-legged hawk	-	-	115	-	47	0
Ferruginous hawk	-	-	49	0	43	0
Golden eagle	1,122	10	1,241	6	928	1
Bald eagle	222	2	275	2	201	0
Osprey	259	29	305	17	251	10
Prairie falcon	91	0	98	0	87	0
Peregrine falcon	28	1	27	1	36	2
Pigeon hawk	-	-	24	0	20	0
Total	1,868	44	3,944	34	3,906	24

Analysis of the Department's raptor reporting program over the past 3 years seriously questions application of this data to determining trends in raptor populations. Factors leading to this conclusion are:

1. Number of raptor sightings reported is influenced by the enthusiasm of the employee and his willingness to report. Reports from field personnel vary from one a year to as high as 97.

2. Rarely seen raptors tend to be reported; commonly seen ones are neglected. White-tailed kite, when first seen, is reported but subsequent sightings are not reported once one learns this bird is more common in the area than earlier suspected.
3. Repeated sightings are often made of an individual bird over an extended period.
4. Error in identification is often suspected. Migrating species are reported in habitat locations and seasons where they have not occurred before.
5. Area covered by sightings and observer effort is not consistent.

The present raptor reporting program does, however, provide opportunity to alert departmental personnel to raptor identification and to obtain their contribution gained from field observations. It also provides knowledge on distribution and occurrences of the less commonly observed raptors.

#### Recommendations

Proposed is a Raptor Survey Program for California involving: (1) Breeding season survey of recorded raptor eyries compiled statewide; and, (2) Raptor counts of established transects statewide. Attached are the report forms and survey procedures.

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February 3, 1970

## OBSERVATIONS ON SPECIAL WILDLIFE SPECIES

### Purpose

The Fish and Wildlife Plan calls for greater emphasis on nongame wildlife and especially those species that are becoming rare or endangered. In order to establish a bank of information for the management of these species, observation cards will be used to document observations during routine work assignments. Valuable information will be obtained on distribution and occurrence of species from this information.

### General Instructions

1. Record the number of birds sighted in the space immediately after the species.
2. Where nesting activity is observed, record the number of birds after the species and check the square provided when nest is known. Clarify in Remarks and map nest site on back of card.
3. Detail the location as accurately as possible with distance and direction to the nearest town.
4. Be sure and record your name and title along with the date observation was made. Thus observers can easily be contacted for additional information when necessary.
5. The card lists only selected species and will be expanded in the future as needed. Rare and endangered species that are not listed, such as wolverine and pileated woodpecker, may be written in on the blank space provided for other species.
6. Any questionable identifications should be substantiated in the Remarks section.
7. Only record those sightings made by you. Do not record second hand information.
8. Observations which are made daily near nesting sites should be recorded monthly with an explanation of the circumstances in the Remarks section. Separate sight records should be submitted when birds near a nest site are thought to be a new bird and have not been recorded earlier.
9. See example for reporting sighting.

Forward reports to the regional office at the end of each month. Negative reports are required when no observations were made during the month.

The regions will include a summary of the observations in the regular monthly report to headquarters. By January 15 staff will compile annual report.

EXAMPLE FG 832

SPECIAL WILDLIFE SPECIES REPORTING CARD

INSTRUCTIONS:

1. USE SEPARATE CARD FOR EACH SIGHTING AND SPECIES (WRITE IN NUMBER OBSERVED).
2. DETAIL ANY PERTINENT INFORMATION IN REMARKS SECTION ON BACK OF CARD.
3. MAP NESTING LOCATION ON BACK OF CARD. 4. USE BLANK SPACE FOR OTHER SPECIES.
5. RECORD POSITIVE IDENTIFICATIONS ONLY. 6. SEND CARDS TO REGIONAL OFFICE MONTHLY.
7. SEE INSTRUCTION SHEET FOR DETAILS ON REPEAT SIGHTINGS AND OTHER SPECIES.

SPECIES	NO.	SPECIES	NO.	SPECIES	NO.
CONDOR		ROUGH-LEGGED HAWK		PRAIRIE FALCON	
WHITE-TAILED KITE		FERRUGINOUS HAWK		PEREGRINE FALCON	
GOSHAWK		GOLDEN EAGLE		PIGEON HAWK	
RED-SHOULDERED HAWK		BALD EAGLE	3		
SWAINSON'S HAWK		OSPREY			
IF NEST INVOLVED, CHECK <input checked="" type="checkbox"/>		OTHER SPECIES			

LOCATION (DISTANCE AND DIRECTION FROM NEAREST TOWN) 10 mi. S.E. of Alturas  
near Hwy 395 COUNTY Modoc

OBSERVER (NAME AND TITLE) John Doe GM I DATE 10/1/67

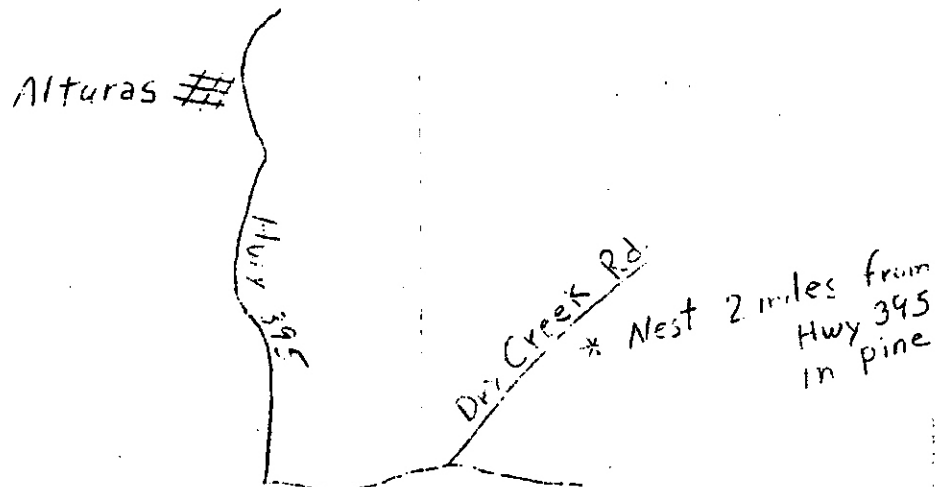
FG 832

(OVER)

Front

REMARKS:

PERTINENT ACTIVITY AT TIME OF SIGHTING: Pair of adults came to nest site  
with fish to feed 1 young at nest.



Reverse

CALIFORNIA DEPARTMENT OF FISH AND GAME  
1416 Ninth Street  
Sacramento, California 95814

ENDANGERED WILDLIFE INVENTORY

NESTING SURVEY

Species \_\_\_\_\_ Nest No. \_\_\_\_\_

Nest Description

General Location: \_\_\_\_\_

Specific Location: \_\_\_\_\_  
(Township and Range)

County \_\_\_\_\_ Region \_\_\_\_\_

Nest Description: \_\_\_\_\_

Property Owner: \_\_\_\_\_

CURRENT STATUS OF NEST

Active Nest: ☐

Observation Date \_\_\_\_\_

Nesting activity \_\_\_\_\_

Eggs (Number) \_\_\_\_\_

Young (Number) \_\_\_\_\_

Inactive Nest: ☐

Reason for Abandonment

☐ Land Use Change \_\_\_\_\_

☐ Harassment \_\_\_\_\_

☐ Other \_\_\_\_\_

☐ Unknown \_\_\_\_\_

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

NOTES

California Department of Fish and Game  
Special Wildlife Investigations

Raptor Survey

Directions for Running Raptor Route

Route

You have been assigned to a specific raptor route. A map is provided to show the survey route and the starting and stopping points. Please do not change your survey route. If you have problems or difficulty in conducting your survey, please insert your comments on the report form in the space provided under "Notes."

We have sought to locate routes along roads which are passable during any season of the year with a minimum of disturbance. Routes are selected in areas which are known to have high raptor populations during the breeding season and/or winter. This route should be run four times each year between the first and fifteenth during each of the following months: January, March, May and December.

Time of Start and Finish

A place is provided for you to record the time your survey was started, finished, and the total time taken. Time recorded is the actual time spent while running the route. Please use the 2400 hour system (0900, 1210, etc.) for recording the time. Route should be started at 0900 and completed before 1300. This time period was selected as the period when raptors are most active. Route should be covered within a three-hour period.

Mileage of Start and Finish

A place is provided for you to record the mileage your survey was started, finished, and the total miles driven to the nearest one-tenth mile. Routes are designed to be 35-40 miles long and be run at a speed of 20 miles per hour where road conditions will permit, giving ample opportunity to make observations.

### Equipment

Please check the following list of equipment to ensure you have the necessary items to conduct the survey: clip board, pencils, forms supplied by Department of Fish and Game, map of route, 7x binoculars or better, and vehicle equipped to run entire route without refueling.

### Weather

Weather information is essential for interpretation of study results. You will find below the coding to be used to record wind and sky conditions. Please do not run survey when winds are in excess of Beaufort 3, or when sky conditions are 4 through 8.

Make your judgement according to the criteria listed below and enter the appropriate Beaufort number and Weather Bureau code in the proper space.

#### Weather Codes

<u>Beaufort Number</u>	<u>Wind Speed MPH</u>	<u>Indicators of Wind Speed</u>
0	Less than 1	Smoke rises vertically.
1	1 to 3	Wind direction shown by smoke drift.
2	4 to 7	Wind felt on face; leaves rustle.
3	8 to 12	Leaves and small twigs in constant motion; wind extends light flag.
4	13 to 18	Raises dust and loose paper; small branches are moved.
5	19 to 24	Small trees in leaf begin to sway; crested wavelets form on inland waters.

#### Sky Conditions

0 Clear or a few clouds.	4 Fog or smoke.
1 Partly cloudy (scattered) or variable sky.	5 Drizzle.
2 Cloudy (broken) or overcast.	8 Shower(s).



Column Headings

Species - Listed are the principal species of raptors you will most likely see in California. Record all raptors sighted regardless of distance from road.

A.O.U. Number - This number will be used in punching out data for computer analysis and a three-digit number will be used for each species. Please leave this column blank after the species you have listed under "Other Raptors". We will provide the proper coding.

Number of Birds - Please make a special effort to age species wherever possible, and make each entry under the appropriate column (adult, immature and unknown). Use a tally system in recording the numbers of each species and age class observed. At the end of the route please add up the totals for each species in the right hand column and a total of all raptors reported entered below.

## RAPTOR SURVEY

MAILING ADDRESS \_\_\_\_\_ ZIP CODE \_\_\_\_\_

**Notes :**