

JOB PROGRESS REPORT

78.29

Schloff '78

State: California

Project Number: W-54-R-10 Project Title: Nongame Wildlife Investigations

Job Number: III - 1.0 Job Title: California Raptor Survey

Period Covered: July 1, 1977-June 30, 1978 Job Type: Survey and Inventory

**SUMMARY:**

Raptor Management Plan. A draft Raptor Management Plan was produced and is pending action by the California Fish and Game Commission. The Plan is comprehensive in scope and includes the following programs: maintain the endangered California Condor, American Peregrine Falcon, and Bald Eagle; research, survey and monitor raptor populations; preserve and enhance raptor habitats; conduct captive raptor breeding and augmentation research and management of wild raptor populations; public relations; and recreational use (i.e., falconry and captive breeding for falconry). When finalized and adopted by the Commission, the Plan will be implemented with the aid of cooperating agencies, conservation organizations, museums, universities, falconers, and other interested groups and individuals.

Prairie Falcon Monitoring. A decision to allow a harvest of 10 Prairie Falcons was made by the California Fish and Game Commission on 7 April 1978. Prior to proceeding with the harvest, it was necessary for the Department of Fish and Game to determine the reproductive status of the wild Prairie Falcon population. A monitoring survey was conducted to obtain information on nest site activity and reproductivity in the area where the harvest was to take place, the central coast mountain range in San Benito, Monterey, and San Luis Obispo counties. Based on information in Departmental files concerning nest locations, breeding behavior, nest site activity, and productivity during past breeding seasons, it was determined that, by comparison, reproduction in 1978 was lower than that in 1977. As a result, the Department cancelled the 1978 Prairie Falcon harvest. Harvest may occur in future years if reproduction appears normal.

Captive Raptor Breeding Program. During fiscal year 1977-78, a total of 6 new captive raptor breeding permits were authorized by the Fish and Game Commission. A total of 22 persons are authorized by the Commission to breed raptors in captivity and 2 additional permit applications presently are being processed. Captive raptor breeding holds promise for restoring endangered and declining raptor populations in California. However, this program also imposes increasing demands on limited Departmental budget and manpower.

Elf Owl: A survey to locate breeding populations of Elf Owls in California was conducted from April to July 1978. Ten pairs were found in an area along the Colorado River near the California-Nevada border NNW of Needles, San Bernardino County and a single individual was found along the Colorado River south of the San Bernardino-Riverside county line. None were found in other areas checked along the Lower Colorado River Valley and on the deserts of southern San Bernardino County, Riverside County, and eastern Imperial County. Past history of the species in California disclosed the Elf Owl was never abundant. Man-caused destruction of mature willow-cottonwood-mesquite habitat appears to have reduced the population of these owls, limiting their ability to continue to survive. The current population of Elf Owls in California probably does not exceed 20 pairs.

## BACKGROUND:

Only in the past decade has Departmental attention been focused on research and management of nongame animals such as the birds of prey. As a result, the Department's knowledge of many raptor species is incomplete. A Raptor Management Plan, "A Plan for California Raptors," was conceived to provide a sound resource-oriented basis on which to develop programs to maintain all of California's raptors. Agencies, conservation organizations, and individuals which have provided input into the Plan included: U. S. Fish and Wildlife Service, Bureau of Land Management, U. S. Forest Service, National Audubon Society, and the California Hawking Club. Recent Departmental studies have included surveys of Ospreys, Bald Eagles, Peregrine Falcons, Prairie Falcons, Spotted Owls, and several other raptor species. Additional research has been conducted on techniques of nest-site augmentation, effects of human disturbance on raptors, and sex determination of the Turkey Vulture. Future investigations will include: determining the requirements for captive propagation of various raptor species, status of the Great Gray Owl, and status of the Swainson's Hawk.

Title 14, Section 670, of the California Administrative Code states that the take of Prairie Falcons for use in falconry is prohibited. In April 1978, demands by falconers to use Prairie Falcons for falconry resulted in changes in falconry regulations to allow an annual harvest of ten nestlings. Eyrie locations and information on productivity contained in Departmental files indicate that such a harvest can proceed without threat to the breeding population of Prairie Falcons. The Department assumes responsibility for conducting the harvest and will do so only after a number of eyries have been surveyed and an assessment has been made of Prairie Falcon productivity. Harvest will be permitted only during years when reproduction appears at least normal.

The Department recognizes the value of a captive raptor breeding program and the need to develop in California the expertise to accomplish what is being done elsewhere in North America. The U. S. Fish and Wildlife Service has an extensive and costly captive breeding and research program at the Patuxent Wildlife Research Center in Laurel, Maryland. The Department of Fish and Game does not have the expertise or budgetary means to establish a similar research facility. Consequently, we are seeking to conduct the research needed to develop the technology of raptor breeding through issuance of permits to people and institutions who possess the expertise and resources to conduct such studies.

Twenty-two breeding permits have been authorized by the California Fish and Game Commission since the program began in April, 1970. These permits allow possession of 226 birds of 12 species. Currently 82 birds of the total birds authorized for captive breeding have been placed into this program. To date, 40 Prairie Falcons, 7 Harris' Hawks, 5 Merlins, 2 Goshawks, 1 Red-tailed Hawk and 1 Peregrine Falcon have been successfully reared.

The Elf Owl reaches the western limit of its breeding range on the Colorado desert of southeastern California. Occurrence of Elf Owls within the State has always been rather sporadic and the small number of existing records are from a few widely scattered localities at isolated desert springs and along the Colorado River Valley. Population declines, as indicated by relatively fewer and fewer recent records, apparently have been occurring over the past 10 years accompanying a rapid rate of habitat destruction and increased human disturbance.

## OBJECTIVES:

1. Determine current status of raptor populations.
2. Conduct surveys to provide population indices.
3. Develop programs of protection and management.
4. Provide for the educational, recreational, and scientific use of raptors.

## PROCEDURES:

The basic objectives of raptor research and management are being accomplished with widespread interagency and public cooperation. Because of limited personnel and budgets, it is necessary to rely heavily on assistance from qualified personnel outside the Department in order to meet the objectives. Assistance in conducting surveys and studies is welcomed from amateur ornithologists, university researchers, falconers, and other knowledgeable people and organizations. A position in the nongame project concentrates effort on raptor management problems and Department employee, Ronald W. Schlorff, has been assigned to the position. Brian J. Walton, biologist and licensed falconer, and Department of Fish and Game biologist Ronald W. Schlorff conducted the Prairie Falcon survey. The Elf Owl survey was conducted by seasonal student assistant Steven W. Cardiff. The Raptor Management Plan was produced by Robert D. Mallette and Ronald W. Schlorff of the Department. The Captive Raptor Breeding program is administered by the Department's Nongame Wildlife Investigations staff.

## FINDINGS:

In 1977 a total of 77 Prairie Falcon nest sites were visited to determine reproductivity. Of the total, 62 (80.5 percent) were active (i.e., at least one Prairie Falcon was observed in the vicinity of the nest) and of those, 54 (87.1 percent) were productive (i.e., produced young). During a survey conducted in 1978, a total of 56 nests were visited. Only 35 (62.5 percent) of the total were active, and of those, 20 (57.1 percent) were productive.

To date, a total of 22 captive raptor breeding permits have been issued by the Commission. These permits authorize the possession of 226 raptors of 12 species.

Attached are the reports cited below:

Mallette, R. D., and R. W. Schlorff. 1978. A Plan for California Raptors. Calif. Dept. of Fish and Game, Nongame Wildlife Investigations, Project W-54-R-10, Draft (September 1978), 58 pp.

Cardiff, S. W. 1978. Status of the Elf Owl in California. Calif. Dept. of Fish and Game, Nongame Wildlife Investigations, Project W-54-R-10, multilith report (July 1978), 15 pp.

## ANALYSIS:

Raptor surveys and studies compatible with research objectives of the Raptor Management Plan have been conducted in the past and are currently being conducted by the Department. Future research is planned to increase our knowledge of various aspects of raptor biology and ecology. Studies are

designed to fill voids in present knowledge and allow for implementation of management programs to ensure adequate protection and preservation of all raptor species and their habitats. Implementation of the Raptor Management Plan is dependent on aid from other agencies, conservation organizations, museums, universities, falconers and other interested groups and individuals.

The apparent decline in Prairie Falcon reproductive success is thought to be temporary in nature and related to climatic stress placed on a semi-arid raptorial species by unusually heavy rainfall during the early phases of the 1978 breeding cycle. For example, nest site areas in San Luis Obispo County received an increase of 30 inches over the normal 20 inches of annual rainfall. This rain came at the time corresponding to the time when Prairie Falcons were engaged in courtship behavior and nest site selection. In future Prairie Falcon surveys, efforts will be made to increase sample size. In addition, other areas of the state may be surveyed for breeding Prairie Falcons.

Good success has been achieved in developing captive breeding techniques for some raptor species. However, relatively few birds have been released to the wild. Departmental assistance must be provided to ensure that captive raptor breeders are able to obtain suitable breeding stock. Financial assistance will be provided where possible to establish suitable scientific research programs dedicated to the maintenance and enhancement of wild raptor populations.

Results of the Elf Owl study indicated the species needs immediate protection under the provisions of California endangered species legislation. Without this protection, the species will soon disappear from California. Immediate steps must be taken to acquire remaining acreage of suitable habitat if the Elf Owl is to continue as a breeding bird in California. Additional surveys of Elf Owls should be initiated to locate other population concentrations and identify key habitats.

#### RECOMMENDATIONS:

1. Implement Raptor Management Plan programs.
2. Continue Elf Owl survey. Initiate steps to classify Elf Owl as Endangered in California.
3. Conduct research on raptor species whose populations appear to be declining (e.g., Swainson's Hawk and Great Gray Owl).
4. Continue to administer scientific captive raptor breeding program. Develop procedures to permit captive breeding for falconry purposes only.
5. Continue annual survey of Prairie Falcon populations and allow limited take of nestlings for use in falconry during years with normal reproduction.

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