

Restoration of Osprey on Santa Catalina Island, California, 2001

A Report Prepared for:

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October 2001

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INTRODUCTION

The osprey currently is listed as a Species of Special Concern by the California Department of Fish and Game. Although ospreys once occurred as breeding residents on the southern Channel Islands (Kiff 1980), there currently are no known nesting pairs on the islands. San Clemente Island contained the largest number of nesting pairs, with at least 20 nests found in 1907 (Linton 1908, Kiff 1980). Ospreys were also common on Santa Catalina Island, although no estimates of their numbers can be found (Kiff 1980). However, Howell (1917, as cited in Kiff 1980) reported that on Santa Catalina Island “every detached rock of any height [had] its resident pair.”

Osprey numbers appear to have declined starting in the early 1900's, probably due in large part to indiscriminate shooting (Kenyon 1947, Kiff 1980). By the 1930's, ospreys were seldom seen on Santa Catalina Island (Willett 1933, as cited in Kiff 1980). Although individual osprey are occasionally seen on Santa Catalina Island, primarily during Fall and Spring migrations, no osprey pairs are known to occur on Santa Catalina Island and no nests have been found on Santa Catalina Island since the early 1900's.

Introductions are probably only necessary when the present nesting populations are 300+ km from historical nesting ranges and the likelihood of natural re-establishment is low (Henny and Anthony 1989). Currently, the closest osprey nesting populations are at the southern end of the Sierra range (Henny and Anthony 1989) and in Baja California (Friedman et al. 1950). Both of these nesting populations are >300 km from Santa Catalina Island. Additionally, although the number of pairs of breeding osprey have increased at the southern edge of their range in California, the breeding range has not extended further south (Henny and Anthony 1989), making it improbable that ospreys will naturally re-establish themselves on Santa Catalina Island. Therefore, in 1999, the California Department of Fish and Game and the Institute for Wildlife Studies (IWS) entered an agreement to attempt an osprey reintroduction on Santa Catalina Island, California (hereafter Catalina Island).

STUDY AREA

Catalina Island is located 34 km south of Long Beach, California. The island is 34 km long, 0.8 to 13.0 km wide, and covers 194 km² (Fig. 1). Elevations range from sea level to 648 m. There is considerable topographic relief, with numerous steep-sided canyons incising the island. Annual temperatures range from 12 to 20° C near the coast, and yearly precipitation averages 31 cm (NOAA 1985).

METHODS

IWS removed four ospreys between the age of 5 and 6 weeks from two nests at Eagle Lake, Lassen County, California on 24 July 2001. Each nest had three chicks and one chick was left in

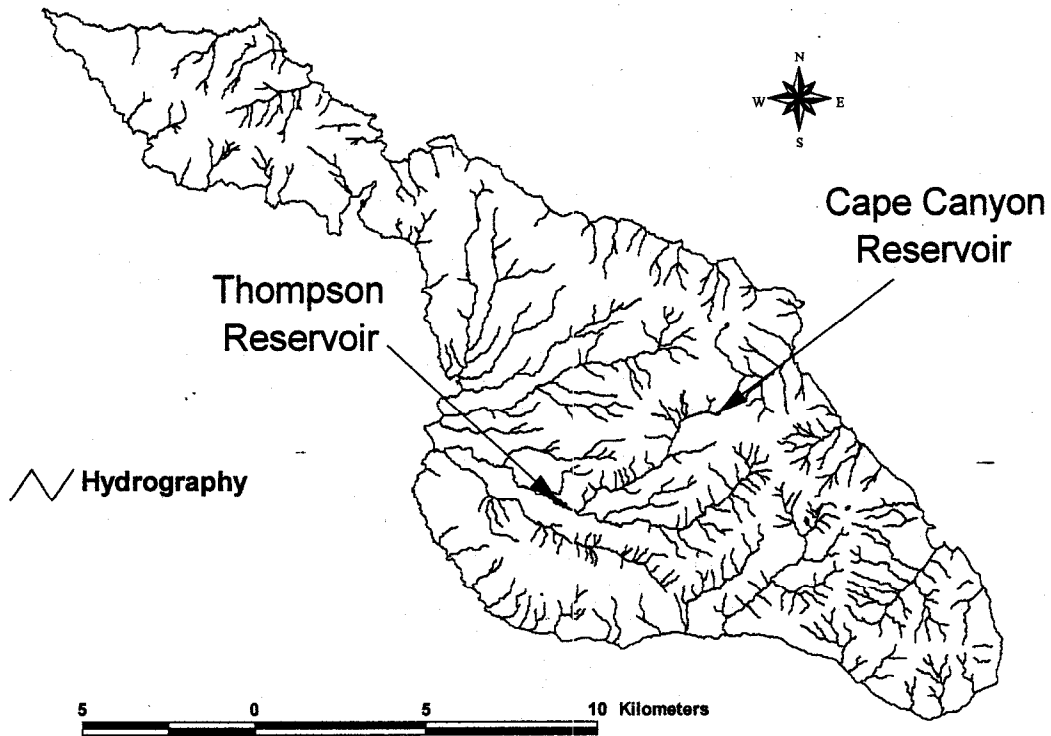


Figure 1. Santa Catalina Island, CA with points of reference.

the nest. The four birds were transported to the San Francisco Zoo where they were housed on the evening of 24 July. On 25 July the birds were transported to Catalina Island and placed in a release tower (Fig. 2). The release tower consisted of a 2 x 2-m cage atop an approximately 6-m tall platform constructed along the edge of Thompson Reservoir, a freshwater reservoir located in Middle Canyon. The cage had a solid roof and was enclosed with plywood on the back half and 2 cm metal bars spaced approximately 8 cm apart on the front half. The birds were fed twice daily. We initially fed them by hand to insure that each bird was eating, but left pieces of cut fish (~ 1 cm² pieces) in glass pie plates to allow them to feed on their own. Once we determined that all the birds were feeding on their own (after about 1 week in the cage) we discontinued hand-feeding and began leaving both whole fish and pieces of fish.

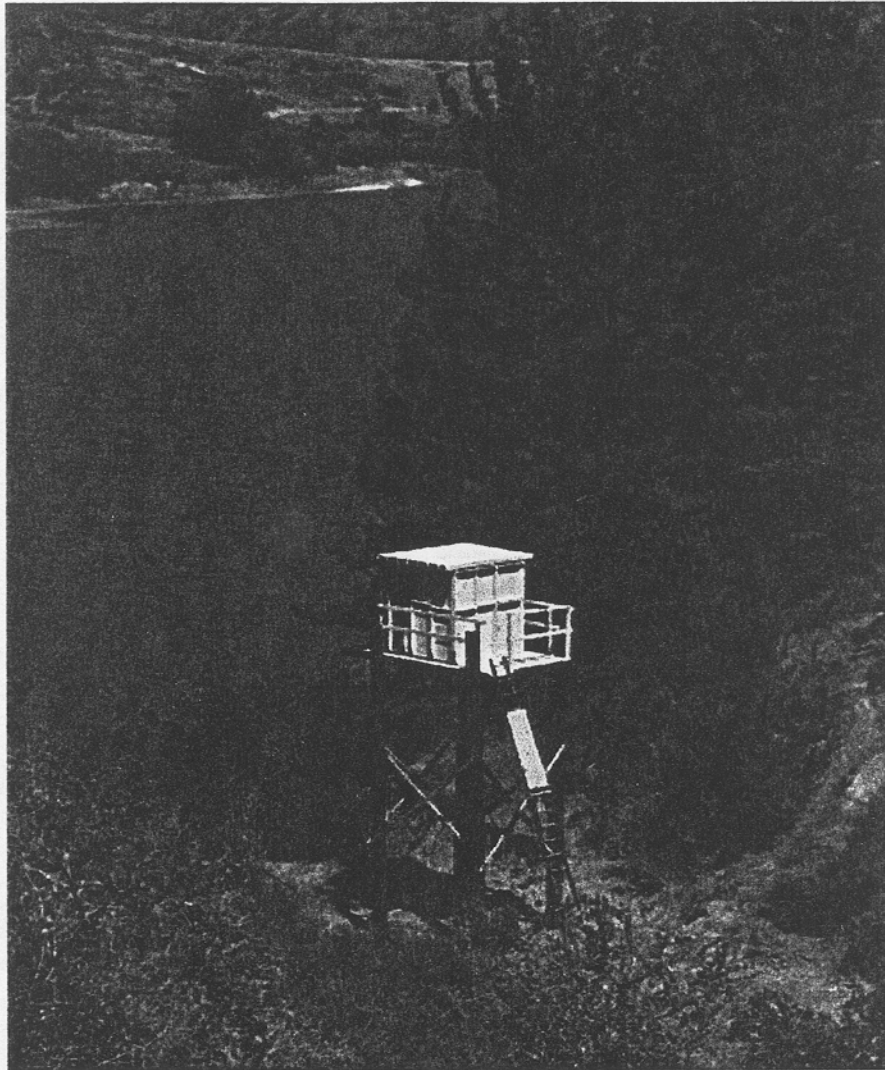


Figure 2. Osprey release tower on edge of Thompson Reservoir, Santa Catalina Island, CA.

On 22 August we entered the cage to place leg bands and radio transmitters on each bird (Fig. 3). Each bird was fit with an orange A-craft leg band, a U.S. Fish and Wildlife Service band, and a backpack transmitter weighing approximately 40 g (Table 1).

We opened the door on the cage to release the birds at 0550 hrs on 24 August. The first bird (USFWS # 788-29537) fledged at 0631 hrs and the second bird (USFWS # 788-29538) fledged at 0739 hrs. The third bird (USFWS # 788-29535) fledged at 0848 hrs and the last bird fledged between 1215 and 1600 hrs. Once we released the osprey we continued to place fish on the roof of the tower for approximately one month while the birds developed their hunting skills.



Figure 3. Osprey with backpack-mounted transmitter.

Table 1. Identification information for four osprey released on Santa Catalina Island, California in August 2001.

USFWS Band Number	Acraft Band Number	Radio Frequency
788-29535 (Right leg)	2/A (Left leg)	216.048
788-29536 (Left leg)	1/A (Right leg)	216.033
788-29537 (Right leg)	2/B (Left leg)	216.068
788-29538 (Left leg)	1/B (Right leg)	216.083

All four birds appeared healthy and began fishing from the reservoir and flying around the island within a week of their release. We continued to track all four birds daily to monitor movements and insure that they remained healthy. USFWS # 788-29535 was the first bird to leave Thompson Reservoir on a regular basis. It often moved between the hack tower and Cape Canyon Reservoir (Fig. 1). We lost the radio signal of this bird between 12 September and 2 October, at which time it was perched at Cape Canyon again. The bird may have left the island for a short period or have been in a location in which we were unable to locate its signal. As of 27 October, the bird was still on the island.

USFWS # 788-29536 also spent time at Cape Canyon Reservoir, but was more often perched along Thompson Reservoir. On 12 September we tracked this bird to the southern tip of Catalina Island. The signal disappeared towards the mainland and the osprey was not seen again.

USFWS # 788-29537 and USFWS # 788-29538 made short trips away from Thompson Reservoir, but were usually back by evening. We lost the signals from these two birds on 1 September and 6 September, respectively.

DISCUSSION

This year's releases were more successful than last year's as we experienced no mortality this year (compared to 50% mortality among the four osprey released last year). We believe that our osprey release program can return a breeding population of osprey to Catalina Island within several years.

We hope to be able to release additional birds during the next several years from the tower at Thompson Reservoir and from towers erected along the island's coastline. We will look for additional/alternate sources of young osprey for releases, as there are only about 10 pairs breeding at Eagle Lake and we do not want to remove more than 6-8 chicks from that area so as not to negatively impact the Eagle Lake population. In the future we will examine the possibility of acquiring osprey from islands in Baja, Mexico to increase the probability of successfully restoring osprey to Catalina Island. Osprey from Baja would be from a similar environment to that found on Catalina Island and they do not appear to be migratory so they may remain on Catalina Island year-round.

ACKNOWLEDGMENTS

We would like to thank the Eagle Lake Ranger District of the U.S. Forest Service for allowing us to remove the young osprey and for their assistance in accessing the nests.

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