

JOB FINAL REPORT

State: California

Project Number: W-54-R-6 Project Title: Special Wildlife Investigations

Job Number: III-16 Job Title: Cormorant Nesting Study

Period Covered: July 1, 1973 - June 30, 1974 Job Type: Survey and Inventory

SUMMARY:

Aerial surveys were made in 1972 and 1974 of cormorant nesting on the Channel Islands. The 1974 survey located 13 rookeries on 7 of the 8 islands. The Channel Island cormorant nesting population appears to be 4,000-5,000 birds with Castle Rock and Prince Island off San Miguel Island constituting the most important rookeries.

BACKGROUND:

Nesting failure of the double crested cormorant (Phalacrocorax auritus) on Anacapa Island (Gress, 1970)<sup>1/</sup> and pelagic cormorant (P. pelagicus) in San Luis Obispo County (Frame, 1972)<sup>2/</sup> directed attention to the need to determine the status of these seabirds. Cormorant nesting on California's offshore rocks was reported by Osborne and Reynolds (1971)<sup>3/</sup>; however, the Channel Islands off California's southern coast was not surveyed during the course of the Department's 1970-71 study.

OBJECTIVES:

Objectives of this study were to (1) make observations of nesting cormorants and (2) determine their reproduction.

PROCEDURES:

The Department's Cessna Super Skymaster stationed at Long Beach was utilized to conduct an aerial survey of the Channel Islands in 1972 and 1974. Location of nesting colonies were mapped and counts were made of cormorants. No effort was made to identify the species of cormorant observed during the aerial survey.

<sup>1/</sup> Gress, F. 1970. Reproductive status of the California brown pelican in 1970 with notes on breeding biology and natural history. Calif. Dept. Fish and Game, Wildl. Mgt. Br. Adm. Rept. No. 70-6, 21 pp.

<sup>2/</sup> Frame, M. A. 1972. Cormorant nesting San Luis Obispo County, California 1972. Calif. Dept. Fish and Game, Special Wildl. Invest. prog. rept., Job III-16, 10 pp.

<sup>3/</sup> Osborne, T. and T. G. Reynolds. 1971. California seabird breeding ground survey. Calif. Dept. Fish and Game, Wildl. Mgt. Br. Adm. Rept. No. 71-3, 4 pp.

FINDINGS:

Table 1 summarizes the aerial counts made of cormorants on the Channel Islands 1972 and 1974.

TABLE 1

Cormorant Nesting Survey  
Channel Islands  
1972 - 1974

<u>Island</u>	1972 June 13-14		1974 May 22	
	<u>Cormorants</u>	<u>Rookeries</u>	<u>Cormorants</u>	<u>Rookeries</u>
San Clemente	41	1	35	1
Santa Barbara	101	1	150	2
San Nicolas	645	1	385	3
Anacapa	---	---	16	---
Santa Cruz	207	---	223	2
Santa Rosa	950	---	600	2
San Miguel	3,443	1	220	1
Castle Rock	---	---	900	1
Prince Island	---	---	<u>1,500</u>	<u>1</u>
Total	5,387	4	4,029	13

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- 1/ Cormorants counted in 1972 were incidental to brown pelican survey. No effort was made to identify rookery sites; 4 sites were minimal.
  - 2/ No cormorants observed on Catalina Island.

ANALYSIS:

Aerial surveys conducted in 1972 and 1974 revealed the location of cormorant nesting colonies on the Channel Islands and the number of cormorants occupying the islands during the breeding season. Identify of the cormorant species nesting at the particular sites and their reproductive success was not determined.

A Channel Island cormorant nesting study proposal was submitted by Dr. George Hunt, Univ. of California, Irvine. The expense of providing monthly boat transportation to the islands precluded initiation of the study.

RECOMMENDATIONS:

1. Aerial survey of cormorant nesting on the Channel Islands be continued in 1975.
2. A study be made of the San Nicolas Island colony to determine cormorant nesting biology and reproductive success.

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Approved by: *Eldridge G. Hunt* Date: October 29, 1974  
Eldridge G. Hunt, Chief  
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Date: May 22, 1974

Purpose: Cormorant Survey, Channel Islands

Participants: Leo Singer (pilot), Dr. George Hunt, University California, Irvine, Leonard Fisk, and Howard R. Leach

Itinerary: Departed from Long Beach airport in Department's Cessna 180 @ 0915. Survey of the islands made in this order: San Clemente, Santa Catalina, Santa Barbara, San Nicolas, Santa Rosa, Santa Cruz, and Anacapa. Survey completed 15:40.

Survey Results:

San Clemente: Clearance to fly south end of island not obtained. Singer knows of no nesting colonies on that portion of the island. At Northwest Harbor colony of 35 cormorants (SC1) Pelicans - 5 adult.

Santa Catalina: No cormorants observed.  
Pelicans - Castle Rock, 14 adults; Bird Island, 16 adults; 2 immature; other - 14 adults, 4 immature.

Santa Barbara: Sutil Island - Colony  
55 cormorants (SB1); Cliff below Tower Peak (SB2), 65 cormorants, SB3 - white wash, no birds seen.  
30 cormorants roosting near hut.  
Pelicans - 17 adults, 2 immature

San Nicolas: Two large colonies  
(SN1 & SN2) 345 cormorants. SN3  
40 cormorants nesting in sandstone rock beneath overhang. Two large whales observed offshore.

San Miguel Island: Adams Cove (SM1)  
Colony 50 cormorants: 170  
Cormorants roosting along east shore.  
Castle Rock - Nesting colony 900 cormorants  
Prince Island - Nesting colony 1500 cormorants

Santa Rosa - SR1 - nesting colony 60 cormorants;  
SR2 - 150 cormorants. Both colonies in overhanging cliffs thought to be pelagic cormorants.  
Roosting on Santa Rosa Island shoreline 390 cormorants

Santa Cruz: West end of island SC1 - nesting colony 50 cormorants;  
98 roosting along shoreline.  
Pelicans - 18 adults.

Scorpion Cove: Nesting colony of 150 pelicans plus 7 immature.

Gull Island: SC2 - nesting colony  
75 cormorants.

Anacapa Island: No nesting colonies;  
16 cormorants observed.  
Pelicans observed at nesting site - 125 adults.

Summary:

Cormorants were found to be nesting on San Clemente, Santa Barbara, San Nicolas, Santa Cruz, Santa Rosa and San Miguel and offshore Castle Rock and Prince Island. Number of cormorants counted was 4,029 and 13 rookeries were sighted.

Observed also were 367 brown pelicans. Nesting pelicans on West Anacapa Island and Santa Cruz Island (Scorpion Anchorage) numbered 125 and 150 respectively.