

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

DOUBLE-CRESTED CORMORANT

Phalacrocorax auritus

Family: PHALACROCORACIDAE
B044

Order: PELECANIFORMES

Class: AVES

Written by: S. Granholm
Reviewed by: D. Raveling
Edited by: R. Duke

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. August to May, fairly common to locally very common along the coast and in estuaries and salt ponds; uncommon in marine subtidal habitats from San Luis Obispo Co. south, and very rare to the north. In the same season, fairly common at the Salton Sea and Colorado River reservoirs, and rare to fairly common in lacustrine and riverine habitats of the Central Valley and coastal slope lowlands. Less common in summer, except locally common near nesting colonies.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds mainly on fish (Robertson 1974, Cogswell 1977); also on crustaceans and amphibians. Dives from water surface and pursues prey underwater, usually remaining submerged for about 30 sec. Prefers water less than 9 m (30 ft) deep with rocky or gravel bottom, but may catch fish as deep as 22 m (72 ft). Sometimes feeds cooperatively in flocks of up to 600, often with pelicans.

Cover: Rests in daytime and roosts overnight beside water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or even transmission lines. Perching sites must be barren of vegetation (Bartholomew 1943). Must visit perches periodically in day to dry plumage. Sometimes rests, or even sleeps, on water in daytime (Palmer 1962). Requires considerable length of water, or elevated perch, for labored take-off.

Reproduction: Requires undisturbed nest-sites beside water, on islands or mainland. Uses wide rock ledges on cliffs; rugged slopes; and live or dead trees, especially tall ones.

Water: No additional data found.

Pattern: Suitable nest-site must be within 8-16 km (5-10 mi) of dependable food supply (Palmer 1962).

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity, except migrates both day and night.

Seasonal Movements/Migration: Summer residents of mountains and northeastern plateau are absent from about November to March; presumably migrate west and south to lowlands, especially along the coast, where the population increases in winter.

Home Range: Usually forages within 8-16 km (5-10 mi) of roost or nest colony (Palmer 1962). In Manitoba, ground nests on islands averaged 1 per 0.8 m² (9 ft²) (McLeod and Bondar 1953).

Territory: Used for some courtship displays, copulation, and nesting; consists of nest, and a perch for the non-incubating parent (Palmer 1962). In Saskatchewan, ground nests on islands were 22-38 cm (8.5-15 in) in diameter, and ranged from 0-91 cm (0-36 in) apart, measured from rim to rim (Vermeer 1970a).

Reproduction: Breeds mostly April to July or August, but begins in January at Salton Sea and Colorado River. Most laying is April to June. Monogamous; nests in colonies of a few to hundreds of pairs, or even thousands; little current information on sizes of California colonies. Clutch size usually 3-4, range 2-7, possibly as high as 9. Single-brooded. Incubation 24.5-29 days. Altricial young tended by both parents, first fly at 5-6 wk, fully independent at 10 wk. Usually breed first at 3 yr, sometimes 2 yr. About 25% of adults at breeding colonies are prebreeders (Lewis 1929, Mendall 1936).

Niche: Susceptible to reduced nesting success from persistent pesticides in water. Many nesting colonies in California have been abandoned after human disturbance and habitat destruction (Remsen 1978). In Quebec, human disturbance of breeding colonies caused nest abandonment and increased predation by gulls on eggs and young (Ellison and Cleary 1978). Predation on eggs and young by gulls and crows may be an important factor reducing nesting success (Ellison and Cleary 1978, Siegel-Causey and Hunt 1981).

Comments: A California Species of Special Concern (Remsen 1978). Numbers declining throughout North America.

REFERENCES

- Bartholomew, G. A., Jr. 1943. The daily movements of comorants on San Francisco Bay. *Condor* 45:3-18.
- Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.
- Ellison, L. N., and L. Cleary. 1978. Effects of human disturbance on breeding of double-crested cormorants. *Auk* 95:510-517.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Lewis, H. F. 1929. The natural history of the double-crested cormorant (*Phalacrocorax auritus auritus*). Ru-Mi-Lou Books, Ottawa. 94pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- McLeod, J. A., and G. F. Bondar. 1953. A brief study of the double-crested cormorant on Lake Winnipegosis. *Can. Field-Nat.* 67:1-11.
- Mendall, H. L. 1936. Home life and economic status of the double-crested cormorant. Univ. Maine Studies, Second Ser., No. 38. 159pp.
- Palmer, R. S., ed. 1962. Handbook of North American birds. Vol. 1. Yale University Press, New Haven, CT. 567pp.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dept. of Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.
- Robertson, I. 1974. The food of nesting double-crested and pelagic cormorants at Mandarte Island, British Columbia, with notes on feeding ecology. *Condor* 76:346-348.
- Siegel-Causey, D., and G. L. Hunt. 1981. Colonial defense behavior in double-crested and pelagic cormorants. *Auk* 98:522-531.
- Vermeer, K. 1970a. Some aspects of nesting of double-crested cormorants at Cypress Lake, Saskatchewan in 1969, a plea for protection. *Blue Jay* 28:11-13.