

**DOUBLE-CRESTED CORMORANT** *Phalacrocorax auritus*

**Conservation Status**

**ALASKA: Not At Risk**    **N. AMERICAN: Not Currently At Risk**    **GLOBAL: Least Concern**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
June-Aug	2-7	25-29 d	35-42 d	ground, trees	surface dip	fish, other aquatic animals

**Life History and Distribution**

Double-crested Cormorants (*Phalacrocorax auritus*) are iridescent, greenish-black waterbirds with orange-yellow skin on the face and throat and aqua-blue eyes. They nest in colonies along coasts and inland near rivers and lakes.

Fish is their primary food. Powerful swimmers, they chase their prey underwater while keeping their long, hooked-tipped bill tilted up at an angle. Small prey are swallowed underwater and larger fish are brought to the surface, flipped in the air, and swallowed head-first.

The outer portion of their feathers adsorbs water. This feature is thought to help them dive and is not just a result of inadequate oil glands as is commonly believed. A conspicuous activity often observed in Double-crested Cormorants is wing-spreading. It is generally thought that this behavior is for wing drying which may be important in reducing heat loss. Other proposed functions include balancing, signaling, or as an aid to swallowing prey.

Two small tufts of feathers on either side of the head are responsible for the common name of this bird, but the double crest is only present early in the breeding season. There is also considerable variation in the color and size of crests and body size across their range. Alaskan birds are the largest, with long, straight crests that are mostly white; eastern populations are smaller, with short, all-dark, curled crests. Based on body size and crests, five subspecies are recognized with *Phalacrocorax auritus cincinatus* occurring solely in Alaska.

Double-crested Cormorants are widely distributed in North America. The five breeding zones are Alaska, the Pacific Coast from southern British Columbia to northern Mexico, the Canadian and U.S. interior, the Atlantic Coast from Newfoundland to New York, and Florida and the western Caribbean. In Alaska, breeding occurs on Nunivak Island, in the southeastern Bering Sea, and from the Aleutian Islands to Southeast Alaska, including Kodiak Island. Inland breeding occurs as far north as Lake Louise.

The Alaskan population generally winters near breeding areas although it is a fairly common winter bird in Southeast Alaska and there is some dispersal as far south as British Columbia. Inland birds migrate to coastal areas.



USFWS Rodney Krey



Mark Rauzon

**Alaska Seasonal Distribution**

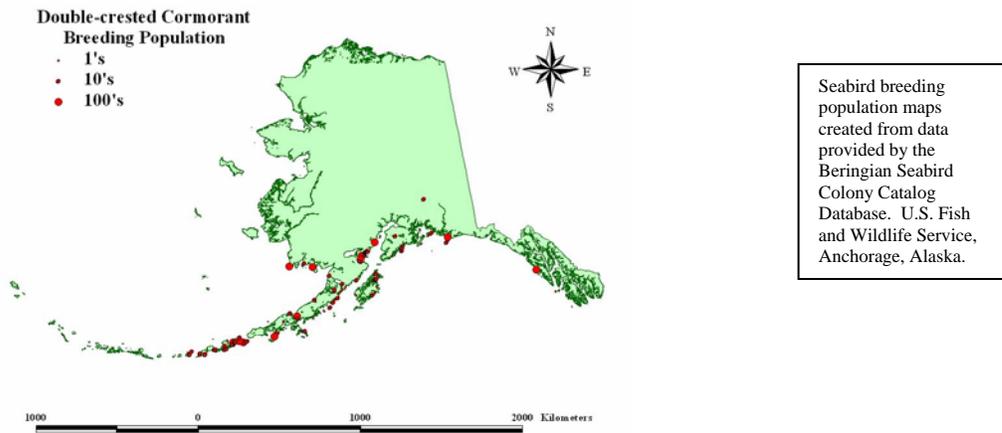
AK Region	Sp	S	F	W
Southeastern *	U	U	U	U
Southcoastal *	C	C	C	U
Southwestern *	C	C	C	U
Central	-	+	-	-
Western *	-	+	+	-
Northern	-	-	-	-

C=Common, U=Uncommon, R=Rare, + =Casual or accidental, - = Not known to occur, \* = Known or probable breeder, Sp=Mar-May, S=June and July, F=Aug-Nov, W=Dec-Feb. © Armstrong 1995.

**Population Estimates and Trends**

The 1990 world population estimate was 1-2 million individuals. However, systematic censusing covers only a portion of the population and some of the largest populations are the least well counted (e.g. Manitoba and Mexico). The U.S. Fish and Wildlife Service Beringian Seabird Colony Catalog lists 106 Double-crested Cormorant colonies in Alaska with approximately 6,068 individuals.

Some Double-crested Cormorant populations have undergone dramatic changes over the last three decades. The species almost vanished in some areas due to the effects of the pesticide DDT. Through legislative controls, levels of this compound declined. In response to declining levels of contaminants and human-induced changes in fish stocks, Double-crested Cormorants had an amazing return. Population increases were the most explosive in the Great Plains, Great Lakes, and on the Atlantic Coast. Numbers of breeding birds on the west coast also grew, but did not reach pre-DDT levels in southern California. In Alaska,



most colonies have been censused only once, or not since the 1970s. Therefore, population trends are not available. However, numbers are thought to have declined since historical times, especially after the introduction of predators.

### Conservation Concerns and Actions

The dramatic come-back of Double-crested Cormorants in some regions created conflict between the birds and humans. Their ability to consume large quantities of fish was perceived as competition by sport and commercial fishermen, and aquaculturists. Their tendency to roost in large flocks and deposit large amounts of excrement in a single location also caused concern about their effects on vegetation. While studies have indicated that some of these concerns were not well founded, others required further research. The U.S. Fish and Wildlife Service conducted an Environmental Assessment and finalized an Environmental Impact Statement (EIS) in 2003. As a result of the EIS decision, the Double-crested Cormorant Public Resource Depredation Order (PRDO) was enacted. This Order authorized the U.S. Department of Agriculture's Wildlife Services, state fish and wildlife agencies, and federally-recognized tribes to control cormorants, without a federal permit, in 24 states (not including Alaska). Discussions continue on the impacts of cormorants to fisheries resources, but recent work has shown that measuring their impact is difficult and interpretation is highly disputed.

Due to the remote nature of Alaska and low numbers of Double-crested Cormorants, conflict between people and the cormorants has not been an issue. Concern in Alaska is in maintaining a viable population and several issues are considered as possible threats to the population.

This species is very susceptible to disturbance at colonies by predators and humans. Hasty departures by adults may lead to eggs being tossed from the nest or unattended chicks dying from exposure to cold or predators. Double-crested Cormorants are particularly vulnerable to disturbance at colonies where other species of birds such as gulls (*Larus spp.*) are also nesting. Departures of adults provide predatory birds with the opportunity to eat the cormorants' eggs and newly hatched young. Other predators include red (*Vulpes vulpes*) and arctic (*Alopex lagopus*) foxes and possibly Norway rats (*Rattus norvegicus*). Numbers of cormorants were probably reduced on some Aleutian Islands by the introduction of foxes in the 1800s. Many islands were rid

of the foxes by the U.S. Fish and Wildlife Service and cormorant populations increased at these sites. Some islands still have introduced fox populations.

Mortality has also been recorded in gillnet and trawl fisheries. However, no species specific data are available for the inshore waters where most individuals are found and additional mortality may be occurring.

Recent data for subsistence hunting and eggging by Alaskan Natives are not available specifically for Double-crested Cormorants. However, cormorants and their eggs are still harvested and data are available for cormorants in general. Between 1995-2000, approximately 1,753 adult cormorants and 22 eggs were collected annually. In areas where Double-crested Cormorants are found they may be included in the take.

### Recommended Management Actions

- Determine Alaskan Double-crested Cormorant breeding population numbers.
- Establish a regional monitoring program.
- Complete a nesting inventory.
- Measure productivity.
- Determine wintering areas.
- Protect colonies and important roosting sites from human disturbance and mammalian predators.
- Investigate mortality related to fishing and fishing gear.
- Work with the Alaska Migratory Bird Co-Management Council (AMBCC) to monitor and regulate subsistence use of Double-crested Cormorants.
- Support efforts to minimize the incidence of fuel spills near breeding and roosting areas and measure contaminants in Double-crested Cormorant eggs.

### Regional Contact

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### References

Armstrong 1995; Hatch and Weseloh 1999; IUCN Internet Website (2005); Kushlan *et al.* 2002; Stephensen and Irons 2003; U.S. Fish and Wildlife Service 2006, 2002; U.S. Fish and Wildlife Service Internet Website (2005); Wires *et al.* 2001.

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