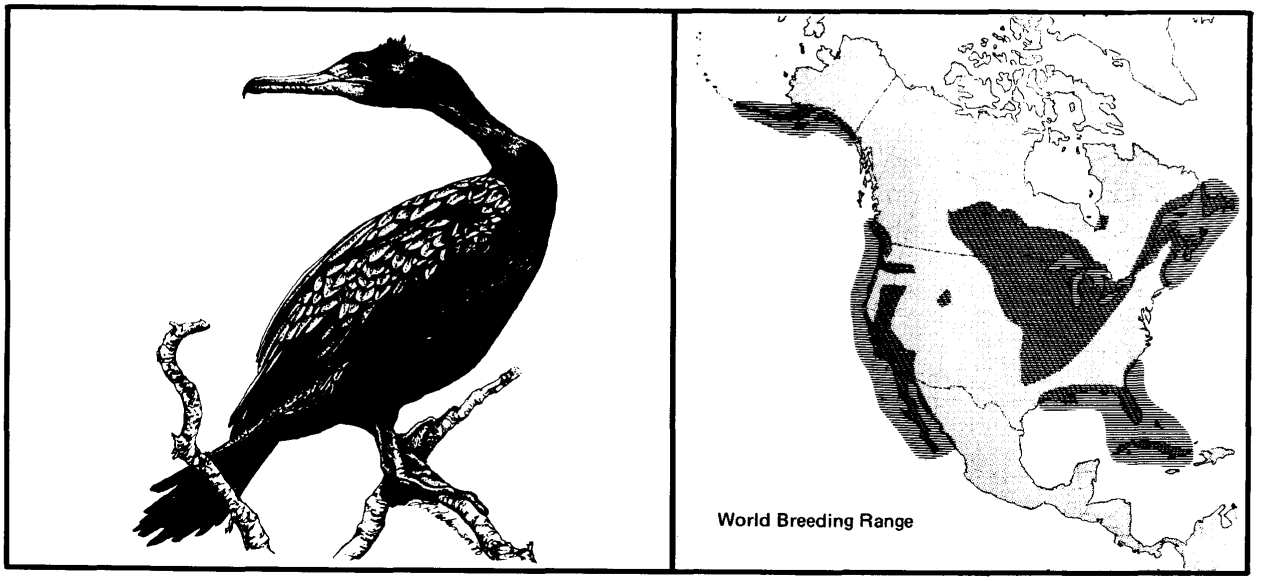
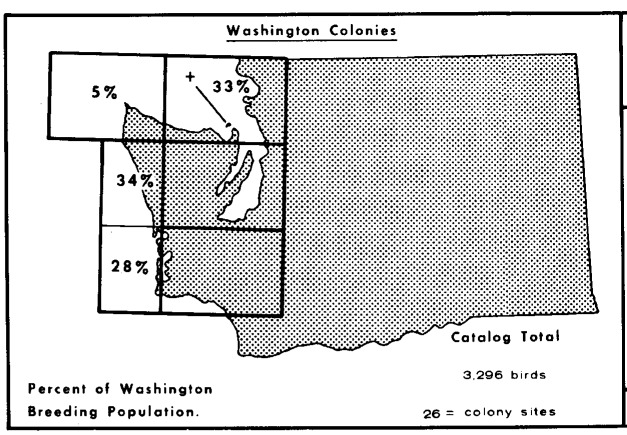
Double-crested Cormorant *(Phalacrocorax auritus)*

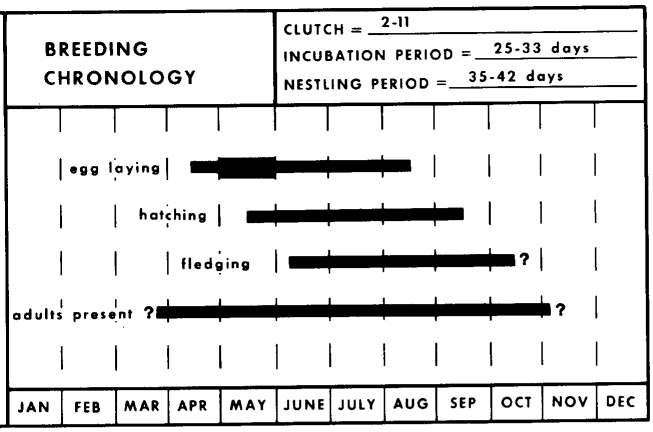


Double-crested Cormorants are the most widespread of North American cormorants. They are the only species in the United States and Canada regularly found in freshwater habitats. In Washington, Double-crested Cormorants are found breeding in limited numbers inland (Jewett et al. 1953), but by far the largest numbers breed in marine habitats near and around the San Juan Islands, along the outer coast, and in Grays Harbor.

Double-crested Cormorants nest in a variety of habitats. Along the coast they nest on the exposed tops of offshore rocks, in Grays Harbor on low sand islands around the periphery of dune grass areas, and in some areas, though not in coastal Washington, occasionally in dead trees. Those nesting inland nest in trees or snags or on islands in lakes. This species constructs nests of sticks, with inland-nesting bird also using matted vegetation gathered near the colony.

Double-crested Cormorants are sleek and strong swimmers that prey on shallow-water fish (Robertson 1974). After their fishing sessions, they are frequently seen perched on logs or rocks, extending their wings to dry. Cormorant feathers become completely saturated during underwater swimming and require periodic drying (Rijke 1968). Many Double-crested Cormorants which nest on coastal rocks and islands feed in nearby bays and rivers on the mainland. There are impressive flights of cormorants between colonies and roosts in the San Juans and the estuaries of the Skagit and other rivers in Washington (Wahl et al. 1981).





WASHINGTON COLONIES

Double-crested Cormorants nest at about 30 locations in Washington. The marine population of about 3,300 breeding birds is concentrated in three regions. About 900 nest in Grays Harbor on Goose Island. Approximately 1,100 nest along the northern outer coast at 14 locations. Another 1,100 nest in the northern inland waters at nine locations, though three colonies at the southern end of Rosario Strait--Colville Island and its adjacent "annex," Bird Rocks, and Williamson Rocks--account for almost all the nesting population. The estimate of total nesting population size is probably reasonably accurate, though shifts in colony locations can make errors possible.

HISTORICAL STATUS AND VULNERABILITY

Cormorants are well known for moving nesting colonies from one location to another, and this is also true in Washington's marine waters. There are some locations where Double-crested and Pelagic cormorants are present each year, but others may have large numbers for a few years and none for another period of time. Cormorants also may shift colony sites in the middle of a nesting season. The reasons for this are unknown but could relate to human disturbance in some cases.

Numbers of nesting Double-crested Cormorants in Washington appear to be increasing. However, lack of consistent censusing over time and the shifts of cormorant colonies mean that caution is required in interpreting census numbers, even in the case of large, conspicuous birds like cormorants. Changes in availability of prey due to variations in oceanographic conditions from year to year have been suggested as explanations for very large variations in nesting numbers (Ainley 1976) in California and similar cycles undoubtedly occur in Washington.

While eggshell thinning due to pesticide contamination decreased reproductive success of cormorants in California (Gress et al. 1973), this threat has not been documented in Washington. Until recent decades, cormorants were

officially persecuted as suspected predators on commercial fishes and, while policies have long been changed to protection, a bomb set off in 1980 on Bird Rocks which killed a number of Double-crested Cormorants suggests that old attitudes die hard. Since the few colonies in inland marine waters are concentrated within a very few square kilometers and are easily accessible by small boat, this type of persecution, along with disturbance due to boating, fishing, and diving, poses a potentially real danger to the birds nesting there. Human disturbance of Double-crested Cormorant colonies can be very destructive (Ayers 1975). Cormorant eggs and chicks are vulnerable to gull predation when adults are frightened off their nests by human intrusion (Kury and Gochfeld 1975).

Little is known of the vulnerability of cormorants to oil, but few oiled birds have been found after spills in California (Smail et al. 1972). Cormorants are mobile, and it is likely they can avoid oil spills to some degree. Unlike many other seabirds, cormorants spend large amounts of time out of the water and would thus be less exposed to oil.

FIELD NOTES

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