

RED-FACED CORMORANT

TAXONOMY

Scientific name: *Phalacrocorax urile* (Lesson, 1831)
Common name: Red-faced Cormorant, Red-faced Shag
Family: Phalacrocoracidae

Taxonomic comments:

May constitute a superspecies with *P. pelagicus* (AOU 1998). See Siegel-Causey (1988) for analysis of relationships within family. Siegel-Causey (1988) proposed removing this species from the genus *Phalacrocorax* and placing it in the genus *Stictocarbo*. Siegel-Causey (1991) described a new species, *Stictocarbo kenyoni*, from skeletal material from Amchitka Island; no nonskeletal specimens are known; the taxonomic status of the new species is questionable (Johnsgard 1993).



DESCRIPTION

Basic description: A medium-sized cormorant with bright red facial skin.

General description:

A medium-sized cormorant; males slightly larger than females. Adult basic or post-breeding plumage is blackish with glossy purple, bronze and green hues over the body and single-crested head, with dull reddish facial skin and yellowish bill with black tip and culmen (Causey 2002). Alternate or pre-breeding plumage is similar but with a striking white patch on the flank, brighter red facial skin and the presence of two head crests and white plumes trailing off the neck and/or breast area. Chicks hatch naked and are soon covered with brownish down, and juvenile birds are almost uniformly dark brown (plumage and bill) with feathered facial area, and develop naked forehead when reproductively mature (about 3 years) (Johnsgard 1993). Closely resembles the Pelagic Cormorant, which overlaps in range, but is larger with generally bigger proportions (Causey 2002).

Length (cm): 79
Weight (kg): 2.1

Reproduction:

Eggs are laid in May-June in Alaska; mean laying date in mid- or late May but time of nesting varies between years. Colonial nests are constructed by both sexes using grass, seaweed and other marine debris, depending on availability, and held together by guano (Causey 2002). Clutch size usually is 2-4. Incubation, by both sexes, lasts about 31-34 days (average). Young fledge at average age estimated at about 7 to 8+ weeks (beginning in mid-August or as late as early September in Alaska). Productivity and local abundance may vary greatly from year to year.

Ecology:

Species is exclusively marine, coming to land only to breed or roost (Causey 2002). Predators include foxes, gulls, corvids, and raptors (e.g., bald eagle); glaucous-winged gull and ravens may be serious egg predators in some areas; human disturbance resulting in predation by American crows or other predators; attempted predation by river otter was a significant decimating factor on Kodiak Island (see Johnsgard 1993).

Food:

Eats mainly small fishes (e.g., cottids, walleye pollock, sand eel), predominantly demersal fish with little specialization (Causey 2002); also crabs and shrimps; obtains food by diving from surface of water, often close to shore and near breeding colony. See Johnsgard (1993) for further details.

Phenology:

Adult and immature diurnal.

Habitat:

Closely associated with rock-bottom coastlines of North Pacific marine islands and isolated areas of mainland Alaska, Kamchatka and Japan; often close to shore in water less than 200 m deep. Nests on steep, relatively inaccessible slopes, on ledges averaging about 40 cm wide (Johnsgard 1993), including rocky sea islands alongside gulls, murre, and auklets. Roosts on offshore rocks or protected cliff outcroppings and forages in water near shore (< 20 km) (Causey 2002).

STATUS

Global rank: G5 (1996-11-20)

Global rank reasons:

Global rank reason currently unavailable.

State rank: S3S4B, S3S4N (2004-08-03)

State rank reasons:

Current Alaska breeding population about 20,000 birds. Apparent population decline since the 1970s; order of magnitude not well documented but appears dramatic. Range is limited to southern Alaska coast west through Aleutians. Protected throughout majority of breeding range in Maritime National Wildlife Refuge. Threats include predation by introduced foxes and rats, disturbance at nesting colonies, exposure to oil spills, and incidental mortality in commercial fisheries.

DISTRIBUTION AND ABUNDANCE

Range:

Global range:

Breeds in northern Japan and Kuril Islands and through the Commander and Aleutian Islands and coastal mainland Alaska to Prince William Sound, north to Bristol Bay and Cape Newenham, and in the Bering Sea in the Pribilofs and Nunivak Island (Johnsgard 1993). Northernmost breeding colony at St. Paul Island (Pribilof Islands, Bering Sea; Causey 2002). Generally throughout breeding range in winter (Causey 2002).

State range:

Breeding: Range in Alaska limited to a narrow, latitudinally compressed band from the Alaska Peninsula to Attu Island along the Aleutian Island chain. Dispersed colonies found throughout the Aleutian and Pribilof Islands, and also on the Alaska mainland near the Gulf of Alaska (Siegel-Causey and Litvinenko 1993). The furthest north this species breeds is on St. Paul Island in the Pribilof Islands, and the furthest east is Middleton Island (Causey 2002). Largest colonies in Alaska are on Attu, Agattu, and Nizki-Alaid Islands in the Near Islands (Trapp 1985). Recent breeding range expansion into Prince William Sound during the last decades (Johnsgard 1993).

Non-breeding: Species is non-migratory, generally occurring throughout breeding range in winter (Causey 2002).

Abundance:**Global abundance:**

Current world breeding population estimated at 155,000 individuals (Siegel-Causey and Litvinenko 1993, Causey 2002). Alaska population currently about 20,000 individuals (USFWS 2003). The majority of the species' population occurs farther west, especially along the Kamchatka Peninsula and the Kuril archipelago (Johnsgard 1993). The most recent population estimate available for the Commander Islands is 24,000 in 1972 (Marakov 1975 in Vermeer et al. 1993). About the same number of birds (20,000 – 30,000) were noted on the Kurils in 1963. In 1983, about 11,000 birds were noted on Kamchatka (Vermeer et al. 1993).

State abundance:

Estimated at 20,000 individuals (USFWS 2003).

Trends:**Global trend:**

Global short term trend: Trends difficult to track due to fluctuations in colony size within and between years (Causey 2002). Local monitoring indicates abundances potentially shifting from the Pribilof Islands to the western Aleutians over the past 20 years (Causey 2002). Eastern end of range may also be contracting. Colonies increasing in Gulf of Alaska since 1960s, and decreasing at some colonies in central and western Aleutians since the 1980s. Breeding bird abundance on Nizki-Alaid (Near Island – Aleutians) was down 82% in 1992, with only 42 nests recorded compared to 1990 when 1,200 nests were detected (Causey 2002). Populations appear to be declining on the Semidi Islands and Chiniak Bay, Alaska, based on 2001 surveys (Dragoo et al. 2003).

Global long term trend: In the late 1970's, Alaska population apparently was stable (Lensink 1984). Recent archaeological study of western Aleutian Island middens may show ten-fold population declines in the past 30 years for that area, likely associated with climatic and oceanographic changes in the same period of time (Causey et al. 2004).

Significant broadening of nesting distribution over the last 50-60 years, with increased abundance in the Commander Islands, Kuril Islands and the Kamchatka Peninsula (Siegel-Causey and Litvinenko 1993).

State trend:

Current trends difficult to identify due to the lack of complete census data. An estimated 150,000 birds occurred in Alaska in the late 1970s according to Lensink (1984) and Johnsgard (1993) estimated 130,000 individuals for the same time period. Current population estimate of 20,000 birds is substantially lower (USFWS 2003). A recent archaeological study of western Aleutian Island middens suggests a ten-fold population decline over the past 30 years, likely associated with climatic and oceanographic changes over the same period of time (Causey et al. 2004).

In the 1970s the Alaskan population was apparently stable (Lensink 1984), with the latest trends showing variable decreases and increases in different areas. Colonies increasing in Gulf of Alaska since 1960s, and decreasing at some colonies in central and western Aleutians since the 1980s. Substantial declines were noted between 1976 and 1982 at St. George; counts during 1985 were similar to 1982 census (Byrd et al. 1985). At St. Paul, a similar decline was noted between 1976 and 1982, but total count in 1985 was higher than 1976 (Byrd et al. 1985). Breeding bird abundance on Nizki-Alaid (Near Island - Aleutians) was down 82% in 1992, with only 42 nests recorded compared to 1990 when 1,200 nests were detected (Causey 2002). Colonies in Chiniak Bay, Kodiak Island reported to be stable in 1978 (Nysewander and Barbour 1979), yet recent surveys during 2001 indicate declines at this colony and also in the Semidi Islands (Dragoo et al. 2003).

EXISTING PROTECTION

Global protection:

See State protection.

State protection:

Protected under the Migratory Bird Treaty Act (1918). The Lacey Act (1900) and amendments (1981, 1984, 1988) protect this species from shooting and molestation in U.S. waters. In Alaska, Native subsistence harvest of migratory birds and eggs is managed by the U.S. Fish and Wildlife Service. Subsistence harvest regulations for spring/summer 2004 removed this species from the harvest list (U.S. Fish and Wildlife Service 2004). Much of Alaskan breeding habitat is protected within the Alaska Maritime National Wildlife Refuge.

CHALLENGES

Global challenges:

Threats include natural and introduced predators, human exploitation, harvest and disturbance, oil spills and nearshore fishing activities. See State challenges for more detailed information.

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At Chiniak Bay, Kodiak Island, causes of mortality were egg and chick predation by Glaucous-winged Gulls, attempted predation by river otters, predation by corvids and Bald Eagles, human disturbance causing adults to leave their nests, and losses caused by storms (Lensink 1984 in Causey 2002). On Ugiushak Island, ravens and Glaucous-winged Gulls were responsible for 81% of nest depredation (Bartonek et al. 1977). Hunting by Native Alaskans and fox predation were major causes of mortality on the Pribilof Islands (Hunt et al. 1981). Although eradication programs

have been conducted in many affected areas, introduced Arctic foxes on several Aleutian Islands may still be a threat. Rats, which come ashore following ship wrecks, are also known predators (Causey 2002).

Historically, Red-faced Cormorants were harvested by Native Alaskans in the Aleutian Islands: adults and eggs for food, adults for their pelts, and bones were used to make tools (Siegel-Causey et al. 1991). Human harvest of this species is currently disallowed under the management of the U.S. Fish and Wildlife Service, subsistence harvest regulations (U.S. Fish and Wildlife Service 2004). Small colonies are especially vulnerable to disturbance, human or otherwise. Human disturbance will flush adults from nests, exposing eggs and chicks to predators and weather (Causey 2002). Laying a second brood is often impossible because of the short breeding season in Alaska's high latitudes (Siegel-Causey and Litvinenko 1993). Due to remote nesting locations, the Pribilofs and Komandorski Islands are the only places where human densities are high enough to pose a threat (Causey 2002).

Oil pollution, including chronic oiling due to a major spill, could severely impact to Red-faced Cormorants, particularly near colonies where densities are greatest. This is of particular concern in the Near Islands. There is also potential for incidental mortality in commercial fisheries (i.e. gill-netting; Causey 2002).

RESEARCH AND INVENTORY NEEDS

Global research needs:

This species is little known and studied. The effects of industry, human activity, pollution and climate change on population trends and distribution should be studied. Genetic research into the distinctiveness of colonies and gene flow among populations is currently lacking (Causey 2002).

State research needs:

Long-term and detailed study of this species' basic life history is lacking, including descriptions of diet, behavior and habitat selection. With more information about food habits/diet, it should be a priority to determine overlaps with commercial and subsistence fisheries resources, and also to study the effects of climate and oceanic changes on populations and their food sources. Long-term studies of marked individuals and colonies are needed to understand population parameters and postbreeding dispersal. No data based on long-term study of individuals are available. Genetic research into the distinctiveness of colonies and gene flow among populations is currently lacking (Causey 2002).

Global inventory needs:

Priority should be to better determine worldwide abundance and number and location of colonies.

State inventory needs:

Shoreline population surveys in the Gulf of Alaska, Prince William Sound and the Aleutian Islands should be continued where they are being conducted, and initiated where not already conducted.

CONSERVATION AND MANAGEMENT NEEDS

Global conservation and management needs:

See State conservation and management needs.

State conservation and management needs:

Continuation and expansion of efforts to eradicate introduced foxes in the Aleutian Islands could reduce the threat of introduced predators (Causey 2002). The U.S. Fish and Wildlife Service should continue to manage the harvest of adult birds and eggs by Alaska Natives. Subsistence harvest of this species should be restricted in its' entire range in response to its apparent overall decline in Alaska over the last decades, and prohibited especially in small, isolated colonies.

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