BLACK GUILLEMOT *Cepphus grylle*

Conservation Status

ALASKA: Moderate **N. AMERICAN: Not currently at risk** **GLOBAL: Least Concern**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
June-Aug	1-2	23-29 d	30-40 d	crevice, hole	surface dive	fish, marine invertebrates

Life History and Distribution

The Black Guillemot (*Cepphus grylle)* is a striking bird with almost entirely black breeding plumage, a bright, white patch on the upper wing and spotless, white underwings. Its plumage is set off with bright red legs and feet, a slender black bill, and a coral red mouth-lining. The most similar North American species is the Pigeon Guillemot *(Cepphus colomba)* and the two species may be seen together in the northern Bering Sea. In any plumage, the Pigeon Guillemot may be distinguished by dusky-gray underwings and a broad, black wedge in the white wing patch.

The breeding distribution of Black Guillemots is circumpolar. They nest from the Gulf of Maine northward throughout eastern Canada, over most of the Canadian Arctic Archipelago, north to Greenland, and across Eurasia. There are also isolated colonies in northern Alaska and the Yukon Territory in Canada.

In the western Arctic and adjacent Pacific Oceans, Black Guillemots breed on coastlines and islands of the eastern Siberian, western Chukchi, and Beaufort Seas. In northern Alaska, they are an uncommon, local breeder from Seahorse Island and Point Barrow east to Igalik Island and a rare breeder farther east to Barter Island. In western Alaska, they are an uncommon breeder at Cape Thompson and a regular summer visitor to St. Lawrence Island (no confirmed breeding).

In winter, this species spends most of its time on the open ocean in the vicinity of its breeding areas. However, in areas where open water is limited by sea ice, the birds retreat until reaching ice-free coastal areas or mobile pack ice with open water and accessible foraging habitat.

Alaska Seasonal Distribution

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

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.

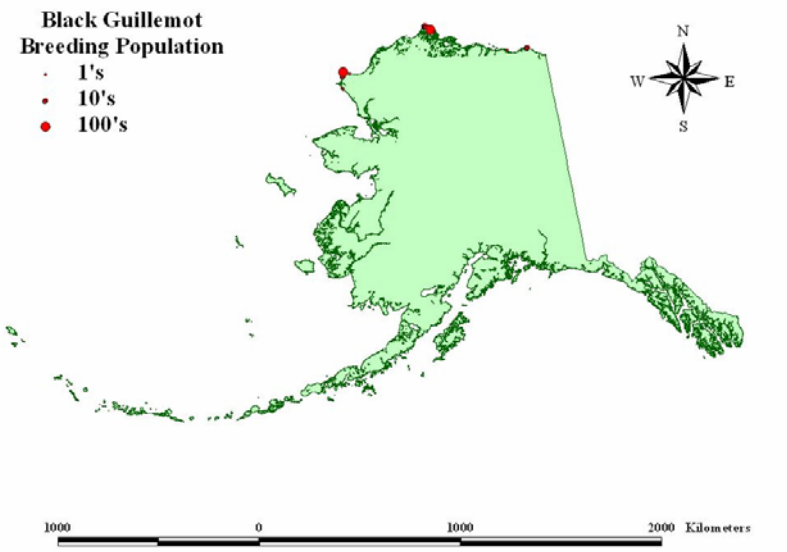
Black Guillemots are an ice-dependent (pagophilic) species. Their survival is inextricably tied to the arctic pack ice. Satellite observations indicate a decrease in the extent of ice cover of nearly three percent per decade since the late 1970s, with the rate of loss accelerating this decade. Changes in Black Guillemot colonization and populations in the western arctic are already among the first documented biological effects of climate change.

Typically, the species nests in crevices on rocky sea cliffs or in cavities found on rocky shorelines or headlands. In northern Alaska, however, the low coastal tundra bluffs and gravel beaches lack any fissures or spaces suitable for breeding and the birds nest in driftwood piles and increasingly in manmade structures. They require a minimum of 80 snow-free days for laying eggs, hatching their young, and for the fledglings to leave the nest.

Population Estimates and Trends

A recent estimate of the global population is 250,000-500,000 pairs, but small colony size and crevice nesting make accurate censusing of Black Guillemots difficult. The U. S. Fish and Wildlife Service Beringian Seabird Colony Catalog estimates 693 individuals at 15 colonies.

The only trend data available is for the Cooper Island population. This colony is located 25 miles east of Point Barrow and is the furthest north point in Alaska. During the 1970s and 1980s, the colony experienced rapid growth, with a maximum number of breeding pairs of around 200. By the mid-1990s, the breeding population had declined by almost 100 to 115 pairs. During 2002, the breeding population again increased with 150 breeding pairs present in the colony. Researchers continue to investigate possible causes for changes in the population.



Seabird breeding population maps created from data provided by the Beringian Seabird Colony Catalog Database. U. S. Fish and Wildlife Service, Anchorage, Alaska.

Conservation Concerns and Actions

The ability of Black Guillemots to exploit arctic habitats throughout the year makes them an ideal monitor of arctic marine ecosystems. Variations in Black Guillemot demographics, breeding biology and composition of their tissues could reflect conditions in the arctic. This species' close association with snow and ice habitats also makes it a sensitive indicator to atmospheric warming. However, continued investigation is needed in numerous areas. The development of reliable and accurate census methods is essential to tracking long-term population trends.

Warming trends may also be responsible for subarctic seabirds, such as the Horned Puffin *(Fratercula corniculata)*, expanding breeding to the far north colonies. The incursion of Horned Puffins may have also reduced Black Guillemot breeding success because they are predators and nest competitors of the Black Guillemot. The link between immigration of new predators/competitors and changes in the northern environment warrants further study.

Continued investigation is also needed to determine the validity of applying subspecies distinctions to various populations in North America and Europe. Recent treatments list five subspecies of Black Guillemots which may be grouped into arctic breeders and all others. Of the five subspecies, only two occur in North America (*Cepphus grylle mandtii* and *Cepphus grylle arcticus).* It is the subspecies *Cepphus grylle mandtii* that is found in northern Alaska. However, the status of proposed subspecies remains unresolved.

Effects of crude-oil spills on Black Guillemot populations have been clearly demonstrated in a number of incidents where counts of mortality were possible. Chronic impacts of oil exposure are not well understood and there is no published information on impacts of oil pollution in the nearshore waters of the Black Guillemot foraging habitat.

Recommended Management Actions

- Develop reliable census methods for Black Guillemot populations in Alaska.
    - Implement a systematic census of the Black Guillemot population.
- Determine Black Guillemot breeding population numbers in Alaska.
- Establish a monitoring program.
- Complete a nesting inventory.
- Measure productivity and dietary needs.
- Determine wintering locations.

Regional Contact

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References

Armstrong 1995; Butler and Buckley 2002; Friends of Cooper Island Internet Website (2005); IUCN Internet Website (2005); Kushlan *et al.* 2002; U.S. Fish and Wildlife Service 2006, 2002.

Full credit for the information in this document is given to the above references.