KITTLITZ'S MURRELET *Brachyramphus brevirostris*

Conservation Status

ALASKA: High **N. AMERICAN: High Risk** **GLOBAL: Critically Endangered**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
May-Aug	1	unknown	24 d	bare ground, scrape	surface dive	fish, invertebrates, macroplankton

Life History and Distribution

A small diving bird related to puffins and murres, the Kittlitz's Murrelet *(Brachyramphus brevirostris)* is one of the rarest and least known seabirds in North America. In most of its range, the Kittlitz's Murrelet seems to nest in rugged mountains near glaciers or in previously glaciated areas, sometimes up to 45 miles inland. During summer, it usually feeds near tidewater glaciers, among icebergs, and outflows of glacial streams. The bird's association with such ancient ice flows has earned it the nickname, "Glacier Murrelet."

Kittlitz's Murrelets differ from 98% of all other seabirds in that they don't nest colonially. They are solitary nesters that rely on camouflage and secretive behavior to avoid predation. They nest on the ground, generally on unvegetated scree fields and occasionally on cliff faces. A single egg is laid in a small scrape, usually on the downhill side of a large rock. Finding nests has proven to be extremely difficult. Only 25 nests have been found, and only one of those was observed throughout a complete season. What is known about the species' breeding distribution has largely been extrapolated from their presence at sea. To further complicate censusing this unique alcid is the difficulty in identifying it correctly. Kittlitz's Murrelets closely resemble Marbled Murrelets (*Brachyramphus marmoratus)* which are common in Alaskan coastal waters and are found in virtually all areas frequented by the former. The Kittlitz's Murrelet shows white in the tail when flushed, which is helpful in field identification.

All of the North American and most of the world population of Kittlitz's Murrelets breed, molt, and winter in Alaska. They inhabit coastal waters discontinuously from Point Lay on the northwest coast of Alaska, south to northern portions of Southeast Alaska. Part of the world population also breeds in the Russian Far East from the Okhotsk Sea to the Chukchi Sea. There are no good estimates of the Siberian population, but it is thought to be much less than the Alaskan population. During the breeding season, Kittlitz's Murrelets are found in several core population centers in Alaska. The centers are the south side of the Alaska Peninsula, Prince William Sound, Lower Cook Inlet and Kenai Fjords, Icy Bay, Yakutat Bay and the Malaspina Forelands, and Glacier Bay.

The winter range is not well known. However,

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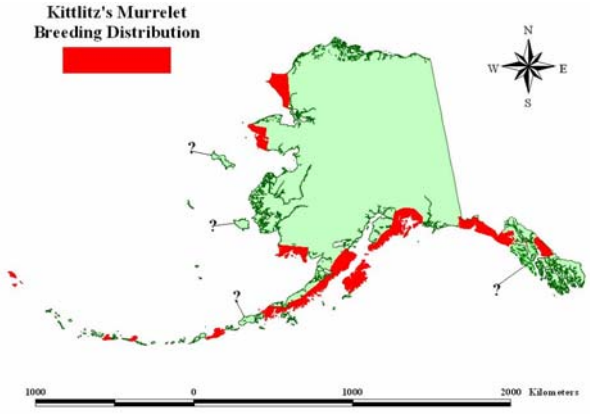
sightings have occurred in Southeast and western Alaska, and in a few locations in southcoastal Alaska. Lower densities of birds also occur in the mid-shelf regions of the northern Gulf of Alaska.

The Kittlitz's Murrelet has undergone steep population declines in several of its core population areas. Reasons for the population declines have not been conclusively determined. Because the species may warrant listing as threatened or endangered under the Endangered Species Act, the U.S. Fish and Wildlife Service named the murrelet as a candidate for protection under the Act in 2004. Candidate species are not subject to the regulatory protections of the Endangered Species Act, and human activities that may affect candidate species are not restricted. Rather, the listing encourages the formation of partnerships among federal agencies, researchers, and others, to carry out research and conservation activities, that may preclude the need to list a species as threatened or endangered.

Alaska Seasonal Distribution

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

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.



Seabird breeding distribution maps created from data *in* Birds of North America, Day *et al.* 1999.

Population Estimates and Trends

Estimates of the Alaskan population range from 9,000 to 25,000 birds. Interpretation of Kittlitz's Murrelet population status and trend data is complicated.

The best U.S. Fish and Wildlife Service information indicates that Kittlitz's Murrelets in Prince William Sound have declined by 84% since 1989, and could disappear from that sub-region by ~2010. Recent declines in the Glacier Bay population center would, if continued, eliminate that population of birds by ~2045. Data from the Malaspina Forelands suggests that its local population of Kittlitz's Murrelets declined by at least 38%, and perhaps by as much as 75%, between 1992 and 2002. In the Kenai Fjords area, the murrelet population has declined by as much as 83% since 1976.

Conservation Concerns and Actions

All the hypotheses about reasons for the decline of Kittlitz's Murrelets are untested. Basic information is still needed about the Kittlitz's Murrelets' habitat, foraging behavior, and food requirements to increase our understanding of these birds and improve our ability to determine the reasons for their decline.

At least two sources of human-caused mortality for Kittlitz's Murrelets have been identified, gillnet fisheries and oil spills. Being small-bodied, nearshore divers, these birds sometimes get caught in gillnets and drown. Adult and juvenile mortality have been documented in gillnet fisheries in southcoastal Alaska. In Prince William Sound, Kittlitz's Murrelets represented 5-30% of the total murrelet bycatch in salmon gillnets during 1990 and 1991. The same traits make them susceptible to oil spills. Relative to their population, high numbers of Kittlitz's Murrelets were killed by the 1989 *Exxon Valdez* oil spill. Seventy-two Kittlitz's murrelets were positively identified among the bird carcasses recovered after the oil spill. Nearly 450 more *Brachyramphus* murrelets were not identified to the species level, and it is reasonable to assume that some of those were Kittlitz's Murrelets. In addition, many more murrelets probably were killed by oil than were actually recovered. It is likely that about 500 individuals died as an acute effect of the oil spill, which would represent a substantial fraction of the world population. Additionally, in 1999, a tour boat went aground in a bay adjacent to Glacier Bay, and, in 2001, two commercial fishing vessels sank and released fuel in northern Prince William Sound. Both events occurred near areas used by Kittlitz's Murrelets. As vessel traffic increases in Alaska's nearshore waters, such events, while not individually catastrophic for the species, could have cumulative impacts on local murrelet populations.

Factors that are strongly suspected to have negative effects on Kittlitz's Murrelet populations include cyclical changes in the oceanic environment and glacial retreat, both of which may alter their prey or foraging habitat. Glacial retreat may be a consequence of global warming.

Other factors that are suspected to cause Kittlitz's Murrelet mortality include natural predation, chronic oil pollution, disturbance by commercial and recreational boaters, and flightseeing operations. The primary breeding areas for Kittlitz's Murrelets are all experiencing increases in tour operations.

Recommended Management Actions

- Complete surveys of Kittliz's Murrelet range and monitor population trends at key sites (Glacier Bay, Prince William Sound, Cook Inlet, Icy Bay, Kenai Fjords, Kachemak Bay, and Yakutat).
- Obtain population estimates at sites with little or no data (Cape Lisburne, Aleutian Islands, and Cape Suckling south to Cape Spencer).
- Develop a productivity index to monitor juvenile birds on the water at key sites.
- Continue studies at key sites on habitat use, chronology, productivity, and foraging biology.
- Work with state and federal agencies and fisheries councils to minimize the negative impacts of fisheries interactions.
- Support efforts to minimize the incidence of fuel spills and chronic oiling near breeding and wintering areas.
- Assess effects on murrelets of large vessel traffic and large tour boat traffic in fjords.

Regional Contact

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References

Armstrong 1995; Day *et al.* 1999, IUCN Internet Website (2005); Kendall and Agler 1998; Kushlan *et al.* 2002; Manly and Nations 2002; U.S. Fish and Wildlife Service 2002; Wynne *et al.* 1992, 1991.

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