



## U.S. Fish & Wildlife Service

### Threatened and Endangered Species

# Kittlitz's Murrelet

*(Brachyramphus brevirostris)*

The Kittlitz's murrelet is a small, pursuit-diving seabird in the auk family. Its summer breeding season plumage is mottled gray or brown sometimes with flecks of gold, while its winter plumage is strictly black and white. Due to similarities in size, shape, and plumages, the Kittlitz's murrelet can be confused with its close and more common relative, the marbled murrelet (*B. marmoratus*).

#### Status

The Kittlitz's murrelet was designated a candidate species for listing under the Endangered Species Act (ESA) in May 2004. It remained a candidate species until September 2013 when the Service determined that listing under the ESA was not warranted.

#### Range and Population Size

The range of the Kittlitz's murrelet encompasses a vast region from the Russian Far East across to the Aleutian Islands and southeastern Alaska, and north to northwestern Alaska.

Unlike most other seabird species, the Kittlitz's murrelet is not a colonial nester, but instead is a dispersed nester that often nests in low densities in isolated and remote areas. Owing to the solitary and secretive nesting behavior of this species, population size and trend are estimated by conducting surveys at sea. However, for many inherent and methodological reasons, there is considerable uncertainty associated with estimates of local population size and trend. Across all local populations with sufficient data, it appears that there was a considerable decline in Kittlitz's murrelets between 1989 and 2000, but since then populations seem to have stabilized or may be declining



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Above: a Kittlitz's murrelet chick. Inset, an adult with a capelin. Nick Hatch / USFWS

at a comparatively much slower rate. The best evidence indicates that the minimum global population of the Kittlitz's murrelet currently is between 26,000 and 42,000 individuals.

#### Habitat and Habits

During the summer breeding season, about 66% of the global population of the Kittlitz's murrelet is associated with glacially influenced marine waters near tidewater glaciers and remnant high elevation glaciers. The exact reasons for this association are not clear, but hypothetical explanations related to nesting and foraging preferences exist. Kittlitz's murrelets also occur in lower numbers in marine waters that lack glacial influence, and even in some freshwater lakes adjacent to mountainous terrain.

This species is a secretive breeder, laying a single egg in a nest scrape composed of sand- and pebble-sized rocks or plant matter. Their nesting

habitat is characterized by sparsely-vegetated or unvegetated scree fields, talus slopes, and coastal cliff, and rock ledges. Until the late 1990's only about two dozen nest records existed. Today, more than 200 nests have been found, many of which were scientifically studied. Based on these nests, nesting success appears to be low primarily because of nest predation and chick starvation, exposure to weather, and disease.

The Kittlitz's murrelet tends to forage as single birds or in small groups. They pursue and capture prey underwater using wing-propelled "flight" and consume prey either at the surface or underwater. The Kittlitz's murrelet has a seasonally-varied diet, feeding on small fishes and zooplankton, and seems to specialize at foraging in turbid, less saline waters and under lower light conditions compared to the marbled murrelet. During nesting, Kittlitz's murrelets

carry a single whole fish at a time to their chick. Because this commute can be energetically costly, parents prefer to deliver high quality lipid-rich fishes to chicks so that the chicks grow faster and fledge from the nest quicker.

At the end of the breeding season, most Kittlitz's murrelets migrate to small bays along the Alaska Peninsula and the Bering Sea before traveling north the Chukchi and Beaufort seas. By September, molting likely occurs, perhaps resulting in a brief, flightless period. During the winter months, Kittlitz's murrelets have been observed in open water leads in the sea ice throughout the Bering Sea, as well as in offshore waters of the northern Gulf of Alaska. As the breeding season nears in March and April, Kittlitz's murrelets move inshore near to known breeding areas.

### Reasons for Current Status

Since its candidacy to the ESA in 2004, a tremendous amount of new information on the Kittlitz's murrelet has been collected. There are two primary reasons that listing of the Kittlitz's murrelet was recently determined to be "not warranted".

First, although populations appeared to have undergone a considerable decline during the 1990's, populations seem to have stabilized or the rate of decline has diminished substantially since about 2000. Despite some known sources of direct mortality of individual Kittlitz's murrelets such as oil spills, predation, and bycatch in gillnet fisheries, populations currently appear to be stable, suggesting that these potential stressors are not having a population- or species-level impact to the Kittlitz's murrelet.

Second, the Kittlitz's murrelet is broadly distributed, nests and forages in a variety of habitats, and has a diverse diet throughout its annual cycle. These are all characteristics that should facilitate adaptation and resiliency in response to changes in their habitats as a result of climate change or other potential stressors. At this time, there is no evidence to suggest that glaciers or ice are essential to the life history of the Kittlitz's murrelet or advantageous to their reproduction and survival.

### Management and Protection Needs

1. Develop a monitoring plan for the Kittlitz's murrelet across its range that includes coordinated survey efforts; continue monitoring populations in key areas to ensure continued population stability and to detect any change in population trajectory as soon as possible; conduct surveys to estimate population size in areas not surveyed yet or adequately.
2. Initiate coordinated research efforts to compare ecology and demography of the Kittlitz's murrelet in areas with and without glacial influence to investigate whether there are fitness advantages to this species in different habitats or parts of its range. Work with the International community (e.g., Russia and Japan) to assess the potential risk to Kittlitz's murrelets from at-sea drift net fisheries.
3. Fill data gaps that serve as challenges to estimating population trend accurately and precisely such as within-season and across-season movements and nest area fidelity; determine fledging dispersal and behavior in order to evaluate reliability of monitoring trend in productivity using surveys at sea.
4. Develop products and tools on seasonal distribution and abundance of Kittlitz's murrelets at sea and on nesting areas and timing, and distribute these materials to oil spill response planning teams, and tourist, fishing, and oil and gas industries.

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*A well-camouflaged Kittlitz's murrelet egg; an adult on a nest (inset).*

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