

Pacific Seabird Group



DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

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Denby S. Lloyd
Commissioner
Alaska Department of Fish and Game
P.O. Box 115526
Juneau, Alaska 99811-5526

Re: Endangered Status of Kittlitz's Murrelet

Dear Commissioner Lloyd:

The Pacific Seabird Group (PSG) believes that it is appropriate to list the Kittlitz's Murrelet (*Brachyramphus brevirostris*) under the State of Alaska Endangered Species Act. PSG is greatly concerned about the long-term survival of the Kittlitz's Murrelet, a rare seabird endemic to coastal Alaska and eastern Russia. Although variable, declines of up to 18% per year for the last few decades have been well-documented in core population areas in Alaska, where the majority of the world population breeds (USFWS 2008, enclosed). While the ultimate cause of the decline is unknown, scientists agree that if current trends continue Kittlitz's Murrelets may be extirpated within the next two decades in core areas of their range. This species is listed on the National Audubon Society's 2007 watchlist as a species of global conservation concern. It is considered critically endangered on the 2008 IUCN Red List. Whether or not your Department ultimately decides to list this species as endangered, we urge it to conduct its own status review of Kittlitz's Murrelets and invite the active participation of scientists and those who might be affected by any management program that might result from a determination that this species is endangered. PSG is strongly committed to using the best available science to manage seabirds.

PSG is an international, non-profit, scientific organization comprised of professional seabird researchers and managers dedicated to the study and conservation of seabirds and the marine environment. Our members come from the entire Pacific basin, including Canada, Russia, Mexico, Japan, China, Australia, New Zealand, and the USA. The primary goals of PSG are to promote the conservation of seabirds through seabird research, information exchange, and providing expert advice on evaluating and managing threats to seabird populations.

Relative to many other seabirds, little is known about the life history, marine and terrestrial habitat requirements, and ecology of Kittlitz's Murrelets. During the breeding season, this non-colonial species often feeds in coastal waters associated with tidewater glaciers, glaciated fjords, outflows of glacial streams, and recently-deglaciated areas (Day et al. 1999). Populations are geographically clustered and are small in size; the current world population is roughly 20,000 individuals (USFWS 2008). The timing and route of migration and the winter range of the Kittlitz's Murrelet are poorly known, and mostly from only a few opportunistic observations. Throughout the year, they feed primarily on schooling forage fishes (e.g., Pacific sand lance, herring, capelin) and macrozooplankton (e.g., euphausiids and copepods; Sanger 1987, Vermeer et al. 1987, Piatt et al. 1994). Kittlitz's Murrelets do not breed until 2–4 years of age, lay only one egg/clutch, and may not breed every year (Day et al. 1999, Day and Nigro 2004). We also suspect that, in some years, there is a widespread absence of breeding effort in this species. For these reasons, recruitment into the breeding population must be low and the recovery of declining populations can be expected to be slow, even with effective actions taken to stem the decline. The U.S. Fish & Wildlife Service has concluded that causes for decline include oil-spill mortality (especially the *Exxon Valdez* oil spill), oil pollution, changes in climate manifested through glacial recession and associated cascading effects, gillnet mortality, vessel-caused disturbance, and reduced availability of preferred forage fishes (USFWS 2008).

In the short term, declining populations of Kittlitz's Murrelets will be most responsive to management actions that reduce direct mortality and improve survival. One principal threat that can be effectively mitigated is the incidental take of murrelets that occurs in some commercial salmon gillnet fisheries managed by the State of Alaska. As part of the National Marine Fisheries Service's Alaska Marine Mammal Observer Program, seabird bycatch is sampled in all areas where gillnet monitoring has occurred in Alaska. In those studies, murrelet mortalities have been recorded in both driftnets and set-nets. An accurate net mortality estimate does not exist because many areas have not been sampled. However, based on the extremely limited data available, it is likely that hundreds of Kittlitz's Murrelets drown in gillnets each year in Alaska (Wynne et al. 1991, Wynne et al. 1992, Manly 2007).

Kittlitz's Murrelets also would benefit in the short term from oil-spill prevention and response planning, reducing human activities that artificially increase populations of predators (e.g., bald eagles), avoiding the disturbance of nesting birds, protecting nesting and foraging habitats, and minimizing vessel disturbance in favored foraging areas (e.g., near glaciers frequented by sightseeing tour vessels).

Recently PSG developed a list of specific research, monitoring, and information needs that would contribute significantly to the conservation and management of Kittlitz's Murrelets in Alaska. We invite your Department to work closely with PSG to begin addressing these high priority topics:

1. PSG is aware of State efforts to conduct a risk assessment by examining the spatial and temporal overlap of Kittlitz's Murrelets and the gillnet fishery. PSG commends this initial step, and urges that after this assessment is completed that the State develop a

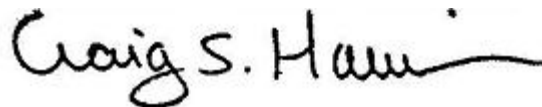
gillnet-monitoring program in nearshore waters where by-catch is a problem and where murrelet densities are high. Incidental take must be quantified in order to begin to develop solutions.

2. Test innovative gillnet fishing gear and methods to reduce bycatch mortality and encourage the use of this gear/methodology in areas of high overlap between salmon fishing and Kittlitz's Murrelets (e.g., Prince William Sound, Kodiak, and Yakutat Bay). Pioneering work in this field already has occurred (Melvin 1999). By building on Melvin's findings and creating incentives to fishermen for employing gear and/or methods, gillnet bycatch of Kittlitz's Murrelets, as well as other seabird species, can be reduced. Modeling the value of bycatch reduction actions is necessary to develop and evaluate management actions over time. This will aid in informing the fishing community and public about the need for, and effectiveness of, such actions.
3. Improve estimates of population sizes and trends of Kittlitz's Murrelets by conducting extensive at-sea surveys and continuing long-term monitoring efforts in core areas. Estimates of the distribution and abundance of juveniles at sea are lacking in all but a few areas. There is evidence that newly fledged juvenile murrelets may use different marine habitats than adults, and that they may be more susceptible to predation, oiling, gillnet bycatch, and food stress. Improving conservation efforts for juveniles will require data on location of breeding populations, the timing of fledging, and breeding success. Pelagic distribution of Kittlitz's Murrelets throughout the year must be better understood to facilitate preparation and response to oil spills, minimize vessel disturbance, and to identify critical marine habitats for possible future protection.
4. Estimate reproductive performance and other important population parameters (e.g., survival) to determine the most important factors affecting population stability. Based on available data, recruitment into the breeding population appears to be extremely low, and is insufficient to sustain the population. Identifying and protecting important terrestrial habitats that are used for nesting and courtship are necessary to sustain future populations and allow for future recovery of the species.
5. Develop a better understanding of foraging ecology, including nutritional requirements, and the relationship to prey availability. This information will be helpful in identifying important marine habitats, understanding effects of climate change, and improving management of some prey fisheries (e.g., herring).
6. Identify important areas occupied by Kittlitz's Murrelets during the nonbreeding season, including molting areas and migratory pathways, to understand if any factors during these time periods are contributing to the decline.
7. Examine genetic flow, variation, and structure between populations, allowing for estimation of effective population size and determination of discrete subpopulations. Kittlitz's Murrelets in western Alaska are morphologically similar to, but reproductively

isolated from, those in southern Alaska. These populations may require different approaches to management and conservation.

PSG offers its collective expertise and technical support to your Department for addressing concerns and recommendations outlined in this letter and in the petition. PSG would welcome the opportunity to work with your staff, other agencies, the fishing community, researchers, and the general public to find effective solutions in the short term that will reduce or stop the decline of this imperiled species in Alaska over the next decade, before core populations are lost and global extinction becomes likely. We appreciate your continued dedication to conserving the natural resources of Alaska.

Sincerely,



Craig S. Harrison

Enclosure

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