

## A POSTER CHILD FOR GLOBAL WARMING

As Kittlitz's murrelet numbers plummet and the bird's icy habitat in Alaska disappears, scientists are racing against time to unravel the secrets of its behavior **BY DOREEN CUBIE**



It may be the nation's most secretive seabird and with a population currently in free fall, it could vanish from its U.S. habitat before scientists can solve the many mysteries surrounding its behavior. "We could very well lose Kittlitz's murrelet," says U.S. Geological Survey biologist John Piatt of the Alaska Science Center. The number of these small seabirds has nosedived by 80 to 90 percent in the last 15 years as their icy habitat literally melts away. "Systematic surveys throughout their range suggest that there are fewer than 10,000 left," says Piatt, who calls the species a "poster child for global warming."

"Polar bears have received a lot of attention, and rightfully so," adds Tony Turrini, senior counsel for NWF's Alaska Natural Resource Center, "but Kittlitz's murrelets appear to be in much more immediate trouble." These ice-loving members of the auk family nest only in Alaska and the Russian Far East on alpine talus and snowfields as far as 45 miles inland from the coast, where little is known about their breeding behavior. Only 40 nests have been found in the last 100 years, and scientists suspect that

the birds do not breed until their third year and produce only one egg a season.

Oil spills and commercial gill-net fisheries are a danger to virtually all of Alaska's seabirds, and undoubtedly kill some Kittlitz's murrelets. Increasing coastal tourism may also be disturbing the birds during the nesting season. But the problems facing this species are more complex and all signs point to climate change.

During summer, most of the murrelets forage near tidewater glaciers or at locations where silt-laden glacial rivers flow into the sea, and Piatt suspects that disappearing ice is reducing the birds' local food supplies. Melting glaciers also may be dumping contaminants into the fiords where the murrelets feed.

When pollution from Asia drifts to North America, it often falls as mercury-laden precipitation on Alaska, where it decomposes slowly due to the cold climate. Michelle Kissling, a U.S. Fish and Wildlife Service biologist studying the species in Southeast Alaska's Icy Bay, is concerned that levels of the toxic substance have accumulated in the glaciers and are now being



**IN A RARE photo, an adult female Kittlitz's murrelet brings a capelin (left) to her 26-day-old chick in Alaska's Icy Bay. Only 40 nests of the small northern birds (above) have been located in the last 100 years.**

released into coastal waters as the ice melts. "There are links between mercury, which is harmful to the nervous system, and low reproductive success of many seabird species," she says.

Another effect of warming in the region, says Kissling, is the spread of new plant growth. "Alder and willow are rapidly moving into recently deglaciated areas," she says. "With this new vegetation come new and more numerous [wildlife] species and, eventually, more predators." As Icy Bay's glacier retreats, trees are growing big enough to support bald eagle nests. Cliffs also are exposed, giving peregrine falcons new places to raise young. Both raptors prey on the quail-sized murrelets. During the summer of 2007, Kissling and her team discovered the remains of at least 30 murrelets at the aerie of just one of Icy Bay's peregrine pairs, which may represent about 10 percent of the local Kittlitz's population.

In 2004, Kittlitz's murrelet was named a "candidate" for listing under the Endangered Species Act but that status gives it no special protection. "Its preferred habitat is changing faster than the species seems to be adapting," says Kissling, who suggests several immediate conservation actions be taken, such as minimizing disturbance in high-density breeding areas. "I fear Kittlitz's may enter a population bottleneck where its numbers become so small and distribution so patchy that recovery will be nearly impossible."

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