

## BLACK-LEGGED KITTIWAKE *Rissa tridactyla*

### Conservation Status

**ALASKA: Moderate**

**N. AMERICAN: Not Currently At Risk**

**GLOBAL: Least Concern**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
May-Sept	1-3	25-27 d	34-58 d	cliff ledge	dip, surface-seize, plunge dive	fish, marine invertebrates

### Life History and Distribution

This small gull usually has just three functional toes, hence its Latin name *tridactyla*. The common name, kittiwake, comes from the sound of its call. While the name “black-legged,” is quite apt, in a few rare individuals, the legs are orange or red.

Adult Black-legged Kittiwakes (*Rissa tridactyla*) have a white head, body, and tail. The upperwings and back are pearl gray and the wingtips, feet and legs look like they have been dipped in jet-black ink. The plumage is offset with a bright, greenish-yellow bill and orange inside the mouth. In breeding condition, adults also develop a reddish-orange ring around the eye which accents the dark iris. Outside the breeding season, adults have a dark gray smudge across the back of the neck and an even darker spot over the ear area. Males and females look alike.

The genus *Rissa* includes the Red-legged Kittiwake (*Rissa brevirostris*) which shares the solid black wingtips and greenish-yellow bill. It is distinguished from the more abundant Black-legged Kittiwake by a darker mantle, shorter bill, and darker color under the primary feathers.

Black-legged Kittiwakes nest on narrow cliff ledges on offshore islands or inaccessible areas of coastal mainlands. Often, the ledges are barely wide enough to fit a nest and birds; the adult and chicks must sit on the nest facing the cliff with their tails hanging off the edge. Nests are composed of seaweed, grass, feathers, and mud to cement them together. Kittiwakes are colonial nesters and colonies may vary from a few nests to many thousands. Frequently, nests are so close together that they are literally touching.

Two subspecies of the Black-legged Kittiwake are recognized: the Pacific subspecies (*Rissa tridactyla pollicaris*) breeds along the coasts of northeastern Siberia, Kamchatka, the Sea of Okhotsk, the Kurile Islands, and throughout the Bering Sea as far as mainland Alaska. The Atlantic subspecies (*Rissa tridactyla tridactyla*) breeds along the coasts of northern and central arctic Canada, Greenland, Iceland, western and northern Europe, and the Russian Arctic. It is difficult to distinguish between the two subspecies because of overlap in range and morphology.

In Alaska, Black-legged Kittiwakes nest from Point Hope on the northwest coast; south on islands and the mainland coast to the southern Bering Sea; throughout the Aleutian Islands to the westernmost end; and east throughout southcoastal Alaska, Prince William Sound, the



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Gulf of Alaska, and into Southeast Alaska.

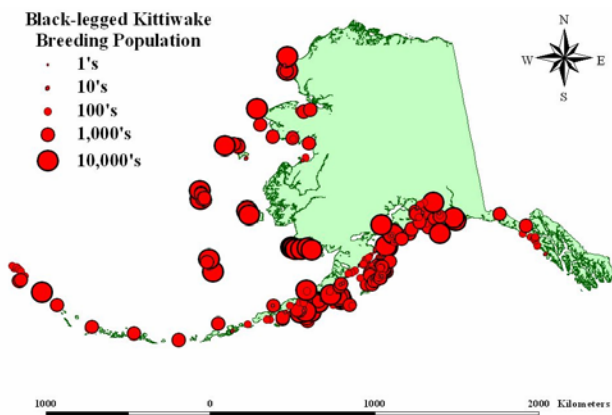
Even in winter, Black-legged Kittiwakes are rarely seen very far inland. After the breeding season, they prefer outer ocean shelves and deep water habitats. This species can be found throughout the ice-free areas of their summer range and as far south as southern California and Mexico.

### Alaska Seasonal Distribution

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

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. © **Armstrong 1995.**

Reproductive success and population numbers of Black-legged Kittiwakes appear to be strongly influenced by food supply. Summer diets vary depending on the location of the breeding colony. In Alaska, the diet is mostly fish including Pacific herring (*Clupea harengus*), sandlance (*Ammodytes hexapterus*), capelin (*Mallotus villosus*), and walleye pollock (*Theragra chalcogramma*). In the Aleutian Islands and Bering and Chukchi Seas, the diet also includes greenling (*Hexagrammidae* family) and zooplankton. Food is obtained by dipping or seizing the prey from the sea surface or sometimes plunge diving. Black-legged Kittiwakes are important in mixed-species



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

feeding flocks and often feed with murre, puffins, terns, and cormorants. Feeding occurs primarily during the day, but birds sometimes forage at night. During the breeding season, Black-legged Kittiwakes stay near the coast to feed. Generally, they do not fly as far in search of food as Red-legged Kittiwakes, but may travel up to 60 miles from the breeding colony.

### Population Estimates and Trends

The Pacific subspecies of the Black-legged Kittiwake has a breeding population of about 2.6 million individuals at colonies in the North Pacific and adjacent seas. In Alaska, more than 371 colony sites have been identified with a population of ~ 1,322,000 individuals. Most colonies have fewer than 5,000 birds, but a few larger colonies support > 30,000 individuals. The larger colonies in Alaska are: St. Matthew, Hall, Little Diomedea, and St. George islands, Delarof Harbor in the Shumagin Islands, and Cape Newenham in Bristol Bay. Middleton Island, in the northern Gulf of Alaska, formerly supported about 160,000 individuals, but has declined to fewer than 20,000 since 1980 (-7.5% per annum).

There is evidence of population declines in some additional colonies in Alaska, while other monitored colonies appear to be increasing or stable. Since the 1970s, significant negative population trends have occurred at St. Paul Island (-4.0% per annum) and Chowiet Island in the Semidi islands (-1.9%). Black-legged Kittiwakes at Cape Peirce in Bristol Bay have also declined (-6.4%) since the 1990s. Some colonies have had significant increases since the 1970s. The Buldir Island colony in the Aleutian Islands increased by +6.6% per annum, and colonies in Prince William Sound have increased by +1.6%. The other 13 monitored colonies in Alaska exhibited no significant population changes.

### Conservation Concerns and Actions

Black-legged Kittiwake colonies are abundant in Alaska and relatively easy to observe, so they have been studied more than other seabird species. However, causes for persistent breeding failure at some colonies remain ambiguous.

There is some evidence that suggests that kittiwake productivity is limited primarily by insufficient food availability at the surface during the breeding season. Scarcity of food may be exacerbated by additional predation. Nests are more likely to be unattended and

more vulnerable to predators as adults spend more time in search of food. Gulls (*Larus spp.*), raptors, ravens (*Corvus corax*), and crows (*Corvus brachyrhynchos*) prey heavily on Black-legged Kittiwake eggs and chicks at some Alaskan colonies.

Because Black-legged Kittiwakes are surface feeders, they do not seem to be as directly impacted by oil pollution as some other seabirds. However, large spills such as the 1989 *Exxon Valdez* oil spill in Prince William Sound may cause substantial mortality. Thousands of Black-legged Kittiwakes were killed in that spill. The species may serve as a potential indicator of indirect effects of oil spills such as changes in the marine food chain.

An additional human activity which directly involves kittiwakes is subsistence hunting and eggging. Some hunting and eggging continue today by Alaskan indigenous peoples. Between 1995 and 2000, approximately 423 adult Black-legged Kittiwakes and 39 eggs were taken annually. Effects on the populations are not directly known, but current harvests are not thought to cause severe impacts.

### Recommended Management Actions

- Maintain 2004 population levels of Black-legged Kittiwakes in Alaska.
- Continue current levels or increase monitoring at index locations on the current schedule of once every one to five years.
- Support efforts to minimize the incidence of fuel spills near breeding and wintering areas and measure contaminants in Black-legged Kittiwake eggs
- Work with the Alaska Migratory Bird Co-Management Council (AMBCC) to monitor subsistence use of Black-legged Kittiwakes.

### Regional Contact

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### References

Armstrong 1995; Baird 1994; Dragoo *et al.* In Press; Hatch *et al.* 1993; IUCN Internet Website (2005); Kushlan *et al.* 2002; Stephensen and Irons 2003; U.S. Fish and Wildlife Service 2006, 2002; U.S. Fish and Wildlife Service Internet Website (2005).

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