ARCTIC TERN *Sterna paradisaea*

Conservation Status

ALASKA: High **N. AMERICAN: High Concern** **GLOBAL: Least Concern**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
May-Aug	1-3	21-23 d	21-24 d	ground scrape	pursuit plunge, dip	fish, crustaceans, insects

Life History and Distribution

The Arctic Tern *(Sterna paradisaea)* is an Arctic to Antarctic traveler with annual migrations of up to 24,000 miles round trip. On its wintering grounds, this Olympic flyer benefits from a "second summer" giving it more hours of daylight than any other bird.

In addition to excellent flying abilities, this slender tern is also known for its elegant breeding plumage. The bill, feet, and legs are blood-red. The upper wings and back are light gray, contrasting with a jet-black cap. The tail is long and deeply forked. Arctic Terns often mix on coastal breeding grounds with Aleutian Terns (*Sterna aleutica)*. They are similar in appearance and both have a black cap, but the Aleutian Tern has a white forehead, black bill, feet and legs, and the wings are a darker gray.

Nests of the Arctic Tern are commonly made near fresh or salt water in open, usually treeless environments. The nest is very difficult to spot unless it contains eggs; it is little more than a shallow depression scraped in the ground. Intruders in nesting areas are often met with aggressive dives and pecks on the back or head.

Diet varies from place to place, but fish is the primary food given to chicks. Prey is captured by plunge-diving or dipping. Occasionally insects are taken on the wing.

The breeding range is circumpolar, from the shores of the Arctic Ocean to the northern tip of Greenland and as far south as Cape Cod, Massachusetts. It also breeds in Europe and Asia. In the far north, the species nests widely inland.

In Alaska, in addition to its' wide breeding distribution on the arctic coastal plain of the Beaufort Sea, it nests along the coasts of the Chukchi and Bering Seas and on St. Lawrence Island. There are also breeding sites in the western Aleutian Islands and many sites throughout the Gulf of Alaska, some as far south as Southeast Alaska.

It is not known specifically where Arctic Terns from North America spend the winter, but birds from the entire northern hemisphere are thought to intermingle around Antarctica. Some birds also winter in southern Africa, southern Australia, and New Zealand.

USGS Bob Gill

Alaska Seasonal Distribution

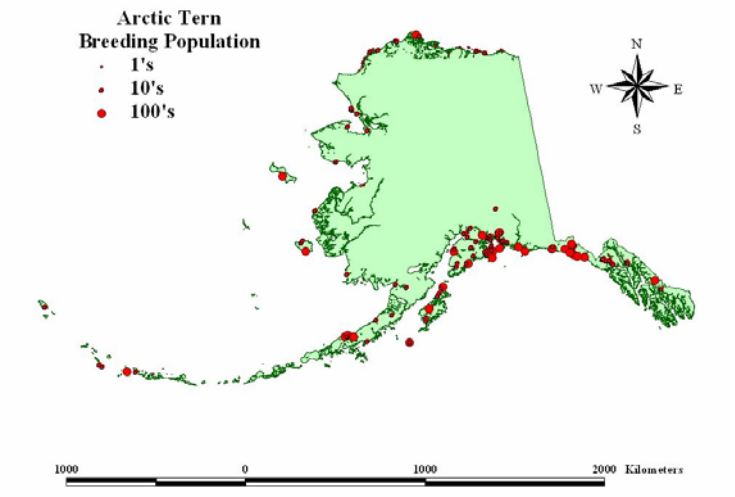
AK Region	Sp	S	F	W
Southeastern *	C	C	C	-
Southcoastal *	C	C	C	-
Southwestern *	C	U	C	-
Central *	U	U	U	-
Western *	C	C	C	-
Northern *	U	U	U	-

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.

Population Estimates and Trends

No population estimates are available for most of the species' range, but worldwide numbers of Arctic Terns may be 1-2 million breeding pairs. In Alaska, there may be several hundred thousand, most nesting inland. However, inland nesting is widespread and poorly documented. The U.S. Fish and Wildlife Service Beringian Seabird Colony Catalog lists 218 Alaskan coastal colonies with a breeding population of approximately 11,000 birds.

There are no data for general population trends in Canada, Alaska, or on the Atlantic Coast, but declines have been reported within each of these areas. In the Gulf of Alaska, both coastal colony counts on Kodiak Island and surveys at sea in Prince William Sound indicated declines of more than 90%. Except for the effects of the



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

1964 earthquake in Alaska, factors causing the population decline and preventing population recovery are unknown.

Conservation Concerns and Activities

Since Arctic Terns are long-lived, far-traveling, and spend part of their year at each pole, they may contribute valuable insights into numerous scientific questions about birds (e.g. daylight exposure and migration, accumulated environmental impacts, and abstention from breeding and movement as responses to changes in food supplies). However, the Alaskan population is not monitored and there is a lack of knowledge about most aspects of their population. Very little is known about nonbreeders in the Antarctic and most of the mortality occurs during this part of the yearly cycle. Therefore, we need to begin with a better understanding of the species distribution, numbers, and trends throughout its range.

Several factors could contribute to population declines of Arctic Terns. This species has been documented to be especially sensitive to reductions in food availability sometimes causing complete breeding failure and possibly decreases in adult survival. Causes for food variability and shortages and the implications for Arctic Terns have not been critically examined.

Arctic Terns are also known to be susceptible to human disturbance at nesting and roosting sites, especially if dogs accompany the humans. The disturbance can prevent occupation of sites, promote desertions, and cause loss of eggs or chicks. In Alaska, reindeer herding caused abandonment of sites and a helicopter landing within a colony caused complete abandonment.

Shooting, egging, and trapping occur in numerous areas across the terns' breeding range and may occur on the migration route on the west coast of Africa. In Alaska, subsistence harvest was estimated at approximately 80 adults and 2,500 eggs per year between the early 1990s and 2000. These are minimal estimates and the full extent of the harvest and the impacts on the population are not known.

Arctic Terns are also vulnerable to predation, which can limit colony sites and strongly affect nest dispersion. Over much of the Arctic Terns' range the main mammalian predator is the arctic fox (*Alopex lagopus).* Norway rats *(Rattus norvegicus)* are also known to eat and cache surplus eggs. Gulls *(Larus spp.)* and birds of prey also eat both chicks and eggs and are a concern at Alaskan colonies.

Since Arctic Terns are surface feeders, they would likely be less vulnerable to oil spills than diving birds, but there is no information on response to oil slicks.

Recommended Management Actions

- Restore and maintain Alaskan Arctic Tern coastal populations of at least 30,000 individuals.
- Establish a monitoring program.
- Develop and utilize an index of abundance at key locations.
- Complete a nesting inventory.
- Measure productivity.
- Determine wintering locations and foraging habits.
- Evaluate human disturbance at key colonies.
- Work with the Alaska Migratory Bird Co-Management Council (AMBCC) to monitor subsistence use of Arctic Terns.
- Reduce predation of Arctic Terns with continued fox removal and rat prevention programs.
- Determine the extent of predation by gulls and the effect on populations.
- Support efforts to minimize the incidence of fuel spills near breeding and wintering areas and measure contaminants in Arctic Tern eggs.

Regional Contact

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References

Armstrong 1995; Hatch 2002; IUCN Internet Website (2005); Kushlan *et al.* 2002; U.S. Fish and Wildlife Service 2006, 2002; U.S. Fish and Wildlife Service Internet Website (2005).

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