

**STATE
THREATENED**

Arctic Tern

(Sterna paradisaea)



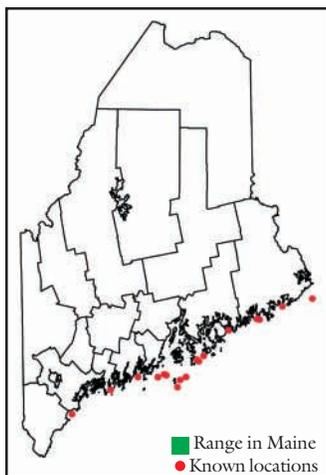
Description

The arctic tern is the champion “globe trotter,” annually migrating over 15-20,000 miles round-trip from its nesting areas in North America to wintering areas in the Antarctic. The arctic tern is a graceful, medium-sized seabird (length 15 inches, wingspan 31 inches) with long, pointed wings and a long, forked tail. In the breeding season it has a light gray body and belly and a white rump and tail. Its black cap and nape are separated from its gray throat by a white facial stripe. The arctic tern is distinguished from other tern species by its deep red beak. Common terns have red beaks tipped in black, and roseate terns generally have all-black or salmon-colored beaks.

Range and Habitat

Arctic terns have the longest annual bird migration known. After leaving North America, they fly across the North Atlantic, travel south along the coasts of Europe and Africa, and winter in the Antarctic – a distance of over 10,000 miles! Their return route may be along the coast of South America.

Maine’s arctic tern population is at the southern edge of the species’ range in eastern North America. Here the terns nest primarily on a few outer coastal islands, always in close association with other terns



and other seabirds. Nesting islands are usually treeless and covered by short herbaceous vegetation. Arctic terns prefer to nest on bare rocks and beaches, presumably because their short legs preclude movement through tall, dense vegetation. Of the 3,000 islands off the coast of Maine, at least 150 have been used by nesting terns in the last century. Arctic terns currently nest on only 10 islands in Maine.

Life History and Ecology

Arctic terns return to their breeding grounds when sexually mature at 3-5 years of age. However, some birds may breed as early as two years old. After they breed for the first time, they exhibit high fidelity to a nesting island, and often return to the same breeding colony yearly. They arrive at breeding islands in Maine in mid-May.

After elaborate courtship flights, ground displays, and ritual feeding, terns establish pair bonds and select a nest site. Two eggs are laid between May 20 and June 10 in a simple scrape that is often lined with pebbles, shells, or vegetation. The incubation period lasts 20-24 days, and both parents share responsibility for incubation. Chicks leave the nest within days, but continue to be fed and brooded by the parents. Fledging occurs in 21-28 days. Within 2-3 days after fledging, they begin to accompany parents on short flights to nearby feeding areas, and generally depart the colony within two weeks. Fall migration begins in mid to late August.

Arctic terns feed on small fish and crustaceans, which they capture by plunging into the water and catching with their bills. Primary foods eaten in Maine include white hake, Atlantic herring, and sand lance. The terns may forage up to 10 miles

away from their nesting island, in deep water, rocky shores, upwelling areas, and over schools of predatory fish. Some individuals specialize in taking shrimp and small amphipods (shrimp-like animals).

Terns can be long-lived. The longevity record for an arctic tern is 34 years!

Threats

The primary causes of declining tern numbers in the Gulf of Maine are gull predation, human disturbance, and food shortages. Gulls arrive on nesting islands earlier than terns, occupy the best nesting areas, and drive terns away. Gulls also eat tern eggs, chicks, and sometimes adults. Habitat on a few islands has been lost because of the construction of permanent or seasonal dwellings. Human disturbance on islands can cause nest and chick abandonment and increase gull predation. Terns feed on the immature forms of many commercially valuable fish. Fisherman may compete with terns for species like herring and hake. Nesting productivity is low in years of poor food availability or adverse weather conditions (rain, fog) that prevent terns from finding food. The recent collapse of some commercially valuable fish stocks may have adverse effects on tern populations.

Conservation and Management

Prior to passage of laws protecting migratory birds, arctic terns were harvested to supply feathers for the millinery trade (to make women's hats) and their eggs were collected for food. Passage of the Migratory Bird Treaty Act of 1918 provided protection for migratory birds, and by 1931 an estimated 8,000 pairs of arctic terns nested on the coast of Maine. However, since the 1940s, arctic tern numbers have declined because of predation and competition with gulls. Most of the population is now concentrated on a few islands managed by conservation groups. The arctic tern was listed as threatened in Maine in 1997 because of past declines and because the population is nesting on only a few islands.

Recovery of Maine's island nesting tern populations (arctic, common, and roseate) requires intensive management. Since the 1970s, terns have disappeared from most of their former nesting islands. Intensive management is occurring on 10 tern nesting islands. Management includes removal or control of competing gull populations, use of decoys and sound recordings to attract terns, and maintaining the presence of tern managers to protect the birds from human disturbance during the nesting season. Management has halted popula-

tion declines, and arctic tern numbers have stabilized at about 2,500 pairs. This is still far below historic levels. More than 90 percent of Maine's breeding population nests at only three sites – Machias Seal Island, Matinicus Rock, and Petit Manan Island. Because of food limitations and gull predation, arctic terns have not recolonized many of their former nesting areas. Arctic tern nesting islands are designated as Significant Wildlife Habitats under Maine's Natural Resource Protection Act or as Protection Fish and Wildlife areas under the Land Use Regulation Commission.

Recommendations:

- ✓ Protect seabird nesting islands and adjacent waters from further development, especially human dwellings, fishing piers, docks, and aquaculture facilities. Review Essential Habitat maps and guidelines prior to development near roseate tern islands. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service to assist with planning.
- ✓ Municipalities should strive to prevent development of seabird nesting islands and adjacent waters and identify these areas in comprehensive plans. Consider protecting a ¼ mile buffer around seabird nesting islands.
- ✓ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.
- ✓ Stay off seabird nesting islands during the nesting season (April 1 to August 15). If visitation is approved (e.g., commercial tours to a seabird island), remain on designated paths and in blinds to minimize disturbance.
- ✓ Keep boat activity more than 660 feet from seabird nesting islands. If birds flush from the island, you're too close.
- ✓ Keep all pets off islands. Do not introduce mammalian predators.
- ✓ Locate aquaculture facilities farther than ¼ mile from seabird nesting islands.
- ✓ Avoid overfishing and polluting nursery areas for herring, hake, and other fish stocks important as food for seabirds.
- ✓ Do not use gill nets near seabird islands or known feeding areas.
- ✓ Do not dump oil, litter, or waste overboard. Even small amounts of oil can kill birds. Seabirds are often injured by eating plastic particles from trash that are mistaken for food.
- ✓ Avoid overboard discharge of fish waste or bait. Predatory gull populations have increased because of this readily available supply of food. 🐦