



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Red Knot *Calidris canutus*

State Status: **Threatened**
Federal Status: **Threatened**

SPECIES DESCRIPTION: This is a stocky, medium-sized shorebird, 10 to 11 inches in length. During spring migration, it has a distinctive (but pale) rusty-red breast (pictured), but it is a dull gray when it migrates back through Massachusetts in late summer and fall, on its way to the wintering grounds. Calls include a low *knut*, also a low *tooit-wit* or *wah-quoit*.

DISTRIBUTION AND ABUNDANCE: The Red Knot is an Arctic breeder with nesting areas in both northern Canada and Alaska. There are no nesting records of this species in Massachusetts. Red Knots use coastal areas in Massachusetts as migratory stopover locations for foraging during spring and fall migration as they move between their wintering and breeding grounds.

Historically, there were records of thousands of Red Knots along the Massachusetts shoreline during both spring and fall. Although few knots are currently found in Massachusetts during spring migration (May-June), high numbers of birds continue to stop-over in the state during fall migration (July-September). Major historical migratory stop-over locations for Red Knots in Massachusetts includes beaches on outer Cape Cod and mainland beaches along West Cape Cod Bay. Interestingly, the reported numbers of Red Knots using outer Cape Cod during fall migration has remained steady over the last 50 years, while numbers of knots using the mainland has declined dramatically over this same time period. Red Knots primarily winter in South America (e.g., coastal Brazil, Tierra del Fuego), but some birds winter along the Gulf of Mexico and occasionally are found as far north as Massachusetts on the Atlantic Coast.



Photo by Gregory Breese/USFWS.

HABITAT DESCRIPTION: As is the case for many species of shorebirds, Red Knots use starkly different habitats during the breeding and non-breeding periods. Knots nest on sparsely vegetated (<5%) tundra habitat, often within 50 km of the coast and characterized by ridges or slopes with stunted willow. During migration and wintering periods, Red Knots use sandy beaches and intertidal areas in Massachusetts and feed on a variety of bivalves and crustaceans. It is uncertain if spring migrants in Massachusetts seek out and feed on horseshoe crab eggs, as occurs with the continentally significant concentrations of Red Knots along Delaware Bay beaches in southern New Jersey and eastern Delaware in May. During periods of high tide, when the intertidal zone is not exposed, knots can be found roosting in groups higher on the beach. Habitat used on the wintering grounds is similar to that during migration.

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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THREATS: The subspecies (*rufa*) of the Red Knot that migrates through eastern North America has declined by 75% since the 1980s. This drop in the population is thought to primarily be a result of a reduction in the abundance of horseshoe crab eggs (from overharvesting) in the Delaware Bay coinciding with the Red Knot migration. Horseshoe crab eggs are the primary food source at this extremely important migratory stop-over location, where Red Knots stage for up to several weeks when they put on critical fat reserves for their next migratory flight. However, the extent to which declines in horseshoe crabs in Massachusetts have affected Red Knots is uncertain. Other threats to this species include loss of breeding habitat due to global climate change and unregulated hunting in the Caribbean and northern South America. Because this species is strongly associated with the coast for much of the year, oil spills are a threat to Red Knots.

REFERENCES

- Rufa Red Knot Ecology and Abundance. Supplement to Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*). Docket No. FWS-R5-ES-2013-0097; RIN 1018-AY17.
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- Harrington, B. A. 2001. Red Knot (*Calidris canutus*). In *The Birds of North America*, No. 160 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
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