Alaskan Red Knot Subspecies (*Calidris canutus roselaari)*
90-Day Finding
Questions and Answers

What action is the Fish and Wildlife Service taking?

The U.S. Fish and Wildlife Service (Service) has announced a 90-day finding on a petition seeking to protect *roselaari* subspecies of red knot (*Calidris canutus roselaari*) under the Endangered Species Act (ESA) does not present substantial information to indicate that protection may be warranted. Therefore, the Service will not initiate a status review in response to this petition. However, the agency encourages interested parties to continue to gather data that will assist with the conservation of *C. c. roselaari*. The Service will continue to monitor the subspecies, and studies are ongoing. (Contact information below.)

What does a red knot look like?

The red knot (*Calidris canutus*) is a medium-sized (9 to 11 inches in length), Arctic-breeding shorebird. The breeding plumage of the red knot is distinctive: the face, breast, and upper belly are a rich rufous-red, and the lower belly and under tail-coverts are light-colored with dark flecks. Upperparts are dark brown with white and rufous feather edges; outer primary feathers are dark brown to black. Females are similar to males in appearance, but colors are typically less intense in females, with more buff or light gray coloration on dorsal parts. Subtle subspecies differences in breeding plumage have been described. Non-breeding plumage, dusky gray above and whitish below, is similar between sexes and among subspecies.

How are red knots broken down by subspecies?

Four genetically distinct groups of red knots were recently identified; they are comprised of *C. c. canutus*, *C. c. piersma*, *C. c. rogersi*, and a North American group containing *C. c. rufa*, *C. c. roselaari* and *C. c. islandica*. *C. c. islandica* breeds in the Canadian high Arctic and Greenland and winters in Western Europe. The other two subspecies in the North American group occur within the United States: *C. c. rufa*, currently a candidate species for protection under the ESA, and *C. c. roselaari*, the focus of this 90-day petition finding.

What are the ranges of the two American subspecies?

More is known about the range and biology of *C. c. rufa*, than about *C. c. roselaari*. *C. c. roselaari* breeds in Alaska and on Wrangel Island, Russia, whereas *C. c. rufa* breeds in the central Canadian Arctic. *C. c. roselaari* is the only red knot subspecies known to nest in the United States. Its breeding range in northwest and northern Alaska is not well known, but includes the Seward Peninsula and inland areas north of Kotzebue, including the DeLong Mountains of the Brooks Range.

C. c. rufa migrates primarily along the Atlantic coast of North America, with most wintering sites along the coasts of South America and fewer wintering sites along the Atlantic and Gulf coasts of the southeastern United States. Although red knots are known to use the Texas and Florida coasts, other extensive marsh areas of Gulf coast States have not been surveyed. There are sporadic reports of red

knots in these areas, but the level of use is not known. There has been taxonomic uncertainty regarding C. canutus wintering in the southeastern United States because C. canutus that winter in Florida, Georgia, and South Carolina have a different molt schedule and do not migrate to southern South America. These birds have been referred to in the past as either *C. c. roselaari* or *C. c. rufa*. However, the attachment to the petition identifies recent information that indicates *C. c. roselaari* is largely or wholly confined to the Pacific coast of the Americas during migration and in winter, and some researchers conclude that red knot populations found along the western Atlantic Ocean coast (wintering in Florida, Brazil, and Tierra del Fuego) are *C. c. rufa*. The conclusion is based on banding records confirming that red knots found on the Pacific coast of North America breed in Alaska and Wrangel Island, Russia, and morphological measurements of wintering red knots captured in Baja, Mexico, indicating these birds were larger than red knots at other wintering sites where it was previously unclear whether the birds were *C. c. roselaari* or *C. c .rufa*.

Currently, *C. c. roselaari* primarily use a few stopover sites during their northward migration to breeding areas in northern Alaska and Wrangel Island, Russia. The most important stopover sites are Grays Harbor and Willapa Bay in Washington, and the Yukon-Kuskokwim Delta and Copper River Delta in Alaska. Smaller numbers have been documented during migration in the Yakutat Forelands, Alaska, and San Francisco Bay, California; and during both migration and wintering along the southern coast of California. The subspecies primarily bypasses Oregon and British Columbia. Use of stopover sites during fall migration is unclear; as the migration is protracted and large concentrations are not reported in fall at sites used during spring. Red knots are known to undertake long flights during migration that may span thousands of miles; thus during fall migration they may bypass sites used in the spring. Important wintering aggregations of *C. c. roselaari* have been documented in Western Mexico at Guerrero Negro, Baja California Sur, and along the Pacific Northwest coast of Mexico in the Gulf of California at Ensenada Pabellones and Bahia Santa Maria, Sinaloa. *C. c. roselaari* probably also winters farther south than Mexico, but important sites have not been identified. We lack adequate information on the historical range of *C. c. roselaari*.

Different habitats are used by red knots for breeding and migration/wintering. During migration stopovers and in wintering areas, red knots are primarily found in coastal habitats, particularly in areas with extensive sandy intertidal flats or near tidal inlets or mouths of bays and estuaries. Prey items for *C. c. roselaari* include bivalves and other benthic invertebrates.

On the breeding grounds in Alaska, *C. c. roselaari* are widely dispersed inland near the Arctic coast. Nesting has been documented in upland habitat, particularly on limestone mounds on windswept slopes, 42 to 48 kilometers (20 to 30 miles) inland. The red knot's diet on the breeding grounds consists primarily of terrestrial invertebrates, but early in the breeding season they may consume a substantial amount of plant material, such as grass shoots and seeds. Red knots lay one clutch (usually 4 eggs) per season. No information is available on hatching success or chick survival rates. Male parents brood and defend their young, which leave the nest within 24 hours of hatching. While the oldest wild red knot recorded worldwide was estimated to be 25 years old, few red knots are assumed to live more than 7 years.

What are the current population estimates for *C.c. rufa* and *C.c. roselaari*?

Population estimates for both subspecies are complicated by uncertainty over the subspecific identification of red knot populations wintering in northern Brazil and Florida. Assuming that red knots migrating and wintering along the Atlantic coast are *C.c. rufa*, and *C.c. roselaari* is confined exclusively to the Pacfic coast, the population size of *C.c. rufa* was estimated at roughly 33,000 in 2007, and *C.c. roselaari* was proposed to contain less than 10,000 individuals in 2008.

What are the population trends of these subspecies?

It is believed that *C.c. rufa* declined from 100,000-150,000 individuals in the 1980s and early 1990s to approximately 33,000 in 2007. This rapid decline provides part of the basis for the Service's "warranted but precluded" determination for that subspecies in the earlier finding.

The Service does not believe that the available data can be used to infer trends in abundance for *C.c. roselaari*.

What is the history of this federal action?

On February 27, 2008, the Service received a petition from Defenders of Wildlife, American Littoral Society, American Bird Conservancy, Delaware Audubon, Delaware Nature Society, Delaware Riverkeeper Network, National Audubon Society, New Jersey Audubon Society, and Citizens Campaign for the Environment, requesting that the Department of the Interior (Department) use its emergency authorities under section 4(b)(7) of the ESA to add the red knot *C. c. rufa* subspecies to the federal list of threatened and endangered species. The petitioners also sought to have the Department list as endangered "a broader taxon comprising both the *rufa* subspecies and the *roselaari* subspecies." The petition further called for a "national listing based on similarity of appearance" under section 4(e) of the ESA.

Given that the Service has already addressed the other components of the petition (moving, for example, the *rufa* subspecies' candidate species priority number from 6 to 3), this finding addresses only whether the petition presents substantial scientific or commercial information that the following petitioned actions may be warranted: (1) Listing the *C. c. roselaari* as endangered or threatened, (2) listing "a broader taxon comprising both the *rufa* subspecies and the *roselaari* subspecies" as endangered or threatened, and (3) a "national listing based on similarity of appearance" under section 4(e) of the ESA.

After reviewing the information provided in the petition and available in Service files about the species, Service experts determined that the petition did not present substantial information that would indicate that any of the three petitioned actions are appropriate. There is not sufficient data, for example, to determine either population levels or trends for the *roselaari* subspecies. Since the ESA does not provide for listing at other than the individual species or subspecies levels, it has no provisions allowing a listing of two among a suite of subspecies, as would be required under action 2, above. And the "similarity of appearance" listing can only be invoked when an unlisted species closely resembles a listed one and shares habitat. Neither of these subspecies of red knot is currently listed, and it appears that their habitat use patterns are largely separate.

What is a candidate species?

The Service maintains a list of "candidate" species. These are species for which the Service has enough information to warrant proposing them for listing but is precluded from doing so by higher listing priorities. While listing actions of higher priority go forward, the Service works with states, tribes, private landowners, private partners, and other federal agencies to carry out conservation actions for these species to prevent further decline and possibly eliminate the need for listing. To learn more about the Candidate Conservation program, visit http://www.fws.gov/endangered/what-we-do/index.html.

What steps does the Service plan to take in the future?

Although the Service will not review the status of these subspecies at this time, the agency encourages interested parties to continue to gather data that will assist with the conservation of *C. c. roselaari*. The Service will continue to monitor the subspecies, and studies are ongoing. If new information on the status or distribution of *C. c. roselaari* is revealed at the conclusion of current studies, the agency will evaluate that information.

A copy of the today's finding and other information about *C. c. roselaari* is available at http://alaska.fws.gov/. To submit information or materials regarding *C. c. roselaari*, send to the Field Supervisor, Fairbanks Fish and Wildlife Field Office, U.S. Fish and Wildlife Service, 101 12th Avenue, Room 110, Fairbanks. AK 99701.