

Shorebird Safari: A Traveling Educational Activity



Prey Sifting



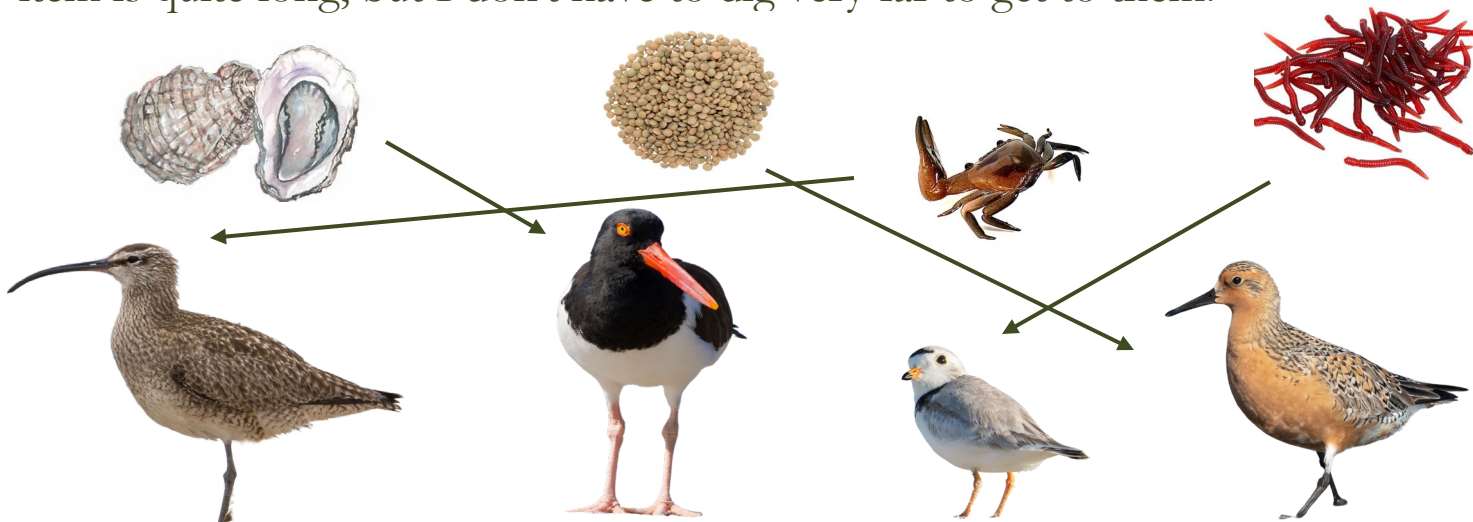
Bill and Diet

"With my straight bill, I can probe about an inch in the sand for my food, and swallow it whole. I need a lot of these to fuel my long migrations!"

"I use my bill to probe very deep into the mud for my food. My prey item usually likes to hide in burrows but my specialized curved bill allows me to snatch them easily."

"The clue is in my name! I use my strong bright bill to pry open my food."

"With my small feet, I tap the sand in front of me to feel for small vibrations (or wiggles!) from my prey item. Although my bill is short, my preferred food item is quite long, but I don't have to dig very far to get to them."



Resighting



Data Entry

Reporting a Banded Bird Information Sheet:

Date (mm/dd/yyyy) :

Location (Folly Beach) :

Time (hh:mm am/pm) :

Bird Species (circle one):

Whimbrel American Oystercatcher Piping Plover Red Knot

Activity (circle one) : feeding resting walking flying

Upper left color (circle one): blue green orange

Upper left code (write code or none):

Lower left color (circle one): red silver

Lower left code (write code or none):

Upper right color (circle one): light green orange silver

Upper right code (write code or none):

Lower right color (circle one): yellow/orange silver

Lower right code (write code or none):

Latitude, longitude (using a GPS) : N

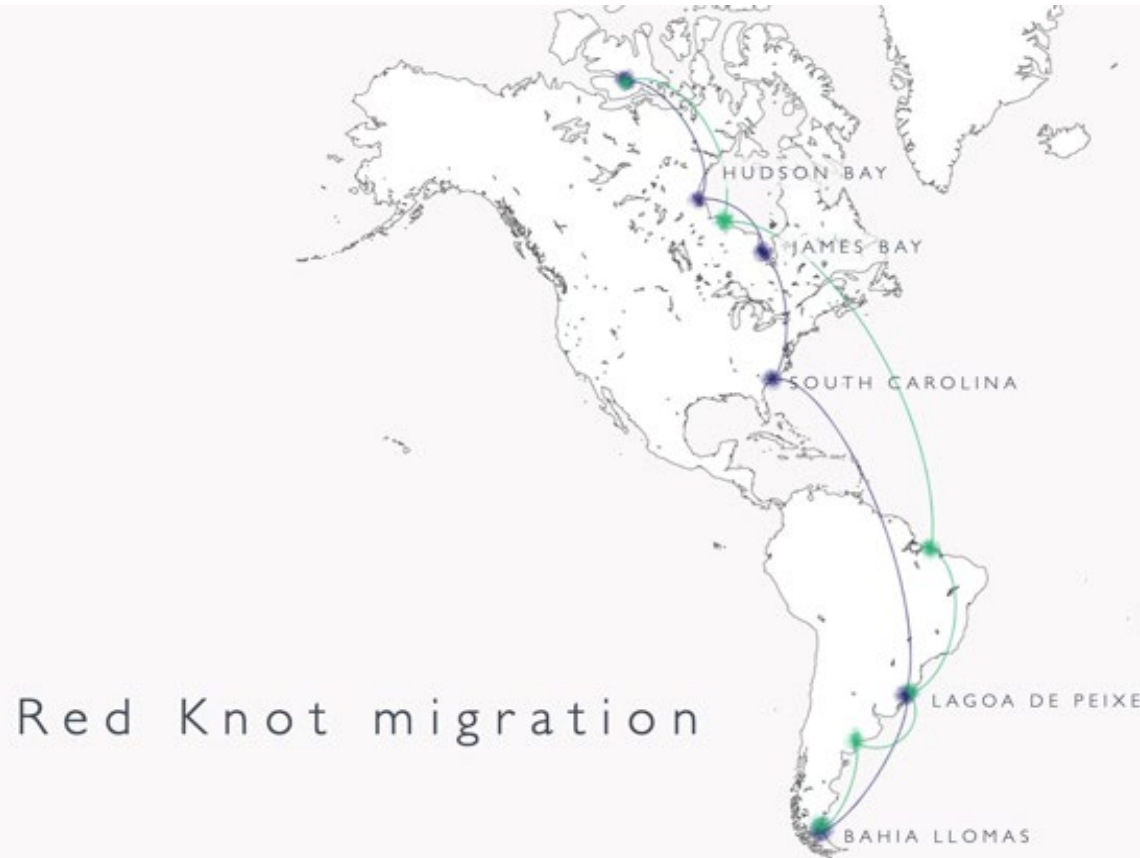
W



Red Knot

Upper left color: green flag, white ink
Upper left code: MCL
Lower left color: none
Lower left code: none

Upper right color: orange
Upper right code: none
Lower right color: metal or silver
Lower right code: unable to read



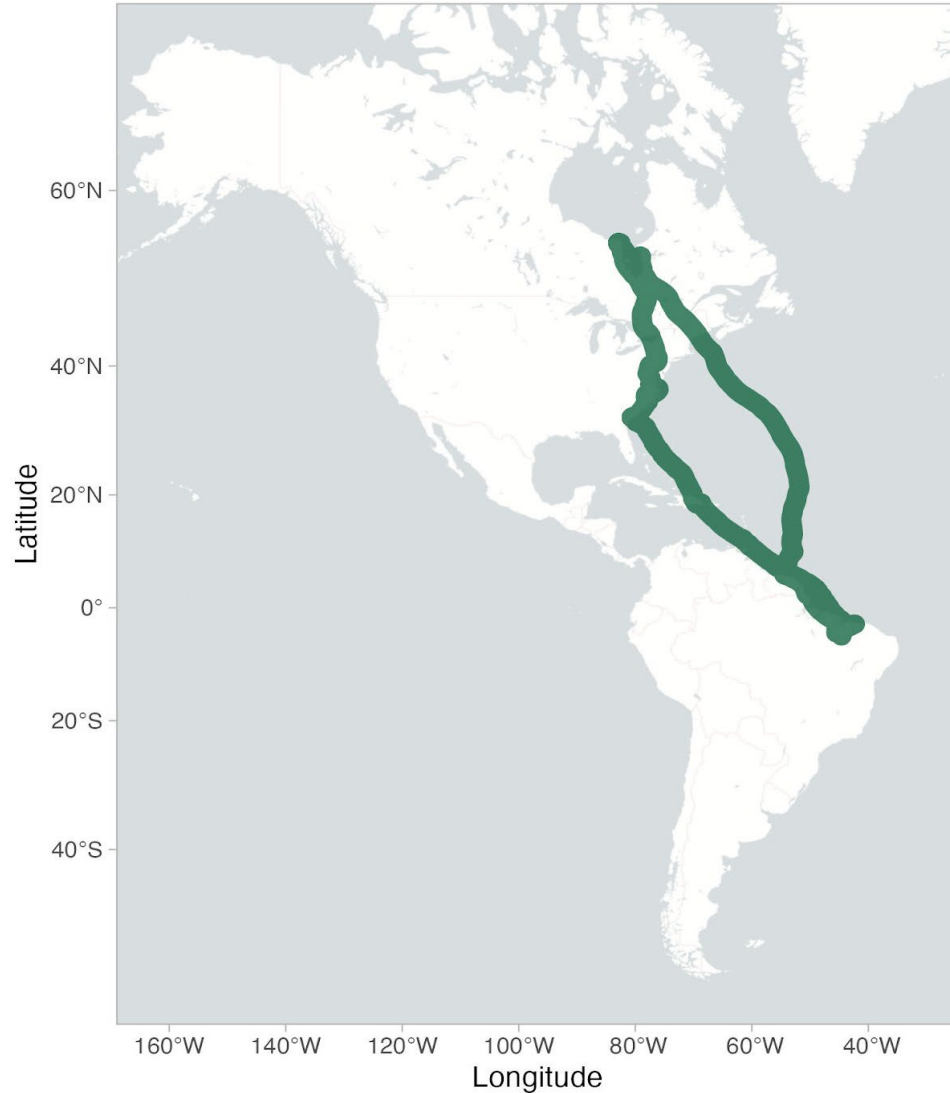
Capture: 05/23/2016 on Deveau Bank, South Carolina by SCDNR biologists

Resight: 01/18/2018 at Tierra Del Fuego, Chile

Map by Benjamin Clock

Background: Red Knots are long distance migrants! Although not all birds will winter in the same place, all Red Knots nest in the high Arctic above the Arctic Circle. MCL has been resighted on the southern tip of South America in the winter, making its annual migration of upwards of 20,000 miles a year. A specialized tag revealed its stop overs and nesting site too. South Carolina is an important stopover site where roughly 30% of all red knots stop in the springtime, on their northward migration.

Whimbrel



Whimbrel ID ■ EJ2

Upper left color: none
Upper left code: none
Lower left color: silver/metal
Lower left code: unable to read

Upper right color: lime green
Upper right code: EJ2
Lower right color: none
Lower right code: none



Capture: 05/11/2021 Deveau Bank Seabird Sanctuary
Background: EJ2 is 1 of roughly 20,000 whimbrels that come to roost on SCDNR's Deveau Bank Seabird Sanctuary. It comes from the coasts of northern Brazil where it winters, and stops in South Carolina in the springtime on its way to its breeding site in Canada. Whimbrels utilize the saltmarsh habitat and mud flats to feed on small crabs, fueling their migration and giving them energy to successfully breed and raise their young.

Map by Maina Handmaker, University of Massachusetts

American Oystercatcher

Upper left color: Blue, with white ink

Upper left code: 2R

Lower left color: none

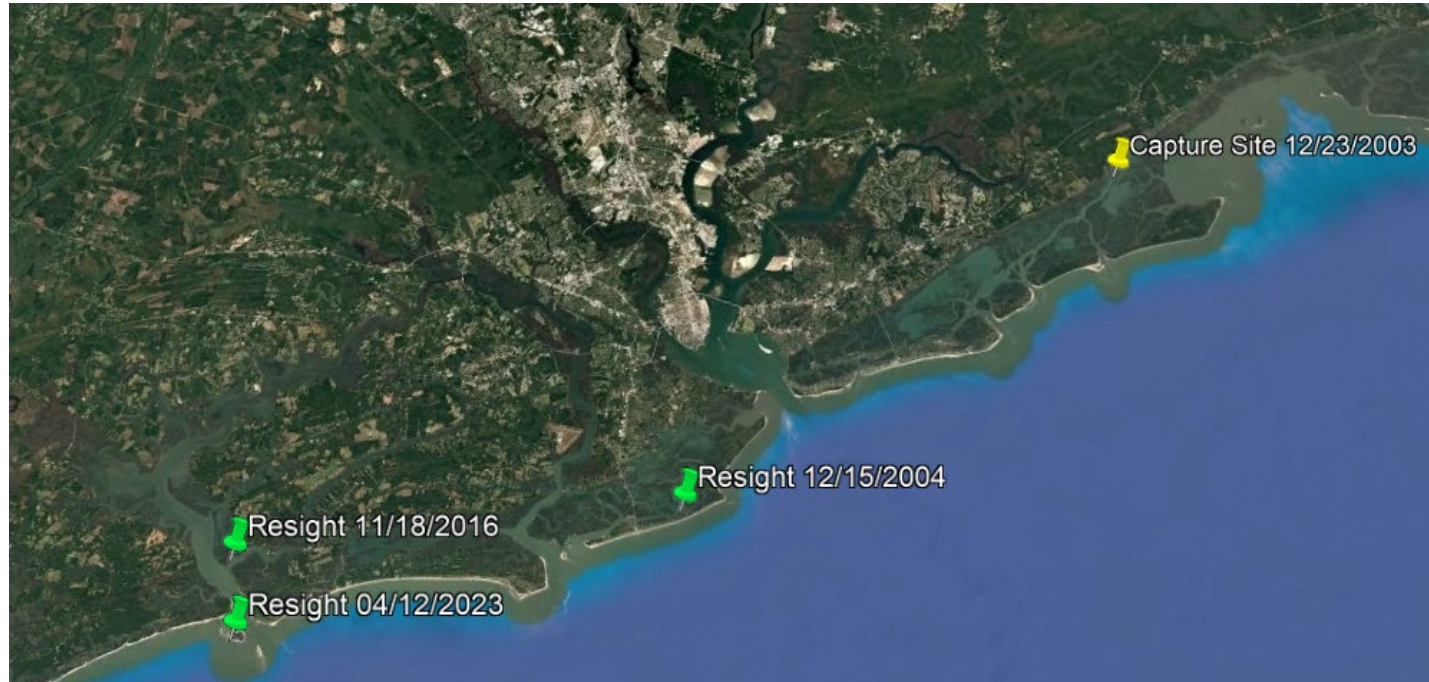
Lower left code: none

Upper right color: Silver/metal

Upper right code: unable to read

Lower right color: none

Lower right code: none



Nathaniel Watkins

Capture: 12/23/2003 on shell rakes in the Intercoastal Waterway, Cape Romain National Wildlife Refuge

Resight: 12 times during its capture year in the same area.

Resight: Not reported for 12 years, between 2004 and 2016. In 2016, 2017, 2020, 2023, and most recently in 2024 it has been reported along the North Edisto River, and on Deveau Bank Seabird Sanctuary.

Background: American Oystercatchers lay eggs and raise their young in South Carolina. They can be on shell rakes or on the beachfront. They will also stay year-round like 2R, or some fly down to Florida seeking warmer weather in the winter. Other American Oystercatchers from northern states like North Carolina, Virginia, New Jersey, and even Massachusetts will spend the winter in South Carolina.

Piping Plover

Upper left color: orange flag
Upper left code: none
Lower left color: red band
Lower left code: none

Upper right color: silver/metal
Upper right code: unable to read
Lower right color: yellow/orange split
Lower right code: none



Capture: 08/05/2020 banded as chick from Grand Marais, Michigan

Resight: 10/10/2020 Seabrook Island, South Carolina by Mark Andrews

Resight: Summer 2021, North Manitou Island, Michigan (on Lake Michigan), nesting.

Resight: Every fall and winter since 2020, on the Seabrook/Kiawah/Deveaux Bank complex.

Background: This bird has been observed every summer breeding in Michigan, and every winter in South Carolina near Seabrook Island since 2020. Last seen in October 2024 on Deveaux Bank Seabird Sanctuary. Breeding in the Great Lakes region, this bird is part of the federally endangered population of Piping Plovers- as only 75 pairs remain. These are heavily monitored and tracked. This male returns to South Carolina every year to spend the winter. During this time, it needs to rest and refuel to recover from a long breeding season, and replenish energy for the next year.





2 R













Shorebird Safari: A Traveling Educational Activity

Instructions:

1. First, participants will be tasked with sifting out the four different food sources from the sand bin. In each container, there are horseshoe crab eggs (lentils), fiddler crabs (crab lures), oystershells, and worms (worm lures). Each prey item needs to be sifted and separated.
2. Then each prey item will be matched with a shorebird species based on the provided description. Once they correctly match the food source with the shorebird, we will discuss how each bird's bill is adapted for probing for its food source. Then we will note the importance of this food source, given the context of this bird's migration pattern and the time of year for when we might observe these in South Carolina.
3. The next task will be to take binoculars (or other optics) and look for the (laminated) banded shorebirds that have been placed throughout the beach area or staked in the ground. Participants will use the attached "reporting a banded bird" sheet to record band colors, codes and locations on their legs of each of the 4 shorebird species. The messaging there is to use optics or stay behind a designated line as to not disturb the birds from their activities (feeding, resting, walking, ect).
4. Finally, once the information on the bands are recorded, the known life history of each of these birds will be shared with the provided info sheet, including where and when it was tagged. The activity concludes with more discussion on migratory patterns, site fidelity, conservation status, research emphasis, and what they can do to support shorebirds on their own!

Prey, Bills, and Diets:

Whimbrel: I use my long bill to probe very deep into the mud for my food. My prey item usually likes to hide in burrows but my specialized curved bill allows me to snatch them easily.

Red knot: With my straight bill, I can probe about an inch in the sand for my food, and swallow it whole. I need a lot of these to fuel my long migrations!

American Oystercatcher: The clue is in my name! I use my strong bright bill to pry open my food.

Piping plover: With my small feet, I tap the sand in front of me to feel for small vibrations (or wiggles!) from my prey item. Although my bill is short, my preferred food item is quite long, but I don't have to dig very far to get to them.

Prey Items:

Find 6



Find 5



Find 15



Find 7



Answer key: Horseshoe Crab eggs = Red Knot, Small worms = Piping Plover, Oyster shells = American Oystercatcher, Fiddler Crabs = Whimbrel

Whimbrel description: The whimbrel is a large shorebird, in the curlew family. It has a distinctive long and decurved bill, with relatively long neck and legs, long and pointed wings, and a short tail. It is predominantly observed in South Carolina during its springtime migration, stopping over for a couple of weeks at a time to feed on small species of crabs on mudflats and in the saltmarsh. It breeds in Canada in the sub-arctic, and winters on the northern coasts of South America.

Red Knot description: The red knot is a medium-size shorebird, most recognizable in its breeding plumage with vibrant rusty red chest and belly. They are federally threatened. While in South Carolina, red knots gather in large flocks along the beachfront and on offshore islands, where they forage for coquina clams and horseshoe crab eggs. They need to gather energy to complete an annual migration that can be up to 19,000 miles, flying from the southern tip of South America where they winter to their breeding grounds above the Arctic circle in the summer. South Carolina is an important stop over for this species, especially in the spring time.

American Oystercatcher: The American Oystercatcher is a large shorebird with distinctive black and white block markings, and a long, robust orange-ish red bill which they use to pry open shellfish. They are found in South Carolina year-round and will make nest and raise young on sandy beaches and shell rakes.

Piping Plover: The piping plover is a small shorebird that is well-camouflaged in the beach environment with a sandy grey back and wings and its white belly and chest. It has a short and stout orange bill with a large eye. They utilize South Carolina during the non-breeding season, either as they migrate through in the Spring and Fall, or for the duration of the winter. They forage for small invertebrates, including worms, in the intertidal zone and in tidal depressions on the beach.

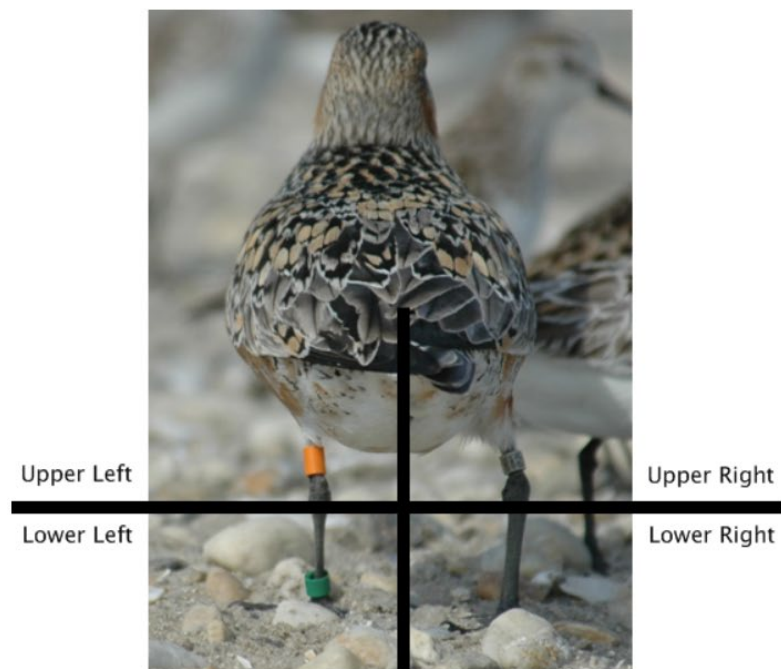
Record and report shorebirds with bands:

While out in the field, shorebird biologists will look for birds that may be outfitted with special bands and or markers on their legs. This is done through optics such as binoculars, spotting scope, or a camera with a big lens. When a bird is seen with a band it must be recorded and reported so that researchers can use it to understand where birds go, for how long, and monitor how the population is doing as a whole.

How to read bands: Read and record band colors starting with the BIRD's left leg, from top to bottom, then its right leg from top to bottom. You also need to note what color the code is and if it is flag or not.

Flag/Band Position

The position that a band or flag has on the legs of a bird can be significant. The scheme used is as if you are looking at the bird from the rear:



To report a banded bird, you need to fill out the banded bird data sheet (4 banded birds total) and hand it in to the biologist to receive information on each of these birds.

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Time (hh:mm am/pm) :

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Lower left color (circle one): red silver

Lower left code (write code or none):

Upper right color (circle one): light green orange silver

Upper right code (write code, if any):

Lower right color (circle one): yellow/orange silver

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