

Project description - Coats Island Shorebird Camp

Shorebirds are declining throughout North America, but we do not know why. This project will help us better understand the causes of the declines in shorebird populations, and will help us to determine if these declines are due to changes on the northern breeding grounds, or other areas including migration stopovers and wintering sites.

The site is located on a gravel ridge on Coats Island. The site will be accessed via Twin Otter aircraft, equipped with tundra tires, landing on a nearby gravel esker. A 4 person crew will use a 4 wheel ATV to transport equipment to camp. The base camp consists of an existing small cabin (~2.5m x 3m), and 2-3 canvas tents erected for cooking and equipment storage each year. These structures will rest on cobble-sized stones surrounded by little vegetation (a small amount of moss). The camp will be powered using a small gas generator - for charging laptops and VHF radio batteries.

Shorebird populations are declining world-wide, but even basic information describing breeding performance and connectivity between breeding and wintering areas is lacking for many species. Studies of breeding shorebirds were carried out previously at Coats Island, 2004-2006, and work this season until 2018, will build on this baseline. A primary objective for 2013 is the deployment of tracking devices (to be collected in 2014) to establish migratory routes and wintering locations for the declining, eastern population of Semipalmated Sandpipers.

Birds will be primarily observed at a distance using binoculars (to observe marked individuals, or find nests) or time-lapse trail cameras (to monitor the presence and impact of avian nest predators including arctic fox). Birds will be captured using a manually triggered bow net over the nest site. Birds will be banded using one metal CWS band, and 1-3 coloured darvic bands above the tarsus. On up to 40 Semipalmated Sandpipers and Dunlin, we will deploy tracking tags (light-level geolocators, weighing 0.65g) using a specially designed flag band, fit above the tarsus.

Coats Island offers a particularly productive opportunity to trap and observe shorebirds due to their high nesting density and inter-annual return rates to this area (Paul Smith, unpublished data). Because previous work conducted at this site will serve as a baseline, continued monitoring of this site allows us to record and observed changes in species composition, rates of reproduction, and estimate important migration routes and overwintering sites.

Shorebird breeding areas offer the highest probability of inter-annual recapture (required to download spatial data from tracking devices) because of their high inter-annual return rate of breeding adults to the same nesting areas. Geolocators are currently the only tracking tags small enough to be carried by shorebirds, and yet robust enough to collect location data for >1 year.