

Sandpiper detectives pinpoint trouble spots in continent-wide migration

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A Semipalmated Sandpiper wears a geolocator that allows researchers to track its migratory movements. Credit: B. Winn

Understanding and managing migratory animal populations requires knowing what's going on with them during all stages of their annual cycle—and how those stages affect each other. The annual cycle can be especially difficult to study for species that breed in the Arctic and winter in South America. A new study from *The Condor: Ornithological Applications* tackles this problem for Semipalmated Sandpipers, historically one of the most widespread and numerous shorebird species of the Western Hemisphere, whose populations in some areas have undergone mysterious declines in recent years.

Stephen Brown, Vice President of Shorebird Conservation for [Manomet](#), assembled a large group of partner organizations to deploy 250 geolocators, tiny devices that use light levels to determine birds' locations, on adult sandpipers at sites across their breeding range in the North American Arctic. Recapturing 59 of the birds after a year to download their data, they found that the eastern and western breeding populations use separate wintering areas and migration routes. Birds that breed in the eastern Arctic overwinter in [areas](#) of South America where large declines have been observed. The researchers believe these declines are tied to hunting on the wintering grounds and habitat alteration at migration stopover sites, although their precise impacts remain unclear.

"This study was a response to the discovery of a large [decline](#) in the [population](#) of Semipalmated Sandpipers in the core of their wintering area in South America, and the need to determine which birds were involved. We didn't know if the decline affected the entire population or just part of it," says Brown. "Bringing together the 18 partner organizations that worked collaboratively on this project allowed us to track the migration pathways used by Semipalmated Sandpipers at the enormous geographical scale of their entire North American Arctic [breeding range](#) and provided critical new information about what sites are important to protect to support their recovery."

"The authors here present one of the few studies that examine year-round connectivity, including stopover sites, of Arctic-breeding shorebirds," according to the University of Guelph's Ryan Norris, an expert on migration tracking who was not involved with the study.

"Multi-site, range-wide studies on connectivity, such as this, are critical if we are to understand the population consequences of environmental change in migratory birds."

More information: "Migratory connectivity of Semipalmated Sandpipers and implications for conservation" *The Condor*, americanornithologypubs.org/doi/10.1650/CONDOR-16-55.1

Provided by The Condor

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