



# SHOREBIRD SCIENCE AND CONSERVATION COLLECTIVE



Smithsonian  
Migratory Bird Center

## Do shorebirds benefit from waterfowl habitat conservation in Canada?

The [Shorebird Science and Conservation Collective](#) offered to help the Fall Flights Team address this question. Dr. Autumn-Lynn Harrison, Principal Investigator of the Shorebird Collective noted: “To bridge the gap between science and conservation, we invited project leaders to share their data through the Shorebird Collective so that it could be used to better inform on-the-ground decisions. The response was incredible!” Now, more than 70 scientists and practitioners have shared their tracking data collected from over 3,300 individuals of more than 35 species. “We can leverage this incredible resource of data to help answer questions like those posed by the Fall Flights Team.”

Dr. Allie Anderson, the Shorebird Collective’s Quantitative Ecologist, explained: “If you look at Map 1, you can see how the migration routes of marked birds representing eight different species converge on the Prairie Pothole Region ([Map 1](#)).”

Dr. Anderson cautioned: “Displaying migration paths of a limited number of individuals representing a limited number of species provides only a partial picture.” She continued, “To offer a comprehensive view based on all the shared telemetry data, we developed the heat map ([Map 2](#)). Each hexagon represents 8,660 square kilometers. The lighter the color, the more shorebird species had location data collected within its borders. I was surprised by how the Prairie Pothole Region lit up on this map.”

CLICK on any of the maps to view/  
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**MAP 1: MIGRATION PATHWAYS OF 8 INDIVIDUALS OF 8 SHOREBIRD SPECIES CROSSING THE CANADIAN PRAIRIE POTHOLES REGION.**



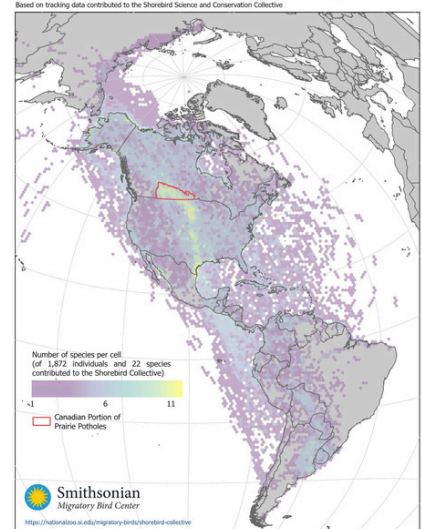
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Next, the Shorebird Collective created a map displaying shorebird location data that included Fall Flights Waterfowl Priority Areas in the Prairie Pothole Region ([Map 3](#)). From this map, it's clear that state investments in Fall Flights benefit both waterfowl and shorebirds. "These maps confirm what we observe on the ground" said Howie Singer of DU- Canada. "In some years, we see more mudflats along the margins as wetlands dry, while in other years, shorebirds use sheet water created after rains."

For states, the next question is: What species of shorebirds benefit from their investments in Fall Flights? The Map 4 illustrates how states can utilize telemetry data available through the Shorebird Collective to identify more specific connections between their state and their investments in Fall Flights ([Map 4](#)). "We would like to help states better understand the critical role they play in reversing recent negative trends among many species of shorebirds," said Candace Stenzel, the Shorebird Collective's Conservation Specialist. She can be reached at [stenzelc@si.edu](mailto:stenzelc@si.edu). The Fall Flights Team encourages states to collaborate with the Shorebird Collective to gain a clearer understanding of how their investments in Fall Flights benefit both shorebirds and waterfowl.

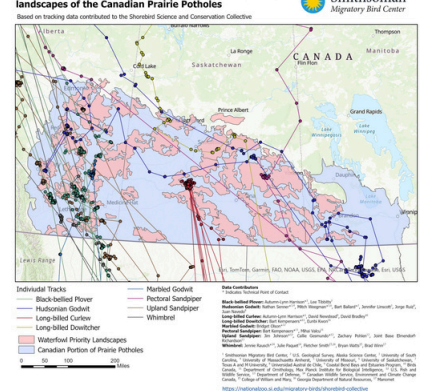


Shorebird species concentrations across the Western Hemisphere



**Map 2: Heat map depicting relative abundance of shorebird species based on telemetry data. (Note: Locations are recorded when birds are in flight or on the ground)**

Tracked locations of 8 shorebirds in waterfowl priority



**Map 3: Shorebird use of Waterfowl Priority Areas in the Prairie Pothole Region of Canada.**

Tracked locations of 8 shorebirds with movements in both



**Map 4: Shorebird movements in both the United States and Canadian portion of the Prairie Potholes region**