

Atlantic brant project annual report, 1 April 2021-31 March 2022

Project leader:

Mitch D. Weegman
Ducks Unlimited Canada Endowed Chair in Wetland and Waterfowl Conservation
Associate Professor
Department of Biology
University of Saskatchewan
mitch.weegman@usask.ca

Project summary:

I hired Lindsay Carlson to lead the Atlantic brant project as a PhD student. Lindsay started in my research group in January 2022. Lindsay completed prerequisite training and departmental courses for the winter term, formed and met with her graduate committee, and presented a poster at the departmental graduate student symposium in mid-April. Currently, Lindsay is drafting her graduate research proposal.

In February, Lindsay travelled to the eastern US to assist the New York and New Jersey state agencies in their efforts to capture wintering brant and deploy 50 GPS-acceleration tracking devices. She also continued efforts to re-sight color-banded brant on uplands (resightings will be included in joint live-dead encounter models to estimate survival). Lindsay is coordinating plans for summer fieldwork in eastern James Bay. She has met with the research group as a whole and had several meetings with various individuals and subsets of the group to discuss logistics and protocols. She is working collaboratively with members of the research group to develop or describe methods for her proposal.

One of Lindsay's first objectives was to organize and update data from the last few years of tracking device deployments, including in an online database for animal movement data (Movebank) which will be used to archive project data and allow better access to data for collaborators. Another early task was to create a variety of maps and data visualizations for internal partner presentations, and a presentation to the Atlantic Flyway Council's snow goose, brant and swan subcommittee. An example of these visualizations can be found online at (https://rpubs.com/lindsay_carlson/atbr_movement_2021) and (https://rpubs.com/lindsay_carlson/spring_locations). Currently, Lindsay is analyzing GPS data from brant which used eastern James Bay staging areas in previous years to create a grid of high-use areas to prioritize vegetation sampling for summer 2022.

Project Objectives, Materials and Methods, Results, Discussion:

Because Lindsay just started in January, we have not accomplished or made substantial progress toward the objectives yet. I anticipate in year 2 of the project, Lindsay will produce maps of locations and migratory routes in James Bay and throughout the annual cycle (objective 1). We will deploy 50 more tracking devices in Feb. 2023, so final maps will not be available until early 2024. Lindsay's first field season in James Bay will be in summer 2022, so I anticipate Lindsay will work toward accomplishing objective 2 (work with Waskaganish community members to visit brant locations and characterize habitat health). Objectives 3 and 4 will be accomplished in 2024 as we need the final data set for these analyses.

Reporting to the communities:

We have not yet worked with the communities, but will do in year 2. We will include a summary of how preliminary results were communicated in the next annual report.