NWRT Final Project Report

NWRT Project Number: 5-18-01

Project Title

Regional and range-wide causes of decline for shorebirds of the Kivalliq

Project Leader

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Summary: Nunavummiut from several communities in the Kivalliq have expressed concerns about shorebird declines and we initiated a long-term study of shorebird ecology on Southampton Island nearly 20 years ago because of these concerns.

Through an NWMB (NWSF) funded collaborative project between residents of Coral Harbour and Arviat and scientists at ECCC, we summarized IQ about shorebird declines in the Kivalliq (see www.kangut.ca; Carter et al. 2018). These discussions renewed concerns about shorebird declines among residents of Southampton Island, and local wildlife managers provided suggestions for research topics that they feel are a priority. This project sought to address these priorities by working with the local committees (ACMC and HTO) to refine the questions in 2018-2019, and then begin a research project to study them in 2019-2022, through a further application for funding to the NWRT. We also hope to continue our work with the community to incorporate a training element into the project, where keen and capable youth are invited to participate in the research, and also trained and mentored in a field training program carried out at the site.

Project Objectives: Shorebirds are declining to such an extent that many could become Species at Risk. People in Coral Harbour recently reiterated concerns about these large declines and suggested that further scientific study might be warranted, to complement our recently completed IQ research. To address their concerns this project has the following objectives:

i) Refine the list of questions that are considered local research priorities with respect to shorebird declines
ii) Explore the role of overabundant geese on the habitat use, breeding success and physiological condition of shorebirds

iii) Track shorebirds (especially Red Phalaropes which have not been previously tracked due to technological limitations) with modern tracking devices to understand their movements throughout the year and how these movements expose them to threats

iv) Explore "carry-over" effects, for example, how feeding conditions at stopover sites influence the physiological status of birds upon arrival to Nunavut, and how this influences subsequent survival and reproduction

v) Engage and train local youth, with shared mentorship by scientists and experienced Inuit guides

vi) Communicate the impacts of shorebird declines from an northern perspective, so that wildlife managers in the South understand the urgency of shorebird management

The preliminary study project (#5-18-01), for which this is the final report, focused heavily on objective i) – refining a list of research priorities in consultation with the community. This objective has now been completed and the remaining objectives are in progress, with continued support from NWRT, under the project #5-19-02.

Materials/Methods:

In April 2018, we carried out consultations with the Aiviit HTO and Irniurviit ACMC to discuss research priorities, and then completed a preliminary field season to address the objectives listed above. We had planned for further in person consultations in Coral Harbour in Fall, 2018. Because of administrative challenges, our financial agreements were not finalized at that time. Consequently, and also because we met with the HTO and ACMC in Winnipeg for another project in September 2018, we deferred the second round of in person consultations until April 2019. In April, 2019, Dr. Paul Smith and his staff Bonnie Taparti attempted to travel to Coral Harbour for meetings with the Aiviit HTO and Irniurviit ACMC to discuss the progress and direction of the research. However, a week of poor weather and flight delays meant that Dr. Smith and Ms. Taparti never made it beyond Rankin Inlet, and consultation had to occur remotely. Although this was disappointing, the project objectives were nevertheless achieved. Details of the successes of the field season are described in the attached field report.

During the 2018 field season, we employed 4 Nunavut beneficiaries in our field work as research assistants, as well as short-term contributions from additional people as guides early in the season. We also developed and launched a new Inuit Field Training Program, in August 2018, at the East Bay Mainland camp. This exciting new training effort brought 8 young Inuit to our camp, mentored by a balanced team of Inuit and southern scientist leaders, to learn about techniques and employment opportunities in environmental science. Additional details of this ongoing program are included as an attachment. Logistics and administration of the training

program are led by a steering committee based in Coral harbor, and also by Ms. Taparti, a Nunavut beneficiary hired in October 2018, and working full-time in our office in Ottawa.

Results:

The purpose of this preliminary study (#5-18-01) was to refine the research questions, relating to the declines of shorebirds, which interest the community of Coral Harbour. Through in person consultations in April 2018, and subsequent communications, we have arrived at a list of priority topics.

The research priorities identified included:

- Tracking studies of Arctic Terns and Red Phalaropes, to understand their winter distribution and whether they face threats there
- Studies of the factors explaining phalarope declines
- Continued studies of shorebirds, habitats and goose effects at Qaqsauqtuuq and Ikkatuaq
- Efforts to increase involvement of local people, especially youth, in the research

Our NWRT proposal for 2019-2022 reflected these priorities, and after the successful application for additional funds from NWRT (project #5-19-02), we were able to make progress towards addressing each of these topics during the field season of 2019. In 2019, our field crews recaptured geolocators that had been deployed on Arctic Terns, and deployed three satellite transmitters on Red Phalaropes to track movements beyond the breeding grounds. In addition, we successfully delivered a second edition of the Inuit Field Training Program at East Bay in late July, 2019, that saw another 8 youth from Coral Harbour participate in a week-long, hands-on training course conducted out of the research cabins located at East Bay. Full details of these research and training activities will be available in the interim and final reports for project #5-19-02 (forthcoming in December, 2019 and September, 2020) when data have been compiled and analyzed.

We also continue to enlist collaborators from across the North to tag and track terns and Red Phalaropes, to understand their movements and threats that they face throughout the year. This multi-site approach will allow us to make broader conclusions about the status and threats of tern and phalarope populations, comparing results from Qaqsauqtuuq to other sites.

We have also made a substantial effort to increase the opportunities for young Inuit to participate in our research, and in research projects general, through the Inuit Field Training Program. We are currently pursuing additional funding sources so that we can expand the program in 2020 to include additional sites (adding Prince Charles Island) and communities (including Naujaat, Cape Dorset, Hall Beach and potentially Igloolik) in the coming years.

Additional details of the 2018 field work, and of the Inuit Field Training Program, are provided in the attached reports.

Discussion/Management Implications:

People of Coral Harbour and other communities in Nunavut have expressed serious concerns about the status of shorebird populations, and scientific studies also demonstrate alarming population declines. Our shorebird research activities are designed with direct input from community organizations (Aiviit HTO and Irniurviit ACMC), and include participation by local people, so that we can ensure that we are addressing local concerns and priorities about shorebirds. These NWRT-funded projects are an excellent complement to the broader suite of monitoring projects that we carry out, funded by Environment and Climate Change Canada. The preexisting infrastructure and our ongoing research and monitoring projects means that, with the additional funding from NWRT, we can efficiently leverage the resources already in place to focus on additional topics of particular interest to Nunavummiut. We are also able connect these local research projects to a broader network of researchers working at other sites across the Arctic, so that research topics that are a community priority can be addressed at a larger spatial scale, allows insights from across the Canadian Arctic.

We have just begun to address the research topics identified in this preliminary project, but we anticipate that in the coming years, we will be able to address them fully and offer recommendations for management towards the conservation of shorebirds nesting on Southampton Island. As an example of the local-scale management implications that our research has produced in the past, we collaborated with community members from Coral Harbour to conduct research at East Bay and Coats Island on snow geese interactions with shorebirds and shared predators (see www.kangut.ca), after community concerns about the effects that overabundant geese were having on the ecosystem. Our research supported the management action to implement an enhanced snow goose harvest, with the goal of reducing snow goose populations in an attempt to limit their impact to other tundra nesting species such as shorebirds, and also to provide incentives and opportunities for hunters to get out onto the land and make greater use of snow geese as an abundant food source.

At a national scale, some of the results of these studies could contribute to status reports for shorebirds being considered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). A number of arctic-breeding shorebird species are identified as priorities by COSEWIC, and Dr. Smith is leading a project to summarize their status for review by COSEWIC. Information from the shorebird breeding grounds in Inuit Nunangat is essential for the development of these status reports.

The research topics identified in this project relate directly to the NWMB mandate of ensuring the conservation and management of wildlife in Nunavut for the long-term benefit of Nunavut residents. By working directly with community members and HTOs, we strive to provide relevant research results that can inform the management and conservation of terrestrial ecosystems such that they can be enjoyed by current and future generations to come.

Report by Inuit Participants:

Mr. Lenny Emiktaut has participated in our research program for several years (including 2018), and has since secured full-time employment with Environment and Climate Change Canada in Iqaluit. We attempted to contact Mr. Emiktaut by email and telephone for a report on his participation in this project, but he was spending time with his family in Coral Harbour and was unable to provide a report before the submission deadline for this report. We will follow up with Mr. Emiktaut when he returns, and plan to provide his report as part of the upcoming reports for project #5-19-02.

Reporting to communities/resource users:

Community/HTO	Before Research	During Research	Completion of Research
Aiviit HTO	Date: April 13th, 2018 Type: In person	Date: April 2019 Type: Attempted In Person, but failed!	Date: March 2020 Type: In Person
Irniurviit ACMC	Date: April 13th, 2018 Type: In person	Date: April 2019 Type: Attempted In Person, but failed!	Date: March 2020 Type: In Person

The project lead Paul Smith met with the Aiviit HTO and Irniuviit ACMC in person on April 13th – 15th, 2018, and discussed research priorities. In addition, we hosted a radio call-in show to field questions from the community on April 14th, along with two community open houses, where our research was presented and then discussed in an informal setting.

Since these meetings, Dr. Smith was in touch regularly with members of the ACMC and HTO to plan and deliver the Inuit Field Training Program; an effort co-led by a steering committee composed of HTO and ACMC members.

We also convened a meeting in Winnipeg in September 2018, which brought together representatives from Inuit organizations (including NWMB), as well as members of the Coral Harbour HTO and ACMC, to discuss the effects of geese on shorebirds, land and people, and to develop priorities and management recommendations. This meeting focused primarily on management issues and research priorities related to geese, but offered an opportunity to further refine our collective thoughts about shorebird declines, conservation issues, and research priorities in Coral Harbour.

As described above, we attempted to reach Coral Harbour to discuss our research with local organizations and community members in April 2019. Over the course of 1 week, after several delays (both mechanical and weather), we made it only as far as Rankin Inlet and had to participate in the meetings remotely. We will attempt in person consultations again this winter, hopefully with better success.

References

Carter, N.A., Henri, D.A., Johnston, V., Emiktaut, L., Saviakjuk, B., Smith, P.,Chaudhary, B., Murray, A. and Ljubicic, G. 2018. Inuit knowledge about light geese in the Kivalliq region, Nunavut. Report prepared by Environment andClimate Change Canada for the Irniurviit Area Co-Management Committee and the Aiviit Hunters and Trappers Organization, Coral Harbour, Nunavut. 53 pp. http://kangut.ca/wp-content/uploads/2019/02/Coral-H.-Community-Report_EN_v2.pdf