

Ecosystem Monitoring on Igloodik Island

Nicolas Lecomte with Universite de Moncton and Lynda Orman with the Government of Nunavut. This study is scheduled to begin on May 20th, 2015 and finish on August 31st, 2015.

This research is intended to:

- Monitor the abundance of shorebirds, insects, spiders, lemmings, predators and plants on Igloodik Island;
- Lay the foundations of a field research training program planned for summer 2016.

The study will involve:

- Attaching standard legbands, collecting blood and feathers from 60 shorebirds;
- Attaching small geolocators to 45 shorebirds to record migratory paths;
- Collection of insects and spiders using pitfall traps along 10 trap lines;
- Collection of insects and spiders in the water using a handheld net;
- Preserving insects and spiders in ethanol and transporting them to a laboratory in the southern Canada for identification;
- Monitoring lemmings by counting abandoned nests until at least 40 nests have been seen;
- Counting all lemmings seen at the field site;
- Live-trapping lemmings on a grid using a total of 50 traps; traps will be baited with apples and oats and checked every 4-6 hours over two 48 hour periods;
- Trapped lemmings will be identified, tagged, weighed, sexed, and released;
- Predator surveys will take place once a week, will last 10 minutes and will take place at a minimum of 10 different locations; predators will be identified using binoculars or a spotting scope;
- If nests of predators are found they will be monitored for reproductive success and feces will be collected to estimate diet;
- Plants will be monitored by erecting two enclosures (1m x 1m x 1m) to estimate the primary productivity of the tundra;
- 1m round warming chambers will be used to simulate warming temperature and its effect on plants;
- Small weather stations will be erected to capture weather trends.

