

## ***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 20<sup>th</sup>, 2014 and finish on August 31<sup>st</sup>, 2014.

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 the summer of 2015.

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.