

Examining the Size and Extent of the Marten (*Martes Americana*) Population in Western Nova Scotia: Progress Report 2007.

1.

- **Goal**

By determining the extent and the habitat needs of the SW NS marten population, the Trappers Association of Nova Scotia (TANS) will be able to work closely with landowners and the forest industry to ensure that marten habitat can be identified (and protected if deemed necessary) based on an enhanced marten habitat model. By increasing the efficacy of detection units, methods and procedures, marten presence/absence from the landscape can be more easily determined.

- **Objectives**

- Enhance the knowledge base regarding the distribution, size and health of the south-western Nova Scotia (SW NS) marten population; and,
- Develop an understanding of the multi-scale habitat associations of the SW NS marten population.
- Involve Acadia University (Cooperative Program honours student) to help determine the efficacy of various hair snag techniques using captive animals being held at the provincial Wildlife Park at Shubinacadie, as well as in the field.
- At a later date conduct DNA analysis on hair samples collected to determine health and size of the western Nova Scotia marten population.

2. Outline of Work Completed

Two trappers (Paul Tufts and Thomas Comeau) from the western end of NS were contracted to carry out surveys to help determine the extent of that population using hair snags, tracks and confirmed sightings. During the winter of 2006-07 thirty-two 5km blocks containing suitable marten habitat (based on NS DNR model) were visited and 4-8 snags were placed in each block to determine marten absence and presence. In addition to these survey blocks staff at Kejimikujik National Park conducted some surveys of their own following similar protocols, but have yet to report their findings.

An Acadia University coop student is investigating the efficiency of various hair snag designs prior to, and during the course of the project. Several captive-bred martens are currently being held at the Nova Scotia Provincial Wildlife Park in Shubenacadie. By testing hair snags on these captive animals, the best design to be used in the field will be determined. This will be based on the number of visits to the units required before a suitable hair sample is acquired. Once a suitable design is selected, more confidence can be given to data collected in the field, which is essential for monitoring the success of the augmentation project on CBI, and determining the extent of the south-western N.S. marten population.

3. Results

Of the thirty-five survey blocks visited (figure 1) 13 new blocks (figure 2) showed marten presence based on track information in and around the bait stations.

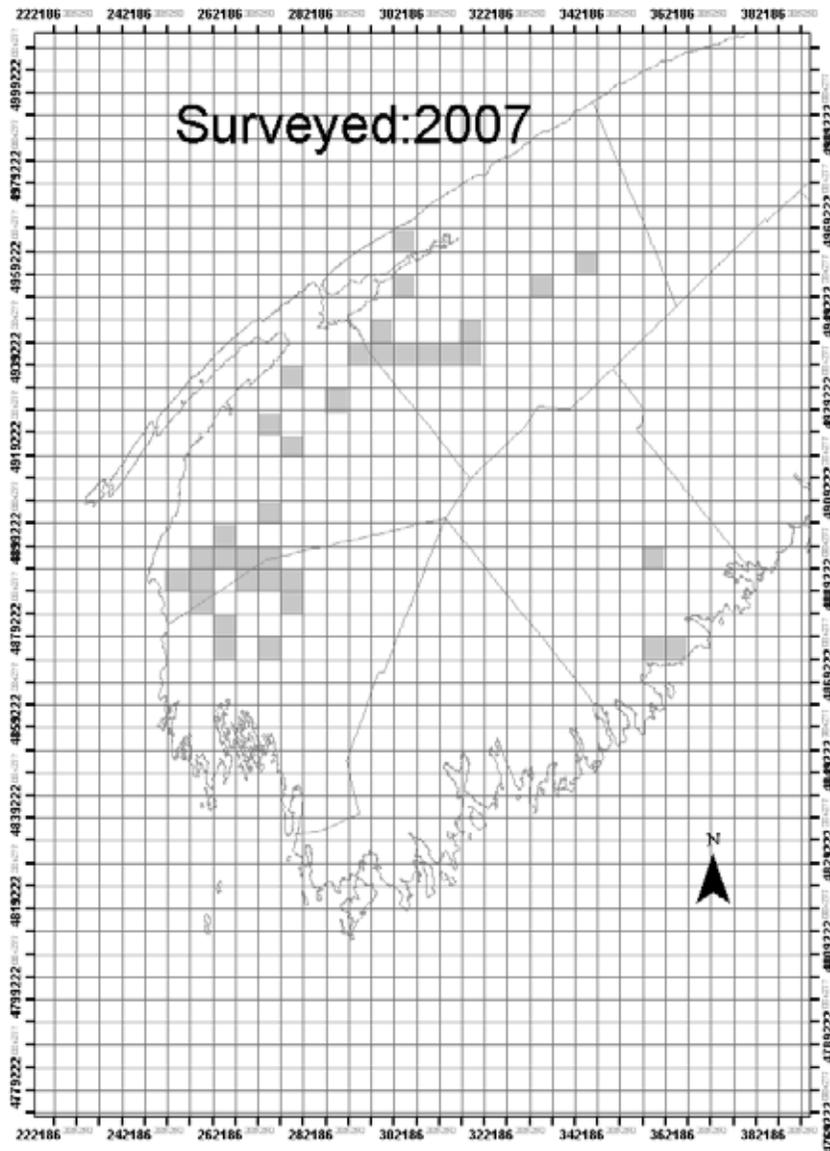


Figure 1. Location of 2006-07 survey blocks for marten.

Previous to this project all marten sightings and reports between 2000 and 2007 (figure 2). These new records were added to the previous known distribution of marten (figure 3).

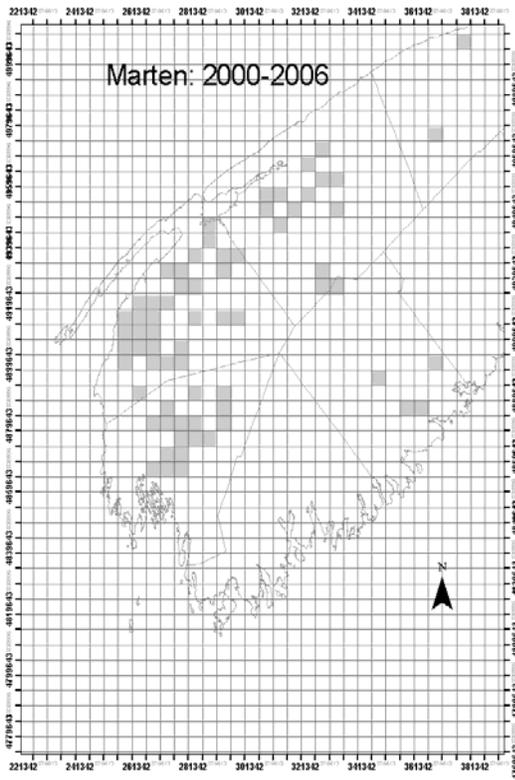


Figure 2. Know presence of marten in western NS 2000-2006.

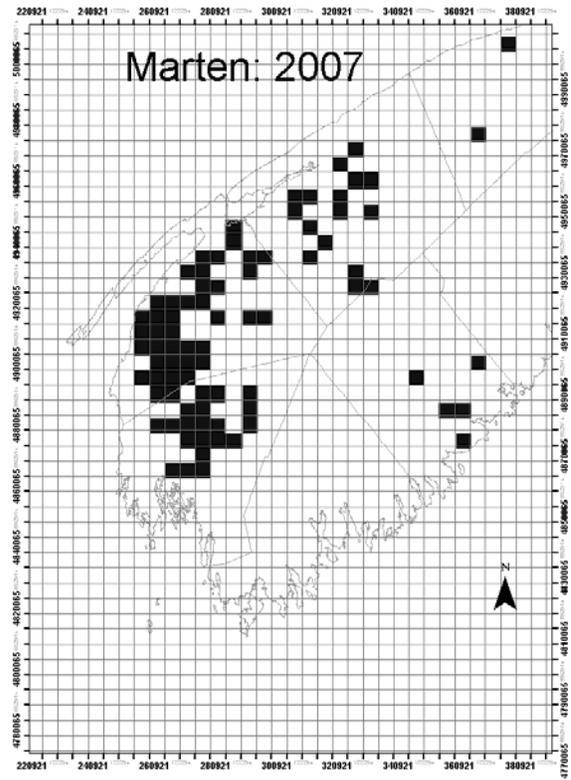


Figure 3. Map of updated areas showing marten presence 2000-2007

Several other hair snag stations have provided ample samples though the animal of origin is yet to be determined. These hair samples will be analyzed this fall at Acadia University

4. Assessment

To date the project seems to be moving along pretty well with the survey expanding from known locations in the Weymouth area to other locations of suitable marten habitat based on the habitat model. Several marten locations have been confirmed through interviews with hunters and trappers. There has been some problem in communicating the need to follow the survey design and to keep snags in place for the intended duration. Initially some snags were pulled out after only 4 days instead of leaving them in until 12 days had passed or once marten sign was found (hair or tracks).

Staff at Kejimikujik National Park are going to continue surveys within and around the Park for the next several years. In addition, NS Department of Environment and Labour are interested in conducting surveys in the Tobeatic Wilderness Area.

It is hoped that with the involvement of Acadia University hair samples collected during this project will be not only used to determine marten presence or absence, but also the health of the population through genetic analysis at a later date.

5. Recommendations

It is recommended that this project be continued over the next few years so that surveys of the initial five western counties can be completed and other counties (Kings and Lunenburg) can be surveyed.