

Determining the Size and Extent of the Marten (Martes americana) population in Western NS - TANS

Final Report: 2009

Project Duration: Year 2 of 2

Contact: Gary Fisher

1. Project Goal

The information on the extent and habitat needs of marten in SW NS gathered by the Trappers Association of Nova Scotia (TANS) through this project will allow NS DNR to better understand the habitat needs of marten in mainland NS. This information will improve the existing marten habitat model, and enable NS DNR to provide better information to landowners and the forest industry to ensure that marten habitat can be identified (and protected if deemed necessary), allowing the population to grow and expand on the mainland. By expanding the survey beyond the Yarmouth/Weymouth area TANS will be able to provide to NS DNR a better understanding of the habitat types marten use in western Nova Scotia, thereby increasing the validity of a marten habitat model.

Project Objectives:

- 1) Enhance the knowledge base regarding the distribution, size and health of the south-western Nova Scotia (SW NS) marten population over an additional 2 year period using remote detection devices (hair snags), sighting records and animal sign (track and scat). Areas of concentration will be Annapolis, Kings, Shelburne, Lunenburg and Queens counties;
- 2) Develop an understanding of the multi-scale habitat associations of the SW NS marten population that can be used to promote special forest management practices to be undertaken on Crown land to ensure habitat is available for this meso-carnivore through time. In addition, recording preferred habitat, landscapes and marten locations will be beneficial for future GIS spatial habitat models;
- 3) Understanding and assessing the habitat needs and preferences of SW NS marten will provide better information on the most appropriate release location for their translocation, if necessary, from areas where they are threatened to more remote locations with suitable habitat;
- 4) Future genetic analysis of the hair samples collected will provide a strong indication of the health and size of the SW NS marten population, which will then help determine the status of this population.

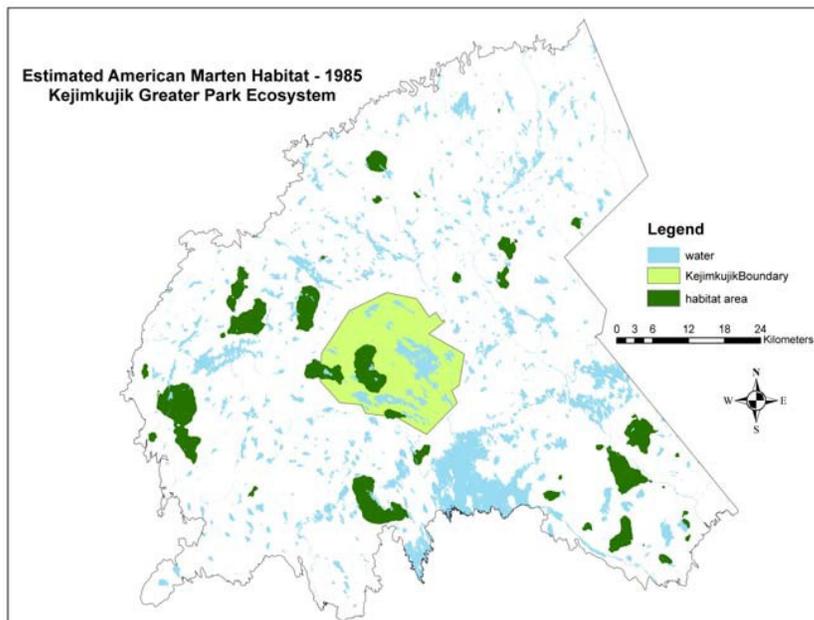
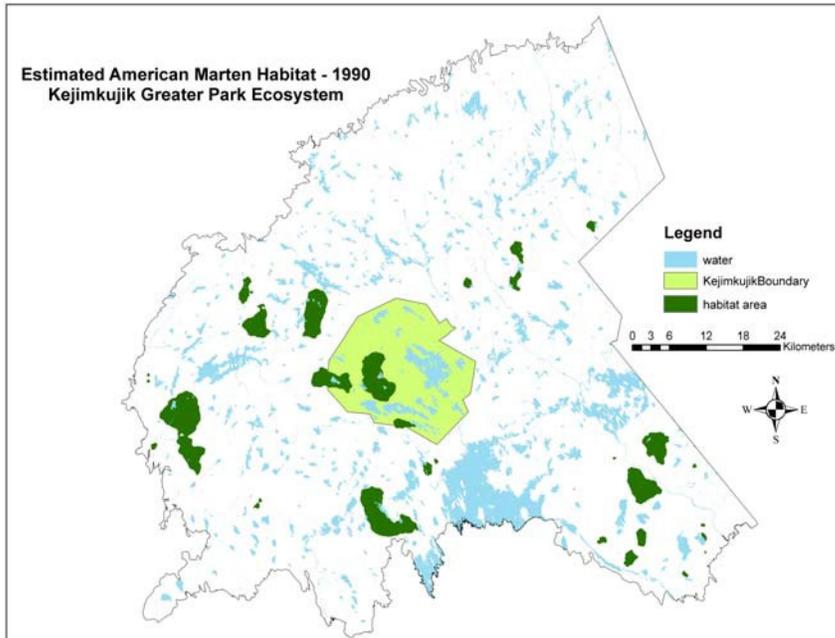
2.

Last year (2008) two people were approached to conduct the surveys in Western NS, Gary Thurber and Al Worthen. Each trapper spent 30 days in the field setting up and checking remote detection devices. To date the areas surveyed (5 km² sample units) and presence/absence data (hair samples, scat or tracks) have yet to be plotted.

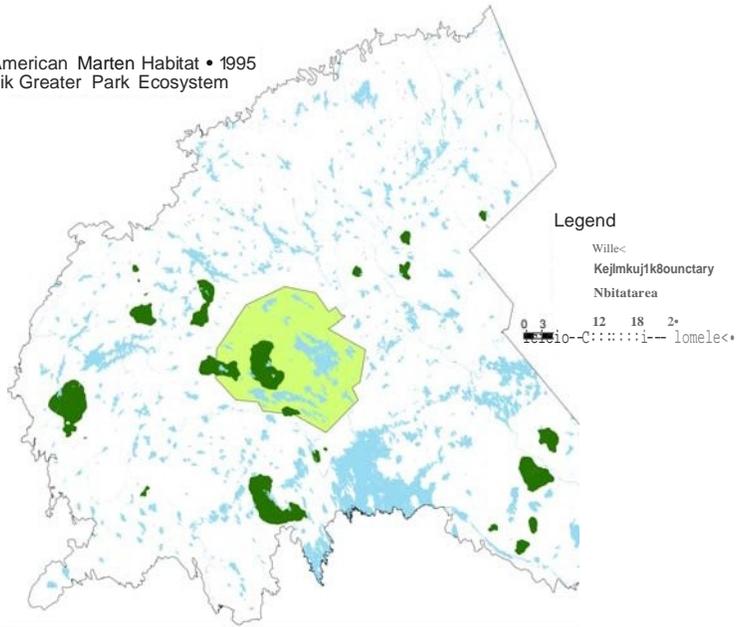
3. Results

Marten Habitat Suitability

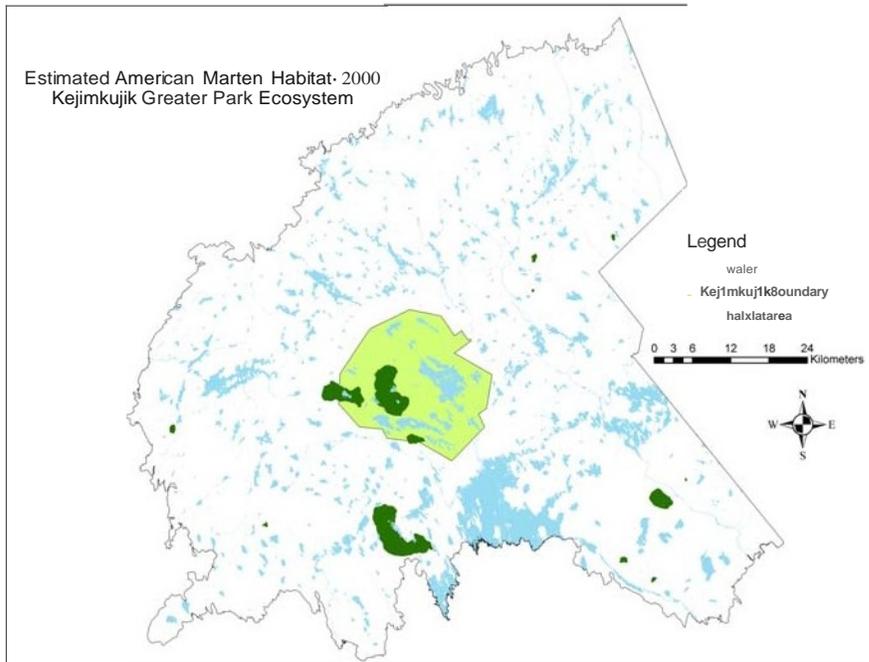
With the help of Kejimikujik National Park, a draft Marten Habitat Suitability Map has been developed for the 4 ecological land classifications around the Kejimikujik area, based on marten reports and trapper information. The following maps of the greater park ecosystem (gpe) have been generated using forest data from 1985, 1990, 1995, 2000 and 2005 which show a downward trend of suitable habitat.

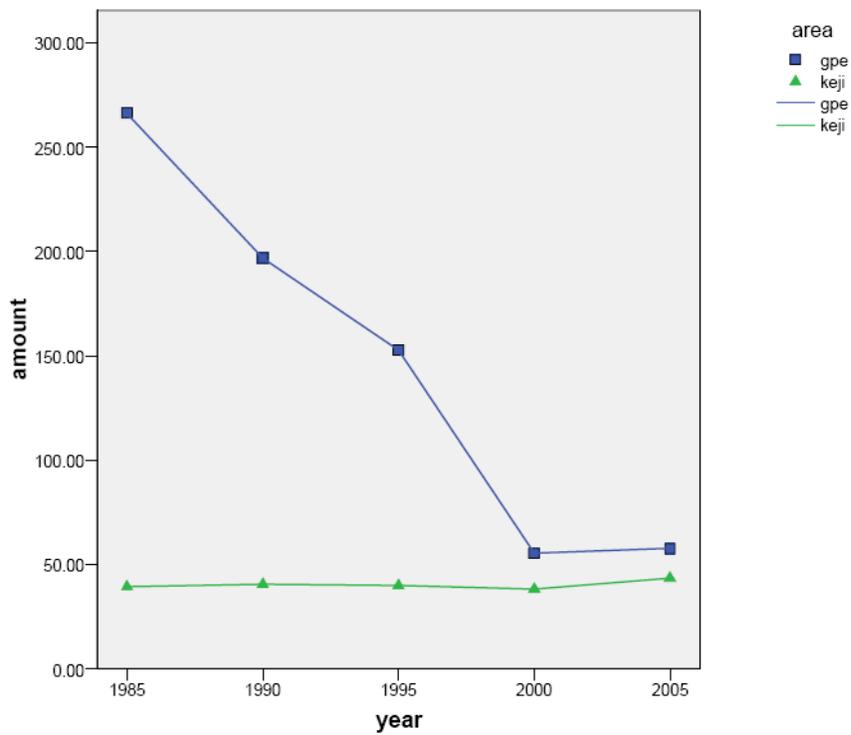
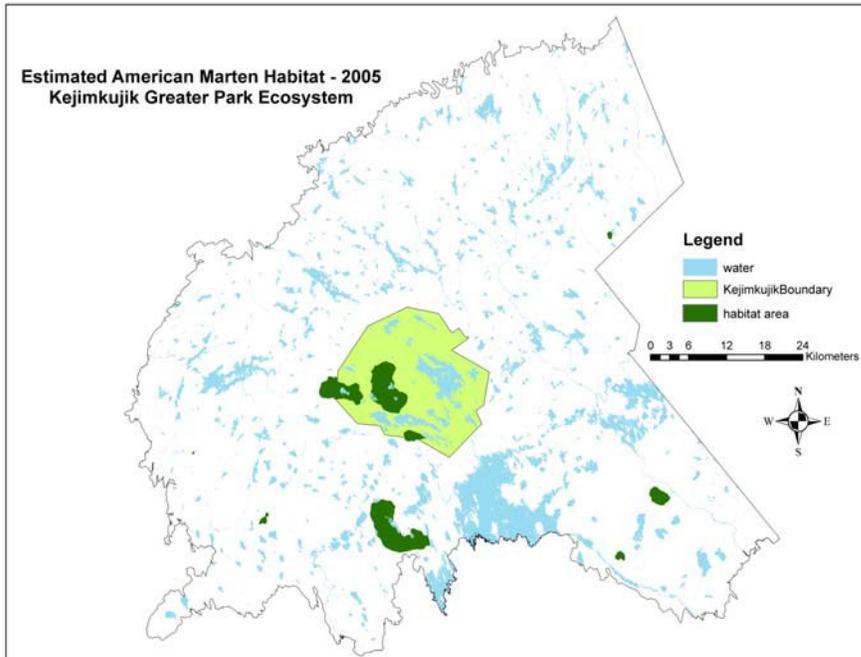


Estimated American Marten Habitat • 1995
Kejimikujik Greater Park Ecosystem



Estimated American Marten Habitat- 2000
Kejimikujik Greater Park Ecosystem





Amount measured in km².
 GPE Trend: -11.173 km²
 per year. $P=.006$
 Keji Trend: no significant.

trend. $P=.403$

Proportional Trend

GPE: 1985 – 4.76%

1990 – 3.52%

1995 – 2.73%

2000 – 1.00%

2005 – 1.03%

Keji: 1985 – 10.35%
1990 – 10.68%
1995 – 10.50%
2000 – 10.08%
2005 – 11.45%

As of 2005, the amount of American Marten habitat in Keji (43.62km²) is almost equal to that of the entire GPE (57.78km²). [GPE estimate includes other protected areas excluding Keji.]
Status = Red. Trend = Stable (in park).

4. Assessment

Over the last 3 years trappers have covered much of the easily accessible marten habitat of south western Nova Scotia. The results do show that the marten population has expanded its range from the location of the last trapped marten in 1976, and from the subsequent trans-locations in Kejimikujik National Park.

The habitat description or areas (stands) where marten have been detected, as provided by the trappers is proving useful in validating the current marten habitat model, though some adjustments may be made to the model.

The TANS trappers involved in the project are very concerned about the amount of habitat loss occurring in south western Nova Scotia caused by forest activities. They feel that the money spent on translocating marten in the 1980s and 90s will be wasted should the loss of habitat continue. Parks Canada staff at Kejimikujik have also noted the loss of marten habitat in south western Nova Scotia (see map and graph above).

An additional year or so of effort in areas of Kings and Lunenburg Counties will certainly help in determining the range expansion eastward in the province.