

INTERIM REPORT #1  
SECOND YEAR OF STUDY  
1 APRIL - 31 JULY 1994

SECOND-GROWTH FOREST AS POTENTIAL MARTEN HABITAT IN WESTERN  
NEWFOUNDLAND: THE COARSE WOODY DEBRIS CONNECTION.

PREPARED FOR

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This report summarizes the work completed on the marten second-growth project subsequent to the 1993 fiscal year (March 1994). Much of the preliminary data analysis has been described in the 1994 annual report (Sturtevant and Bissonette, May 1994). This report will therefore focus on the summer field season of 1994.

**Summer Field Season Objectives:**

1. Complete CWD and stand structure data collection.
2. Sample for small mammal abundance within second-growth and old-growth stands.
3. Identify stands showing marten foraging activity during the previous winter. Measure for habitat characteristics on a stand level, using the same techniques used for random stands.

Brian arrived in Newfoundland on June 13, 1994. Keith Chaulk was hired on as his assistant. The first priority was to recapture the marten collared in the South Brook study area during the winter of 1994. The animal appeared to be in good condition, and the ear tags were still in place. One metal ear tag (#286) appeared loose, so an additional ear tag (#276) was attached to the right ear.

**Objective 1: Coarse Woody Debris**

Habitat mensuration was completed within the Victoria Lake Study Area during the month of July. Total stands measured in this region include four 80+ year old stands, and three second-growth stands in the 20-40 year old age class.

The majority of habitat work that remains is within the South Brook Study area. Six second-growth stands were completed during the month of July, for a total of two old-growth and ten second-growth stands completed for 1993 and the first half of 1994. Five additional stands will be measured during the remainder of the field season, along with some CWD measurements from young (0-20 year) regenerating stands.

Historical records for the South Brook study area (Corner Brook Pulp and Paper, Ltd. historical files) show that certain sections of the region were cut during the mid to late 1920's, and the remainder of the area was cut during the late 1930's to early 1940's. The region should therefore support fifty to seventy year old forests. However, core samples taken within the each stand show ages that are older than one would expect from the logging records. This is probably a result of the logging practices of the time period; loggers typically selected for larger trees, leaving behind a percentage of smaller trees (Kerry Hutchinson, pers. commun.). These residual trees increase the overall age of the present stands, which may skew our samples toward the more advanced stages of forest development. We will select additional stands, approximately forty to fifty years of

age, from other areas of the Model Forest to fill the age gap in our analysis.

## **Objective 2: Small Mammal Abundance.**

### **Session 1.**

Victoria Lake Study Area: Traplines were placed and set within two young second-growth stands and two old-growth stands at Victoria Lake in late June, according to the methods specified in the Annual Report (Sturtevant and Bissonette, May 1994). Meadow voles (*Microtus pennsylvanicus*) were successfully trapped within old-growth stands, but none were captured within the dense regenerating stands. Only one masked shrew (*Sorex cinereus*) was captured on all of the trap lines (1536 trap nights). *S. cinereus* abundance appears to have dropped significantly from last year, indicating a population crash or fluctuation in this species.

South Brook Study Area: Traplines were set within two old-growth stands and six second-growth stands in early July. In a total of 3072 trap-nights, only three *M. pennsylvanicus* and two *S. cinereus* were captured. The abundance of both species has appeared to have dropped dramatically since last year. Other researchers studying small mammals within the model forest have found a similar response this summer (W. Adair and S. Forsey, pers. comm.), which suggests a population decline for both species within the region.

### **Session 2.**

Traplines will be set within the Victoria Lake Study Area during the third week in August. This trap session will establish whether the vole population decline has affected this region of the model forest. A second trap session at South Brook was planned for the third week in August. However, the low trap success from the first session suggests that the information gained would not be worth a second trapping effort within this area. We will monitor the success of other small mammal projects in the area before deciding to cancel this trap session.

## **Objective 3: Marten Foraging Sites**

GPS (Global Positioning System) points from our work this winter are presently being differentially corrected using base station data from West Viking College in Corner Brook. These positions will be plotted on forest inventory maps (Newfoundland Division of Forestry) to determine the stands within which the foraging sites are located. A group of these stands will be selected for habitat mensuration.

## **Literature Cited**

Sturtevant, B.R. and J.A. Bissonette. 1993. Second growth forest as marten habitat in western Newfoundland: the coarse woody debris connection. First Annual Progress Report. 31 May 1994.