



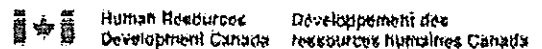
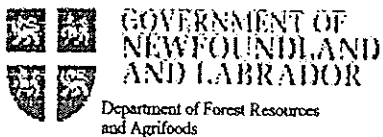
*The Newfoundland Pine Marten Education Project*

*Phase 2*

Prepared by:

*Western Newfoundland Model Forest*

December 2000



## Abstract

This Pine Marten Education Action Plan was designed to educate and inform a variety of audiences on the endangered Newfoundland pine marten on insular Newfoundland. The direction for this project was provided by a subcommittee (The Pine Marten Education Subcommittee (PMES)) which has representation of the key players concerned about pine marten education and survival issues (see Appendix 7 for a list of agencies represented on the subcommittee). This committee was formulated as a result of discussions between the Pine Marten Recovery Team and the Pine Marten Working Group (an initiative of the Western Newfoundland Model Forest).

During phase 1 of this project (November 1999 - March 2000), the PMES developed an action plan which saw the creation and distribution of various educational materials and the presentation of a number of public awareness sessions and displays.

During phase 2 (April 2000-March 2001), further educational materials were developed and distributed and further public awareness sessions were conducted. Additionally, other initiatives undertaken include: the development of a 2- dimensional modified snare model (to replace the 3-D model developed the previous year); the design, production and distribution of a modified snare education pamphlet; the generation of 4 Newfoundland pine marten 'good news' stories and their distribution to 18 newspaper and magazine publishers; and the development of 21 identical Newfoundland pine marten educational kits.

These initiatives were co-ordinated with provincial and federal government departments, research facilities, and national parks - all of which have an interest in, or initiatives pertaining to, the endangered pine marten. Funding was received from the World Wildlife Fund (WWF), the provincial Department of Forest Resources and Agrifoods (DFRA) and Human Resources Development Canada (HRDC). In kind support was received from the Western Newfoundland Model Forest in the nature of office space, vehicle use, administrative support and computer use.

Positive effects resulting from this project can be measured in terms of its impact on the pine marten population and the public's perception of their role in survival of this species. The profile of the Newfoundland pine marten and its current situation has been enhanced and a variety of tools produced which can be used in the long term to educate the general public. Through increased understanding of the species and the impacts that human use of the forest pose, accidental snaring can be reduced and human pressure on the ecosystem can be lessened.

## Table of Contents

	<b>Page #</b>
1.0 Introduction	1
2.0 Project Goal	1
Objective 1	2
Objective 2	2
Objective 3	2
3.0 Outline of Work Completed (phase 1 & 2)	2
• Pine Marten Brochure and Poster	2
• 3-D Modified Snare Models	2
• 2-D Modified Snare Models	2
• Planning Session	3
• Modified Snare Pamphlet	3
• Public Exhibitions	3
• Pine Marten Good News Articles	3
• Maps, Boundary Descriptions, & Pamphlets to Vendors	4
• Edukits	4
• Modify the Modified Snare Contest	4
• Newfoundland Sportsman Article	4
4.0 An Assessment of the Success in Achieving the Project's Objectives	5
5.0 The Conservation Significance of the Project	5
6.0 The Future of the Newfoundland Pine Marten Education Project Steps to be taken - Phase 3	6
7.0 Funding Support	6
8.0 Budget	7
9.0 Conclusion	7

## **List of Appendices**

- Appendix 1 The Pine Marten Brochure
- Appendix 2 The Modified Snare Pamphlet
- Appendix 3 Modified Snaring Boundary Map and Written Boundary Descriptions
- Appendix 4 Newfoundland Pine Marten Edukit Contents
- Appendix 5 Modify the Modified Snare Contest
- Appendix 6 Newfoundland Sportsman Article
- Appendix 7 List of Agencies participating in Pine Marten Education Subcommittee

## 1.0 Introduction

The Newfoundland pine marten, a subspecies of the *Martes americana*, was listed as *threatened* in 1986, and up-listed to *endangered* in 1996 due to declining numbers. It is estimated that the marten population on the Island is currently stable at about 300. Of all the eleven strategies put forth by the National Recovery Plan for the Newfoundland marten (RENEW Report No. 14) in 1995, information and education is one of the least addressed issues. Public response to the implementation of certain recovery efforts has been varied. The general public in the western region of the province appear to understand more readily the concerns facing the endangered pine marten, most likely the result of localized educational programs associated with the Western Newfoundland Model Forest and other agencies.

The two-year, Newfoundland pine marten education action plan was developed by the Education Subcommittee of the Pine Marten Working Group and the Pine Marten Recovery Team. This subcommittee consists of individuals from the Department of Forest Resources and Agrifoods, Wildlife Division; Terra Nova National Park; Salmonier Nature Park; and the Western Newfoundland Model Forest. This subcommittee worked with the Recovery of Nationally Endangered Wildlife (RENEW) Team and developed its mandate to address the recovery plans' objective of developing and implementing public information and education programs regarding the Newfoundland pine marten.

## 2.0 Project Goal

At the inception of this project, the Pine Marten Education Subcommittee incorporated one main goal and three subsequent objectives into their mandate:

**Goal 1:** *To make information regarding the endangered Newfoundland pine marten available to target audiences, which include: the domestic snaring community; the trapping community; students (elementary, junior and senior high schools, colleges and universities); forest-based industries; front line forestry workers and contractors; and the general public, particularly in central and eastern Newfoundland.*

- Objective 1:** To educate target audiences on the endangered Newfoundland pine marten including factors influencing its vulnerability, its role in the ecosystem, and the measures needed for the species to recover.
- Objective 2:** To raise awareness of the personal actions these audiences can take to help in the recovery of the species.
- Objective 3:** To measure the extent of how supportive the public is for the implementation of these recovery efforts.

Phase two of this project was initially aimed at giving presentations, however, the focus changed to the development of much needed presentation materials filling a gap identified across the province.

### 3.0 Outline of Work Completed

Individual activities that have been undertaken since this project's inception (phase 1 & 2) and meet the specific project goals are listed below (only projects from phase 2 are explained).

- **Pine Marten Brochure and Poster** (see Appendix 1)  
(Completed, printed and distributed in phase 1)  
  
Distribution continued in phase 2.
- **3-D Modified Snare Models**  
(Constructed and distributed to sporting goods stores, provincial wildlife division's district offices, several community colleges, the university, and timber industrial partners in phase 1)  
  
In phase 2, it was decided these models were too cumbersome and could be adjusted improperly to convey the wrong message, so they were recalled.
- **2-D Modified Snare Models**  
As a result of the failed 3-D models, a new 2-D model was developed and produced for the edukits (explained later). These models demonstrate and explain how to successfully set the modified snare to catch the snowshoe hare while allowing the ensnared marten to escape without serious injury.

- **Planning Session**

In June 2000, the PMES held a strategic planning session in central Newfoundland to discuss the approach to be taken when giving educational presentations regarding the Newfoundland pine marten.

- **Modified Snare Pamphlet (see Appendix 2)**

(During phase 1, a modified snare pamphlet was designed)

In phase 2, the modified snare pamphlet was revised, edited, printed and distributed. It explains what a modified snare is, how to set the snare (step-by-step), how to release a marten from the snare if it is not able to release itself, where the snare must be used, and the legislation and penalties which result from not using a modified snare in designated areas. 5,000 copies were printed and distributed to sporting goods stores and other establishments selling modified snare coils and small game hunting licences.

(It should be noted that government legislated a third mandatory modified snaring area in the Red Indian Lake area, in fall 2000. Previously legislated areas include: Northwest Grand Lake and an area to the west of Terra Nova National Park.)

- **Public Exhibitions**

The Western Newfoundland Model Forest, Newfoundland pine marten display was set up at two exhibitions during phase 2. Items displayed included: the 3-D and 2-D modified snare models, a mounted pine marten, a live trap, small mammal traps, and a radio collar. Pine marten pamphlets, brochures and posters were also available. Additionally, a TV/VCR was continuously running the CBC documentary video, 'In the Name of the Pine Marten' and the Department of Natural Resources Wildlife Division video, 'The Modified Snare'. The display was set up at the Humber Valley Agricultural, Home and Handicraft Exhibition in Deer Lake, September 15<sup>th</sup> & 16<sup>th</sup>. Over 3000 people, including 1000 students, attended the exhibition during the two day show. As well, the same display and information was exhibited at the Port au Port Agricultural Fall Fair, September 30<sup>th</sup> & October 1<sup>st</sup> where over 1400 people attended.

- **Good News Articles**

In phase 2, five pine marten 'good news' articles were written - four articles were selected and distributed to 18 newspaper and magazine publishers in the province. The articles selected were titled:

Marten General Information and Facts; Pine Marten Breeding Program; Pine Marten Recovery Team; and Public Support for New Snaring Methods.

- **Modified Snare Boundary Descriptions & Maps** (see Appendix 3)  
(In phase 1, the PMES supported the sporting goods vendors by providing them with 'shelf talkers' which conveyed a variety of messages encouraging store patrons (potential snarers and trappers) to consider the plight of the endangered marten in their trapping activities.)

In phase 2, the PMES continued to support vendors selling small game licences and modified snare coils by providing them with 8<sup>1/2</sup> X 11 color maps outlining the modified snaring areas as well as a written description of the exact boundary locations. A number of modified snare pamphlets were also sent to the vendors to be displayed prominently with the map and boundary descriptions.

- **Edukits** (see Appendix 4 for edukit contents)  
(During phase 1, it was recommended that in educating the public on the Newfoundland pine marten, a consistent message should be delivered. As a result, it was suggested that a uniform, consistent educational kit should be developed, pulling together all tools currently being used in the province. These edukits were to consist of games, slides, photos, activities, brochures, etc. aimed at different educational levels.)

During phase 2, twenty-one Newfoundland pine marten edukits were put together including various marten information and materials to be delivered to the wildlife offices and agencies who play a role in marten education in the province (see Appendix 3 for a list of agencies to receive an edukit).

- **Modify the Modified Snare Contest** (see Appendix 5)  
A 'Modify the Modified Snare Contest' was initiated by the Inland Fish and Wildlife Division of the DFRA (one of the PMES partners). The purpose of the contest was to find alternatives to the current modified snare which traps rabbits but allows marten to escape. The contest was advertised in the Newfoundland and Labrador Hunting and Trapping Guide 2000-2001.
- **Newfoundland Sportsman Article** (see Appendix 6)  
The September/October 2000 edition of the Newfoundland Sportsman magazine featured an article titled, "Hunters Can Help the Recovery of the Endangered Newfoundland Marten" written by John Gosse, Conservation biologist (a member of the PMES).

#### **4.0 An Assessment of the Success in Achieving the Project's Objectives**

Throughout phase 1 and 2 of this project the PMES and the Pine Marten Education Assistant have been successful in meeting its objectives. Not only has the profile of the Newfoundland pine marten and its current situation been enhanced through various public displays and discussions, but also a variety of tools have been produced which can be utilized in the long term to educate students and the general public. An increased understanding of the species itself, its role in the ecosystem, and the impacts of habitat loss and accidental trapping will encourage a more judicious approach to the preservation of the pine marten.

Support given to local store owners in their marketing efforts of the modified snare are being very well received. Marten brochures, shelf talkers, 3-D modified snare models, modified snare pamphlets and pictorial boundary maps and boundary descriptions have provided an informational basis for retailers to inform and educate their clientele (trappers and snarers) in the proper use of the modified snare, the rationale for its use, where exactly one must use the modified snare and the penalties associated with non-compliance of the modified snaring legislation.

#### **5.0 The Conservation Significance of the Project**

It is anticipated that the results of this pine marten education project should significantly affect the future viability of this species. Through an increased understanding of the species itself and the impacts that human use of the forest pose, accidental death of the pine marten can be reduced.

Educational materials produced during this undertaking, such as the pine marten brochure and poster; the modified snare pamphlet; the 3-D & 2-D modified snare models; shelf talkers; and the edukits will be used in the long term to promote the conservation message and raise the level of knowledge and understanding of the Newfoundland pine marten.

The Western Newfoundland Model Forest has recently developed local level indicators of a sustainable forest management to ensure our forests are being managed sustainably. The population of the Newfoundland pine marten is one of the key parameters measured in this framework to determine if we are maintaining viable populations of this native species. The ultimate impact of this project will be to heighten the profile of this endangered species to a level where conservation efforts will be understood and accepted by forest users.

### **6.0 The Future of the Pine Marten Education Project - Steps to be Taken - Phase 3**

The Pine Marten Education Sub-committee has identified a number of directions in which this project should move to ensure its conservation message is heard, understood and has a positive impact. These directions include:

- Continued emphasis on the promotion of the modified snare and its use with the goal of decreasing accidental mortality in pine marten populations.
- Promotion of advancements in the province of Newfoundland and Labrador which see the survival and population increase of marten, i.e. establishment of the Pine Marten Reserve in Little Grand Lake area, establishment of modified snaring areas, etc.
- The review of the modified snare design and research on a new, improved model.
- Development of a teacher's manual which will link the edukit material to the existing school curriculum.
- Develop and present a 'Train the Trainer' workshop to educate persons responsible for delivering the pine marten message in Newfoundland using the edukit i.e. DFRA Wildlife Officers .

### **7.0 Funding Support**

Several funding sources were accessed to provide funding for this project for the period of April 2000 to March 2001 (phase 2). \$10,000 was received from the World Wildlife Fund and \$5000 was received from the provincial Department of Forest Resources and Agrifoods. An additional \$3,237 was deferred revenue from 1999-2000 contributions.

A proposal was submitted and approved by Human Resources Development Canada for a four month Pine Marten Education Assistant position (November 1999 - March 2000) for \$7,980. In March 2000, when the original HRDC contract was up, it was amended to include a further 8 months (April - November 2000) for \$11,789. These contributions were received to employ an individual who would concentrate efforts on educating the general public on the endangered pine marten.

The second individual hired under the contract with HRDC began work on the project in April 2000, however, left the position in July to take another position more related to her education. A third individual was hired under the same contract for the same position in late August until

early November 2000. This individual continued to work on the project until December 31, 2000 under other funding.

## 8.0 Budget

The attached breakdown details the revenue and expenditures for the Pine Marten Education Project for the period of April 1, 2000 to March 31, 2001. This revenue breakdown is based on funds committed and/or received. Expenditure projections are based on actual expenditures to December 31, 2000 and projections to March 2001.

### Revenue

World Wildlife Fund	\$10,000	
Dept. of Forest Resources & Agrifoods	5,000	
Human Resources Development Canada	11,780	
Deferred Revenue 1999-2000 (WWF & DFRA)	3,237	
<b>Total Projected Revenue</b>		<b>\$30,017</b>

### Expenditures

Salaries and Benefits	\$21,275	
Materials and Supplies	2,000	
Travel & Accommodations	2,000	
Advertising	2,000	
Printing Promotional Material	1,500	
<b>Total Projected Expenditure</b>		<b>\$38,775</b>

**Balance Remaining** **\$1,242**

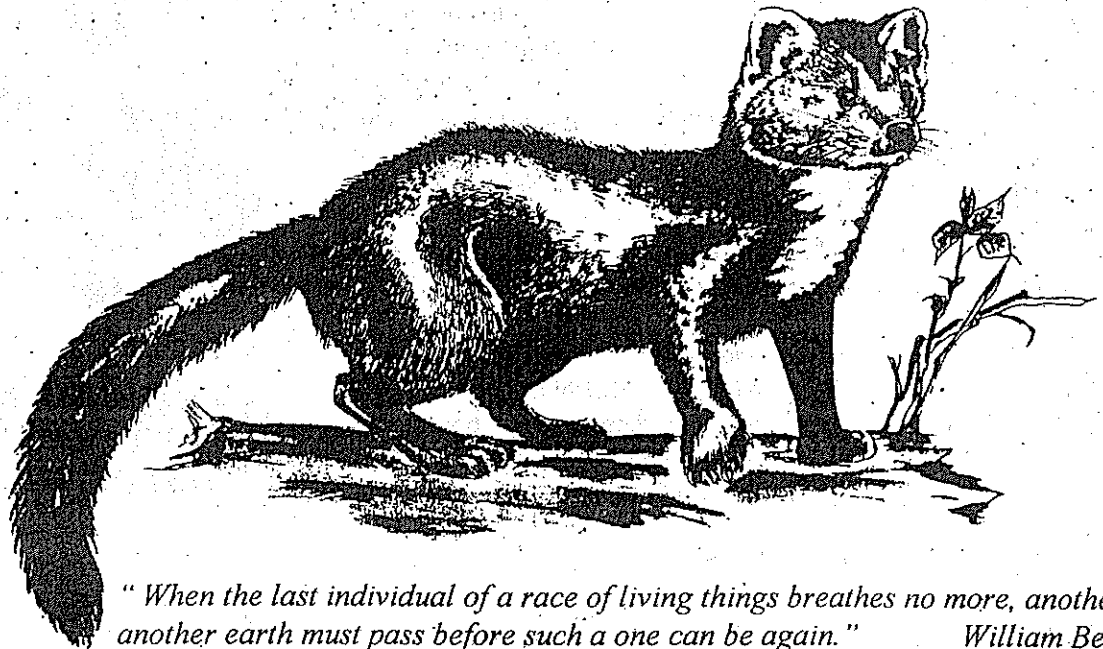
## 9.0 Conclusion

This project has been a success in that it has met its goal and objectives. A number of educational materials have been developed and delivered to the domestic snaring and trapping community, students, front line forestry workers and the general public. As a result of the production and distribution of the Newfoundland pine marten posters, brochures, and pamphlets; modified snare displays; public exhibitions; modified snaring information available in stores; and the development of the pine marten edukits, the general knowledge of the pine marten and modified snaring areas and legislation has been raised.

**Appendix 1**

# Newfoundland Pine Marten

## A Vanishing Animal



*"When the last individual of a race of living things breathes no more, another heaven and another earth must pass before such a one can be again."* William Beebe, Scientist

### DID YOU KNOW?

That threatened means: Any native species of plant or animal that might become endangered unless people help it to survive.

That endangered means: Any native species of plant or animal that might become eliminated throughout all or a significant portion of its range due to human action.

That the list of threatened and endangered species is compiled by COSEWIC (Committee on the Status of Endangered Wildlife in Canada) and includes mammals, plants, reptiles, amphibians, fish and plants.

### GENERAL DESCRIPTION

Few people have ever seen an American marten (locally known as the pine marten or marten cat) on the island of Newfoundland. This is because there are very few left to be seen. The species was listed as *threatened* in 1986 and *endangered* in 1996 due to declining numbers. It is estimated that about 300 remain on the island.

About the size of a small housecat, the marten has a long, slender body, a small head with a short, pointed muzzle, large rounded ears and dark brown eyes. Dark brown fur, a paler head and yellowish-orange patch on the throat and chest distinguish the marten from others in the mink/weasel family. In summer, the marten's coat becomes lighter as it sheds its winter fur. New fur growth begins in late summer and is completed by late October. Its legs are short, but the feet are large and furred, complete with sharp claws which help the marten climb trees. Males have an average length of 50 to 63 cm (20 to 25 in.) including a 17 cm (7 in.) tail. Their average weight is 1100 g. (2.4 lb.). Females average 46 to

56 cm (18 to 22 in.) including a 15 cm (6 in.) tail. average weight is 750 g (1.6 lb.).

The marten is part of the Mustelid family which includes wolverine, otter, skunk, mink and weasel. Both sexes have two types of scent glands: the anal gland, located under the tail and the abdominal gland found under the skin of the belly. Martens drag their bellies over logs and vegetation using the abdominal gland to mark their territories.

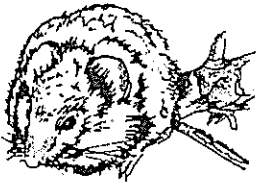
Native to the island, martens have probably resided here since the last glaciation over 10,000 years ago. Canadian island geography has meant that the gene pool has been isolated. This has probably resulted in a race of martens not found anywhere else in the world.

There is some debate as to whether the island population is a separate subspecies. Studies on skulls and DNA are currently underway to try to resolve the debate. As the debate continues, one thing is certain: the loss of the Newfoundland marten would represent a loss of genetic diversity which would further reduce the biodiversity of Canadian fauna (animal life).

## DID YOU KNOW?

The most important prey of the Nfld. pine marten is the meadow vole, the only small rodent native to the Island. Snow insulates and protects small animals like the voles from sub-zero temperatures. A cold winter with little snow cover can kill voles resulting in a decrease in the already jeopardized marten population.

Meadow Vole



## DID YOU KNOW?

In Newfoundland, the natural predators of marten include lynx, great horned and hawk owls and red fox.



## THE CONTINUING DECLINE

Historical references to marten were reported from most parts of the island and date back to at least 1795. In 1830 to the 1840's, hundreds of pelts were shipped annually from the island. The major factors contributing to their early decline include habitat loss and over-trapping. Their keen sense of smell and great curiosity allowed trappers to take them regularly until declining numbers resulted in the permanent closure of the trapping season in 1934.

In an effort to help marten expand to new areas, they were introduced to Main River in 1976 and 1978, to LaPoile River Valley and Sceviour Island in 1975, and to Notre Dame Bay in 1976 and Terra Nova National Park (TNNP) in 1982, 1983, 1998 and 1999. It appears that most of these introductions were unsuccessful. The introduction to Main River and TNNP may have been the exceptions.

## PRESENT STATUS

In Canada, marten are no longer found on Prince Edward Island, or in the developed areas of southern Ontario and Quebec. In Nova Scotia, where numbers are low, they are completely protected. Elsewhere in Canada, there are enough marten to allow controlled trapping. In the United States, they can be found in Maine, New England states, the Great Lakes states, in some western states, and as far south as northern New Mexico and central California. In Labrador, marten are found in most forested areas, where they are trapped for their pelts. On the island of Newfoundland, viable populations are found in areas surrounding Little Grand Lake, Red Indian Lake and Main River on the west coast. On the east coast, there is a small population in the Terra Nova National Park area.

In the early 1980's, it was estimated by the Provincial Wildlife Division that there were between 630 and 875 marten on the island. Recent data indicates that there are now about 300 marten on the island. However, marten are still common in Labrador.

This map shows the current distribution of Newfoundland marten. The highest concentration is in the lower portion of the shaded area near Little Grand Lake and Red Indian Lakes.



## HABITAT

Marten appear to prefer habitat with a structure often associated with an over-mature forest. There they find older trees with a number of dying or dead trees scattered on the forest floor or leaning on other trees. They appear to prefer thick shady woods with a dense canopy and may avoid large openings or clearings. For denning and nesting sites, marten use hollow trees, stumps, logs and rock crevices.

In its first year, a young marten may travel long distances searching for a place to call its own. Once found, the established territory is defended against other marten of the same sex. In good habitat, where food is plentiful and easily found, a female may have a territory approximately 15 km<sup>2</sup>, while a male may have an area double that of females.

## FOOD

Marten are carnivores, or meat-eaters, whose main foods are small animals such as meadow voles, shrews, snowshoe hares, red squirrels and birds. They also feed on berries, bird eggs, insects and carrion when available. Marten hunt during both night and day, and will rest in trees or dens. They do most of their hunting on the ground, but are agile tree climbers.

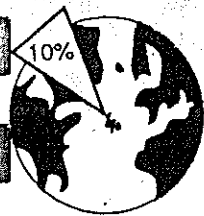
## DID YOU KNOW?

Most rabbit snares are now made of stainless steel, which does not corrode. Left in the forest after the season closes, they continue to kill marten.



## DID YOU KNOW?

The World Commission on the Environment called on all nations to strive to protect at least 10% of their natural environment.



Marten stay active all winter. They hunt small mammals under the snow by using natural crevices around stumps or fallen trees. When the forest is clear-cut, the snow layers change, eliminating the natural avenues to their winter food source.

## BREEDING BIOLOGY

Marten reach adult size at about three and a half months of age. Females are usually over two years old before they have their first litter. Generally loners, they come together only briefly during the mid-summer breeding season, often mating with several partners. Birth occurs 220-276 days after fertilization. For most of that time, the egg is in a resting state, known as *delayed implantation*. The active pregnancy lasts only about one month.

The kits are born in March/April, weigh about one ounce and for the first two to three weeks they are blind, deaf and naked. The mother's den usually consists of an underground crevice or cavity. Sometimes, marten will take over a squirrel's nest or even use a woodpecker's nest in an old snag tree.

## RESEARCH AND MANAGEMENT

The Inland Fish and Wildlife Division established a Marten Study Area in 1973 around Little Grand Lake on the western portion of the Island to protect marten from accidental snaring and trapping. In 1999, the Government of Newfoundland and Labrador announced its intention to protect the habitat in the area by establishing a system of reserves, which now includes Glover Island. All trapping (except for beaver) and snaring is prohibited in the area to protect marten from accidental capture. Within this area, studies are being conducted to learn more about the marten's food habits, reproduction, age structure, habitat choice and overall health.

Outside protected areas, marten often get caught in rabbit snares and other traps. These snares and traps often result in death for the marten. In several areas where marten are trying to recover, the use of modified rabbit snares and modified traps is mandatory. The modified rabbit snare will snare rabbits and allow marten to escape. The modified trap is also designed not to capture marten.

The Inland Fish and Wildlife Division, in cooperation with the Canadian Forest Service, Corner Brook Pulp and Paper, Abitibi-Consolidated and the Western Newfoundland Model Forest is currently funding projects that will provide answers to help marten. One of these projects is a 5 year study, the largest marten project ever conducted in Newfoundland, and involves the Little Grand and Red Indian Lake populations. The results from this project will provide needed information on issues such as home range sizes, impacts of trapping and snaring, and the habitat needs of the Newfoundland marten.

Since the re-introduction of eight marten in the early 1980's, Terra Nova National Park has been involved in studying marten. Since 1996, Terra Nova National Park has been working in partnership with the World Wildlife Fund and the Inland Fish and Wildlife Division. Marten have been successfully live-trapped in the park. These marten were outfitted with radio-collars and monitored in an effort to determine the size and distribution of their home ranges and preferred forest types. Evidence of breeding success has been determined from this monitoring effort.

Despite live-trapping efforts in and outside of the Park, all trapped marten were from within the national park. The home ranges of these marten fall almost entirely within the park boundaries. The fact that no marten were trapped outside the park illustrates the value of protection to the Newfoundland marten. In order to establish a healthy population of marten in this region of eastern Newfoundland, it may be wise to extend management of marten beyond the park.

## MARTEN RECOVERY PLAN

A Newfoundland Marten Recovery Team is in place. The team's goal is to develop and monitor the implementation of a plan which will restore the marten population to a point where it is no longer considered in danger of extinction. Some of the issues dealt with include habitat requirements and protection, accidental snaring and trapping and captive breeding. In 1995, as part of the recovery plan, a Newfoundland marten breeding program began at Salmonier Nature Park. Four females and two males were taken in the vicinity of Red Indian Lake in September of that year to be used as breeding stock. In April of 1996, three litters

## DID YOU KNOW?

Worldwide loss of habitat (not poaching or hunting) is the largest contributing factor to the loss of wildlife. Other causes include: environmental pollution, disruption of migration routes and breeding behaviours, and illegal trade of protected animals and animal parts.

totalling seven young were born to these wild-mated females. There were no additional litters produced in 1997 or 1998. In 1999, the first captive bred marten litter was born at Salmonier Nature Park. It is anticipated that any young born at the Park will be used to re-populate suitable unoccupied marten habitat or will be recruited to the captive breeding program. Additional animals have been added to augment the breeding program.

## SOMETHING TO THINK ABOUT

Habitat loss, rabbit snares, accidental trapping, disease, and the possible scarcity of food are all thought to hinder marten recovery. Habitat which is a key component to the survival and recovery of the marten must be taken into consideration and sufficiently protected when planning and carrying out wood harvesting operation in areas frequented by marten or in areas slotted for their recovery. Suitable forested areas need to be reserved as marten refuges, and additional areas need to be managed to ensure that components of mature forest are always available at a landscape level.

The accidental capture of marten in traps and snare set for other animals may be limiting their expansion into other areas. For example, of the six wild martens captured for the breeding program at Salmonier Nature Park, two had rabbit snares embedded in the bodies. One died as a result of the embedded snare. Of the six live trapped at Terra Nova National Park two had snare wire marks on their abdomens. In 1998 two radio-collared martens died in the Terra Nova area. One death was confirmed due to a rabbit snare; the cause has not been determined for the second case.

Newfoundlanders have a unique opportunity to manage the forest for the longterm sustainability of all species including the marten. The marten is one of only fourteen mammals that are native to Newfoundland. By comparison, Nova Scotia has forty land mammals. We must ensure that future generations have a chance to know this unique little mammal of the Newfoundland forest.

On a global scale, our challenge is to find room on our beautiful planet for all living creatures, as all creatures are needed to help keep our planet healthy.

## WHAT YOU CAN DO:

- \* Learn about the Newfoundland pine marten.
- \* Inform others about the plight of the marten.
- \* If you use modified snares, check them daily, and remove them at the end of the season.
- \* Save trees and marten habitat by not wasting paper; try reusing and then recycling paper.
- \* Join a local wildlife, natural history or conservation group.
- \* Write letters to public officials to let them know that protecting endangered species is important to you.
- \* Report any accidentally trapped marten to your nearest conservation official.



Credits: Inland Fish and Wildlife Division, Government of Newfoundland and Labrador, 1999.  
Initial text by Lucy O'Driscoll, illustrated by Ralph Jarvis.



To help protect species which depend on our forest resources for their survival, this brochure is printed on recycled paper.

**Appendix 2**

## Why should I use modified snares?

Modified snaring areas are important marten habitat and expansion areas for existing marten populations.

Using a modified snare reduces the chance of capturing an endangered pine marten.

Accidental trapping and snaring, as well as habitat loss and disease, are believed to be contributors to the pine marten's decline in Newfoundland.



## Will I be fined if I don't use a modified snare in designated areas?

Yes. Any person found guilty of failing to use a modified snare in the required areas is subject to a fine not exceeding \$500.00 and in default of payment to imprisonment for a period not exceeding six months.

### Prepared by:

Western Newfoundland  
Model Forest Inc.

### Sponsored by:

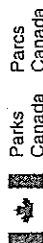
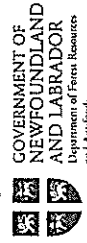
Western Newfoundland  
Model Forest Inc.

Department of Forest Resources  
& Agrifoods, Government of  
Newfoundland and Labrador

Canadian Wildlife Service

World Wildlife Fund Canada

Canadian Millennium  
Partnership Program



# THE MODIFIED SNARE



Photo By: J.D. Taylor

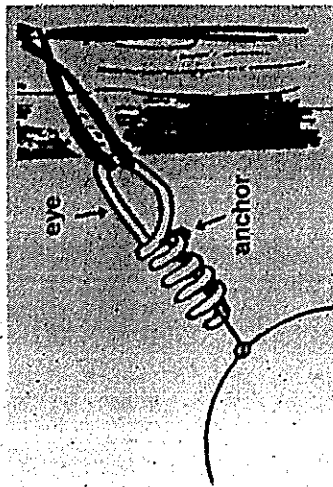
*Help protect the  
endangered  
Newfoundland  
Marten.*

*For more information, please contact  
your nearest Forest Resources &  
Agrifoods office, or:*

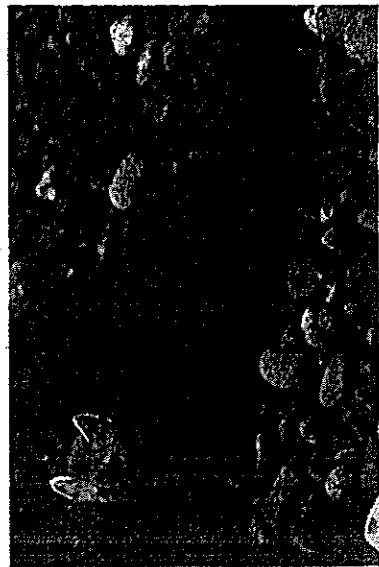
**WESTERN NEWFOUNDLAND MODEL FOREST INC.**  
Forest Centre, University Drive  
P.O. Box 68  
Corner Brook, NF  
A2H 6C3  
Tel.: 709-637-7300  
[www.wnmf.com](http://www.wnmf.com)

## What is a modified snare?

The modified snare consists of a five-coil spiral and a traditional stainless steel snare wire. The coil device responds to the animals' instinctive behaviour when snared, permitting capture of snowshoe hare and other small game while allowing the endangered pine marten to escape.



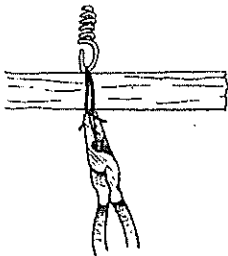
Coils are sold at many sporting goods stores throughout Newfoundland. For a complete list of retailers, please contact the nearest Forest Resources & Agrifoods office.



## How to set a modified snare.

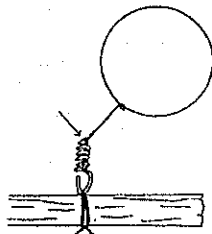
### Step #1

Using heavy wire, attach the coil device firmly to a tree located next to the run. Wrap the wire two times through the eye of the coil for stability.



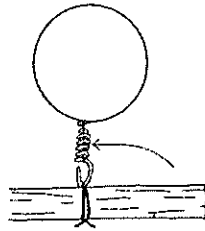
### Step #2

Make a small loop at the anchor end of the snare wire and place the loop on the end of the coil device.



### Step #3

Rotate the snare loop through the inner portion of the coil by winding it around the coil. To work properly, the portion of the snare wire between the anchor end and the snare loop must be inside the coil.



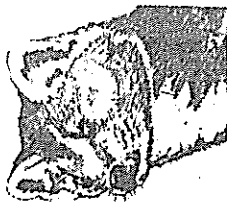
*Note: The snare should not be tied to the coil in any other way.*



## How to release a marten from a modified snare.

**Step 1:** Exercise caution when approaching the marten. It will screech and face you in an effort to defend itself.

**Step 2:** Carefully place a jacket or blanket over the marten to help settle the animal.



**Step 3:** If possible, remove the snare by cutting the wire near the eye of the coil. Otherwise, remove the snare from the anchor.

Don't worry if the wire is still on the marten's body - the marten will shed it.

## Where are modified snares required?

Modified snares are mandatory in three areas of the island, including the Northwest Grand Lake areas, Terra Nova area and Charlottetown enclave. Modified snare use in the Red Indian Lake area is subject to the outcome of public hearings and legislation (September 2000). These areas have known marten populations.

### Appendix 3

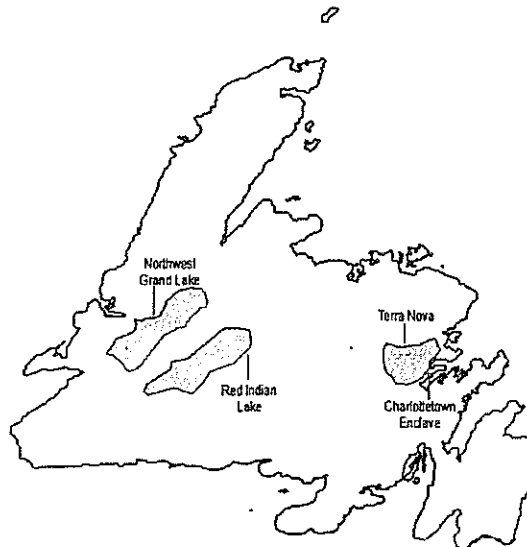
# Modified Snaring Boundary Descriptions

## Northwest Grand Lake Area:

beginning at the intersection of the Trans Canada Highway (TCH), Route 1 and Camp 33 Road; thence following Camp 33 Road to the southwest extremity of Grand Lake; thence following the north shoreline of Grand Lake in a northeasterly direction to the Humber Canal; thence following the south bank of the Humber Canal to its intersection with the TCH at Deer Lake; thence following the TCH in a southwesterly direction to the point of commencement.

## Red Indian Lake Area:

All that area of the Island of Newfoundland bounded by a line beginning at the mouth of Victoria River and Red Indian Lake; thence following the north bank of Victoria River in a southwesterly direction to Victoria Lake; thence following a mid-way line between the north and south shoreline of Victoria Lake to the mouth of a small river entering the said lake at its southwestern extremity; thence following the north bank of said river to a point opposite the mouth of a brook flowing from Peter Strides Pond; thence following a straight line in a northerly direction to the intersection of the Pine Marten Study Area (PMSA) and Lloyds River at the mouth of the brook flowing from Cormack Lake; thence following the PMSA boundary along Lloyd's River in a northeasterly direction to the mouth of Otter Pond Brook; thence following the western bank of Otter Pond Brook, the western shore of Otter Pond and the west bank of Otter Pond Brook to Lake of the Hills; thence following a straight line in a northwesterly direction to UTM coordinates 471,250 metres east and 5,379,000 metres north; thence following a straight line in a northeasterly direction to its intersection with Clench Brook at UTM coordinates 500,875 metres east and 5,401,000 metres north; thence following the south bank of Clench Brook to its mouth on Red Indian Lake; thence following a straight line in an easterly direction to the point of commencement.



## Charlottetown Enclave:

All that area of the Island of Newfoundland bounded by a line beginning at the intersection of the Terra Nova National Park boundary and the north shoreline of Clode Sound, Bonavista Bay at UTM coordinates 720,554 mE and 5,367,279 mN; thence following the TNNP boundary in a northerly direction to UTM coordinates 720,507 mE and 5,370,209 mN; thence following the TNNP boundary in a northeasterly direction to UTM coordinates 721,554 mE and 5,371,792 mN; thence following the TNNP boundary in a southeasterly direction to its intersection with the north shoreline of Clode Sound, Bonavista Bay at UTM coordinates 722,550 mE and 5,369,850 mN; thence following the shoreline of Clode Sound, Bonavista Bay in a southwesterly direction to the point of commencement.

## Terra Nova Area:

All that area of the Island of Newfoundland bounded by a line beginning at the intersection of North West River and the Terra Nova National Park (TNNP) boundary at UTM coordinates 5,365,250 mN and 706,250 mE; thence following the north bank of the said river in a westerly direction to UTM coordinates 5,346,625 mN and 664,125 mE; thence following a straight line in a northwesterly direction to UTM coordinates 5,353,125 mN and 663,750 mE; thence following a straight line in a westerly direction to the northeastern extremity of Kepenkeck Lake; thence following a straight line in a northwesterly direction to the eastern extremity of Newton's Lake; thence following a straight line in a northerly direction to the eastern extremity of South West Pond; thence following a straight line in a northeasterly direction to the western extremity of Dead Wolf Pond; thence following the southern shoreline of Dead Wolf Pond to the mouth of a small stream entering the said pond at its eastern extremity; thence following this stream to its headwaters pond; thence following a straight line for approximately 500 metres due east to an unnamed pond; thence following a stream exiting this pond at its southeastern extremity; thence following this stream in a southeasterly direction to its outflow in Riverhead Brook; thence following this brook in an easterly direction to its mouth in Gambo Pond; thence following the north shore of Gambo Pond to Gambo Brook; thence following the west bank of Gambo Brook to its intersection with the Trans Canada Highway (Route 1); thence following the TCH in an easterly direction to its intersection with the TNNP boundary; thence following the western boundary of TNNP in a southerly direction to the point of commencement.

## Newfoundland Marten Edukit Contents:

- 30 Photocopies of:
  - Coloring Sheets
  - Activity Booklet
  - Marten Quiz
  - (originals found in binder)
  
- 1 Radio Collar
- 2 Coils
- 1 Snap Trap
- 1 Small Mammal Trap
- 1 Live Cage
- 1 2-D Modified Snare Model
  
- 1 Model Forest CD (curriculum guide and index found in binder)
- 1 Model Forest Video
- 1 Image Bank CD of Marten Photos
- 10 Marten Posters
- 100 Modified Snare Pamphlets (approximately)

### Binder Contents:

- Good News Articles Booklet
- List of Edukit Contents
- Sample Letter to CBC Requesting Use and Purchase of Documentary
- Presentation Outline
- Pine Marten Brochure
- Color Map of Newfoundland showing Marten Distribution
- Color Map of Newfoundland showing Modified Snaring Areas
- Modified Snare Pamphlet
- Modified Snaring Boundary descriptions
- List of Websites featuring the Newfoundland Marten
- Coloring sheet of Pete the Pine Marten (original)
- Marten Activity Booklet (original)
- Marten Quiz (original)
- List of Marten slides with explanations of each slide
- Marten Slides
- Newfoundland Marten Game
- The Path of the Pine Marten
- List of Marten Reports Available
- Model Forest "Exploring Our Forest" CD Curriculum Guide and Index

### Departments/ Agencies Receiving Edukits Include:

- \* Dept. Forest Resources & Agrifoods in: Bishop's Falls; Port Saunders; St. Georges; Pasadena; Milltown; Clarenville; Gander; Springdale; Lewisport; St. John's; Gambo and Massey Drive
  
- \* Terra Nova National Park
- \* Salmonier Nature Park
- \* Gros Morne National Park
- \* Western Newfoundland Model Forest
- \* World Wild Life Fund

# Modifying the Modified Snare

The Inland Fish and Wildlife Division would like to take advantage of the considerable ingenuity of the province's residents in helping them improve the current modified snare in use in several areas of the province. As most rabbit snarers are aware, traditional snowshoe hare snares are not selective and can capture non-target species. Accidental captures of the endangered Newfoundland marten in snares is an ongoing concern in this province. To reduce accidental captures of marten and aid their recovery, several areas on the island that have known marten populations have been closed to traditional snaring and some trapping activities. As an alternative to closing these areas completely to snaring, the Department of Forest Resources and Agrifoods implemented the Modified Snaring/Trapping Program, which allows hunters and trappers to maintain a modified form of their activities, while providing a measure to minimize the accidental captures of marten.

The current modified snare was developed through research supported by the Inland Fish and Wildlife Division and carried out at the Alberta Research Council in 1991/92. The researchers designed a modified snare based on studies of hare and marten behaviour when caught in a traditional snare. They observed that hares jumped back and forth in the snares, while marten dropped and rolled around on the ground. Various modified snare models were tested, with the most successful version being a traditional snare attached to a 5 coil anchor. It was found that hares were unable to escape from this device, while the rolling behaviour of marten allowed them to twist the snare off the anchor. All marten tested in this study dropped the snare wire within 24 hours of escaping the coil. The 5 coil device was also field tested by the Inland Fish and Wildlife Division prior to its use in Newfoundland's modified snaring program. The modified snare was found to be approximately 75% as effective as a traditional snare was in catching hares but took 2 to 3 times as long to set. Since implementing the modified snare, the Inland Fish and Wildlife Division has been trying to develop improvements in the current design.

The modified snare has been in use by hunters in three areas: Northwest Grand Lake Area, Terra Nova Area and Charlottetown Enclave Area. This fall, the modified snaring program will be implemented in the Red Indian Lake area of central Newfoundland

(see page 26)

## Format of Submissions

Design submissions for the modified snare may include physical models (preferred), drawings and/or explanatory text. The design must be original and should contribute to an improved management strategy such that recreational hare snaring activities can be maintained while the risk of accidental marten captures is reduced or eliminated. All submissions remain the property of the Inland Fish and Wildlife Division. Three prizes of \$500, \$300 and \$200 will be awarded as first, second and third place prizes, respectively. The Inland Fish and Wildlife Division will seek the services of an independent reviewer to evaluate all submissions prior to the awarding of prizes.

*"Three prizes of \$500, \$300 and \$200 will be awarded as first, second and third place...."*

## Deadline

Deadline for receipt of submissions is December 31, 2000 to the attention of:

Sue Forsey  
Small Game Biologist  
Inland Fish and Wildlife Division  
Building 810, Pleasantville  
P.O. Box 8700  
St. John's, NF  
A1B 4J6



# Hunters Can Help the Recovery of the Endangered Newfoundland Marten

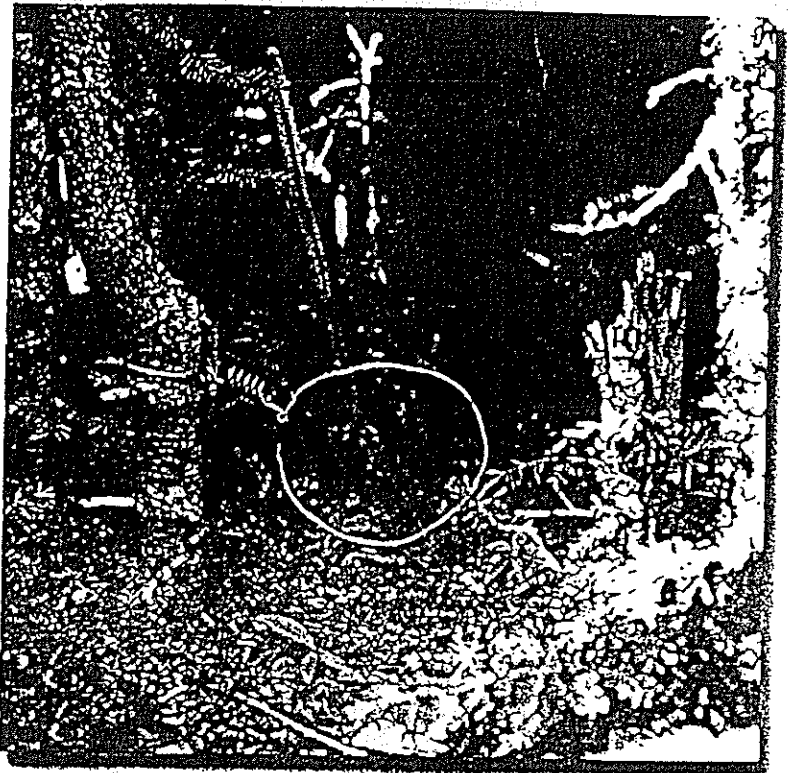
By John Gosse  
Conservation Biologist

Rabbit snaring is an enjoyable recreational pastime for many Newfoundlanders. Every year, hunters from across the province look forward to the crisp days of autumn to 'tail a few slips' and to boil up along their favourite brook or trail. Unfortunately, rabbit (snowshoe hare) snaring is having a negative impact on our native population of pine marten in certain areas of the province. Marten often use rabbit 'runs' in search of food or for ease of travel in dense brush and sometimes become entangled in snares where they usually perish. In the early 1980's it was estimated that there were about 800 marten on the island of Newfoundland. Two decades later the number is down to about 300, and marten are now listed as an endangered species. Accidental death from snaring alone has not caused this population decline. Rather, it is the result of the combined impacts of habitat loss from forest harvesting, snaring and trapping, and disease, and it is often debated as to which of these factors have the greatest impact.

Several years ago, the provincial Department of Forest Resources and Agrifoods implemented a modified hare snare to be used in areas where marten are found. The modified snare, which is designed to retain snowshoe hares and allow marten to escape, takes advantage of the differences in the behaviour of each species when caught in a snare. Hares pull back in forth against the snare whereas marten drop to the ground and roll forwards and backwards. The modified snare differs from a traditional snare in that the end of the snare wire is wound onto a coil which is then securely fixed to a tree. The marten's rolling motion causes this snare to unwind from the coil on the modified snare and they are able to escape. This system was tested in an experimental setting in Alberta and all marten caught in a snare that was attached to the coil were able to escape. Promoters of the modified snare fully acknowledge that the new design has faults. Compared with the traditional snare it does take a little more time to set up and the occasional rabbit may escape. However when used properly, the modified snare is a much better option for hunters than closing an area down to snaring altogether. Other snaring designs are being considered that will hopefully improve on some of the problems with the existing modified snare.

A sentiment often expressed by some hunters is that they've never caught a marten in a snare or even seen one after many years in the woods, so why should they change their snaring habits? This is a valid question. Because there are so few marten on the island and they are widely dispersed, the chance of any one person catching a marten is very small. However, when there are maybe hundreds of snarers using a particular area throughout the season, the chance of a marten being caught in a snare is very high. We have to take the attitude that our actions, as individuals, do make a difference. Though not a game animal with an economic value, marten are an important species and we have a responsibility to protect this animal from extinction. This isn't to say that we should abandon traditional activities such as rabbit catching or wood harvesting, but we have to consider the consequences of our actions on other resources and modify our activities to minimize negative impacts.

Use of the modified snare is mandatory in several areas of the province where marten recovery is underway. These areas include Northwest Grand Lake, an area to the west of Terra Nova National Park,



and the Red Indian Lake area pending approval by the Department of Forest Resources and Agrifoods prior to the onset of the fall 2000 hunting season. For specific boundary descriptions where use of the modified snare is required and for instructions on how to set the modified snare, please see the 2000-2001 Hunting Guide published by the Department of Forest Resources and Agrifoods.

To learn more about the Newfoundland marten please visit the following website on the internet; [www.vmunix.com/~lmayo/](http://www.vmunix.com/~lmayo/)

### Other ways you can help:

- Encourage others to use the modified snare.
- If you capture a marten while using the modified snare report this to your nearest wildlife office. It is important to further assess how the coil performs in the field.
- Report sightings of marten to help researchers update the distribution of marten on the island. In eastern Newfoundland call John Gosse at 533-3184 or Joe Brazil at 729-3773, and in western Newfoundland call Lem Mayo or Bill Greene at 686-2071.
- Provide input on the modified snare and how the design can be improved

### Here's a list of vendors where you can purchase the modified coils:

Corner Brook Co-op gas bar	True Value Hardware, Clarendville
Barnes Sporting Goods, Corner Brook	Wiseman's Sales and Service, Milton
Schwartz Source for Sports, Deer Lake	Charlottetown Enterprises
Good Buddy Sports, Pasadena	Kean's Home Hardware, Glovertown
PJ's Grocery, Torbay	Pritchett's Grocery, Gambo
Goobies Ultramar	Needs Convenience, Gambo

**Agencies Participating in the  
Newfoundland Pine Marten Education Subcommittee:**

- ▶ World Wildlife Fund
- ▶ Department of Forest, Resources and Agrifoods, Wildlife Division
- ▶ Department of Human Resources and Development Canada
- ▶ Salmonier Nature Park
- ▶ Terra Nova National Park
- ▶ School District # 3
- ▶ Western Newfoundland Model Forest

