

How to Avoid Incidental Take Of American Marten

While Trapping or Snaring

Mink and other Furbearers.



The purpose of this information is to reduce injury and mortality to the Endangered American Marten population caused by trapping mink and/or other furbearers. Marten are similar in appearance and habits to mink, and their ranges overlap with other furbearer species, and with each other. Therefore, it is important for trappers to know how to distinguish marten from mink, to recognize their preferred habitat types, and to avoid capturing or harvesting marten. Trappers must also learn what to do if a marten is caught incidentally.

American marten

Current Status

Researchers speculate the current American marten (*Martes americana*) population on Cape Breton Island may be less than 50 animals. Consequently, in the summer of 2001, the marten population on Cape Breton Island was provincially listed as "**endangered**" under the Nova Scotia *Endangered Species Act*. Thought to be extirpated from the mainland, several marten re-introductions have been attempted. It seems these reintroductions have been successful, as there have been some very recent records of marten in southwest Nova Scotia. The status of the marten on the mainland is considered "data deficient," (meaning more research is required before giving it a designation). The harvesting of marten is not permitted in Nova Scotia.

Time is of the Essence

Small, localized populations, like the marten on Cape Breton Island, are vulnerable to *local extinction*. Factors such as inbreeding (a genetic effect), as well as habitat loss, accidental capture, starvation, and certain random events like disease, fire, and unusual weather events could eliminate the entire population. We must act now to ensure the future of the marten on both mainland Nova Scotia and Cape Breton Island.

Recovery Efforts

In 2001, a Nova Scotia Marten and Lynx Recovery Team was formed, consisting of scientists and resource managers from the Nova Scotia Department of Natural Resources, Parks Canada, Natural Resources Canada (Canadian Forest Service), StoraEnso, and local universities. This team is focussed on improving our understanding of marten, developing a recovery strategy and activities to conserve marten and their habitat in Nova Scotia. Presently, little is known about the marten population on Cape Breton Island or the mainland. Some basic questions remain unanswered: How many animals are there? Where are they located? What type of habitat do they require for survival? How genetically different is this population from neighbouring North American ones?

Stewardship is Key

Partnerships with local stakeholders such as trappers, landowners, and forestry operators are central to our efforts to conserve the marten. Due to the nature of the threats facing the marten, and because of the existing knowledge gaps, the information that you may have about marten numbers and past and present distributions could be highly valuable in helping to direct recovery efforts. Also, local community support to help minimize accidental marten deaths and further habitat degradation is crucial to ensuring the future of marten in Nova Scotia.

Threats to the Population

Decades of extensive unregulated harvest likely caused the near extinction of marten in Nova Scotia. Consequently, in the early 1900's the marten trapping season was closed. However, traps and snares legally set for other furbearers still occasionally catch marten. No accidentally captured have been reported from Cape Breton in recent years, but accidental captures may be affecting the marten population in southwestern Nova Scotia.

Currently, the lack of suitable habitat is the main threat facing the marten population on Cape Breton Island. The forested land on Cape Breton Island is severely fragmented, largely the result of forest insect invasions and subsequent salvage harvesting. The decline in the availability of large continuous tracts of forest has contributed to the loss of marten habitat, isolating individual marten from one another, and possibly limiting mating opportunities and increasing their risk of predation. Predation by hawks, owls, fishers, and foxes may also influence the health of a marten population.

Description

The American marten is a shy member of the weasel family similar in appearance to both the mink and fisher. All three animals are from the mustelid family and have long slender bodies and short legs. The marten and mink are both about the size of a house cat, and the fisher is slightly larger. All three species show sexual dimorphism, with the males being slightly larger than females (Table 1.)

Table 1. Approximate Sizes of Marten, Mink and Fisher

Species	Weight		Body Length	
	Male	Female	Male	Female
Marten	730-1300 g	680-800 g	50-65 cm	45-55 cm
Mink	680-1300 g	450-700 g	48-74 cm	40-53 cm
Fisher	3500-5000 g	2000-2500 g	90-120 cm	75-95 cm

The marten has glossy, light chocolate-brown fur with an orange patch on its chest and throat. Comparatively, mink fur is generally dark chocolate brown, with the darkest colour on the back. The underside of the mink is paler than the back, with considerable white, sometimes in patches, on the midline from chin to the base of the tail. Fisher fur is dark brown to nearly black with white-tipped hairs giving the animal a frosted or grizzled appearance. In addition, there are often irregular white patches on the chest and underside of the fisher.

The marten, mink and fisher all have broad, flat heads with sharp pronounced muzzles, and eyes facing forwards. Marten ears are quite visible and are much more obvious than the ears of either the mink or the fisher, whose ears are much more broad, rounded and low.

Marten (right and below) are characterized by their size, the chocolate coloured fur, orange throat patch and more noticeable ears compared to mink or fisher. Similar in size to mink, the marten is more arboreal in nature.



John Marriott



Similar in size to the marten, mink (above and left) fur is often darker and the ears are not as prominent. The mink is found more often near water and is considered semi-aquatic.



The fisher (above and right) shares the same forest habitat as marten, but is much larger and has a frosted or grizzled appearance. Fisher ears are less obvious than those of marten.



Sign

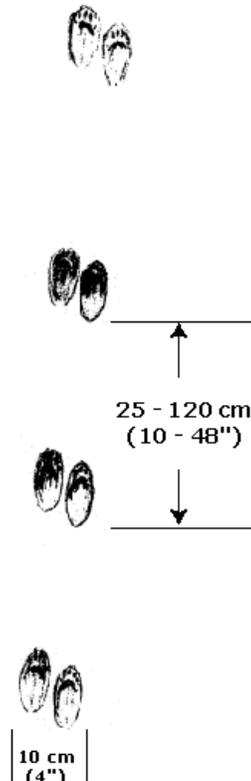
In winter, the soles of a marten's feet are covered with fur and the toes are not easily distinguishable in the tracks. Tracks are about 37 mm long and form two ovals that overlap by about one third. This happens because martens travel with a loping sort of gait, and the hind feet land in the tracks left by the front feet. Loping is common among mustelids, and it takes some practice to be able to distinguish the tracks of the various species. Unlike other weasels, it has semi-retractable claws that can be extended for tree climbing. (Although weasels have five toes front and back, the fifth toe seldom registers, nor do the claws.)

Fisher tracks are similar to mink's and American Marten's but larger. The prints are wider than long, with claws showing; 50 mm wide on dirt, to more than 50–67 mm on snow. Like marten, fisher tracks may end abruptly at base of tree. An important distinguishing characteristic, the toe pads in fisher tracks are distinct in snow while those of marten are more diffuse due to their heavily furred feet. The tracks of large male fishers can usually be distinguished by size. Tracks of male marten and female fisher can be difficult to discriminate as they have similar appearances and overlap in terms of size. Careful scrutiny involving back-tracking is often necessary to achieve a confirmation.

Front



Hind



Mink tracks are fairly round, 30–40 mm wide, and more than 50 mm in snow. A clear print may show heel pad, all 5 slightly webbed toes separately, and semi-retractile claws.

Marten scat is long, thin, and looks twisted and folded and tapered on both ends. Approximately 2.5 to 5 cm long and about 1 cm in diameter, marten scat are often deposited upon prominent logs or rocks, often lying in a semicircle. Mink scat is often dark brown or black, and roughly cylindrical. Approximately 12 to 15 cm long, mink scat are sometimes segmented, often with bits of fur or bone, and usually deposited on rocks, logs near water, and beaver lodges. Fisher scat is also about 12 to 15 cm long, dark, and roughly cylindrical, and often segmented. Fisher scat may show fur, bone, berries, or nuts. Scat with porcupine quills is almost always a sure sign of fisher.

Life History and Diet

Marten are primarily solitary animals. Female marten raise the young, and they form the only groups found in the wild. Males are aggressive and associate with the females only at breeding time. Marten are curious animals with ravenous appetites, and are often found at feeding stations in isolated areas. These characteristics lead to their easy capture in different kinds of traps and trap sets.

Marten typically mate in July, and bear two to six kits in early May of the following year. Juveniles reach adult size in about three and a half months, but they are cared for by the female until they disperse in late summer or early fall. Most marten reach sexual maturity when they are 2 years old, and bear their first litter near their third birthday.

Small mammals, such as red-backed voles and deer mice, are the main prey of marten. However, they will also take snowshoe hare, ruffed and spruce grouse, squirrels, insects, and even eat berries and fruit.



Deer Mouse



Red-backed Vole



Red Squirrel



Snowshoe Hare

Distribution and Habitat Preferences

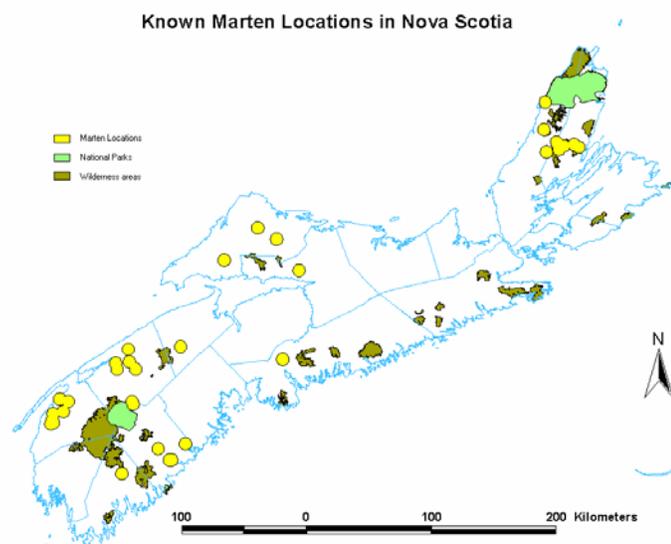
Historically, marten were widely distributed across Canada, including all of Nova Scotia. Today, there are two known populations of marten in Nova Scotia, the endangered Cape Breton Island population, and a known population in the Clare district of Digby. Additional northeastern populations of marten are found in Newfoundland, Maine, Quebec and New Brunswick.

North American range
of the American Marten
(*Martes Americana*)



The southwestern Nova Scotia marten population is, at least partially, a result of a release of animals by Parks Canada in the late 1980s and early 1990s. This re-introduction appears to have been successful as there have been many marten accidentally trapped in Digby County, and this population continues to be of interest to researchers.

Marten are active throughout the year, including the winter months. They prefer mature coniferous or mixed-wood forests with an abundance of coarse woody debris (standing dead trees, fallen logs, and root masses), as well as substantial overhead cover. These features provide protection from predators, denning and resting sites, prey habitat, and access beneath the snow to prey. The marten's broad feet, and sharp claws allow it to readily climb trees, run through forests, tunnel under snow, and tolerate severe winter conditions.



Trapping and Snaring Methods to Help Avoid Catching Marten

There are several ways to avoid catching marten while trapping or snaring other furbearers or snowshoe hare. When trapping larger furbearers such as coyote or bobcat, adjust the pan tension on leg-hold traps so more weight or pressure is needed to trigger the trap. By adjusting the pan tension in this way, smaller animals like marten and birds will not be caught in the trap, while larger animals will be well caught above the pad as the trap will only trigger once they have fully committed themselves. Setting the pan tension for the larger, specially targeted animals means better productivity for the trapper, as they do need to reset the traps because of non-targeted species. Also, snares on log crossing, should be placed fairly high to avoid marten.

Trigger placement of Conibear or body gripping type traps can be adjusted from the factory setting to avoid accidental take of marten. Providing larger openings on body gripping traps by bending or cutting the triggers will help in avoiding smaller animals such as marten, but still enable the trapper to catch larger furbearers such as raccoons. Trigger placement is especially important with Conibear type traps sets on logs crossing water.

Figure 1. Conibear with factory set trigger



Figure 2. Conibear with trigger spread

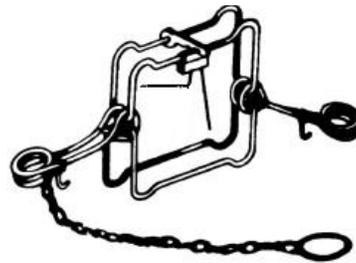


Figure 3. Conibear with trigger spread

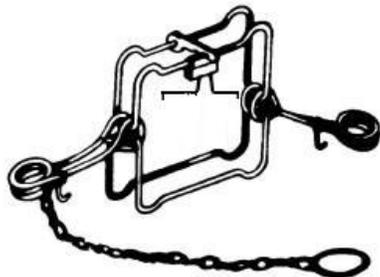
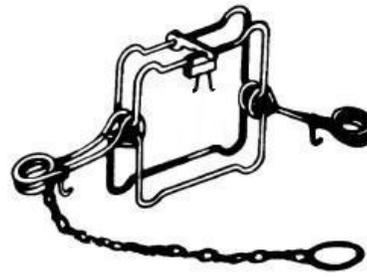


Figure 4. Conibear with trigger cut



To avoid catching marten when trapping smaller furbearers such as mink, trap sets should be made where the target animals are known to exist and in habitat that marten tend to avoid. For instance, trap set locations for mink that may avoid marten include open meadows, pastures, crop lands, and stream- or riverbank habitats. Marten rarely use

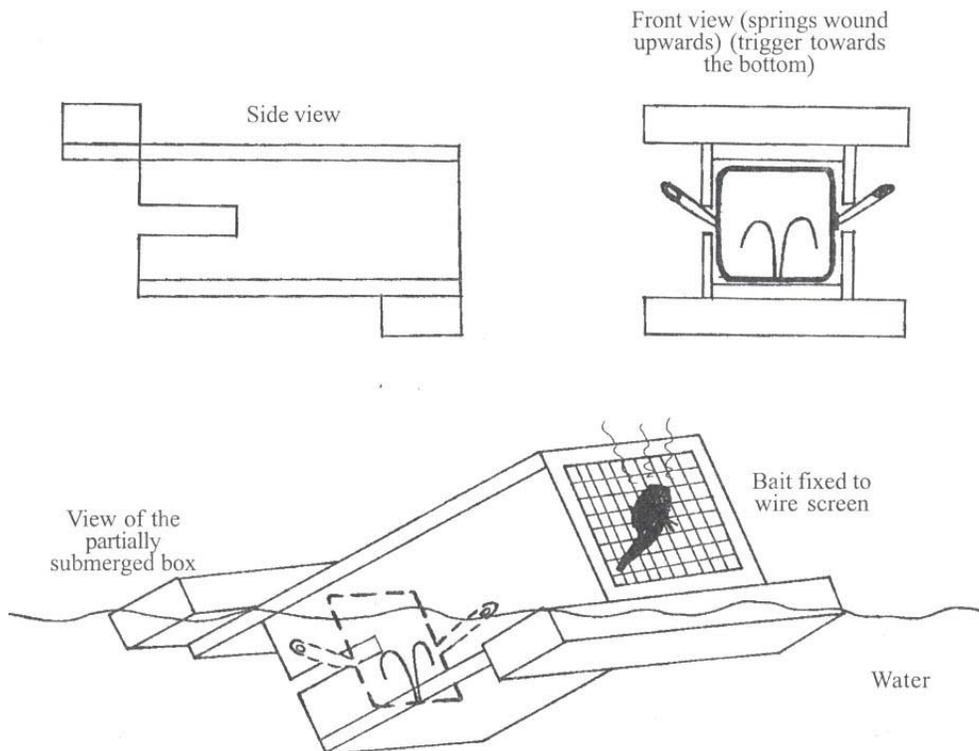
agricultural lands and generally prefer to hunt and travel in forested areas and along forest edges.

Trap sets, lures and baits that are effective for mink may also appeal to marten, though rancid meat and fish might be less inviting for marten. Whenever a marten track is identified, trap and snare sets should not be made in the vicinity. Visible baits of hare, squirrel, beaver, or parts of hare, squirrel and beaver should not be used if marten might frequent the area. Water sets that require the animal to swim underwater to get to the bait are useful in avoiding marten, as marten tend to shy away from this behaviour.

Floating Box with Conibear

One method to target mink with minimal chance to catch marten is to use a floating box with a Conibear trap. The aim is to install a slightly modified box so that it floats on water. Attach two 5x10.2cm (2x4 in.) piece of wood to the box across the width, one on top and the other underneath at the back. For this type of trap, the back must be made of wire screen. Fix the bait to the top part of the screen inside the box. The smell will attract the mink. It will have no alternative choice but to dive and go inside the trap in order to reach the bait.

Because the box is installed on the water, small land mammals including marten cannot get caught in it. Also, the mink is not wary of the trap since it must swim inside the box and not simply run through it. The box is used in the middle of a stream where fast-running water prevent freeze-up early in the season. Finally, the captured animal dies quickly and its fur is not damaged since it is caught under water.



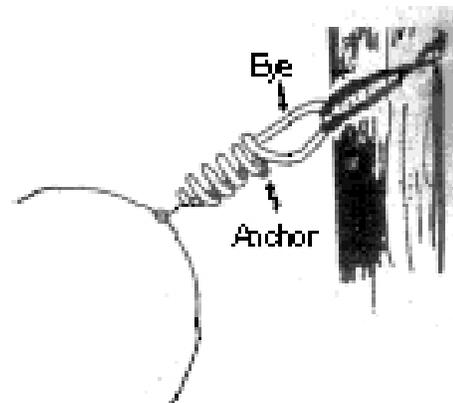
When trapping or snaring weasels and squirrels it is best to use Victor rat traps in various configurations to avoid marten. A rat trap placed in a weasel box with a 3.8 cm (1½ in) in the front will not allow a marten to enter the trap, but may injure a foot if the marten tries to reach the bait. An additional board with the same diameter hole placed further inside the box will prevent any injury to the marten, but still allow a weasel to enter. Rat traps will also work with squirrels, but gang sets on poles should be avoided. Instead squirrel snares can be used, using 24-gauge brass wire. This wire will hold a squirrel, but break when a marten struggles to free itself. A small conibear trap nailed to a tree with an apple as bait for squirrel should not be used, as they will also kill marten.

Modified Snaring

By the very nature of the activity itself, the practice of snaring hares results in the occasional accidental capture of wildlife other than hares. In recent years, there has been a heightened awareness of the effects of accidental capture on the Marten in other jurisdictions. One ongoing study in Newfoundland suggests that marten mortality from hare snares may well be an important limiting factor to marten dispersal.

The Newfoundland and Labrador Wildlife Division and the Alberta Research Council investigated alternative snaring systems that maintained their effectiveness on hares but minimized the potential for accidental capture and retention of marten. The most promising alternative came from attaching a conventional rabbit snare to a 5-coil wire system. This method was effective in snaring hares, yet marten were able to shed the snares within one day. The effectiveness of this modified snare is attributable to the differences in behaviour between marten and hare when caught in a snare.

While this five-coil wire system works, it is felt that improvements in the design can further enhance both its effectiveness and the ease with which it can be set. In addition, the modified snare costs more per set than conventional wire snares. The modified snare does require some skill and training to properly set.



Snare Wire

It is illegal to use stainless steel wire for snaring snowshoe hare in Nova Scotia. If placed in the wild these stainless steel snares continue to kill, and pose a threat to the American marten. Research elsewhere has shown that stainless steel snares have a much higher incidence of catching and killing marten. The best choice of wire to snare snowshoe hare legally in Nova Scotia is the typical 20-gauge brass wire.

How To Release a Marten From A Hare Snare

Even if someone used the avoidance methods mentioned above, there is still a chance for marten to be accidentally snared. If the person snaring checks their snares only twice a week, an accidentally snared marten will almost certainly die from exposure or by strangulation. If the snares are checked every day, there is a good chance that the marten may be still alive in the snare.

Care should be taken to approach any snared/trapped animal slowly and quietly to minimize stress to, and agitation of, the animal. Placing a coat, tarp or jacket over the marten and getting close enough to cut the snare wire can release the marten quite easily. A pair of small wire cutters or pliers is ideal. While doing this, the marten will be quite vocal. Do not worry about the marten escaping with the wire still on its neck or body, as the marten will remove the rabbit wire later. Tests on marten caught in rabbit wire have shown that the wire is usually shed within 24 to 48 hours. The marten has a much better chance of survival with the wire on him/her than you trying to release him without the wire. Never attempt to render a trapped marten unconscious with a blow to the nose or head or by any other means. Striking the marten may result in a life threatening injury to the animal.

Care should be taken at all times when releasing or handling a marten as they are capable of injuring the trapper with their teeth or claws. Wearing thick gloves to release trapped animals is always wise. A successful release will have given you the satisfaction of knowing you have saved the life of an endangered animal.

Should the very worst happen, and the marten dies while you are trying to release it, don't panic. You have two choices: 1) leave the animal in the woods and call your nearest Department of Natural Resources Office as soon as possible, or 2) fill out the accidental harvest form on the back of your licence summary, and bring the marten to your nearest Department of Natural Resources Office as soon as possible. Information on the animal (sex, age, weight, location) is important for researchers managing this species and increasing the possibility that one day the marten will be removed from the Endangered Species List.

What you can do?

- Learn about the American marten.
- Inform others about the marten and its conservation.
- Support marten recovery efforts by reporting any marten sightings, tracks, scats, and captures to your local DNR office, or to the Wildlife Division in Kentville, and by implementing the described avoidance methods.
- Fill out the accidental harvest form on the back of your licence if a marten is trapped.
- Avoid trapping where marten may occur.
- Release live accidentally captured marten immediately, and notify the DNR promptly.
- Turn in all marten specimens (new and/or old) to your local DNR office.

For more information contact:

Nova Scotia Department of Natural Resources, Wildlife Division, Kentville

Tel: (902) 679-6091

Email: MARTENPROJECT@gov.ns.ca

This pamphlet was produced by the Nova Scotia Department of Natural Resources, Wildlife Division. With thanks to the Newfoundland & Labrador Inland Fish & Wildlife Division, the Newfoundland Marten Recovery Team - Accidental Snaring and Trapping Action Group, and the Fur Institute of Canada: Alberta Research Council Inc. Sustainable Ecosystems Unit.

The Government of Canada Habitat Stewardship Program for Species at Risk

