



Fisher

**High-tech Trapping
Protects Fur Bearers**

Research Trapline

Getting a Handle on the Northeastern Fisher

As I tuned the radio to the proper frequency I clearly detected the rhythmic beep that indicated yet another trap had been sprung. Sure enough, as I approached the cage I could see the unmistakable form of a small female fisher. She instinctively cowered back to the darker recesses of the cubby, evidently expecting the worse. But it was her lucky day, because soon she would be free again. Although extremely valuable for her pelt, this young female would prove to be much more valuable alive.

After immobilizing her with a tranquilizing drug, I removed her from the cage trap. Anyone who's had a close look at the teeth of a fisher can understand the need for the tranquilizer. The canines, especially those on young fisher, are dangerously sharp.

When she was completely under the influence of the drug, a premolar was pulled. This is the tooth directly behind the canines. It is small and relatively insignificant. Later, in the lab, this tooth would be sliced into sections and the age of the fisher determined by counting layers of growth, much like one would count rings on a tree.

After the tooth was pulled, measurements on body size, weight and condition were taken. Finally, and most importantly, a radio-collar was placed around the neck of the fisher. For the next year this collar would provide wildlife biologists with information on the location and status of this particular animal. This information would be used to help determine survival rates, movement patterns, habitat use and a variety of other behavior patterns.

Within an hour of my finding the fisher in

By Daniel S. Licht

the trap she was off and running, albeit somewhat slowly due to the lingering effects of the drug.

By the end of the day three fisher had been caught. All of them were handled and released in a similar fashion. It would be my



Daniel Licht prepares a radio-collared fisher for release back into the woods.

busiest, longest and most enjoyable day on the fisher research trapline.

The fisher trapline was located in the hilly forests of south-central Maine. On the surface it appeared to be ideal habitat, with plenty of large, contiguous stands of old and young softwoods and hardwoods. Fisher prey species, such as snowshoe hare and ruffed grouse, were apparent. The stands of

old-growth forest provided an abundance of den trees.

But, a closer look revealed potentially serious problems. Because of its proximity to the highly populated areas of Augusta, Portland, Bangor, and even Boston, the area may be losing some of its wildness, and hence it may be losing the fisher.

A study had been initiated by the U.S. Fish and Wildlife Service's Cooperative Fish and Wildlife Research Unit at the University of Maine at Orono. Financial support had come from the Maine Department of Inland Fisheries and Wildlife, and the Maine Trappers Association. Because of my employment at the University of Maine, I was selected to spend the fall of 1987 on the fisher trapline.

Our goal was to catch enough animals to provide us with an adequate sample to make future game management recommendations. Insuring fisher traplines for future generations is one of the best catches a trapper could ever hope to make.

The high-tech aspects of this research trapline were a long ways from the muskrat trapping days of my youth. Instead of sloshing through knee-high mud every day after school, I was checking my traps from the warmth and

luxury of a pickup truck. Nevertheless, the thrill was almost the same (no trapline can compare to the thrill of a trapline in one's youth). Every trap around the next bend brought new anticipation and suspense.

Because of the electronic equipment at our disposal we had one advantage that most trappers don't have. Instead of having to walk in every day and visually check each

trap, we hooked up a triggering device that "told" us when the trap was sprung. A deer radio-collar was attached to a tree near the cage trap. A magnet placed on the radio-collar acted as an off switch, but if the magnet was removed, the collar would start transmitting. A piece of string was attached from the door of the cage trap to the magnet. The shutting of the door pulled the magnet from the radio-collar, turning the transmitter on. With this setup we could check the traps from several miles away. (Lest any trappers entertain notions of using this system, they should be warned the equipment costs several thousand dollars, it may be illegal in many states and requires special permits.)

While some trappers are resentful of any regulations or limits concerning furbearers, most are well aware that they are a necessity if we are to have furbearers available for our kids. This is especially true for low-density furbearers with valuable pelts, i.e. the fisher. While some animals, such as muskrats, can easily survive repeated harvesting, the same cannot be said for the fisher. Their reproductive rate will not allow it. As scientists learn more about the fisher's reproductive and survival rates they may better regulate the seasonal harvest, leaving a seed stock for next year.

Scientists may also determine the impact land-use practices have on fisher. In southern Maine, urban sprawl is a potentially catastrophic event for local fisher populations. Biologists monitor these potential impacts and work with trappers and land-owners to minimize the damage.

For example, habitats that have high value to fisher (mature softwood/hardwood stands) may be set aside and protected. Certain aspects of habitats may also receive special attention. Denning trees may be protected from logging, if research indicates that fisher reproduction is influenced by the availability of these trees.

Information gathered by biologists may also be put to use by trappers to help protect their sport. The fact that there is a sound scientific management of a resource is a strong argument against those who would advocate closing trapping seasons, for whatever reason.

Being able to say that we may harvest "x" number of fisher this fall and still have just as many next fall should put to rest the fears of many that trappers are eliminating the fisher. In fact, biologists and trappers are getting so good at managing the harvest there are probably more fisher now than at anytime since the turn of this century.

We had hoped to catch a dozen fisher to augment the eight fisher that were already being monitored from earlier trapping efforts. To do this we put out 20 traps. These were spaced several miles apart as the crow flies. Total length of the line was 100 miles.

As all trappers know, trap location is usually the key to success. My partner, Steve Arthur, had spent the last couple of years

following radio-collared fisher, at all times of the day and night and throughout the year, so he had a pretty good grasp of what to look for. Experience had taught him the best place to trap fisher was along the edge of a bog, swamp, pond or river. He looked for any natural or man-made obstruction that would funnel or direct fisher through a small area. These spots were found by carefully scanning a topographic map or aerial photograph of the area.

Once we found an "edge" we started looking at the composition and age of the forest stand. Mature forests composed of a hardwood/softwood mix seem to be preferred by fisher, especially in the fall and winter. We did most of our trapping in October (since this was prior to the regular trapping season, we had to apply for special state permits).

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Pure deciduous forests seemed to be used to a much lesser degree at that time of the year. Studies have documented that fisher prefer forests with high canopy cover, greater than 80 percent, and avoid areas with canopy cover less than 50 percent. Completely open areas are shunned by fisher.

However, we knew of one exception where a fisher might show a preference toward a deciduous forest, and that pertains to apple trees. These valuable trees are found scattered throughout New England; many are relics of farms now long deserted. Their use by deer, bear, raccoon and many other forms of wildlife is well-documented, but their use by fisher (and some other carnivores) may surprise some. Studies have found evidence of apples in the scat of fishers. While this doesn't prove that apples are an important part of their diet, it does show they use the fruit. One of the more productive traps on our line was within 20 yards of several apple trees.

Once we located a general area for the trap, we started looking for a specific set site. We preferred any kind of small rise, knoll or ridge. Fisher make regular use of these elevated vantage points. A rocky knoll with lots of holes and crevices seems to be especially attractive to fisher. We also noted any large deadfalls, since fisher have a tendency to run along the length of large fallen trees.

As mentioned, our traps were often several miles apart. Fisher are territorial animals and the home ranges of individual fisher (of the same sex) do not overlap. These home ranges are usually several square miles in area. This means a particular trap site may only be within the territory of one male and one female fisher at any particular time. If you're lucky, the trap may be on the edge of a couple of territories, or the young of the female may still be within her home range. But nevertheless, the fact that fisher are territorial means there are a limited number of animals with access to any particular trap.

We used cage traps baited with road-killed skunk or deer meat confiscated by game wardens. Each trap was covered with fir boughs and rocks to give the impression of a cubby. In some cases it seemed the cubby appearance was enough to attract fisher, even without the smell of the bait. The visual lure of a dark hole triggered the natural curiosity of the animal, hence another reason for putting the cubbies in visible locations, such as the top of a small knoll. When snow covered the ground the cubbies became even more conspicuous, and therefore, potentially more effective. Of course, the cubby set also meant we caught a lot of porcupines and raccoons, which may be a nuisance or a fringe benefit depending on your point of view. Since we were only interested in the fishers, we released all other animals we caught, although the porcupines often took a bit of not-so-gentle persuading to leave their new-found home.

The re-population of the fisher has been one of the great success stories in wildlife conservation. Because of research and management, they are once again common in areas where they had become rare. In fact, states that didn't have any fisher 30 years ago, such as Wisconsin and Michigan, now have harvestable populations. These successes have spurred other states into considering reintroductions. Trappers and biologists both deserve the credit for this remarkable comeback of a fascinating and valuable furbearer.

Yet, as happy as the story has been up until now, the truth is the most difficult chapters are yet to come.

Increasing demand for human living space is going to put a squeeze on the forests, and inevitably the fisher. Trappers and biologist need to continue to work together, and listen to each other. Only through a commitment to research, management and wise use of the resource can we assure fisher for tomorrow. ■

A Magazine for Practical Outdoorsmen

FUR-FISH-GAME

Harding's Magazine

MAY 1988

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In Canada \$1.95

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