

A Survey Of Mustelids On The  
University Of Idaho  
School Forest

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By  
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## INTRODUCTION

This study was undertaken primarily to provide some basic information on members of the mustelid family that might inhabit forest lands owned by the University of Idaho and to a lesser extent to provide information about those animals when encountered in other areas. Information in this study came mainly from the University of Idaho forest, but was also taken from time spent in the Salmon River Mountains during the summer of 1995.

The Mustelidae are better known as the weasel family and consist of numerous members scattered all over the world. The animals I was concerned with were the wolverine (*Gulo gulo*), the marten (*Martes americana*), the mink (*Mustela vison*), the long tailed weasel (*Mustela frenata*), and the ermine (*Mustela erminea*). During the study period I encountered all of these animals though some were much more common than others.

## Methods

During the study I gathered information mainly by checking suspected areas of use until tracks or other sign was located

and then frequenting those places that showed much use. This worked well once I became familiar with an area. Early on I tried to locate live traps but was unable to actually procure them for the study, so that avenue of research was closed.

Another method used was creating artificial scent stations. This method would have been more successful if the weather had not been so extreme during the fall and winter. The early fall was a very wet one which washed away both tracks and artificial scents. Then the following extreme cold and deep snow further hampered the use of scents. Extreme cold weather seemed to "dampen" scents until they did not disperse well and the rapid snow falls quickly covered them. However, since I spent a large amount of time in certain areas I was able to learn of a number of natural scent stations which seemed to be widely used in most weather.

On several occasions I used predator calls to try to lure in animals. I used two different calls. The first was a call that simulated an injured rabbit. I was unsuccessful with it, but that could be because its loud call drew in larger, faster predators which caused the mustelids to stay away. I also used a small mouse squeaker which I was successful with once.

#### Time and Place of Study

The time of study was May of 1995 until February of 1996. Several places were observed during the study. I spent time on all the units of the school forest, but I spent the majority of my time in this area on the Flat Creek unit since the roads to it are accessible in almost any weather. During the summer of 1995 I worked for the U.S. Forest Service on the Krassel Ranger District in the Salmon River Mountains. I used that time to observe mustelids in that area and was able to witness some activities that I don't think would have been possible in this area.

#### Literature

Little attention has been paid to the mustelids, even in scientific circles. This could be due to the fact that the smaller members of the family are very unobtrusive, and the larger members inhabit such rough terrain that it is difficult to observe them. I was able to find several books which had varying degrees of information on the family members which were in the areas I utilized. For North America, Stokes (1986) and Haley (1975) both present excellent information on behavior and distribution of these animals. Halfpenny (1986) and Murie (1954) had books that detailed the tracks and sign of these animals. I used this body of information to help me interpret behaviour I witnessed and to aid in translating tracks and sign I came across.

## Presentation of Data

In presenting my data I will treat the mustelids individually, due to their great variation in size, habits, and range.

### Wolverine

I will mention the wolverine only shortly due to a chance encounter with it in the summer of 1995. The sighting happened in late July, 1995 in the Lick Creek subrange of the Salmon River Mountains. I was in a saddle between two large mountains at an elevation of 6900 feet. The area was predominately steep talus slopes vegetated with pockets of conifers climbing up to the mountain tops. The saddle also contained a lake several acres in surface area. At approximately 1800 hours the wolverine crossed an open rocky area about 100 yards in front of me. The animal moved fairly rapidly over the rocky ground, and increased its speed further when it caught some sign of me.

It then scrambled up a nearby slope and disappeared into a large boulder field. This sighting was later corroborated with an individual who was radio tracking wolverines in the Sawtooth area. During his study, a young male wolverine dispersed from the study area and apparently dened within about one mile of

the area I spotted this wolverine in. I returned to this area many times throughout the rest of the summer but never saw the animal again.

#### Marten

I saw marten twice during the year that I searched for them. Both times were fleeting glimpses of the animals, but they were both also at close range so the identification is fairly certain. The first sighting was on 9 April, 1995 on the East Hatter Creek unit of the school forest. My wife and I were walking up the middle of the dirt road that traverses that unit of forest when the marten ran across the road about 20 yards to our front. We both saw it and went to the area where it left the road but were unable to find any tracks. I never saw any other sign that I could be sure was from a marten in that area or elsewhere on the school forest, but that could be due to the crude methods I used to search, and the fact that martens spend much time in trees not leaving many tracks.

The second sighting was in the canyon of the South Fork of the Salmon river in a forested area about 5000 feet in elevation. This time I was walking an old logging road to a trailhead when a Red squirrel (*Tamiasciurus hudsonicus*) ran across the road in front of me with a marten in pursuit. They then reentered the forest and began to leap from tree to tree.

In a few seconds they both "disappeared". The only guess I could make was that at some point they entered a hollow section of a tree. I never saw another marten, but throughout the summer I did see scats placed on prominent rocks and logs that I thought looked like marten scat. I came to this conclusion due to several reasons. These scats were were similar in size (2-3 inches long) to what I would expect from a mink, but they all were found at higher elevations (5000-6000+ ft) and were not near any bodies of water. The scats that caught my attention also often contained parts of berries and I have been unable to find any references to mink eating berries.

#### Mink

I saw various sign (tracks and scat) of mink during my study. The majority of mink activity I observed happened during my stay on the South Fork of the Salmon river. However I did see a small amount of mink sign on the Flat Creek unit of the school forest. I infrequently found scat that I believed to be mink in the lower, wetter portins of this area. In December of 1995 I found a dead male mink on Highway 9 near the entrance to the Flat Creek unit. He had apparently been struck by a car while on the edge of the road. His body was 16 inches long, and the tail was 6 inches long. The front paws were each about 1 3/8 inches long and 1 1/8 inches wide. The hind paws were 1 5/8 inches long and 1 1/2 inches wide. I suspect that his

tracks would be slightly wider when walking due to the toes spreading out under the body weight. He was well furred and appeared to have been healthy.

The shorelines of the South Fork are very rocky and so yielded few tracks, but made it relatively easy to find scat. Most of the scats were 2-3 inches in length, 1/2 inch in diameter, and showed traces of bones and hair. Incidentally, I have been told that otters live in the area, but I never saw any.

#### Long Tailed Weasel

Of all the animals in the study, this one appeared most common. The long tailed weasel seems to use persistency as his hunting tool. I have followed numerous snow trails and they are often circuitous and looping. I found this animal very common so I will list only a few of the more interesting sightings I have had. The first encounter occurred on the Flat Creek unit. I was walking along a ridge that frequently shows tracks when I crossed some that looked very fresh in the snow.

I determined which direction the tracks were headed and decided to backtrack them. I followed them for about 300 yards in their winding course. The animal had investigated every leaf pile and hole in the shallow snow along the way. At the end of the 300 yards I found a small hole the animal had exited from and



inches from that, a small scat with the urine placed directly on top of it indicating that the individual was a female. I then began to track the prints forward. I followed them for about 600 yards total (including the initial 300) to where the tracks led into a small clearing. The tracks ended abruptly at a set of wing tip brush marks. The animal was apparently taken by a small hawk (the wing marks were 18 inches wide). Apparently the weasels are taken by larger predators occasionally. It is also interesting to note that although I paced off 600 yards, in straight line distance I probably only went 200 yards.

The second incident of interest happened near my cabin on the South Fork during the summer of 1995. Upon arrival, I noticed that a large number of chipmunks (*Eutamias*) were in evidence and were very bold. After about 1 month I noticed they were becoming more scarce and I did not see them very often out in the open like before. Shortly after making that observation, I saw out my window a long tailed weasel making his way through the grass by walking under a pole fence. Several days later I saw a weasel (possibly the same one) hopping around my supply shed. As I drew nearer I saw 3 or 4 large ground squirrels (*Citellus*) facing the weasel. The weasel made a tentative rush toward the lead squirrel (about twice the size of the weasel) who also rushed forward. This happened a few times until the weasel apparently gave up and ran off into some brush. The ground squirrels were agitated for quite some time

afterward. So, not only do the weasels sometimes get killed by larger predators, but apparently their prey can put up enough of a fight to make it worthwhile to look elsewhere.

### Ermine

I had difficulty in telling the sign of the ermin and the long tail apart, but once I was certain that I was dealing with an ermine. During the early fall of 1995 I was on the West Hatter Creek unit of the school forest attempting to predator call in a weasel. I picked an area I had seen scat in before and sat down to begin calling. I was using a hand squeezed bulb mouse squeaker. After approximately 15 minutes of intermittent calling some weeds rustled off to my side. I turned my head and squeaked a few more times, and about 10 feet away the ermine stepped partially out of the weeds, looked at me for a few seconds and the ran away. I identified it as an ermine because it had white feet with its still brown coat. The long tail would have had brown feet and the least weasel (*M. nivalis*), which also keeps white feet, does not live here. This was the one and only time I was certain I saw and ermine.

### Summary

At this point, I have been able to identify the mustelids

that inhabit the school forest and even learn a little about their life and habits. They are vigorous hunters who are very successful but can still be stymied by potential prey. They suffer natural and man caused mortality with some regularity. I also noticed that the tracks of the weasels are abroad even in bad weather, probably because of food needs due to a high metabolic rate. It is also interesting how many family members can inhabit the same area due to the fact that they have all adapted to exploiting the environment differently. In the South Fork area at least four family members lived there during my residence. In short, they are an adaptable, persistent family of hunters that inhabits almost any terrain they encounter.

## REFERENCES

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American marten  
*Martes americana*



ermine  
*Mustela erminea*



martens, weasels, wolverines, and relatives  
Mustelinae



long-tailed weasel  
*Mustela frenata*



wolverine  
*Gulo gulo*



American mink  
*Mustela vison*



## Location of Complete Research:

Author & Title: Walker, Jeffery  
A Survey of Mustelids on the University  
of Idaho School Forest

To our knowledge this is the complete survey,  
no further research has been added to it.