

Montana Trapper Education Manual

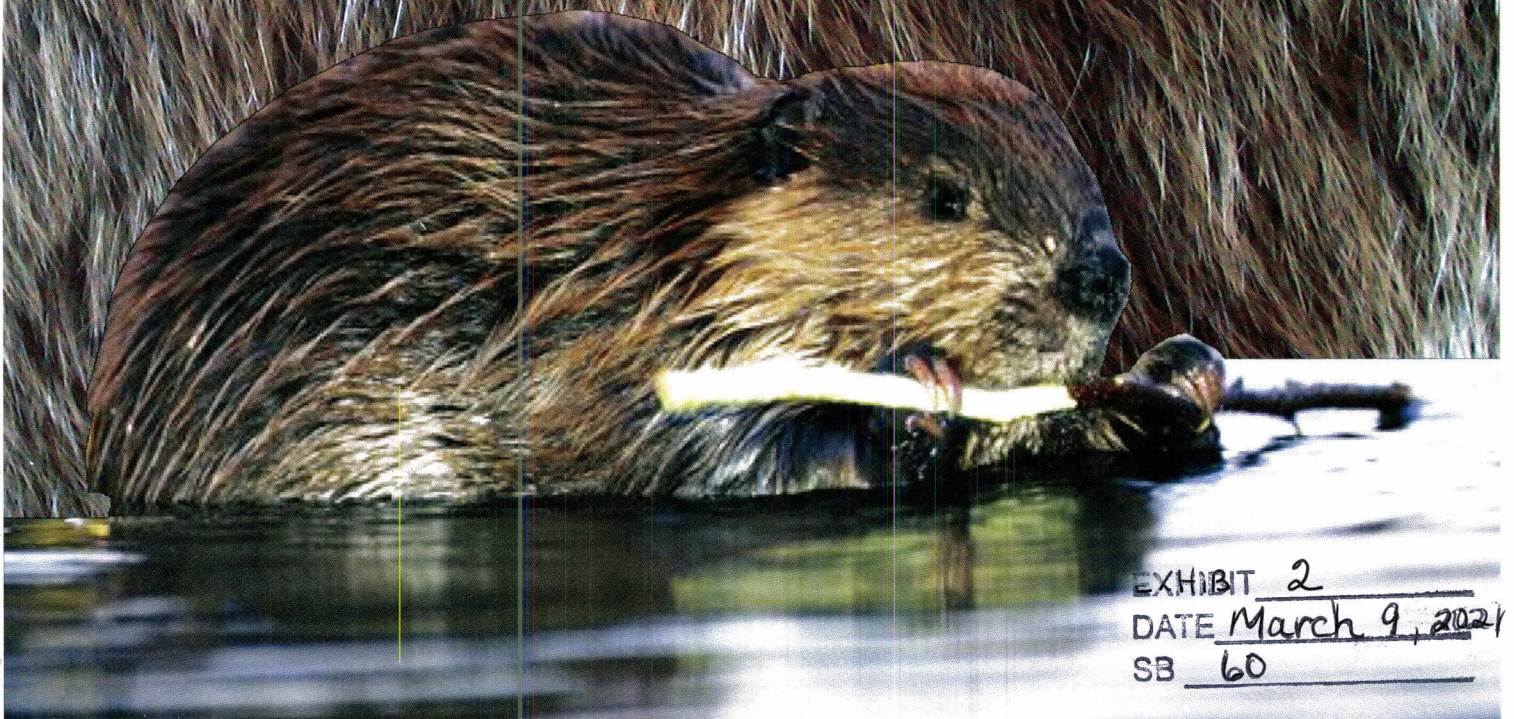


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Forward

The use of fur for clothing has been in existence for thousands of years. The development of effective trapping devices increased man's ability to capture animals and led to a steady supply of furs around which an industry could be formed. With the discovery of North America and its abundant supply of furbearing animals it became profitable for European merchants to provide furs to Europe where they were in great demand. Therefore, the trapping of furbearers became Montana's first land based industry. Since then trapping has undergone many changes. Harvesting methods, equipment and fur handling techniques have radically changed and are continually evolving. Public attitudes have also changed since much of the continent's population has relocated from rural to urban areas where there is little opportunity for people to be in contact with trapping or to learn about nature's furbearers. Like every industry, trapping demands professionalism. Trappers must be proficient at their jobs, must at all time project a good image and be ready to change with the times.

In order to meet these changes, the Montana Trappers Association has developed a basic course for trappers. The curriculum has been designed to increase awareness of the trapper's responsibilities, while introducing new trapping methods, equipment, furhandling techniques, legislation, biology and outdoor skills. The course has been designed to increase financial returns to trappers by encouraging them to practice sound management concepts that lead to increased fur production.

This course will make it possible for you to learn what it has taken some trappers a lifetime to discover. It is your responsibility to use this information wisely, to trap lawfully, and to act in the best interest of trappers everywhere. By being a professional trapper, others will be encouraged to follow your example and in this way it will promote good trapping and conservation practices.

This manual will be of value for future years as a reference for yourself and others.

Introduction to Trapper Education

The trapping industry is changing. New, improved trapping devices and techniques are now available or are being developed. Management regulations are constantly being updated and there is mounting pressure from anti-animal use groups and the general public for trappers to adopt modern methods and to manage wildlife more effectively. Trappers themselves, trapper organizations and the trapping industry have contributed greatly to these changes.

Learning and employing new, more efficient traps and techniques in trapping, as well as better fur handling and marketing techniques, can greatly enhance revenues to the industry as a whole and to the general economy of Montana. This, in turn, will act to ensure the continued viability of the industry and to preserve the trapping lifestyle that so many enjoy.

Trappers and other advocacy groups have seen education as a means of assuring the public-at-large that trapping is carried on at a professional level.

Education Programs

This program is intended to provide a base of knowledge that will help both beginning and active trappers conduct their operations responsibly, including effective predator control and harvest of furbearers according to a sustained yield, consideration for others who use the same land, and with respect for the various objectives established by landowners or public land laws for managing individual units of land.

The purpose of the public education program, is to inform the public about the role of trapping in Montana today. During the course you will learn about furbearer management, trapping techniques, avoidance of non-target animals, personal health and safety, ethics, responsibility and knowledge of the furbearers of Montana.

We encourage you to continue learning about trapping, furbearers, wildlife management, habitat and responsible sportsmanship to increase your enjoyment of your outdoor experience.

TABLE OF CONTENTS

Production Information.....	01
Acknowledgements.....	01
Forward and Introduction to Trapper Education	02
Chapter 1 - The History and Development of the Fur Industry.....	05
Chapter 2 - Ethics, Education and Social Concerns	11
Chapter 3 - Eco Systems & The Biology of Wild Furbearers.....	19
Chapter 4 - Conservation & Furbearer Management.....	49
Chapter 5 - Trapline Equipment.....	59
Chapter 6 - Prior & Post Season Preparation and Business Management	69
Chapter 7 - BMP's & Responsible Harvest of Furbearers	81
Chapter 8 - Fur Handling.....	93
Chapter 9 - Marketing Options	109
Chapter 10 – Health & Safety.....	117
Glossary	125

CHAPTER 1

THE HISTORY & DEVELOPMENT OF THE FUR INDUSTRY

Trapping is the oldest land based industry in North America, with a recorded history of more than 400 years. During this time, it contributed immeasurably to the exploration and development of the continent. Trapping is a part of our North American heritage. First-time trappers in many states and Canadian provinces must complete a trapper education program covering skills, regulations and the role of trapping in wildlife management. Trapper education programs teach basic techniques with a strong focus on the responsible treatment of animals, legal methods, safety, selectivity, and ethical trapper behavior.

Trapping is a highly regulated activity because the public is concerned about wildlife conservation and the welfare of wild animals. Regulations are designed to help manage furbearing animals using safe and selective equipment and techniques.

Trapping takes a lot of time and dedication. Trappers spend a lot of time studying wildlife, scouting, preparing traps, working with landowners, setting traps, running trap lines and preparing pelts. When trapping season begins, trappers must check their traps routinely until they are removed.

Society – trappers, and nontrappers alike – will not accept illegal or unethical behavior. This course will teach you the basics. You must be willing to spend the time and effort to trap responsibly.

In most states, trapping is an individual privilege available to all citizens who choose to follow regulations and behave responsibly. Trappers who violate laws can lose their privilege to trap. If trappers as a group do not behave responsibly, citizens could decide to stop all trapping.

Some states have made it a collective right to hunt, fish, and trap. This protects the activity of trapping for future generations. It does not protect trapping privileges for people who violate trapping regulations. Judges can, and do, suspend trapping privileges for serious violations.

The taking of animals for fur and the history and development of the industry can be roughly divided into three periods; the Pre-European Period, the European Period, and the Modern Period.

The Pre-European Period (approximately 2000-3000 years ago, to the 16th century)

Before Europeans arrived on the North American continent, the native people took furbearing animals for their own use for clothing, food and shelter. Generally, they took only as many animals as were needed for their own requirements at the time. They did not trap for commercial trade or profit, but rather lived a life of subsistence, hunting and fishing

During this period, furbearing animals were abundant and were in no danger of being over harvested by man. This was due to the low human population, the limited and inefficient equipment, and taboos which helped to conserve the animals

The European Period (approximately 1550-1905)

The development of the fur trade in Montana can be traced back to events and conditions in Europe several hundred years ago.

There was a high demand for furs in Europe for fashion and clothing as Europe had a cool climate. Felt hats were extremely popular in Europe and beaver fur made the finest felt.

Europeans introduced the steel trap which had first been developed to catch poachers in the 12th century and was later perfected for use on animals. Steel traps were not mass produced or widely available until after 1823.

Fur trading posts were first established in Canada, before migrating south into the United States and Montana. The French established trade in the St. Lawrence Valley in Canada in approximately the year 1615. The English followed shortly afterward by forming the Hudson's Bay Company in the year 1670, building the trading post on Hudson Bay.

A fur trader/explorer named David Thompson, played a big part in exploring Canada, Idaho and western Montana. Thompson worked for the Hudson's Bay Company (HBC) up to 1800 when he was no longer needed as HBC became more interested in fur trading than exploring.

.....Beaver felt hats were prized possessions among European men during the 1700s and early 1800s. They were expensive to make. Beavers were captured in North America and their pelts were shipped a long distance to reach Europe. The manufacturing process was complex.....



.....Two kinds of beaver were used to make felt hats. At first, "coat beavers" were preferred these were furs that were worn by Native Americans until the guard hairs wore off; "parchment beaver" were prime pelts they had to be shipped to Russia to remove the guard hair....

.....Beaver felt is commonly used to make high quality cowboy hats....

In 1809, Thompson and his party built a trading post on Hope Island on the east side of Lake Pend Oreille calling it the Kullyspell House. They would use this post to trade with Kootenai and Flathead Indians.

David Thompson traded with Flathead, Blackfoot, Salish and Kootenai tribes between 1808-1812, operating the Spokane House, Kullyspell House and Salish House. In 1812 he gave up fur trading and went back to Montreal Canada.

The Eastern part of Montana was explored by the Corp of Discovery in the early 1800's when Lewis and Clark began their journey up the Missouri River. On their return trip, William Clark camped on the Bighorn River. Finding the point between the Bighorn and Yellowstone to be composed of soft mud and sand, he and his party ascended the Bighorn a half mile, crossed it and formed a camp on its lower side (east). Less than fifteen months later, the fur trader, Manual Lisa selected this sight as the home of the first trading post in Montana, Fort Manual Lisa or (Fort Raymond, named after one of Lisa's sons). A new fur trading post was built by the Missouri Fur company in 1820, named Fort Benton. The building of these forts, the fur trade and trappers were all an important part of the early development of Montana and the trapping heritage it holds.

During this period of exploration in Montana, the European fur trade, increasing pressures were brought to bear on the furbearing animals. As a result, furbearer populations seriously declined in many areas and might have even disappeared in some places except for the restraint imposed by the monopoly trade and the sharp drop in demand of felt after 1830 since silk became the popular material for hat making.

The Modern Period (1905-present)

When the European Period came to an end, laws governing the use of furbearing animals began to emerge. In 1876, came the first closed seasons on furbearing animals such as beaver, marten and fisher. This was also the time when trapping beaver was prohibited except on private land. In the late 1800's and early 1900's the Montana legislature authorized the first Fish and Game Board which then began to set laws and regulations to manage furbearer populations.

This was all necessary due to a sharp increase of human population and the immigration of settlers. As a result of intensive regulation and management of the resource, furbearer populations have recovered to the point that fur production for some species is probably higher than at the turn of the century. Today most of the animals trapped for fur have stable populations and the resource is harvested in an orderly manner.

Fish, Wildlife & Parks officers, biologists, Montana trappers and various other organizations today are cooperating to assure that trapping and the fur industry is maintained and managed for the benefit of all those who recreate in Montana.

It is important to note that at the present time, countries throughout the world continue to play an important role in the fur trade and have the major market for Montana fur and the fur from all of the United States.

Some other important developments which have occurred in recent times are the expansion of trapper organizations, formal trapper education programs, the establishment of organizations which support the fur industry and humane trap research and development such as Best Management Practices (BMP's) for trapping.

Trapping BMPs are documents that provide information to help trappers practice safe, humane, and efficient capture techniques. BMPs recommend different types of traps, how traps should be set, and what training may be needed for people who use BMP recommended traps.

Five criteria are considered when developing BMPs:

- *Animal welfare* – Researchers tested live restraining (foothold type) traps for injuries to furbearers using two methods. One system evaluated specific injuries, and the other grouped the injuries into categories from mild to severe. BMP-approved traps must have a low rate of injuries to the furbearing animals being studied. Recommended traps resulted in moderate, low, or no injury to at least 70 percent of the animals trapped.

.....The ability to participate in activities like hunting and trapping, is not an individual right...

.....Responsibly trappers care about wildlife conservation and animal welfare.....

.....State wildlife agencies prohibit the taking of any species if it would negatively affect the population.....

- *Efficiency* – Traps meeting BMP criteria must be able to capture and hold at least 60 percent of the furbearers that spring the trap.
- *Selectivity* – Traps must be set and used in a fashion that limits the risk of capturing nonfurbearing species while increasing the chances of capturing the desired furbearer.
- *Practicality* – Each recommended live restraining trap was evaluated by experienced trappers and wildlife biologists for practicality. Criteria used to measure practicality included cost, ease of use, ease of transport, storage, weight and size, reliability, versatility, and the expected life span of the trap.
- *Safety* – Each recommended live restraining trap was evaluated for safety to the user and other people who might come into contact with the trap.

Wildlife and Trapping Agencies and Organizations

There are many benefits to membership in trapping organizations. You will learn new techniques to become more successful, be invited to meetings and other activities, gain a greater understanding of wildlife management, and learn about issues affecting trapping.

Montana Department of Fish, Wildlife & Parks

The Department of Fish, Wildlife and Parks is a Montana agency which employs biologists or other wildlife personnel to manage the state's fur resources. The Fish and Game Commission was organized in 1913. It is a 5 member panel appointed by the governor and is responsible for the establishment of rules and regulations concerning the management of Montana wildlife, including its furbearers. With the collection of information from different area or district biologist, wardens, trappers and other public sectors, this allows the sharing of the needs of Montana's wildlife in a cooperative approach to fur management.

Montana Trappers Association

Established in 1978, the Montana Trappers Association (MTA) is a non-profit organization of concerned conservationists who promote proper management of Montana's furbearers, who develop proper predator control, maintain a positive image and help perpetuate quality habitat. The MTA has been and is very instrumental in challenging unfair statutes and regulations and in the protection of the trapper's constitutional rights. The MTA is dedicated to the conservation, management and promotion of our renewable resources and the revision of any law or regulation which is biased or discriminatory towards the trapper.

The Executive body is elected annually; with the offices of President, Vice-President West and Treasurer elected in odd numbered years and the offices of Vice-President East, NTA Representative, Recording Secretary and Membership Secretary elected in even numbered years. The membership is kept informed of the Association's activities through the "MTA Newsletter" published quarterly.

The National Trappers Association

The National Trappers Association (NTA) is a non-profit organization dedicated to promoting conservation techniques in the management of furbearers, to educating the public in the consumptive use of our furbearer resources as a necessary and proper tool of wildlife management, and to encourage sensible, progressive legislation pertaining to the management of fur bearing animals. It is the largest trapping organization in America and is recognized by legislators, media, outdoor writers and wildlife management agencies.

It plans to continue to provide conservation leadership, to preserve the freedom, privileges and pleasures of the trapline for those who succeed us and to instill within the public and media an educated awareness of both wildlife and furbearer management principles.

.....Organized trappers, hunters, and anglers have supported fish and wildlife conservation for more than 100 years.....

.....Membership in state and national trapping organizations will help you become a more successful and responsible trapper.....

.....Online bulletin boards for trappers are a good way to learn new techniques and solve problems. Post a question, and get an answer from friendly, experienced trappers....

.....Know the legal types of traps that may be used in your state.....

The U.S. Sportsman's Alliance

The US Sportsmen's Alliance (Formerly the Wildlife Legislative Fund of America 'WLFA') provides direct lobbying and grassroots coalition support to protect and advance the rights of hunters, fishermen, trappers and scientific wildlife management professionals.

Furbearers Unlimited

Furbearers Unlimited (FBU) is a non-profit, tax exempt (501c3), furbearer oriented conservation organization. It was established in 1988 and incorporated in the state of Montana. FBU is dedicated to developing, promoting and supporting education programs based upon scientific, technical, and legal study and analysis for restoration, wise use, management and conservation of furbearers and other natural resources.

Fur Takers of America

The original incorporation papers stated that the FTA purpose was "...to promote interest in and accumulate and disseminate knowledge concerning the trapping of fur bearing animals among person interested therein." Education is one of the FTA goals and the organization believes that it can be accomplished in a number of ways.

Association of Fish & Wildlife Agencies

The National Association of Game and Fish Wardens Commissioners became the International Association of Game, Fish and Conservation Commissioners in 1917 to reflect the Association's interest in full cooperation with Canada after the U.S. signs a Migratory Bird Treaty with the country for the protection of migratory birds by prohibiting or regulating their hunting. In 1976, the organization is renamed the International Association of Fish and Wildlife Agencies, then shortened to its current name, the Association of Fish and Wildlife Agencies, in 2006.

The Association represents its state agency members on Capitol Hill and before the Administration to advance favorable fish and wildlife conservation policy and funding and works to ensure that all entities work collaboratively on the most important issues. The Association also provides member agencies with coordination services on cross-cutting as well as species-based programs that range from birds, fish habitat and energy development to climate change, wildlife action plans, conservation education, leadership training and international relations.

CHAPTER 2

ETHICS, EDUCATION AND SOCIAL CONCERNS

Code of Conduct Preamble

We view ourselves and the furbearing wildlife that we harvest, as part of the ecological whole that is composed of life. A phrase borrowed from conservationist, John Muir, further defines our viewpoint. Muir said, "Everything in the ecosystem is hooked to everything else."

Fur trapping is but one of the many activities affecting the quality and quantity of wildlife populations, logging, road building, land zoning, dam construction, swamp drainage, intensive farming, fire exclusion, forest recreation and similar endeavors impact the resources we treasure for better or worse. Trappers, then, should not confine their knowledge, voice and votes to trapping activities alone. We must represent the furbearing wildlife on a variety of land use and political proposals in many places throughout the United States. There is no one else qualified or inclined to do this for us.

Montana Trappers Association Articles of Conduct

- I. Help perpetuate quality habitat.
- II. Respect the animals -- trap humanely.
- III. Urge that furs be used for true needs of people.
- IV. Take good care of furs from trapline to market.
- V. Respect fellow trappers and other land users.
- VI. Support research in trapping methods and requirements for furbearing wildlife.
- VII. Know the laws, obey the laws, help enforce the laws.

Trapping Ethics - The Unwritten Laws

What are Trapping Ethics?

A trapper who is ethical has a feeling for what is right and wrong, and has strong principles about doing right.

When people think about trapping ethics they usually think about laws and regulations. This is a large part of being an ethical trapper. Trappers working within the laws benefit rather than diminish wildlife populations.

Regardless of ownership - be it public or private; it is the responsibility of the trapper to make ethical decisions.

For example: In areas of over population, a liberal harvest is allowed to keep populations in check. On the other hand, in areas of low populations, quotas are lowered to help maintain the species.

It is your responsibility to know and follow the laws in your area. Trappers must accept responsibility for their activities. They must trap legally and ethically and with an understanding of the resource they are harvesting. Trapping laws and regulations are part of a total wildlife management system that provides a flexible working structure to conserve the furbearer resource and to harvest the surplus.

We must be risk managers on our traplines. Knowing what animals may be present, knowing the appropriate capture systems to employ, and evaluating the risk associated with each must be an ongoing, daily process. Poor location, illegal equipment, or failing to check your sets in a timely manner will surely draw unneeded attention, and thereby increase the potential to again lose the privilege of using capture devices in Montana.

....."Ethics - The rules or standards which govern the conduct of a person or members of a profession" - Webster's dictionary.....

.....Ethics go far beyond the laws set forth by the state to manage wildlife.....

.....Trappers working within the laws benefit rather than diminish wildlife populations...

However, ethics go far beyond the laws set forth by the state to manage wildlife. In North America, wildlife is a public resource owned by no individual or corporation. State and federal wildlife agencies manage wildlife for the benefit of all people. Public values and attitudes about wildlife determine how it can be used. Since the first European settlement, people's attitudes about wildlife have changed. Furbearing animals are a public resource and use of such a resource requires both courtesy and responsibility. The trapper has to respect himself, and the rights of others.

Trappers must look upon trapping as a privilege, and not a right, according to the laws of Montana. Trappers are a minority, and a minority can only exist with the support of the majority.

Conservationists, wildlife managers, and others who believe in protecting and enhancing wildlife, recognize responsible trapping as the most efficient means of harvesting furbearers and controlling predators when it is conducted by responsible trappers.

A trapping license does not give free access to private land. One must obtain landowner permission and should respect the land he traps on. Close gates, stay on roads and don't litter. If the landowner is having animal damage problems try to do all that you can to help.

Set traps in a manner that will reduce non-target catches and avoid catching domestic animals. Check traps on a regular basis according to the animal trapped and follow state rules and regulations. The potential for incidental catches will exist with every season. Your conduct in the field can reduce that potential and your preparation in advance can reduce stress if one should occur. Be prepared with the right equipment to release an unwanted catch, or have the contact information for the Montana Department of Fish, Wildlife & Parks representative available for requesting assistance.

When trapping water animals, construct drowning sets whenever possible. Concentrate trapping efforts in areas of over population, but be sure not to over harvest. Harvesting the right numbers of animals will insure a reasonable harvest year after year.

Target species must be dispatched as quickly and humanely as possible. Non-target catches should be released whenever possible.

There is no practice less ethical than the wasting of fur. Animals taken must be properly skinned and stretched.

There is no reason for a person to kill an animal without purpose. Anyone who wastes wildlife has no business on a trapline.

Cooperate with other recreationists. When trapping on private land always be aware that there may still be other people in the area, many of whom do not know that the area in question is private. On public land you must share space with others, and act accordingly. Others have just as much right to be there as you do. Be polite. If you feel that your presence may offend others, do not be confrontational. It is not until **your** trap closes on an animal that it becomes your property, and responsibility. People sometimes have conflicting attitudes about the way wildlife should be used or managed. The most serious conflicts are among people who have different views about killing wildlife. However, even people who hold similar views may disagree on how animals such as furbearers should be managed.

A trapper is not just a taker of furs. He must be a responsible member of the community. He is perhaps the most knowledgeable person concerning the state of the land on which he traps. When he notices changes, such as disease or pollution, he should take his concerns to his local game officer.

Trapping According to Landowner Objectives

The trapper and the landowner working together can accomplish their mutual objectives. There are different types of landowners in Montana with varying objectives for the management of their land. These landowner holdings include:

- The private landowner with tracts as small as one acre to ranches with 1000's of acres, to the large timber companies.
- Public lands--the State of Montana and Federal lands.

.....A trapping license does not give free access to private land.....

.....There is no practice less ethical than the wasting of fur.....

.....There is no reason for a person to kill an animal without purpose. Anyone who wastes wildlife has no business on a trapline.....

Special regulations will apply to state lands-trappers must check with the Montana Department of Natural Resources to learn the current laws. In most cases, a permit will be required to trap on state land. This is because trapping is listed as a commercial activity in Montana. Regulations set down by the Montana State Legislature and the Montana Fish, Wildlife & Parks Commission specify state objectives for the management of wildlife. (See the current Montana Trapping Regulations).

The private landowners (those who own small tracts as well as large farms and ranches) often have widely different, and sometimes, conflicting objectives. Here are a few basic reasons landowners may have for requesting or permitting trapping on their land.

- Animals causing damage to livestock, crops or property.
- Animal population control
- Disease

It should be emphasized that state regulations concerning furbearing animals, must be followed. It is the responsibility of the trapper to follow all state laws. Landowners can specify limits, or what they want or don't want trapped, within these state regulations.

There are three basic classifications of furbearing wildlife which can be trapped in Montana, as determined by Montana State Law:

1. Furbearers.

Beaver, otter, muskrat, mink, marten, fisher, wolverine, bobcat & swift fox.

2. Predators.

Coyote, weasel, skunk & spotted skunk.

3. Nongame wildlife with commercial pelt value; any wild animal not otherwise classified by statute or regulation.

i.e. Badger, raccoon & red fox.

The legislature can revise the classification of various species every two years and, consequently, it is important to be familiar with the current state regulations.

Let's consider those animals which most frequently cause problems for the landowner. The landowner's objective in the following cases may be to eliminate the problem animals or reduce their population to acceptable limits:

Beaver - The problem which the beaver may cause for landowners are, plugging irrigation and drainage ditches and canals, destroying trees, i.e. fruit, ornamental or shade trees. The fruit tree loss can cause the loss of a crop, the ornamental and shade can cause financial or other harm. The beaver's dam capabilities can cause flooding of hay fields, basements and other areas which could be a financial loss to the landowner.

Muskrat - The muskrat will bore holes in irrigation dikes and dams, thereby causing them to wash out.

Mink - Primary problems caused by mink are destroying ducks, geese, chickens and turkeys.

Otter - The otter eats fish, and consequently, can occasionally cause problems for fish hatcheries and private fish ponds.

Coyote - The coyote may kill livestock, mostly sheep, and occasionally calves.

Raccoon - The raccoon may destroy crops such as corn, melons and fruits. They also can damage grain storage buildings and barns as well as spread rabies.

Skunk - The skunk spreads rabies, eats the eggs of game and domestic birds. It can also be a nuisance when they den under buildings on farms.

Badger - The badger has been accused of digging holes which can cause horses and cattle injury when they step into them. They also destroy cropland while chasing rodents and digging burrows.

Fox - The primary problems caused by the fox are destroying wild ducks, geese and turkey nesting sights in addition to the occasional raid on domestic poultry farms.

.....State regulations concerning furbearing animals, must be followed. It is the responsibility of the trapper to follow all state laws.....

.....There are animals having little or no pelt value, which the landowner might also wish to have removed from his/her property.....

.....It is important to mention that adjacent landowners may have conflicting objectives.....

All of the animals, which we have considered up to this point, have a pelt value when in their prime. There are other animals having little or no pelt value, which the landowner might also wish to have removed from his/her property. For example, the porcupine destroys Christmas trees and kills trees in timber stands by girdling them. He can cause considerable damage to livestock, working dogs and household pets when they receive a face full of his quills. In addition, the porcupine destroys leather and any equipment which contains salt and will chew holes in plastic silage sacks.

Other animals, such as pack rats, gophers and ground squirrels can cause a variety of problems, which require their removal.

When helping out the landowner, the trapper is wise to work with the landowner, within legal parameters to address any other animals, it is just good public relations.

Let us consider the landowners objectives concerning animal population control. Some landowners wish to preserve some of the animals discussed earlier, but only in limited numbers. For example, they may wish to keep beaver numbers sufficient to maintain a pond, but not in numbers which would create a problem. Maintaining beaver ponds provides prime habitat for muskrat and mink. That is clearly to the advantage of the trapper. Some landowners, who are not raising livestock, but are growing grain crops, may wish to have a limited number of coyote, fox, mink, and skunk in order to control the rodent population. Again, this is to the advantage of the trapper. Even those landowners who want nothing trapped, provide a service, by providing a sanctuary.

.....Remove all signs of trapping activities.....

It is important to mention that adjacent landowners may have conflicting objectives. For example, there may be a culvert on a public road being plugged by a beaver, who spends most of his/her time on private ground, on which the owner will not allow trapping. This may leave the trapper only a 2 to 5 foot strip on which to trap the beaver. Similar conflicts could develop between a private landowner whose trees are being destroyed by the beaver, who spends most of their time in closed areas. In this case, the trapper must explain that often a beaver, especially in summer months, will travel a mile or more each night and seldom stops at the same place two nights in a row. The trapper must explain the habits and trapping alternatives to both landowners in order to abide by both landowner objectives.

There are special objectives applying to wilderness areas, which the trapper has to keep in mind. These objectives are covered in the current State trapping regulations.

Here it is worth mentioning that on all State, Federal and private land, most of the rules which apply to wilderness trapping, such as removing all signs of trapping activities, are essential to follow, especially removal of all nails, wire and metal objects from trees. Metal left in a tree may cause injury to sawmill workers and damage to the equipment. Such injuries and damage to equipment may lead to legislation, which would limit trapping on timbered land.

We have discussed the most common ways in which the trapper can assist the landowner to carry out their mutual objectives. By understanding the objectives of the landowner, the trapper can assist the landowner in achieving his/her objectives, increase public appreciation of his/her occupation and, at the same time, improve the wildlife population.

.....With the commitment of all individual people, that the right to trap and the well being of this valuable renewable resource will be insured.....

Trapping Politics and Social Concerns

It is important for all trappers and all other persons to be very active at local, state and national levels to insure trapping will continue as a viable tool in the management of this important renewable natural resource now and for future generations to come. Apathy may lead to loss of trapping privileges.

Trappers must trap in a manner that is acceptable to the general public, as it is only with public support that trapping will continue. The objections to trapping most commonly heard are:

- Unethical trapping - people feel that trapping is cruel, and causes undue suffering for the animal. It is a commonly heard argument that trappers are greedy, heartless, and cruel, and that it is wasteful to kill an animal for its fur, and not for food. The simple fact is that trapping when done with a management perspective, benefits all; the wildlife, the trapper, and the habitat. Ethical trapping is done for the benefit of the wildlife, and has been scientifically proven to cause less stress than other natural controls. Because the animals must be removed for the benefit of the species and habitat, it is natural and good that at least some part of the animal be utilized.
- Harvesting pelts only for profit - In times of higher fur prices, critics put forth the argument that trapping is solely for profit, and management objectives are meaningless. Trapping is regulated with laws, quotas, limits, and season lengths. These controls allow management experts a surprising amount of restraint on the number of animals harvested.

These objections can be rendered unsupportable with statements about all the good things trapping has to offer.

- Safe, humane population management - Trapping is a valuable tool for wildlife experts to use when controlling fluctuating populations.
- Appreciation of nature through participation - An experienced trapper is the most knowledgeable individual about local wildlife habits, activities, populations, and habitat conditions. He will often be of assistance to local wildlife managers, and other interested in the study, or observation of wildlife.
- Conservation benefits to all people through moneys generated by sportsmen - All wildlife related sports generated income for the Fish, Wildlife & Parks through license purchases, taxes paid on sporting goods, and purchases of goods and services relating to their pursuits. Seldom can many of the other outdoor activities make the same claim.

Trappers can and should make use of their unique skills and knowledge to help educate the public, and to promote trapping as a viable tool for wildlife managers. Trappers must see that trapping remains in the good graces of the public, by being active at all levels.

Local

The local aspect of activity by the trapper is to be as knowledgeable of the laws as possible. Cooperate with the game wardens and biologists when problems arise. The trapper should be sure to make themselves available for groups such as schools, civic groups, boy scouts, education groups and environmental groups. Teach and show them your real concern for wildlife management. Set a good example and follow the laws and you will protect and promote the trapper's image.

Know the law! Many states have laws and regulations dealing with wildlife damage, and predator or rodent control, which every serious trapper should keep up with.

Effective Action By Trappers

Local

Trappers can educate people about trapping and what trappers do with traps. The Spring Montana Trappers Association District Meetings are an excellent place to voice your personal opinions and views.

.....Trappers must trap in a manner that is acceptable to the general public.....

.....Trapping when done with a management perspective, benefits all; the wildlife, the trapper, and the habitat.....

.....Trapping is a valuable tool for wildlife experts to use when controlling fluctuating populations.....

State

On the state level, the Montana Trappers Association meets with legislators and the Montana Fish, Wildlife & Parks Commission who set quotas, seasons and strict laws affecting the trapper. There are many organizations dedicated to the movements of the trapper's fight for the right to continue to trap a very valuable natural renewable resource and to carry on our American heritage. Trappers and concerned individuals should also be involved in the land use planning, for without habitat, we cannot expect to maintain furbearer populations at their highest potential. The MTA lobbies the Montana FWP Commission and legislators for season preservation, quotas, and laws that effect fur harvest and access.

National

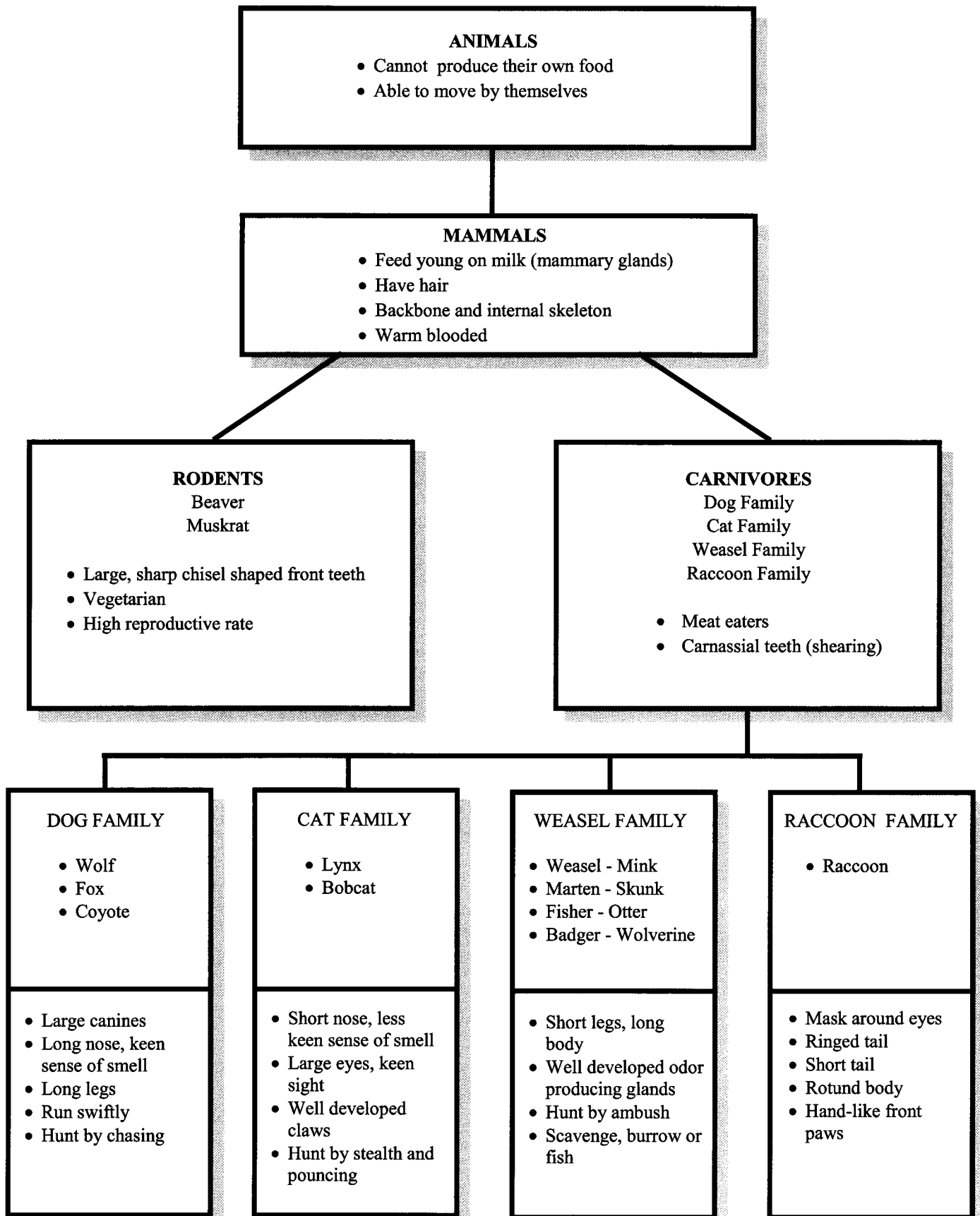
The National Trappers Association, Fur Takers of America, National Rifle Association, Wildlife Federation of America, the American Wildlife Partners and Fur Wraps the Hill these are just a few of the organizations the trapper can rely on to keep abreast of all actions in the House and Senate which affects trappers and the fur industry in any way.

It is through the efforts of organizations such as these and the efforts of dedicated trapper associations along with the commitment of all individual people, that the right to trap and the well being of this valuable renewable resource will be insured. Those people actively interested in pursuing trapping are the future generation of trappers who will benefit from the work being done by dedicated trappers and concerned individuals from all parts of the United States. Only by their involvement and dedications to the protection of wildlife habitat, can we and will we insure healthy furbearer populations now and forever.

CHAPTER 3

ECO SYSTEMS AND THE BIOLOGY OF WILD FURBEARERS

Classification and Identification of Furbearers



Montana Life Zones or Ecosystems

All forms of life require certain conditions in which to live and successfully reproduce. These conditions are supplied by a plant or animal's environment. Every environment is created by the interaction of air, soil, water, plants and animals, under the influence of climate and other factors. There are many possible combinations and variations of these factors and, thus, environments can vary widely from place to place. As environments vary, so do the kinds of plants and animals that are adapted to live in them.

Montana is a large state with a total area of approximately 145,388 square miles. A major characteristic of the state is its diverse topography, ranging from flat, sometimes featureless plains to high mountains of the west. These differences help create a variety of environments, from the prairie in the east and central parts of the state to the, boreal forest of the west and treeless alpine of the Rocky Mountains. This range of environment can be divided into major "life zones or ecosystems" that are characterized by particular grouping of plants and animals. The following are general descriptions of each major life ecosystem in Montana.

Alpine

This zone is only found in the highest Rocky Mountains where it is too cool for trees to grow. In Montana, timberline (upper latitudinal limit of tree growth) runs irregularly from 6000 to 8000 ft. above sea level. Timberline drops progressively. Permanent snow fields and glaciers are common in this zone. Plant life is low lying and generally sparse, being found in rocky habitats, moist meadows, and along stream courses.

Montane

Timberline forms the upper limit of this zone. The zone is characterized by forests of coniferous trees, western larch, cedar, Douglas fir, birch, aspen with engelman spruce and lodgepole pine at lower elevations.

Intermountain Grassland (Foothills)

This zone is similar to the lower portion of the Montane zone, except that it is generally drier, receiving less precipitation than areas closer to the high mountains. Forests of white spruce, lodgepole pine, and poplar are often broken by tracts of grassland. This mosaic of vegetation provides good habitat for a variety of wildlife.

Riparian

These areas are adjacent to water bodies which support vegetation characteristic of wet soils and humid conditions. Riparian sites include the margins of large ponds and reservoirs, bottomland along rivers and streams, and wetlands, such as backwaters, abandoned meanders, overflow channels, and oxbow lakes. Riparian areas can be large or small and fairly contiguous or finely dispersed depending on moisture availability. they usually have abundant willow, cottonwood and aspen tree growth as well as cattail and other wetland grasses.

Shrub Grassland

This type of ecosystem is primarily sagebrush grassland, occupying the plains on level, gentle, or locally steep slopes east of the mountains. Dissected river breaks support scattered stands of juniper and ponderosa pine. The wetter drainage's support deciduous trees and shrubs such as cottonwood, green ash and chokecherry.

Plains Grass

These areas are generally flat to rolling, although deeply eroded badlands areas typically occur along stream courses throughout eastern and southeastern parts of Montana. Areas north of the Missouri River were influenced by glaciation, the northern plains are smoother and flatter than the plains south of the Missouri. With the semiarid climate associated with these area, cold winters and warm summers are common. A wide variety of grasses are found here. This would also be where the majority of wetlands and other diverse farmland is found.

Plains Forest

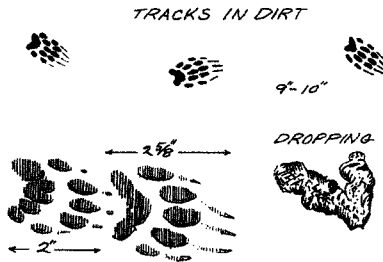
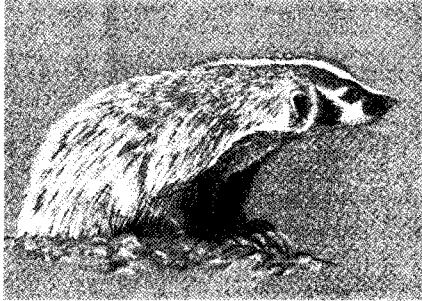
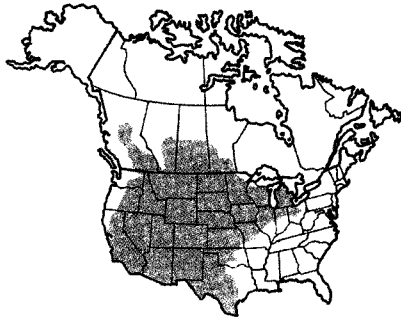
Upland plains forest generally occupy areas in the southern half of Montana's plains. They support forest due to varied amounts of moisture, topography and soil conditions. Different types of deciduous trees, various bushes and shrubs occupy these areas.

.....Biology is simply the study of the life history of an animal, including its basic identification, characteristics, habits, food, reproductive cycle, range and habitat requirements.

.....This manual provides information on the basic biology of fifteen wild furbearing species found in Montana. These animals are all mammals (animals which feed their young on milk). They can be divided into two major categories: the carnivores, or meat-eating animals, including the dog, cat, weasel and raccoon families, and the rodents, including the beaver, muskrat.....

.....People can learn much about the lives and habits of wildlife from first-hand observation, but there is also valuable information which can be learned from the scientific study of these animals.....

.....Trappers who make use of this information will know more about the lives of the animals and will be able to manage them more effectively.....



Biology of the badger (*Taxidea taxus*)

Order: Carnivora; Family: Mustelidae

Characteristics

The badger is a short, robust, flattened mammal that has a narrow, whitish stripe running over the crown of its head from its muzzle to its shoulder. This white line is matched on each side of the face by white cheeks and white ears trimmed with black. The fur is much shorter on its head than on its back and sides where it hangs loosely on the animal. The underside has very little fur. The normal color of its hair is creamy-buff with black-brownish bands, giving it a grizzled appearance. Its stubby tail is covered with fairly stiff, buffy-brown hair. The front feet have very long claws for digging, while the rear feet have short claws.

Both sexes are similar in size with the average length being about 28 inches. They weigh between 12 and 16 pounds, but extra heavy ones can reach up to 25 pounds. Badgers, like other members of the weasel family, have scent glands which give off a musky odor when the animal is excited.

Life Cycle

Mating takes place from May to August, however, the actual implantation of the embryo is delayed until mid-December. At this time, the embryo begins active growth; the gestation period is about 46 days. The young are born in February. Litter size ranges from one to four. They are weaned when half grown but food is still brought by the mother until they are three quarters grown. Thereafter, they begin to hunt with the mother and gradually learn to hunt on their own. At 10 to 12 weeks old the young become independent.

Food

The badger is a carnivore and its food consists mainly of ground squirrels, pocket gophers, mice, voles and other rodents. They will raid bees' nests and take birds and their eggs as well. Other food sources include snails, insects, and snakes. They often wait in ambush within a burrow for unwary animals.

Habits

The badger is a very powerful digger and a courageous fighter. It seems to be a solitary animal except during mating season. When badgers run, they have a distinct waddle. They appear to be most active at night but at times may be seen sunning near their burrows in early morning or late afternoon. The badger, unlike other members of the weasel family, hibernates during the winter. It is generally a quiet animal but, when threatened, it may hiss and snarl trying to intimidate the animal or person following it.

Population

The overall badger population is abundant and mainly occurs in areas where gophers and ground squirrels abound.

Habitat

Badgers are found mainly in open prairie and plains, farmlands and open foothills where sand loam areas occur that permit easy digging and which can support other burrowing rodents. Badgers generally have many dens; some are dug in search of prey and may be used only temporarily but are often returned to. Special dens are dug for rearing the young. These dens may be up to 30 feet long and 10 feet deep and usually have more than one entrance with a large dirt mound at the main hole.

Economic Value

The fur from badgers can be quite valuable. However, there is much variance in the quality of fur on badgers. Some have fairly short hair while others have quite long hair. The long, clear colored furs bring good value and are used mainly for specialized purposes. The fur is quite durable and badgers hair is known for its use in shaving brushes.

Badgers help control pest populations but may also create problems for farmers because the large burrows and mounds are a hazard to machinery and livestock.

Distribution Status

The range of the badger covers all of Montana. They are common east of the mountains in grassland areas and are rare in timbered areas. The badger is classified as an unprotected predator in Montana.

Biology of the Beaver (*Castor canadensis*)
Order: Rodentia; Family: Castoridae

Characteristics

The beaver is a semi-aquatic furbearer and is North America's largest rodent with an average weight of 30 to 60 pounds. It is a dark brown creature with an average length of 40 to 45 inches including the tail. The scaly paddle-like tail acts as a rudder for swimming, aids in diving, is a counter balance when walking or carrying things, and acts as a prop when the animal is chewing on trees. It also uses its tail to warn other beaver of danger. It is a compact, roundish, awkward looking animal when on land, but when frightened, can travel quite quickly for a short distance in a bounding gallop. Its short hind legs have large webbed feet which propel it while swimming and support its weight in soft muddy areas. The two inside claws on each hind foot are double. These special claws are used for combing the fur. Its short front legs can be used like hands for carrying sticks, stones, and other material for dam building.

The beaver's eyes are small and round. It has relatively poor eyesight but its hearing and sense of smell are excellent. Its nostrils and ears are small and can be closed for underwater swimming. Its lips can close behind its large incisor teeth to gnaw under water without swallowing water. The incisor teeth grow constantly and consist of bone material that is hardest on the outward side. As the teeth wear away because of gnawing, the outer tips of these teeth are kept chisel sharp.

The beaver's fur is very dense and consists of fine underfur of about 3/4 inch in length (when prime) while the outer layer of heavy guard hairs are about 2 inches in length and give the beaver its color shades. This dense fur is made waterproof by much combing and oiling. The beaver obtains the oil for grooming from two glands near the anus and applies it by using its front and rear legs. Combing straightens the fur and removes mites and other insects from the fur.

This is the only animal that can effectively alter its habitat by building dams that it uses to store its food and protect itself from predators. The beaver also builds its own lodges and digs tunnels into banks along the water.

Life Cycle

The beaver normally has one mate. Should its mate be killed, it may take another. Females produce the first litter at about 2 to 3 years of age. Breeding season is usually from January to March with a gestation period of 105 to 107 days. A typical litter contains two to three kits. The kits are normally born between April and June. Young can be born at any time up to late summer as a result of delayed breeding. Kits are born fully furred with their eyes open. They are weaned at about 8 to 10 weeks, they stay with their parents for about 2 years then they are driven away. After they leave their parents they migrate along lakes and streams or even across country until they find a mate and suitable building site for a dam and lodge. The average life span is 5 to 6 years but they have been known to live for up to 14 years.

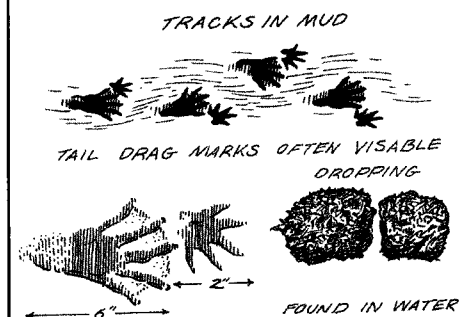
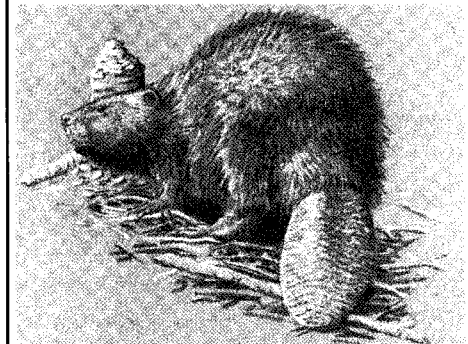
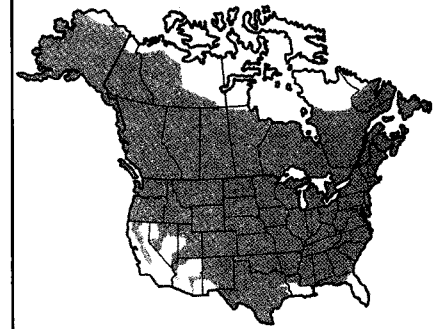
Food

The beaver's preferred food is the bark of the quaking aspen but will readily eat bark from poplar, alder and willows. It can eat various kinds of tree bark and shrubs when forced to and will often consume pond lily, various grasses, and roots of aquatic plants.

Habits

Beaver are territorial by nature so considerable fighting occurs, especially during the spring season. Their territories are marked by scent mounds that consist of dirt pads upon which is deposited an odorous substance secreted by the beaver's castor glands.

Beaver colonies can contain quite a number of animals but a typical colony consists of one breeding pair and a number of yearlings and kits. The most familiar and distinctive beaver structure is a dam behind which water accumulates. Dams are made from sticks, grasses, mud, and stones and are interwoven in such a manner that they can withstand considerable water pressure. There may be a series of dams but the lodge or bank dens are usually located at the main dam. Building of dams is instinctive and will occur wherever beaver are stimulated to build by the sound of running water.



.....The beaver gets its scientific name from its castor glands which occur in both male and female.....

Gathering of food for winter usually begins in August and is intensified as fall approaches. The food cache is built near the lodge and consists of branches of felled trees. These branches are submerged under the water so that only the tops can be seen above the water level. Beaver are most active from dusk until morning. Although capable of felling large trees they are not able to control the direction of the fall.

The beaver is an expert swimmer and is able to remain under water for periods of up to 15 minutes. The brain can redirect oxygen away from less vital organs such as the stomach and legs to its more essential organs such as the heart.

Beaver are quiet creatures, but guttural sounds seem to be used as a means of communication. The tail can be used to provide a warning by slapping it hard against the water, creating a splashing-thudding sound.

Population

Beaver populations are generally high where food and water are plentiful. Birth rates are low and mortality rates increase when food is scarce or of poor quality. Beaver are territorial by nature so only a certain number can be accommodated within a given area. Infighting occurs when populations become too dense, habitat deteriorates and mortality increases.

Wolf, bear, and coyote are the beaver's main predators but eagles are known to take some, especially kits. Tularemia, a bacterial disease which produces white spots on the liver and spleen, can severely affect their numbers and often entire colonies are wiped out. This disease can be transmitted to humans so caution must be used when handling suspected carcasses. Various other internal parasites occur but generally do not result in the death of the animal.

Habitat

Ideal beaver habitat consists of slow meandering creeks or streams and small lakes with shallow muddy banks where quaking aspen, alder, poplar, willow, and shrubs are readily available. Lodges are often found near the outlet of lakes where dams can be built. The lodge is built from peeled logs, sticks, and mud interwoven to form a very strong dome shaped structure. The lodge provides shelter and security and has several entrances below water level. These lead to an open platform area inside the lodge where the beaver can sleep, feed, and rear its young. Beaver dig bank dens in addition to the lodge and in some situations these may serve as the only shelter. The bank dens also have underwater entrances with a feeding or resting area above water level which can serve as an escape shelter in emergencies. Along streams beaver may build a series of dams causing the water to build up which increases the depth and overall surface area of the pond. The flooding which then occurs allows beaver to fell trees which would otherwise be too far from the water. It also assures adequate water depth for the winter food storage. Beaver dams provide habitat for a variety of species of wildlife including, at times, fish. Mixed wood and lowland life zones are best for beaver habitat. Rocky areas and fast moving streams are least preferred.

Economic Value

The beaver's value as a fur animal was responsible for much of the early exploration of North America. It was one of the main reasons for early exploration of Montana and the fur trade which started the migration of mountain men, trappers and later settler to the state. It was trapped extensively which then required the establishment of fur trading posts, the first being Fort Raymond at the confluence of the Bighorn and Yellowstone Rivers and later Fort Benton on the Missouri River.

Beyond the economic value, the indirect benefits from beaver dams is immeasurable. Water storage, spring run off control, as well as providing habitat for birds and animals is a benefit to trappers and other natural resource stakeholders. Unfortunately, dams and runways in agricultural areas cause considerable damage to farm lands and roadways. Active trapping and removal of problem beaver when conflicts arise, eliminate and avoid potential problems.

Distribution and Status

Beaver are found throughout Montana but are scarce in mountainous areas and in open prairies unless streams and gullies are present. Their status is abundant to over-abundant in many areas and a large harvest of beaver can occur, especially in agricultural areas of Montana. The beaver is managed and protected by regulated fur harvest seasons.



.....The fur of the beaver is very durable and is made into coats, hats and trim.....

.....Generally, beaver do not travel very far but some tagged beaver have been known to travel 150 miles...

Biology of the Bobcat (*Felis rufus*)
Order: Carnivora; Family: Felidae

Characteristics

The bobcat looks much like its close cousin, the Lynx, but is smaller and more slender, has less prominent ear tufts and its legs are shorter with much smaller feet. The tail is short and is barred with white on the underside, unlike the full black tip found on the lynx. The coat is more distinctly spotted and has a reddish tone, especially in summer. In winter the coat is lighter in color. In arid areas, the fur is often buff colored, while in heavily forested areas it is much darker.

The male may be from 35 to 50 inches long and weigh up to 20 pounds. The females are 30 to 40 inches and weigh up to 15 pounds.

Life Cycle

Bobcats reach sexual maturity at about one year of age. The mating season usually occurs between February and early April. The gestation period is 60 days, and two to four kittens are born in April or May. Females may rear two litters in a season if conditions are good. Males may assist in rearing the young by bringing food to the den but there is no permanent bond between males and females. The young are spotted at birth and have distinct facial markings. They are weaned at 2 months of age.

Females are protective of the young but may abandon the den if disturbed. The young can fend for themselves by fall.

Food

Bobcats prey on snowshoe hares and jackrabbits as well as mice, squirrels, muskrats, shrews, chipmunks, and other small mammals. Birds, their eggs and carrion are also eaten. Bobcats are capable of occasionally killing deer that are wounded or in deep snow. The bobcat hunts mostly by chance encounter, using its keen vision and hearing to detect prey and then carefully stalking it, or by waiting in ambush and pouncing on prey as it passes by.

Habits

The bobcat is a shy, solitary, elusive animal which mainly hunts at night but may at times be seen in daylight, particularly in winter. The bobcat is a good climber and will also swim if pressed. Bobcats may travel great distances at times but generally stay within a fairly restricted home range of about 3 square miles. The size of the home range may vary somewhat according to food supply and the proximity to mate. Bobcats may travel up to 7 miles in a single night.

Bobcats are sometimes heard caterwauling like alley cats. They scream especially during the mating season. They spit, snarl, purr and meow much like house cats. Bobcats maintain regular travel routes marked by urine scent posts. They are strong, furious fighters when cornered or trapped and are not submissive as is the lynx.

Population

Bobcats have few enemies; men and dogs are the principle ones. They are affected by feline distemper, mange, rabies, leptospirosis, parasites and other diseases. The main factor limiting their numbers is the availability of food.

Habitat

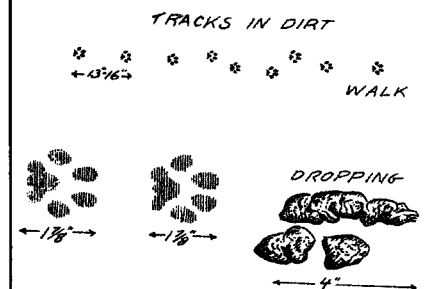
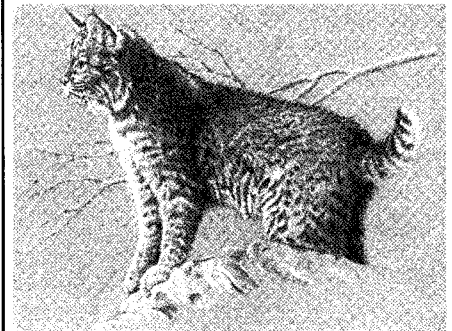
The bobcat usually avoids heavy forests, preferring more thinly treed areas, rocky hillsides, and dry coulees. They are sometimes found in broken mountainous country. They have adapted to agricultural and populated areas to a greater extent than the lynx. Bobcats also do well in arid regions or in areas that have been logged which provide small openings in the forest. Bobcats may den up in rocky crevices or under dead falls.

Economic Value

The bobcat is a very valuable fur animal. It is also valuable for its rodent hunting activities.

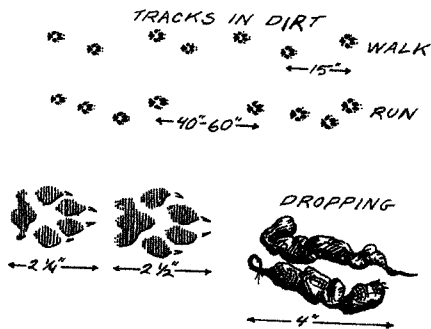
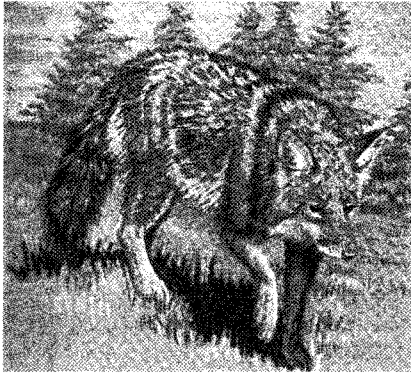
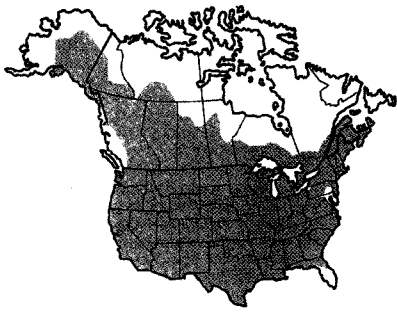
Distribution and Status

Bobcats are found throughout Montana and most of the United States. They are managed and protected by regulated fur harvest seasons.



.....Other names: Bay lynx, barred bobcat, catamount, cat of the mountains, lynx cat, pallid bobcat, red lynx, wildcat.....

.....The bobcat has extremely keen eyesight and hearing which are its principle means of detecting prey. The sense of smell is fair but is not as highly developed as in the dog family.....



.....The life expectancy of a coyote in the wild can reach up to 9 years. However, in captivity they can live up to 15 years.....

Biology of the Coyote (*Canis latrans*)

Order: Carnivora; Family: Canidae

Characteristics

The coyote is much like a German Shepherd dog in appearance, with long thick hair, slender pointed nose, erect ears, and a large bushy tail. It is a relative of the wolf but much smaller. Sometimes it is mistaken for a wolf.

There appear to be three different colors of coyotes in Montana. There are the Prairie, Northwestern, and Mountainous coyote. All three are similar in size with the general differences being that the Prairie is lighter (paler) colored, the Northwestern often has cinnamon or reddish-brown streaks, while the Mountainous is very dark. The average length is, including the tail, 45-55 inches and the average weight is about 25 pounds. The male tends to be larger than the female.

The coyote runs with its tail pointed downward, whereas the wolf often runs with its tail pointed upward. Hybrids called "coy dogs" occur when cross-breeding with dogs takes place. These offspring show greater variations in the hair color.

Life Cycle

A female coyote begins breeding just prior to being 2 years old. The heat (estrus) period is usually from January to March. Prior to birth, the female begins to clean out dens or burrows where the pups will be born from late March to early May. The gestation period is about 63 days, with the average litter being four to seven pups. However, litters of up to nineteen have been reported. The pups remain blind for the first 10 days of their life. They are weaned by 5 to 8 weeks during which time they begin to leave the den and explore the immediate vicinity. By mid-July or when they are half grown, they begin to run with their parents and learn the art of hunting and self-preservation. By late fall they are fully grown.

Food

The coyote is primarily a meat eater but does consume some plant matter. Being an active hunter, its favorite prey is mice, gophers, rabbits, and other small rodents, as well as birds and their eggs.

Occasionally, when hunting in pairs or groups, they kill deer, antelope and domestic animals such as sheep and calves. They also eat carrion and can become a problem to livestock raisers

They will readily eat insects, reptiles, berries, and grain. Surplus food is at times cached.

Habits

Coyotes are social animals but maintain a home territory of about 10 square miles when food is available. The home territory is marked by urinating on stumps, rocks, digging sites, and new feeding sites.

They are most active at night, early morning, and late evening but they are occasionally seen during the day when hunting for food. They are very vocal animals and are especially noisy during the breeding season. The familiar sounds of the coyote include howling, short yips and barks. Usually, when one coyote begins to howl, a chorus soon joins in.

Coyotes usually travel at a steady lope and can run at speeds of up to 30 miles per hour, or faster when chased, for short distances. They are good swimmers and will even catch the occasional fish.

They are very adaptable and can readily live in semi-urbanized areas and thrive near farms and livestock areas. Occasionally, some will travel as far as 400 miles beyond their normal home range.

Population

Food supply is the main factor determining the number of coyotes in a particular area. Litter size will decrease when rabbit and mouse populations are low. Coyotes eat a wide variety of foods so their population does not fluctuate drastically but rather changes gradually over a longer period of time. Mortality among young increases considerable when food is scarce and many die before they reach the age of one year.

Coyote populations are also affected by various parasites and diseases such as mange, fleas, and ticks, as well as distemper and tularemia. Rabies is rare in coyotes, however it does occur and trappers handling suspected animals must be extremely careful. The coyote's chief predator is man, who traps, hunts, and at times, poisons them. Some evidence appears to suggest that wolves will also control the number of coyotes in areas where their ranges overlap.

Habitat

The preferred habitat of coyotes is along the margins of farm lands, pasture lands, mixed farming areas, game preserves, and areas near cities and towns. Open forest edges also attract coyotes. Rolling hills, creek valleys, coulees, and shores of lakes are natural for them. Denning sites are in concealed spots, mainly on brush covered slopes, steep banks, and rocky ledges. The actual dens are about 3 feet in diameter.

Economic Value

The coyotes fur ranges from silky (usually female) to coarse texture. It is used for coats and trim material. The lighter, silkier coyotes from the prairie are in greatest demand.

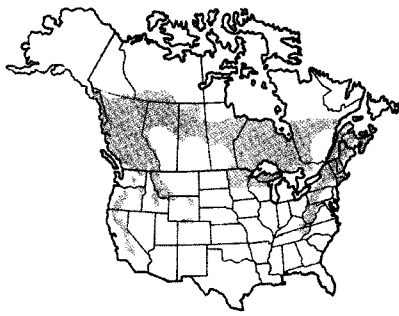
Distribution and Status

The coyote is found throughout Montana, However, it is most prevalent in the prairie, with sizable populations existing in foothill and mixed wooded zones. They are classified as an unprotected predator.

.....Local municipal agencies often assist landowners in removing problem coyotes using the services of predator control specialists.....

.....Besides the economic value, recreational hunting of coyotes is becoming a popular sport. The overall benefits of controlling gophers, mice and other rodents are often overlooked.....





Biology of the Fisher (*Martes pennanti*)
Order: Carnivora; Family: Mustelidae

Characteristics

The fisher is one of the largest members of the weasel family and is closely related to the marten. It is about 30 to 40 inches long including a 13 to 14 inch tail. Males weigh 8 to 10 pounds and are significantly larger than the females which weigh 4 to 6 pounds.

The fisher is powerfully built with an almost wolf-like head but with smaller, rounder ears. The body is long and slender but well muscled. The legs are short and the feet have poorly developed center pads, the claws are non-retractile.

The tail is long, well furred, and tapering. The fur of the male is coarse and grizzled, with gray on the head and upper body, becoming darker toward the legs and lower back and the tail is almost black. There is often a white patch on the throat. Older fisher tend to be more grizzled than younger ones. When over-prime, the fur has a strong tendency to take on a reddish or rusty color, which generally reduces the value. The fisher has scent glands on the pads of the hind paws and the base of the tail or anus; these are used to mark their territories. Fisher molt in the spring and fall. The fur is at peak primeness in November and deteriorates after January.

Life Cycle

Both sexes are sexually mature at one year of age. Breeding occurs in March and April and both sexes may have more than one mate. Fisher have delayed implantation with a gestation period of about 51 weeks, but the active pregnancy lasts only 8 weeks. Litter size ranges from one to five with the average being three. The young are blind and helpless at birth, but can see by 1 1/2 months. Weaning occurs at about 4 months but they may begin taking meat before they are completely weaned. Fisher may live up to 14 years, but the average is 4 to 5 years. The female tends to out live the males. Juveniles can be distinguished from adults by the development of a bony crest on the skull which becomes progressively larger with age and is particularly pronounced in males.

Food

The fisher eats a wide variety of small animals including mice, squirrels, hares, birds, bird eggs, and insects. It is one of the few animals capable of killing porcupines without harming itself. If some quills do become embedded they do not seem to fester as in other animals and eventually work their way out. Fisher also feed on carrion and during certain seasons, eat a lot of berries.

Habits

The female and young travel together for a time after leaving the den but disband in the fall. Adult fisher lead solitary lives except for brief periods during the mating season.

They keep on the move almost constantly and tend to travel in rough circles of 4 to 12 miles, repeating the circuit every 4 to 12 days. They are most active at night but are sometimes seen in broad daylight. They are good tree climbers and swimmers but mostly travel on the ground. The home range of the male is approximately 9 square miles and the female 6 square miles. These are marked with scent and may vary in size depending upon the quality of the habitat and availability of food. Fisher are great travelers and are curious animals, so are readily attracted to bait and are easily trapped.

Population

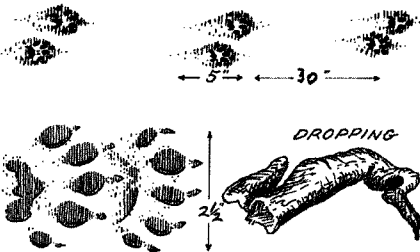
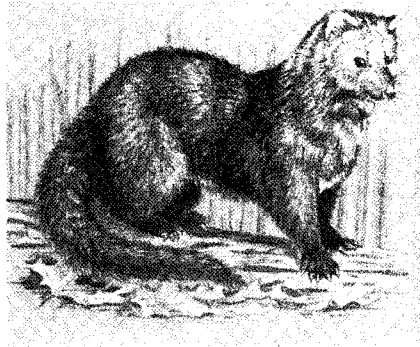
Fisher prefer heavily forested areas with extensive coniferous growth. They are adaptable and inhabit a wide variety of habitat types if the food supply is adequate. Fisher den under brush or log piles or in hollow trees.

Economic Value

The fur of fisher is very durable. The pelt of the female, though much smaller than the male, is silkier and lighter and usually more valuable than that of the male. The fur is used for garments.

Distribution and Status

Fisher are found in the western quarter of Montana in old growth coniferous and deciduous forests. They are managed and protected by regulated harvest seasons.



.....Other Names: **Black cat, fisher cat, pekan, atchok or oochick, Wejak.....**

.....Fisher were re-introduce in the Cabinet Mountain area of Montana and that population is stable...

Biology of the Colored Fox (*Vulpes vulpes*)
Order: Carnivora; Family: Canidae

Characteristics

The red fox looks like a small dog and moves with an almost cat-like grace. They are about 41 inches long including the 15 inch tail. They stand about 14 inches high and weigh up to 14 pounds. The male is usually larger and heavier than the female. The fox has large pointed ears, keen hearing, and a sharply pointed nose indicating its acute sense of smell. It also has sharp eyesight. Its legs are long with small padded feet and non-retractable claws. The tail is large and bushy and used to keep the nose and feet warm when curled up.

There are three main color phases of the fox, the red, the cross, and the silver phase. These are all the same species and, in fact, all three variations may occur in the same litter. Also, just about every possible color gradation from straw red to cherry red through to black can occur. The red phase is most common with the cross and silver found occasionally throughout Montana.

The fur is long and silky with a thick underfur overlaid by guard hairs when prime. The legs are black in color and the tail is also darker with a white tip. The chin, muzzle tip, throat and belly are creamy white. The ears are white inside and black outside.

The silver fox is mostly black with a frosting of white guard hairs, while the cross fox is denoted by a darker band across the shoulders and down the back. The fox does not undergo any seasonal variation of color but molting occurs in the spring and fall. The fur is best in early winter.

Life Cycle

Fox can breed at one year of age. Males begin to search for mates in late November or Early December, and breeding occurs in January or February.

There is a gestation period of 51 to 53 days and the young are usually born in March or April. At birth the young are well furred and the litter size varies from 4 to 8 pups. The young are born in earth dens dug in sandy soil. The pups are weaned at 8 weeks of age. If there is a disturbance in the area, the vixen will move the pups to a new den. Gradually, the young venture further from the den and eventually join the parents on hunting excursions. By fall they are nearly full sized and are fully colored.

The young disperse from the home range in the fall in search of new territory. Females move up to 30 miles from the home area but males have been known to travel as far as 300 miles from the area where they were born.

Food

The fox will eat almost anything but mostly concentrates on small animals such as mice, chipmunks, squirrels, woodchucks, hares, and muskrats. Birds, insects, and berries are also eaten. The fox will feed readily on carrion.

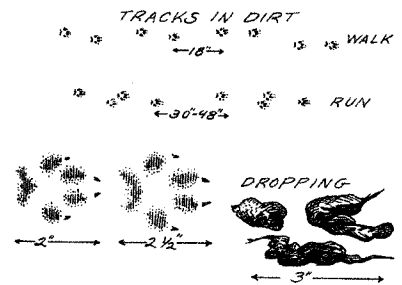
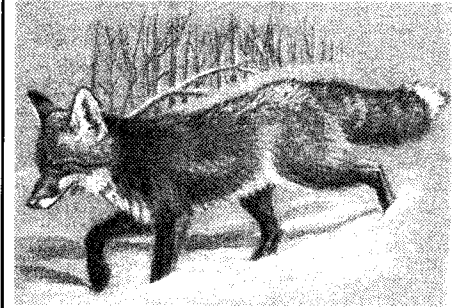
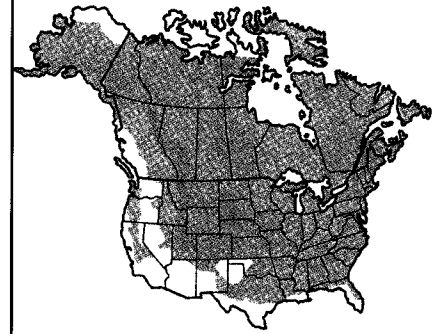
The fox regularly caches extra food for future use. The fox follows a regular route when hunting, carefully checking likely spots for small rodents. It captures these by zeroing in on the sound or smell and then pouncing, crushing them with all fours. They may also team up to chase rabbits or wait in ambush for woodchucks.

Habits

Foxes are intelligent animals with extremely keen senses. They are very adaptable and seem to have adjusted well to the presence of man, and thrive in agricultural areas.

They seem to prefer mixed terrain of open fields, and forested areas but can also be found in unbroken forest.

They avoid denning near coyotes, and in most areas where coyotes are plentiful they seem to have displaced the fox.



.....The life span of a fox in the wild averages 5 to 6 years.....

.....The fox is very valuable in helping control rodent populations.....

Foxes mate for life and the pair share the same home range. They travel together most frequently during the breeding season but seem to keep track of each other through scent posts and vocal calls during other seasons.

The home range is from 1 to 3 square miles and is marked by scent, urine or droppings. They also mark food caches in this manner. A fox is most active in the evening or night. It is a shy, retiring creature and can run at speeds up to 26 miles per hour. It can also swim readily.

The fox has scent glands at the base of the tail and on the foot pads. The foot glands are used to mark trails. The anal gland gives off an odor when the fox is alarmed and a gland on the rump is used to mark scent posts.

Population

Fox population are most abundant in the fall when the young are dispersing. Trapping, road accidents and rabies are major causes of mortality of the fox.

Habitat

The fox has adapted well to agricultural areas of Montana. The mixture of open fields, thickets, fence lines, hedgerows, ditches, and hilly areas are to its liking and offer good shelter and feeding opportunities. The fox is also found in forests as well as in open grassland areas. Foxes den in thickly sheltered areas, often taking over groundhog or skunk burrows. The burrows generally have more than one entrance with about a 10 inch opening and may be 25 feet in length.

Economic Value

Fox have long, silky fur, which is light but not very durable. It is used extensively for garments and stoles. The fox is very valuable in helping control rodent populations.

Distribution and Status

Red Fox are found throughout Montana. It is classified as an unprotected predator.

Biology of the Marten (*Martes americana*)

Order: Carnivora; Family: Mustelidae

Characteristics

The marten has the typical long slender body of the weasel family. The head is small with large, rounded ears, dark brown eyes, and a short tapered muzzle.

The marten lacks the center pads on its feet and has semi-retractable claws. The legs are comparatively short. The tail is well furred and about half the body length.

Males are larger than females and average 25 to 30 inches in length, including the 7 to 10 inch tail. They weigh up to 1 1/2 to 2 pounds. Females average 18 to 20 inches including the tail, and weigh less than 1 to 1 1/2 pounds.

Color variations may range from yellow to nearly black, but the most common is a golden brown. The head is usually quite light and the legs dark. The outer edges of the ears are trimmed with white. Yellowish or orange patches occur on the throat and chest. The fur has a rich, soft texture when prime. The summer coat is lighter, coarser, and lacks the thick underfur.

All marten have two types of scent glands - one under the tail and the other under the skin of the belly. These glands are probably used to mark territories or attract mates during the breeding season.

Life Cycle

Both sexes are sexually mature at one year of age. The breeding season occurs in July and August. They often mate with more than one partner in one season. During most of the year they lead solitary lives, except when rearing young and during the mating season.

There is a gestation period of 220 to 276 days following fertilization known as delayed implantation. Active pregnancy occurs only during the last 27 days. There may be two to four young, but the average litter consists of three kits which are born in March or April. The young are covered with fine, downy, yellow hair, and are blind until 4 to 6 weeks of age. They are weaned shortly after this.

Marten usually live to around 6 years of age, but occasional instances of individuals living to 19 years have been recorded. Young marten can be recognized from adults by the differences in their skull features.

Food

Marten prey on small mammals such as squirrels, chipmunks, hares and particularly the red backed vole and field mice. They may also eat birds or their eggs, insects, carrion and even berries.

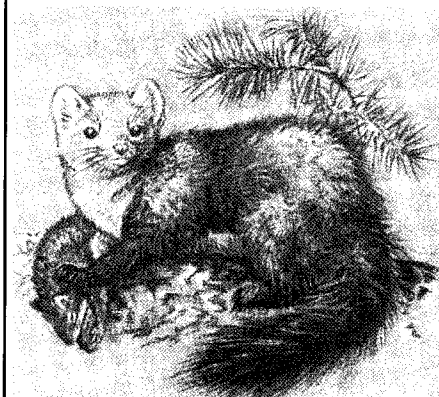
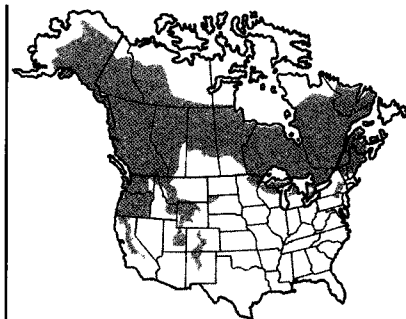
Habits

In a good habitat males have a home range of about 2 square miles and females, about 1 square mile. Immature marten have no territory of their own but establish these by the time they reach adulthood. Ranges are marked by scent glands. Females establish a permanent den to rear the young, but during the rest of the year both sexes keep on the move. The marten spends most of its time in the trees and is primarily nocturnal. It has the ability to rotate hind limbs to enable descending trees head first. The marten may den up in extreme weather.

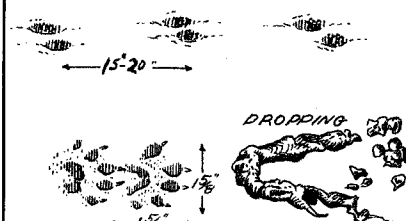
Population

Trapping can have a strong effect on marten populations. Males travel more than females and are more likely to encounter traps. As a result, two or three times more males are taken than females. Nevertheless, the sex ratio within the population remains balanced which indicates that females must have a high natural mortality rate.

The number of marten in a general locality is never constant because of the tendency, especially of the young, to disperse. Populations may increase to two or three times their normal size due to the presence of juveniles that are passing through the area in search of territories of their own. This most commonly occurs in late summer when the young are leaving the den.



TRACKS IN SNOW



.....Other Names: American marten, pussy marten, pine marten, American sable.....

.....Marten are curious and have very keen senses. They are readily attracted to bait and are sometimes easily trapped...

The young are very easily trapped. This probably results from their inexperience and their habit of traveling widely in search of territories. If trapping activities are concentrated in the early part of the season (November) the harvest will largely consist of that years young. This is preferable as it conserves the valuable adult breeding stock which will bear young the following spring. This is harvesting the surplus, as most of the young would not survive the winter. The young are much more susceptible to natural mortality factors than adults who have established territories. The removal of these surplus animals makes more food and space available to the remaining population, thus improving their survival and encouraging higher reproduction rates.

Habitat

The marten is primarily a boreal animal preferring mature conifer or mixed wood forest. They seem to avoid extensively burned over or logged areas. They often frequent open, grassy areas along streams or other water bodies and small forest openings, probably in search of mice or other small rodents.

They generally den in abandoned squirrel nests, hollow trees, in old stumps or rock crevices.

Economic Value

The fur of the marten is highly rated for beauty and quality and the pelt is very light. It is extensively used for making garments.

Distribution

Marten are mainly found in the western 1/3 of Montana, with spotty populations in the central part. It is a furbearer managed and protected by regulated fur harvest seasons.

Biology of the Mink (*Mustela vison*)
Order: Carnivora; Family: Mustelidae

Characteristics

The mink has a long, slender body with short legs and a well furred tail. It varies from 18 to 36 inches in length including an 8 inch tail. They usually stand 3 to 5 inches at the shoulder and weigh about 2 to 4 pounds. The male is notable larger than the female. Although ranch raised mink have been bred in a wide variety of colors, wild mink are usually dark brown with a white spot under the chin. The head is small and sharply pointed with small ears

The mink is a semi-aquatic mammal with a dense, oily underfur which protects it from water. There are stiff hairs between the hind toes which act as an aid in swimming. Mink also possess musk glands which can give off a powerful odor. These may be used to mark territories, attract a mate or for defensive purposes. Mink have keen sight, smell, and hearing.

Although mink molt twice a year, they do not change color from winter to summer as weasels do. The spring molt begins in March or April and is finished in mid-July. In the fall the molt starts in mid-August and is completed by October. When prime the skin is creamy white and the underfur is bluish in color. The guard hairs have a tendency to singe or curl, especially in mid to late winter.

Life Cycle

Both sexes are capable of mating at around 10 months of age. The breeding season occurs in January to March, generally lasting for a 3 week period. Like many other members of the weasel family, the mink exhibits the phenomenon of delayed implantation but it is not nearly as long as that found in fisher or marten. Gestation lasts from 40 to 75 days, averaging 51 days. The litter size varies from two to ten young with the average being four. The young are weaned at 5 to 6 weeks of age. There is a high mortality rate for the young during their first year but, if they survive to adulthood, they may reach 6 years of age.

The young are born in April or May in dens lined with leaves or grass and they are naked except for a covering of fine white hair. Their eyes open after 25 days and they are able to hunt by 8 weeks of age. Growth is rapid, with females reaching adult weight at 4 months and males by 7 to 10 months. The young stay within the home range until August and then disperse.

The age of a male can be estimated by the size and weight of the penis bone. The penis scar can be readily seen on a cased pelt of the male. Young and adult females can be distinguished from each other by the appearance of the teats which are much larger and darker in adults than in young.

Habits

Mink are usually solitary except during the breeding season or when rearing young. They are most active in the early morning or evening. Being a semi-aquatic animal they frequent lake shores, stream banks and are excellent swimmers, readily diving and swimming underwater. They are capable of climbing trees but do not do so very often. Mink are curious and persistent hunters, tirelessly investigating every hole they come across in search of prey.

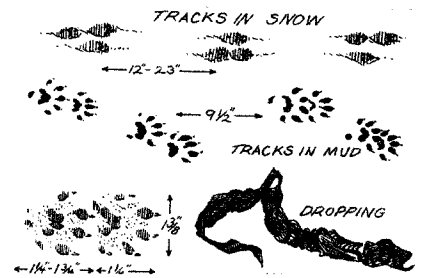
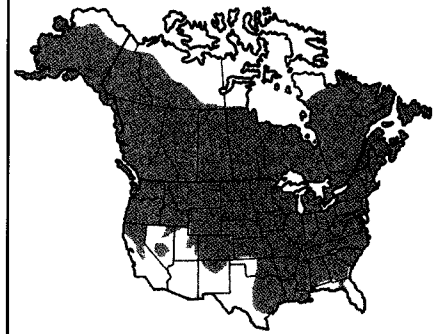
They are active year round although they may den up in inclement weather. The male uses a number of dens. The female has fewer but frequently changes dens when rearing the young.

The female has a home range of about 1 square mile, while the male home range varies from 2 to 3 square miles. The young travel more and may cover long distances in search of a home range. Territories are marked with scent on prominent places. A mink normally ranges only about a thousand feet from his current denning place, gradually rotating around his home range.

Food

Mink will eat a wide variety of food. Being a carnivore, it primarily eats animal matter and will kill almost anything it is capable of overpowering: muskrats, mice, fish, frogs, rabbits, crayfish, birds, (including waterfowl) and their eggs. Even insects are included in their diet.

Mink prey heavily on muskrat. They often cache extra food and kill their prey by piercing the base of the skull with their teeth. Mink hunt by exploring every hole or crevasse which occurs along their line of travel.



Population

Where good habitat exists, anywhere from two to five mink may live within 1 square mile. Since mink are so dependent upon shore line habitats, flooding, drought, and cottage developments may adversely affect their population.

In areas where mink are feeding almost exclusively on a single prey species, their population may follow the cycles of the prey animals. In areas where they have a diverse diet, the population is usually quite stable.

Mink are susceptible to several diseases and parasites such as tularemia, kidney worm, guinea worm, tapeworm, lice, ticks, and fleas. Under normal conditions these do not adversely affect the mink population but may do so when conditions become unfavorable or when the population is overabundant.

Habitat

Mink avoid open areas and prefer the edges of water bodies such as lakes, streams or ponds. Forested areas with fallen timber, irrigation, and drainage ditches with brush or other vegetation along the banks are also frequented. Marshlands are also good habitat, especially if they support muskrat populations and fish.

Burrows and dens are usually located near water bodies, especially under coniferous cover. Dens of other animals may be used or improved. Burrows are often 8 to 10 feet long.

Economic Value

Mink is a very valuable furbearer, having short, fine, durable fur which is used extensively in the making of women's coats. Mink can be successfully ranch raised.

Distribution and Status

Mink are found throughout Montana with concentrations in marshes and around beaver dams. The mink is managed and protected by regulated fur harvest seasons.

Biology of the Muskrat (*Ondatra zibethicus*)

Order: Rodentia; Family: Muridae

Characteristics

The muskrat looks like a large field mouse that has become adapted to an aquatic existence. They are generally 16 to 25 inches in length, including a 8 to 11 inch tail. They stand about 3 1/2 to 5 inches high and weigh 2 to 4 pounds. The front legs are short with almost hand-like front paws. The larger hind feet have special stiff hairs or fringes to aid in swimming. The tail is long, hairless, and flattened vertically, acting like a rudder when swimming. The scaly surface of the tail may serve to regulate body temperature. The body is round and chunky with a small head and ears. The mouth contains two pair of large, sharp, incisor teeth which, like most rodents, grow constantly. They are kept sharp and worn down by continuous chewing on vegetation. The color is usually dark brown on the upper body and pale brown to almost yellow or silver on the stomach. The color may range from pale brown to almost black in some localities. The muskrat is well adapted for aquatic life and has special valve-like flaps which can close off the nostrils, ears and mouth for underwater feeding or travel.

It can also restrict blood flow to essential organs in order to conserve oxygen and, thus, can stay underwater for up to 15 minutes.

Life Cycle

Like most rodents, muskrats have a very high reproductive potential. Young are sexually mature within 1 year and, under favorable conditions, this can be reduced to 5 months. The breeding season begins at ice breakup and muskrats are quite vicious at this time. Fights are common and pelts taken at this time often show bite marks.

One female can produce up to three litters per year when conditions are good. Most produce at least two litters in a season as the gestation period is only 30 days. Litter size ranges from two to eleven, with six being the average. The young are reared in the lodge. Occupied lodges can be recognized by the fresh material added to them in the spring. These muskrats should not be trapped in order to protect the breeding stock and the young being reared.

The young are born helpless, blind, and naked, but grow quickly and are able to leave the lodge in 2 to 3 weeks. Weaning occurs at the end of 1 month and the young are able to fend for themselves within 6 weeks. The young disperse the following spring to find territory of their own. Muskrats can live up to 4 years but records show that 87 percent die of natural causes during their first year. Only about 11 percent live to the age of 2 years and 2 percent to the age of 3 years or more. The young may be distinguished from adults by their pelt patterns in late fall or early winter.

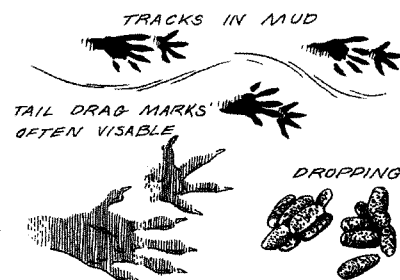
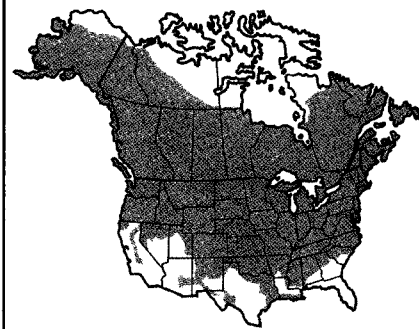
Food

Muskrats are primarily vegetarian in food habits but will eat some animal matter, such as crayfish and frogs. They prefer the inner parts of the stocks and roots of cattails and bulrushes. They will also eat submerged pond weeds and grasses, sweet flag, lily pad bulbs, roots, and wild rice.

Muskrats make pushups in the winter by forcing vegetation up through the ice, creating a protective platform to feed on. During the open water season, they have favorite feeding locations which they use repeatedly and which eventually become built up with vegetation, forming a feeding platform.

Habits

Muskrats live alone or in pairs except during the winter when they group together for warmth. It is not uncommon, because of their aggressive nature, for some to be forced out of the lodge onto the surface of the ice. These individuals are doomed to die from exposure or from predators. Muskrats are most active during the spring breeding season and are particularly wary and aggressive at this time. They will climb onto any floating object to investigate and will not hesitate to attack predators or people if cornered. Fighting between muskrats is frequent during the breeding season and can be fatal. Females with litters are very territorial and will also engage in fighting to protect their young.



Muskrats are most active during the evening hours but can be seen swimming at any hour of the day or night. They remain active all year round.

There are two musk glands near the anus which produce an oily musk used to mark territories. These glands enlarge during the breeding season.

Along creeks, home ranges extend along the stream in both directions from the burrow. In marshy areas the home range is a circular radius surrounding the lodge. Muskrats use the same runs over and over again when traveling.

Population

Muskrat populations must have stable water levels to thrive. Water bodies must be deep enough not to freeze to the bottom in the winter but not so deep that the water won't support emergent aquatic vegetation.

Muskrat populations rise and fall in fairly regular cycles of 7 to 10 years. Diseases, such as tularemia or hemorrhagic disease, can quickly decimate overpopulated areas. White spots on the liver may indicate tularemia and blood in the intestine or lungs is a sign of hemorrhagic disease. Muskrats have many parasites but seldom would these cause death.

Muskrats are preyed upon by owls, hawks, mink, fox, coyote, raccoon, and bobcats and often kill each other for territorial or mating reasons.

Habitat

Muskrats inhabit marshes, slow moving streams, drainage ditches, ponds or sloughs. They prefer soft banks that permit burrowing and which support abundant growth of cattails, bulrushes, and other aquatic vegetation. Stable water conditions of at least 2 to 3 feet deep are required.

Muskrats build two types of lodges - a dwelling lodge and a feeding house. Both are made from non-woody vegetation. The dwelling house contains several chambers and is usually constructed in the fall. The feed houses have only one compartment and are smaller than dwelling houses.

Muskrats also make pushups in the winter by forcing mud and vegetation from the bottom up through cracks in the ice. These are used as feeding stations or as locations to come up for air. Muskrats generally dig burrows where there is suitable soft earth along stream banks or lake shores. These burrows may be as long as 150 feet long and have more than one branch. The entrances are always below the water line and lead to one or more chambers above water level. The chambers are lined with vegetation. In some areas, muskrats use both lodges and burrows and in other locations, only one or the other depending on the availability of vegetation and soil conditions.

Economic Value

Muskrats have a fine quality fur often used for coats, hats and trim. It is one of the most important fur animals in North America. Muskrats can be a nuisance at times around ditches and dikes because of their burrowing habits. Muskrats head the list in terms of numbers taken and income generated for trappers in North America as a whole.

Distribution and Status

Muskrats are abundant and found all over Montana. Their populations fluctuate in cycles and are also greatly affected by habitat destruction due to the drainage and damming activities of man. It is managed and protected by regulated fur harvest seasons.

Biology of the North American River Otter (*Lontra canadensis*)
Order: Carnivora; Family: Mustelidae

Characteristics

The otter has a long slender body which is powerfully muscled. The legs are very short and the hind feet are webbed. It has a long tapering, muscular tail which is furred and somewhat flattened on the sides. Otters are about 35 to 55 inches long, including the tail, and stand about 10 inches at the shoulder. They weigh from 10 to 30 pounds. They have large protruding eyes (like a seal), a blunt, broad muzzle and small rounded ears. The whiskers on the snout are quite bristly and prominent.

The fur is short, very dense, and very durable. The color is a deep, dark brown, almost black in appearance and very glossy. The lower parts are much lighter. There is a thick layer of fat under the skin which helps to insulate the otter against cold. The otter is a semi-aquatic mammal and has muscles which close off the nostrils and ears when swimming underwater. The claws on the feet are non-retractile. There is no seasonal change in color and the sexes, immature and adults, are difficult to distinguish from each other. The fur of the otter is molted twice a year, in the spring and in the fall.

Life Cycle

Otters are sexually mature at 2 years of age. The mating season is from March to April and mating takes place in the water. The gestation period is 9 1/2 to 10 months, depending upon delayed implantation, with the young being born in March or April. Litter size varies from one to six, averaging two to three.

The young are blind, toothless and are fully furred. They are weaned at about 3 1/2 to 4 months old. The family travels together for up to 8 months or until the next litter is born. In the wild, otters can live up to 20 years. They are subject to a number of parasites and diseases such as tuberculosis, guinea worm, giant kidney worm, ticks, roundworms, and flukes. These may limit the otter population.

Food

Otters subsist mainly on fish, frogs, clams, and crayfish. They kill muskrat and beaver and do eat some vegetation in the summer months. Otter usually hunt alone except when they are in family groups. They do not cache food for later use.

Habits

Being semi-aquatic, otters rarely stray far from water. They are the most aquatic of the weasel family. They are fun loving and often seem to enjoy playing or sliding on snow or mud banks. Otters are strong, powerful animals, and excellent swimmers. They are quite social and rarely fight among themselves. Otters do not build houses of their own but frequently use beaver lodges or bank dens for shelter. In areas where they are living their dropping piles are commonly seen. These are used repeatedly as toilets and also to roll and rub themselves in. Otters are active mainly in the evenings or at night but may occasionally be seen during the day. They are active year round and are shy, wary creatures. Otters have musk glands and may give off a strong odor when alarmed.

Population

Otters are often associated with beaver ponds and their numbers fluctuate in relation to beaver populations.

Habitat

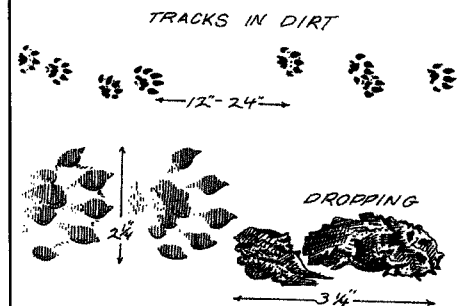
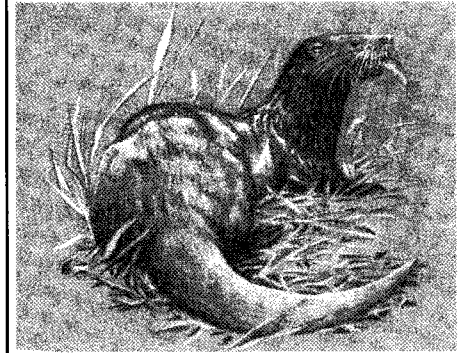
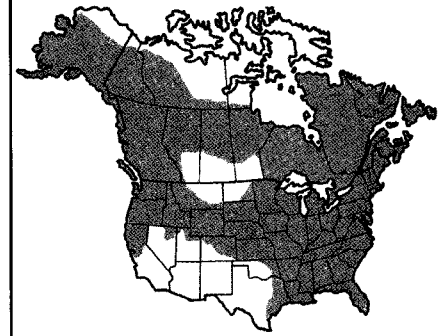
Otters prefer areas where water bodies are close together and abundant. They are frequently found around beaver ponds. Riparian vegetation is a key component of otter habitat. The availability of food, water, and shelter determine the duration and intensity of habitat used.

Economic Value

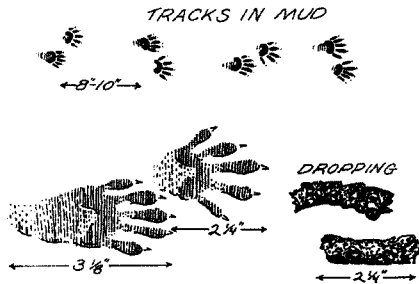
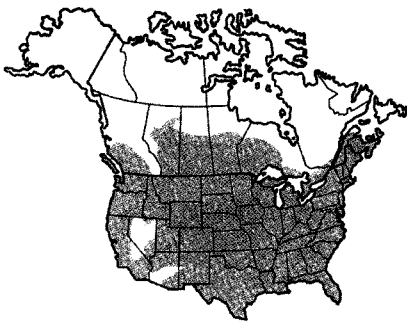
Otter have short, dense fur which is extremely durable and is used mainly for collars and trim, but also for coats, usually for men. Otter fur is of moderate value.

Distribution and Status

Otters are found in the Western 1/3 of Montana but numbers are showing up along the Missouri River and other drainage's. It is a managed and protected by regulated fur harvest seasons.



.....Otter populations are closely linked to habitat having extensive lakes, rivers and streams where fish are readily available. In these areas they will maintain an abundant population.....



.....Other Names: Ringtail,
coon.....

Biology of the Raccoon (*Procyon lotor*)

Order: Carnivora; Family: Procyonidea

Characteristics

The raccoon is a carnivore of small to medium size, having a stout, robust body. Its body length can be up to 35 inches with a 10 inch tail. Average weight varies from 18 pounds for males to 16 pounds for females. The largest one ever weighed exceeded 60 pounds.

Its most notable features are its black facial mask and ringed tail, which may have as many as six black rings. The rings form a clear contrast along the tail portion. Its body hair is grizzled gray or brownish black and its undercoat is brown, woolly, and covered by long guard hair.

The raccoon's face tapers from the short, rounded ears to a button-like nose. Its legs are relatively short and its feet are narrow and have five toes which are finger-like and quite long. It has non-retractile claws. The feet have naked pads, resembling those of man, and the front feet are especially sensitive and agile. The raccoon's keen eyes provide it with good night vision. It is nocturnal by nature. It is a good climber and will fight strongly when threatened. It possesses good hearing and a keen sense of smell.

Life Cycle

Female raccoons begin breeding the spring following their birth, however, males require two years to mature sexually. Breeding takes place during February and March, and occurs intermittently when they come out for short periods of intense activity from their partial hibernation. During this period, males will travel up to 15 miles at night in search of a mate. Females will drive off unwanted males, however, the acceptable male will move into the nest or den and stay for a week or so. The gestation period is 63 days with the young being born in mid-April to mid-May. A litter of one to six (average two to four) is born fully furred, except for the tail. They remain blind for the first 18 to 23 days. At about 6 weeks they leave the nest area to explore the nearby vicinity. They are weaned at 2 months. They remain together as a family unit, generally on the mother's range, for the first winter. After that they disperse. Raccoons are known to live up to 14 years of age.

Food

The raccoon eats a great variety of items; among its favorite foods are clams, young birds, eggs, small mammals, frogs, fish, insects, fruits, nuts, berries and corn. In the spring, when the female is providing food for its young, the diet is mostly composed of animal matter. In summer, as plants are abundant, the raccoon becomes a vegetarian. The raccoon is nocturnal by nature and its varied diet often includes garbage and corn. During the fall they gorge themselves on nuts, corn, and nests of insects, including bees and ants, so that a large reservoir of fat is built up. By late fall one half of the raccoons weight can be fat. Even in winter, when it comes out of its inactivity, it will eat carrion and other available food quite readily.

Habits

Raccoons make a chirring noise while feeding or traveling in a family unit. Snarling is common during fighting, especially when cornered, or a dispute over food arises. Its chief habit is to discover food stuff under water. This activity is often misinterpreted by observers as it appears that the raccoon is washing its food. Its favorite areas are near creeks, rivers and lakes.

Raccoons are quite sociable within their family group and even den up together, but conflicts occur when other groups intrude into their area. They are very active at night but do enjoy sun bathing often from high tree nests. They are good climbers, strong and very agile and when cornered they become furious and effective fighters.

Population

The raccoon population is becoming abundant in Montana. There are a few taken per year by trappers. The raccoon's chief predators are the horned owl, which preys on the young, and the badger. Raccoons often have parasites such as lice, fleas, and wood ticks. They are subject to distemper, meningitis, rabies. They also carry roundworms and other internal parasites. Montana's extreme weather conditions limit the raccoon's population.

Habitat

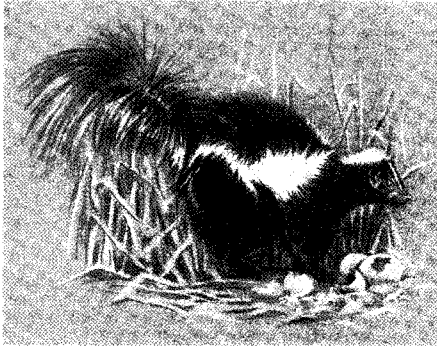
The raccoon's chief habitat is in forested areas along creeks, rivers, and lakes that have an abundant food supply. They are most abundant in riparian and wetland habitats. It adapts itself well to humans and is found in and near cities and towns. It has a home range of about 1 square mile but does roam considerable. It has various dens and nests within its range. Raccoons prefer hollows in old logs and trees but will den up for the winter in abandoned burrows, old buildings, and culverts.

Economic Value

Raccoon are a moderate value fur animal although the fur has a wide range of uses. Due to its nature, raccoons cause considerable damage to farmers and bird life. They do have a high aesthetic appeal to the public due to their "human like" tendencies.

Distribution and Status

Raccoons are found throughout Montana with their range gradually expanded. They are classified as a nongame animal.



TRACKS IN DIRT



.....Skunks may be seen out and about from time to time during the winter if warm spells occur.....

Biology of the Striped Skunk (*Mephitis mephitis*)

Order: Carnivora; Family: Mustelidae

Characteristics

Skunks are easily identified by the distinctive black and white markings on the body.

The pattern of white markings vary considerably. In some individuals, the pattern may consist of only some white patches on the head, while in others, two broad white stripes may cover much of the head, back, sides and tail. The remainder of the body is black. This coloration probably serves as a warning to other animals of the skunk's powerful defense.

The head is small and sharply pointed with small ears. The body is chunky and about the size of a cat with relatively short legs. The skunk has well developed claws on the front feet for digging and walks with a rolling, flat footed gait. The tail is large and bushy.

Skunks vary in length for 17 to 28 inches, stand 8 to 13 inches in height and weigh from 4 to 15 pounds. Both sexes have a pair of musk glands on either side of the anus. These types of glands are found in all members of the weasel family, but the ability to spray a stream of foul smelling liquid is most highly developed in skunks. Skunks can spray their liquid up to 12 feet, but are usually accurate only to about 6 feet. The odor can be carried far and wide by the wind.

Life Cycle

Skunks usually mate in February or March. Often timing coincides with the first warm spell after the new year. They may exhibit delayed implantation as in other members of the weasel family. The gestation period is about 63 days and the young are born in May. The average litter size is about six, but may vary from three to nine. The young show the distinctive color patterns on their skin at birth. Their eyes are closed and do not open for about 30 days.

At about 6 to 8 weeks, the young begin to travel and forage with the adults. The musk glands of the kits are fully operational by one month after birth. The family stays together all summer and by September, they find or dig a deep burrow to be used as the winter den. The inner chambers are large enough to accommodate the entire family plus perhaps a few neighboring skunks who prefer company for the additional warmth provided.

Food

The skunk is an opportunistic, omnivorous, predatory feeder. The largest part of the skunks diet consists of insects such as grubs, beetles and grasshoppers, but the skunk will eat virtually anything. Small mammals such as mice comprise about 10 to 20 percent of the diet and frogs, birds eggs, berries, and other vegetable matter make up an additional 25 to 30 percent. He will also eat carrion. His diet varies greatly depending on season and geographic locations.

Habits

Skunks are mainly active at night or in the early morning and do not generally travel great distances. The males have separate home ranges of up to 1 square mile. The females ranges may overlap with other females, and vary from 1/2 to 1 square mile.

Skunks do a great deal of digging with their large front claws, probably mostly in search of grubs. They also dig dens to over-winter in, or may den under buildings, in hollow trees or logs, often congregating together for mutual warmth in December to late February.

Skunks are very prone to rabies infection and any skunk active in daylight that acts tame should be avoided

Skunks generally give sufficient warning of their intention to spray by stamping their feet, raising their tail and pointing their rear in the direction they intend to spray.

Habitat

Skunks live in a variety of habitats including semi-open country, mixed woods, brush land, and open prairie. Skunks are rarely found in densely forested area. They are most abundant in agricultural areas where there is ample food and cover. They are frequently seen around abandoned building sites and garbage dumps. They are usually absent where water table is to high for making ground dens.

Skunks may den under buildings, in old woodchuck holes or in rock piles. They generally cover the entrance with leaves and grass.

Economic Value

Nationally it is a valuable fur animal. There is a limited demand for skunk pelts and essence, but tremendous numbers of skunks are taken each year.

Skunks are beneficial in eating some insects and rodents but also are a nuisance because of their digging habits and foul odor.

Economic losses are also incurred because of the threat of rabies that is posed by skunk populations.

Distribution and Status

Skunks are found throughout Montana and is a very abundant nongame animal.

Spotted Skunk

The spotted skunks weigh between 1 and 3 pounds. They are black with a white spot on the forehead and interrupted white stripes over their backs and sides that give the appearance of spots.

They are often incorrectly called a "civet cat" or "civvy cat".

Distribution and Status

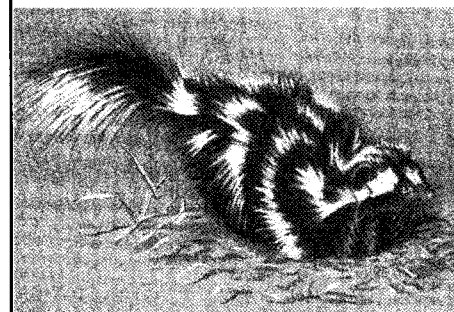
The Western Spotted Skunk (*S. gracilis*) occupies mostly lowland wooded areas in North America, west of the Continental Divide from southern British Columbia to Central America. It is a nongame animal.

Spotted skunks protect themselves by spraying a strong and unpleasant scent. Two glands on the sides of the anus release the odorous oil through nipples. When threatened, the skunk turns its body into a U-shape with the head and anus facing the attacker. Muscles around the nipples of the scent gland aim them, giving the skunk great accuracy on targets up to 15 feet away. As a warning before spraying, the skunk stamps its front feet, raises its tail, and hisses. They may warn with a unique "hand stand"—the back vertical and the tail waving. Skunks store about 1 tablespoon (15 g) of the odorous oil and can quickly spray five times in row. It takes about one week to replenish the oil.

The secretion of the spotted skunks differs from that of the striped skunks. The two major thiols of the striped skunks, (E)-2-butene-1-thiol and 3-methyl-1-butanethiol are the major components in the secretion of the spotted skunks along with a third thiol, 2-phenylethanethiol. Thioacetate derivatives of the three thiols are present in the spray of the striped skunks but not the spotted skunks. They are not as odoriferous as the thiols. Water hydrolysis converts them to the more potent thiols. This chemical conversion may be why pets that have been sprayed by skunks will have a faint "skunky" odor on damp evenings.

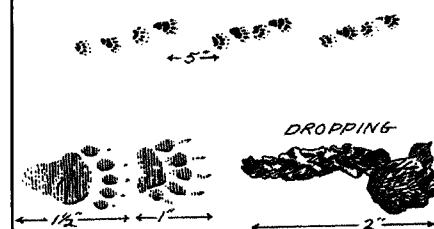
The female gives birth to between two and six young and she may have two litters per year. The newborn skunks are covered with fine hair that shows the adult color pattern. The eyes open between 30 and 32 days. The kits start solid food at about 42 days and are weaned at about two months. They are full grown and reach adult size at about four months

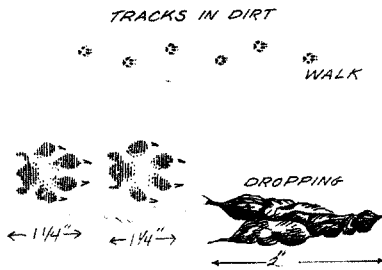
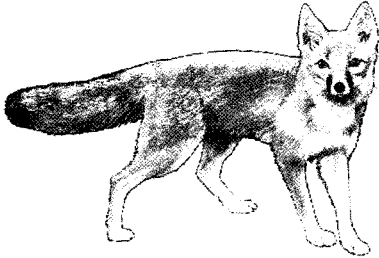
Spotted skunks can live 6 years in captivity, but in the wild, about half the skunks die after 1 or 2 years.



Spotted Skunk

TRACKS IN DIRT





SWIFT FOX (*Vulpes velox*)

Order: Carnivora; Family: Canidae

Characteristics

The swift fox is the smallest of the wild dogs in North America. Adults weigh between 5 – 7 pounds and are approximately 12-16 inches tall and 31 inches long with the tail. This is equal to about the size of the domestic housecat.

They have a grayish tan coloration that extends to a yellowish-tan color across their sides and legs. The throat, chest and belly are pale yellow to white. They have a black tipped tail, black patches on the muzzle and noticeably large eyes.

They receive the name “swift” fox because of their ability to run at speeds up to 30 mph which helps them catch food and avoid predators. Swift foxes also avoid predators by seeking shelter in burrows.

They are closely related genetically to the Kit Fox (*Vulpes macrotis*); with the kit fox being slight smaller. Hybrids between the two occur naturally where their ranges overlap.

Life Cycles

The adult breeding season of the swift fox varies with the region they live in, but occurs between December – March with pups born in March to mid-May. Males mature and may mate at one year while females usually wait until the second year before breeding. Adults live in pairs with some mating for life while other choose different partners each year.

The gestation period is 51 days with on litter of 2 – 6 pups born per year. The pups eyes are closed for 10 to 15 days leaving them dependent on the mother for food and protection. The swift fox may occupy up to thirteen dens per year, following food source or because skin parasites build up inside the den. The pups stay inside the den for a month and is usually weaned around six to seven weeks old. They remain with the parents until fall then disperse. In the wild, the Swift fox usually lives from 3 – 6 years.

Food

The swift fox is an omnivore and hunt continually from dusk to dawn covering a great distance each night in search of food. The diet consist of small mammals, birds, reptiles, amphibians, fish, insects, grasses and berries.

Habits

The swift fox is mainly a nocturnal species. Daytime activities are confined to dens and vary seasonally. In winter, they may be seen sun bathing by the den during the warm midday period, while in summer they only spend early evenings and nighttime above ground.

Population

There are scattered populations of the swift fox in the Great Plains of North America. Today, fragmented, smaller populations reside in portions of Montana, with the main, viable and self-sustaining population in the Northeastern portion of Montana. The coyote is its main predator with the badger, golden eagle and bobcat being of lesser concern.

Habitat

The swift fox lives primarily in short grass prairies and deserts. They form their dens in sandy soil on open prairies, in plowed fields or along fences where their food source may be abundant.

Economic Value

The fur of the swift fox is a valued commodity

Distribution and Status

The main population of the swift fox is found in the northeastern part of Montana. It is managed and protected by a regulated fur harvest season.

Biology of the Weasel

Short Tailed Weasel (*Mustela erminea*)

Long Tailed Weasel (*Mustela frenata*)

Least Weasel (*Mustela nivalis*)

Order: Carnivora; Family: Mustelidae

Characteristics

The long tailed weasel is the largest of the three weasels found in Montana and varies from 13 to 18 inches in length, including a 6 1/2 inch tail. It is the long tail which gives it its name. They are about 2 to 3 1/2 inches high and weigh up to 12 ounces.

The short tailed weasel (Ermine) is noticeable smaller, with a shorter tail, and varies from 8 to 14 inches long with a 4 1/2 inch tail. They weigh from 1 1/4 to 5 ounces and are 2 to 3 inches high.

The least weasel is considerable smaller, with a very short tail, and males may measure up to 8 inches in length, while females measure about 6 inches.

All three species have long, slender, muscular bodies with short legs. The head is small, with beady eyes, small ears and a pointed nose. They move with quick movements and a graceful, bounding gait. All three weasels change color with the seasons, and there is no color difference between the sexes. All the senses are well develop in these weasels.

In summer, the short tailed weasel is dark brown on the back and legs. The chin, throat and undersides of the legs are white or a light yellow. In winter, it is entirely white, sometimes with yellowish stains on the lower abdomen. The tail has a black tip year round.

The long tailed weasel is much the same in color as the short tailed weasel except that, in some areas, it does not become white in winter. The feet are dark brown in summer whereas the short tailed weasel has pale yellowish feet in summer. The tail has a black tip throughout the year. The molting pattern is different than in short tailed weasels, starting on the back in spring and causing a brindled appearance to the facial markings.

Life Cycle

Both the short tailed and long tailed weasel females mature at 3 to 4 months and males mature at about one year. The breeding season is in July. There is a period of delayed implantation with a gestation period of 9 to 10 months. The period of active pregnancy is 23 to 17 days. Litter sizes varies from four to thirteen, with an average of six to eight. The young are born in April or May in nests constructed in underground dens or hay piles. Mouse nests and burrows are often used and heavily lined with fine grass and mouse fur. The male begins to bring food to the den about 1 month after the young are born. The young are weaned at the end of 5 weeks and are able to hunt for themselves by 7 or 8 weeks of age. The family stays together until late summer and then disperses. The life expectancy of weasels is short, probably less than a year, although they are capable of living as long as 6 years

The least weasel may have three to ten young, but averages five which may be born at any time of the year but most frequently are born in late winter.

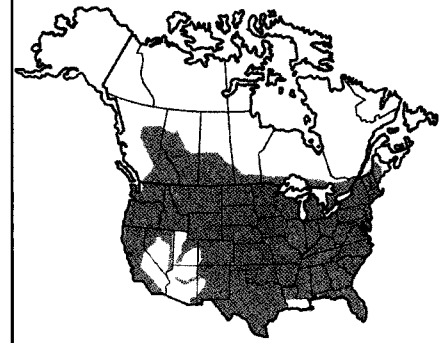
Food

Weasels prey on small rodents such as mice, rats, voles, hares, rabbits, and chipmunks. They also take shrews, birds, birds eggs, frogs, bats, insects, earthworms and may occasionally kill domestic chickens. The least weasel depends almost exclusively on mice for food.

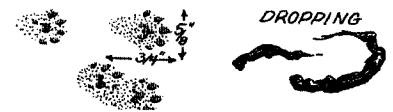
The weasel hunts by tirelessly and persistently investigating every small hole, crevice, bush or rock pile it encounters. They will track prey by following their scent trails and generally attack prey by ambushing and pouncing on it. They are very quick and kill by piercing the base of the skull with their teeth. The weasel frequently kills more than it can eat and often caches leftover food. The weasel can consume up to one third of its own weight in a 24 hour period.

Habits

Weasels are curious, alert and bold. They are persistent hunters who seldom remain long in their dens and may be abroad hunting at any hour, although they are usually most active at night. Weasels are active year round.



TRACKS IN SNOW



DROPPING

Other Names - Ermine, stoat.

.....Least Weasel - No black tip on the tail - 8 inches in length - 2 1/2 ounces - white feet.....

.....Short tailed Weasel - Black tipped tail - 13 inches in length - 6 ounces - white feet.....

.....Long tailed Weasel - Black tipped tail - 16 inches in length - 12 ounces - brown feet.....

Weasels occasionally hunt in pairs but, for the most part, are solitary except during breeding and rearing season. They are good swimmers and can also climb trees. All species emit a strong musk odor when alarmed, and the weasel may stamp its feet when annoyed.

Weasels may mark their trails with droppings. Home ranges vary from 30 to 400 acres.

Population

Weasel populations often cycle with mouse populations. Several parasites can infect weasels, such as guinea worm and kidney worms. These probably have little impact on the population.

Weasels are subject to predation from hawks, owls, foxes, coyotes, dogs, cats and man.

In agricultural areas, weasels are more common due to the practice of storing grain which provides ideal conditions for mice.

Habitat

Weasels prefer woodlands or open country with hedgerows, thickets or fence rows. They are usually found near water but are not semi-aquatic as is the mink. They frequent stone piles, brush heaps, wood piles, hay stacks, log piles and old abandoned buildings.

The short tail weasel inhabits brushy or wooded areas, usually not far from water. It tends to avoid dense forests.

The long tail weasel is found in almost all land habitats near water. It has the broadest ecological and geographical range of the North American weasel. It avoids dense forests.

The least weasel has a variety of habitats including meadows, fields, brushy areas, and open woods. It avoids dense forests.

The dens of weasels are shallow chambers about 6 inches underground with two to three entrances and are lined with mouse fur and grass.

Economic Value

The fur of the short tailed weasel was once reserved for use by royalty. The fur of both the long and short tailed weasel is fine and of good quality and is used in garments, lining and trim. The long tailed weasel commands a higher price because it is so much larger. The least weasel is seldom taken and is so small that it is of little or no value in the fur trade.

Weasels play an important role in helping to control rodent populations.

Distribution and Status

Weasels are found throughout North America.

In Montana, the short tailed weasel is found in the western third of the state with a narrow band along the southern boundary.

The long tailed weasel is found throughout Montana.

The least weasel is found in the northern third of Montana east of the Rocky Mountains
The weasel is classified as an unprotected predator.

Biology of the Wolverine (*Gulo gulo*)
Order: Carnivora; Family: Mustelidae

Characteristics

The wolverine is a powerfully built, long haired animal, somewhat resembling a small short legged bear, with markings similar of those of a skunk. The back is arched, and the tail is bushy. The feet are large and well furred, with long, non-retractile claws.

Males are 31 to 51 inches long, including a 8 to 9 inch tail. They stand 12 to 14 inches and the shoulder and weigh 20 to 45 pounds. Females are about one quarter smaller.

Because of its size, stocky form, and long coat, the wolverine cannot be easily mistaken for any other mammal.

The head is broad and short snouted with small, rounded ears, small eyes, massive teeth, and powerful jaws. The neck is short and powerfully muscled, as are the shoulders. The senses of smell and hearing are good but eyesight is poor.

The fur is long, with coarse guard hairs and thick underfur when prime. The color and texture varies with the individual. Usually, they are dark brown above the pale lateral stripes which run from shoulders to rump, merging at the rump and extending along the top of the tail. In some individuals, the contrast is very distinct while in others it is faint.

The under parts are dark, often with irregular white or orange markings at the throat and a bright orange patch on the belly, indicating the location of a gland.

The wolverine walks in a flat footed manner. The hind feet in fact, resemble the feet of a man. It travels in several gaits but a sort of run with long, bounding strides is the most common. It is not a particularly fast runner but can travel tirelessly over long distances.

The wolverine is a courageous animal which is respected and avoided by other predators. Even cougar and grizzly bear have been known to abandon a kill on the approach of a wolverine. Wolverines will often urinate on carcasses, fouling them so that no other animal will eat them.

Life Cycle

Both sexes reach sexual maturity during their second summer. Mating is said to take place from April to October. A delayed implantation occurs, with an active gestation period of 60 days. The young are born in late March or early April. One to four young are born in dens located under protective rock slides, natural caves, under the roots of trees or windfalls.

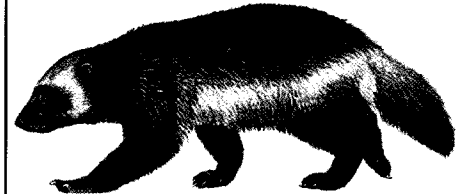
The young are covered with fine white hair. The females gives the young extensive care for up to one year, after which she drives them from her territory.

Food

Wolverines mainly eat the flesh of mammals or birds. Wolverines are generally too large to subsist well on small game, too small to effectively kill large game regularly and too slow to pursue swift animals. As a result, they often resort to scavenging carrion. Often, they subsist almost entirely on winter killed animals or the kills of other predators. The wolverine will hunt and kill whenever the opportunity presents itself and they are tireless and persistent in their hunting activities. They will take a wide variety of foods, including hares, mice, lemmings, ground squirrels, chipmunks, marmots and beaver. Berries are often eaten in late fall. When food is scarce, the wolverine will attempt to kill big game animals and there are authentic records of attacks upon mountain goats, moose, deer and elk.

Habitat

Little is known about the habits of the wolverine. Due to its poor eyesight, it has been noted to come within 50 to 60 yards of man before becoming alarmed. If not absolutely sure of what lies ahead, it will sit on its haunches and shade its eyes with its forepaws, just as a human would do if scrutinizing a dim or distant object. Wolverines avoid water or even heavy rain if possible, but will cross small water obstacles when necessary.



.....Other Names - Devil Bear, carcajou, skunk bear, devil beast ...

Wolverines are most active at night but will travel in daylight, especially in winter. They are normally solitary and very intolerant of each other except during the breeding season. They have large territories and will periodically travel great distances.

Population

Wolverine are never abundant but are sparsely scattered over extensive areas. As a result, they seem to maintain a stable but low population most of the time. They need wilderness areas where they can avoid conflicts with man. The most viable and widespread population of wolverines in the contiguous 48 states occurs in the Rocky Mountains of Montana.

Habitat

The wolverine is a creature of the northern wilderness, frequenting heavily wooded, broken, rugged, and mountainous areas. The primary wolverine habitat in Montana is the coniferous forest types of the Rocky Mountains. Wilderness is an essential habitat component as it requires large areas to roam over in solitude.

Economic Value

The fur of the wolverine is extremely durable, but is generally too long and the leather too heavy to be used for coats. Most are sold for parka trim because it does not mat and frost up as much as most furs. The hoar frost can be easily brushed out of the fur. The fur is highly valued and widely used in the Arctic and sub-Arctic as ruffs or trim on parkas and other garments. Distinctively colored individuals are in high demand for rugs or for mounting. They generally command a fairly high price because of their rarity.

Distribution and Status

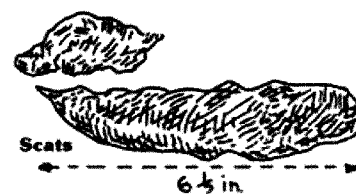
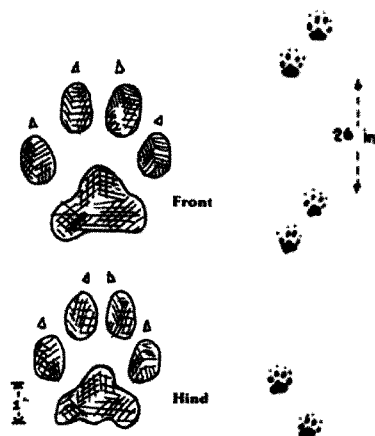
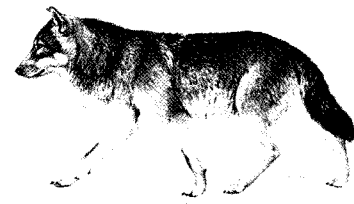
Wolverine occur in the western third of Montana in the Rocky Mountain range. They are managed and protected by regulated fur harvest seasons.

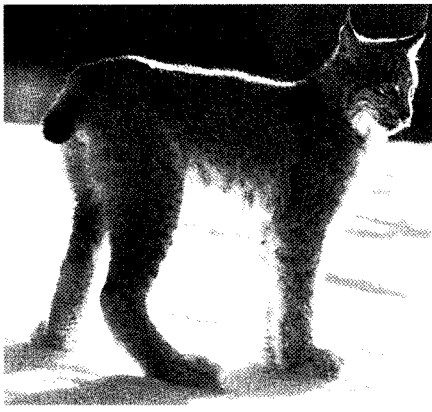
Biology of the Grey Wolf (*Canis Lupus*)

Order: Carnivora; Family: Canidae

The gray wolf is the largest wild canine, reaching adult weights of 80-185 pounds. It is on the U. S. Endangered Species List except for Alaska, where the animal can be hunted and trapped. Colors range from white to black. Wolves carry their tails straight out, while the smaller coyote holds the tail at a downward angle. Domestic dogs' tails curve up.

The gray wolf is found in Alaska, Washington, Idaho, Montana, Minnesota, Wyoming and a few other areas, where they prefer forests or open tundra. They live and hunt in packs of 2-15 members that range up to 260 square miles. Gray wolves normally eat about nine pounds of food a day, but can go long periods between meals. They hunt at night feeding on moose, caribou, elk, deer, berries, birds, fish and insects. Gray wolves seldom use dens, except for maternity dens. Wolves are sexually mature at two years, breed during late January to February, and produce one litter a year averaging 5-6 pups.





Biology of the Canada Lynx (*Lynx Canadensis*)

Order: Carnivora; Family: Felidae

The Canada Lynx is on the U.S. Endangered Species List and classified as threatened in the lower 48 where it was always rare because its primary prey, the snowshoe hare, is mostly found in Canada and Alaska. Canada Lynx are light gray, with scattered brown to black hair, cinnamon colored underparts and short tails.

Males are larger than females, with weights ranging from 11 to 40 pounds.

Canada Lynx are found in Alaska, northern states, parts of the Rocky Mountains, and New England living in coniferous forests, bogs, and swamps. During the day, Canada Lynx rest in cover. They climb trees and often leap down onto prey including snowshoe hares, birds, and voles. They will also eat larger dead animals, or take weakened deer, caribou, or sheep. They pose little threat to humans or domestic animals. Wolves and mountain lions will prey on Canada Lynx. They breed in March or April, producing one litter of 3 to 4 young.



CHAPTER 4

CONSERVATION & FURBEARER MANAGEMENT

Wildlife management is taught as a science. Wildlife biologists are professionals. Biologists strive to apply the basic principles of ecology to maintain and manage wildlife. Many biologists are as highly trained as physicians, lawyers, or college professors.

Some wildlife biologists specialize in the management of furbearers and their habitats. Furbearer biologists monitor animal populations, habitat and diseases that may affect furbearers or cause human health problems. They develop management goals and create plans to meet those goals.

Furbearer biologists set regulations to protect or restore threatened and endangered species, allow for the harvest of surplus animals, or reduce overabundant furbearer populations. They also work to educate landowners and the general public. Without education, it is difficult to have public support for management programs.

Few people truly understand wildlife management. Along with biologists, experienced trappers are among the people most knowledgeable about wildlife. This is because trappers must study wildlife and habitats to be successful.

As people learn more about wildlife, they usually care about it more. When caring leads to actions that conserve wildlife for future generations, the person has become a conservationist. This chapter will introduce you to the principles of furbearer management. Through further study and experience, you can develop the knowledge, skills, and attitudes to become a true conservationist.

State wildlife agencies have the authority and responsibility to manage furbearer resources and regulate trapping. The Montana Department of Fish, Wildlife & Parks manages Montana's furbearer resources for the benefit of the citizens of the state. The Department recognizes that furbearers have a variety of ecological, cultural, economical and aesthetic values, and that these values can be positive or negative. Also, since values are determined by people, not nature, the same animal can have a wide range of values depending on the time, the place, and who is being affected by it.

In order to responsibly manage furbearers, the Department monitors furbearer populations and harvests, sets regulations, maintains habitats, and enforces laws related to furbearers.

Seasons

Trapping and hunting seasons are based on furbearer populations. Seasons are not permitted if they are deemed detrimental to the survival of the species. Once biological requirements are met, further decisions are based primarily on the concerns of people who use, value, or are affected by the resource. Opportunity, fur primeness, damage problems, landowner concerns, non harvest values, disease and other factors all enter into these decisions and opportunities for public input are provided.

Surveys

Harvest and fur value surveys are conducted for all harvestable furbearer species in Montana. For species that are more sensitive, harvest figures are determined through pelt registration. For some species, information on location, sex ratios, age and productivity are used to assess the health of the population.

Habitat

Although furbearers often are not the highest priority in many habitat management programs, the fact remains that furbearing animals are primary beneficiaries of many of these practices. This is particularly true of wetland areas, which are prime habitat for muskrats, mink, beavers, raccoons, foxes, and other furbearers. In fact, furbearers often do so well in these areas that conflicts develop with management for other species such as waterfowl. Forest management practices also influence furbearer populations, with some species favoring early successional stages of vegetation, and others favoring later stages.

Enforcement

Game wardens in Montana enforce the laws and regulations relating to furbearers statewide. Of course, they have many more duties in addition to furbearer regulations, but they always are interested in, and concerned about situations where violations are occurring. It is important, however, for trappers and hunters to police their own ranks. People who take furbearers illegally are stealing from honest citizens of the state.

.....When a persons caring leads to actions that conserve wildlife for future generations, the person has become a conservationist.....

.....Carcass winter feed stations have shown to provide supplemental nutrition to animals during critical winter months when food is scarce...

.....Trappers should perform a pre-season assessment of the furbearers and other related animal populations as well as habitat conditions...

.....People who take furbearers illegally are stealing from honest citizens of the state.....

.....Major factors that affect wildlife populations

- **Changes in habitat**
- **Carrying capacity**
- **Limiting factors such as food, weather and predation...**

.....Wildlife habitat is made up of food, water, cover and space...

.....Renewable resources are living things with the capacity to regenerate or repopulate...

.....Nonrenewable resources are non living items that are finite and do not regenerate themselves...

Conservation and Trap Line Management

Furbearer regulations are established for the entire state, or for large regions of the state, depending on the species. Conditions vary within such large areas, therefore, it is up to trappers to practice conservation on their own trap line, and capture only a portion of the surplus. This sounds simple, but actually is quite complicated because in many areas a number of trappers and hunters are competing for the same resource. Fortunately, trapping and hunting tend to be self limiting for many species. The time and effort required to take these animals exceeds the benefit long before they are reduced to critically low levels. For other species which are not so resilient, regulations have to be correspondingly more restrictive.

In areas where trappers have exclusive or near exclusive trapping privileges, individual trap line management is much more feasible. In these areas the trapper can manage not only the harvest, but in many cases the habitat as well. By doing so, the trapper can be assured of having a relatively high sustained harvest year after year.

Regulated fur trapping provides many benefits for society. For example, they help keep wildlife populations in balance with the environment or at acceptable levels, reduce property damage, support broader conservation programs and obtain many products for human use. While all of these are good reasons for people to support regulated fur hunting and trapping, the future of these practices also depends on their perceptions of fur hunters and trappers and their actions afield. You can do your part to ensure the future of fur trapping in Montana by:

- Knowing and obeying fur trapping laws.
- Respecting landowners' property and obtaining written permission as required by law.
- Considering animal welfare in your choice of capture, release and killing methods.
- Avoiding waste by caring for the animal and the fur properly, and marketing other useful products.
- Checking capture devices as recommended by law.
- Disposing of carcasses properly.
- Supporting local, state, and national fur trapping organizations.
- Assisting the Montana Trapper Education Program by becoming a certified instructor.
- Promoting fur trapping by communicating its benefits, especially among nontrappers.
- Avoiding nontarget catches.
- Helping landowners reduce property damage caused by furbearers.
- Reporting the presence of diseased animals and rare, endangered or threatened species to the proper authorities.
- Respecting others who participate in outdoor activities.
- Keeping up-to-date on improvements in fur trapping equipment and methods.

Fur trapping is highly regulated and laws are enforced by trained game wardens. Laws that pertain to fur trapping help to:

- Protect species from becoming threatened or endangered.
- Improve animal welfare.
- Prevent nontarget catches.
- Limit fur trapping to the time of the year when furs are marketable and young no longer depend on adult animals.
- Monitor harvest levels by using harvest questionnaires.
- Support habitat conservation and wildlife studies through license sales and other fees.
- Protect landowners' rights and interests by requiring permission before setting capture devices.

Natural resources fall into one of two categories: renewable and nonrenewable. Renewable resources are living things with the capacity to regenerate or repopulate. Plants and animals are renewable resources. For example, when trees are cut down, new trees can grow there again from seeds. Similarly, when wild animals are harvested by people or die due to disease, predation or starvation, the remaining animals have young and the population increases. Trees and animals are resources that can be renewed as long as habitat is available.

Nonrenewable resources are nonliving items that are finite and do not regenerate themselves. Coal, oil and natural gas are examples of nonrenewable resources.

Wildlife habitat is made up of food, water, cover and space. Each species of wild animal needs certain kinds of food and cover. Each species also needs a certain amount of space, or habitat, to provide for its needs.

The quality and quantity of habitat in an area affects the number of species present, and the population level of each species.

Each species of wild animal is associated with a certain kind of habitat. Wetlands, forests, grasslands and farmlands are common types of habitat used by furbearers.

Arrangement is an important characteristic of habitat. When habitat types are mixed, the area generally will support more species and higher wildlife populations.

Native wildlife populations are natural resources - biological wealth - that must be sustained and managed for the benefit of present and future generations of people.

Wildlife biologists focus on protecting, preserving and improving habitats and ecosystems. It is important to understand that biologists also focus on maintaining sustainable populations of wildlife, not individual animals.

Most species of wildlife, including furbearers, have short life spans. Long term, individual animals do not endure, but populations do.

Sustainable management of furbearer populations depends upon two key concepts:

- A focus on habitat.
- A focus on the furbearer population.

Biologists generally look for three requirements before allowing the harvest of wild animals:

- The species is not threatened or endangered.
- The harvest techniques are acceptable.
- Harvesting the animals serves a practical purpose.

Furbearer populations change over time. Populations are highest after young are born each year. Some animals die due to weather, food supplies, diseases or predation, so the number of animals declines over the year until more are born the following year. Animal populations also change over longer periods of time, usually due to changes in the quantity and quality of habitat.

Many wild animals, including furbearers, can quickly repopulate an area of suitable habitat. River otters provide one example. In many states river otters were extirpated long ago due to unregulated killing, habitat destruction and water pollution. In recent years, some river otter habitat has been restored. Biologists and trappers captured river otters in states where the populations were high, and released them in the restored areas. Within a short time, the otter populations expanded to fill the available habitat.

The number of animals a given area can support throughout the year is known as its biological carrying capacity. Limiting factors determine what the biological carrying capacity will be. Food is a common limiting factor. Water, shelter, space, disease and predation are other types of limiting factors biologists must monitor.

Over the course of many years, furbearer populations may decline more than normal due to catastrophic events. Examples include habitat destruction such as forest fires, extreme weather such as blizzards, and diseases such as rabies. If a few animals survive, the population is capable of recovering when conditions return to normal. During these times, biologists may restrict harvest and take other actions to help the animals or the habitat.

Biologists consider several factors when setting management goals for each furbearer species. Two of these factors include the biological carrying capacity of the habitat, and the cultural carrying capacity. Biological carrying capacity refers to the number of animals the habitat can support. Cultural carrying capacity refers to the number of animals that society will accept, which may be a lower level than the biological carrying capacity.

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.....Two funding sources for furbearer management programs are:

- **Hunting and trapping license revenues**
- **Excise taxes on firearms, ammunition and archery equipment...**

.....Most populations become stable when their population reaches the biological carrying capacity...

....."Additive mortality" to bring the population down to its cultural carrying capacity...

.....The U.S. Fish and Wildlife Service reported trapping was used on 487 management projects at 281 national wildlife refuges...

Under normal conditions furbearers produce a surplus of young. Wildlife managers can set seasons, bag limits and trapping methods to allow part of the annual surplus to be harvested. Biologists manage for compensatory mortality by substituting regulated trapping for other mortality factors that would otherwise reduce the population. When managed for compensatory mortality, trapping does not affect the overall population that survives until spring. If trapping did not occur, a similar number of animals would be lost due to limiting factors, such as a lack of food or shelter. The population level is determined by the biological carrying capacity of the habitat.

While some furbearer populations can change dramatically, most populations become stable when their population reaches the biological carrying capacity. In some areas high furbearer populations can cause major problems to people. Beaver dams, for example, may cause water to flood farm fields and roads, or interfere with city water supply systems. When furbearer populations cause too many problems, biologists may decide to reduce the numbers below the area's biological carrying capacity. In this case, biologists are managing for additive mortality to bring the population down to its cultural carrying capacity.

Regulated trapping is an important part of wildlife management programs. The regulated use of the furbearer resource is not only acceptable but in some cases has significant benefits. When furbearer populations cause conflicts with people, or with other wildlife species and habitats, biologists may adjust trapping regulations to increase the harvest to reduce the population. Regulated trapping is the most efficient and practical means available to reduce furbearer populations and it does so at no cost to the public.

While furbearer population reduction is not a goal for all furbearer management programs, population reduction in specific areas can be beneficial. Furbearer population control can: (1) reduce the number of furbearer problems with people; (2) lower predation on rare, threatened or endangered species; and (3) reduce damage to habitats and property.

Regulated trapping helps manage wildlife and habitats. Trapping is used to protect many rare and endangered plants and animals, wetland habitats and personal property. Regulated trapping also is used for localized disease control, wildlife research and wildlife restoration.

The case of the piping plover, a beach nesting bird, is a good example. The piping plover is a threatened shorebird protected by the United States and Canada. Foxes, raccoons, mink, and striped skunks prey on piping plovers when they nest. The U.S. Fish and Wildlife Service uses trapping in and around piping plover habitat to reduce local populations of these predators. Some other rare species protected by trapping programs include pink lady slippers, pitcher plants, the desert tortoise, sea turtles, Atwater's prairie chickens, brown pelicans, least terns and black-footed ferrets.

Beavers, muskrats, coyotes, raccoons, opossums, red foxes, mink and other animals often are trapped to protect habitats and personal property. Traps are the only efficient and practical tool that can be used to remove these animals.

Three major issues affect conservation and management of furbearers:

- Human population growth, which degrades and destroys habitat.
- Public intolerance of furbearers.
- Opposition to any use of wildlife by animal rights groups.

Human population growth causes the loss of furbearer habitat. The range of some furbearer populations already has been reduced. Habitat destruction has eliminated the possibility of restoring some furbearing species to areas they once inhabited. Unlike habitat destruction, regulated trapping is a sustainable use of furbearers. Trapping does not threaten the continued existence of furbearer populations.

Public intolerance of furbearers is another issue. As wildlife habitat continues to be fragmented by development, biologists are faced with new challenges. Examples include coyotes killing pets, beavers cutting landscape trees or building dams that flood roadways, raccoons invading homes, and human health threats from diseases such as rabies. These problems are highly publicized and they make some people want to lower or eliminate furbearer populations. As a result, nuisance animal trapping has become a growing industry. This is a concern because an increasing number of people identify furbearers as problems that should be destroyed. This is a reactive response to problems when regulated trapping activity is proactive and values these resources.

Animal rights activists reflect a different view, which differs from values of using animals for food, clothing and other purposes. Activists want to eliminate all trapping and stop managing furbearers. If animal rights activists are successful, people will have fewer options for solving furbearer problems. Additionally, people could not use furbearers the way they do now.

Hunters and trappers provide most of the money for wildlife management programs. The two major sources of funding include:

- Hunting and trapping license revenues.
- Excise taxes on firearms, ammunition and archery equipment.

Hunting and trapping licenses are sold by states and provide direct revenue for furbearer management. Excise taxes on equipment are distributed by the U.S. Fish and Wildlife Service under the Division of Federal Assistance in Wildlife Restoration Act. Wildlife Restoration dollars, sometimes more than \$200 million a year, are distributed to all 50 states, territories, and Puerto Rico for approved programs that involve wildlife research, management, land purchases and education.

Licensing and Permits

Licenses or permits are annual documents which the user must obtain before they can begin to utilize the resource. These documents fulfill the following purposes:

- They serve by granting authority to the license/permit holder to conduct specific activities.
- They provide state fur management staff with information as to the number of people involved in trapping and the use of the resource.
- The license can serve as a means of assigning quotas.
- Licenses ensure that the authority granted is given to qualified or eligible applicants.

Standard Licenses:

In Montana, residents are permitted to trap under the authority of a prerequisite Conservation License that must accompany one of three other licenses: General Trapper, Youth Trapper (ages 6 through 12), or Landowner Trapper. Nonresidents 13 years of age or older may trap predatory animals and nongame wildlife if the state of residence has a nonresident trapping license available to Montana trappers.

General Trapper and Youth Trapper Licenses

These licenses are available for trapping on most state and federal public lands, with certain important exceptions, and on private lands with landowner permission.

Landowner Trapper License

This license is available for those who restrict their trapping activities to lands they either own or lease. The must provide a legal description of the land owned or leased, as well as resident Conservation License number.

Nonresident Trapper License

This license is available for trapping on most state and federal public lands, with certain important exceptions, and on private lands with landowner permission. Nonresidents may not trap animals in the furbearer classification i.e. beaver, otter, muskrat, mink, marten, fisher, wolverine, and bobcat.

Areas with Special Permit Requirements:

School Trust Land Special Recreational Use License

When Montana was admitted into the union as a state, two sections in every township were reserved for state ownership to provide revenue for schools. These lands are administered by the Trust Land Management Division of the Montana Department of Natural Resources and Conservation. A general recreational use license for access to School Trust Land is not valid for trapping. Those wishing to trap on these lands must contact the Trust Land Management Division at offices listed under "Special Regulations" in the FWP furbearer regulations.

State Game Preserves, FWP Wildlife Management Areas (WMA), and Parks

Most of these areas are open to trapping, some with special regulations. There may be access restrictions or requirements for written authorization from area managers. Some FWP WMAs, or portions of them, have trapping units available through a drawing process. Those interested in trapping on these lands should first consult the "Special Regulations" listed in the FWP furbearer regulations.

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.....In federal refuges that allow trapping, more restrictive regulations may apply...

.....Montana tribal governments currently offer no trapping permits to nonmembers...

.....Montana is divided into seven Trapping Districts...

National Wildlife Refuges

These lands are managed by the federal government. Trapping is not permitted except as otherwise specified. In federal refuges that allow trapping, more restrictive regulations may apply. A few federal refuges may have trapping units available through a bid or drawing process. Information is available through the local manager.

National Parks

Trapping is prohibited in all lands in Montana administered by the National Park Service.

Tribal Lands

Tribal governments may have adopted trapping regulations within the exterior boundaries of their respective reservations. Tribal regulations may differ from the statewide trapping regulations adopted by the Fish, Wildlife, and Parks Commission. Montana tribal governments currently offer no trapping permits to nonmembers. Questions of state-tribal jurisdiction have not been resolved.

Export Permit:

A federal export permit is required in addition to a Montana "CITIES" tag before the pelts of bobcat and otter may be exported from the United States. This usually involves shipment of pelts to the major Canadian fur auctions. These auction houses have representatives in the U.S., commonly listed in popular trapping publications, who can be contacted to obtain current export information.

Fur Dealer License

This license is required for any person or company buying, selling, trading, or dealing in the skins or pelts of any designated furbearing or predatory animal. There are both resident and nonresident fur dealer licenses.

State Trapping Districts

Montana is divided into seven Trapping Districts. The purpose of these districts is to divide the state into regions consisting of generally similar topographic features, habitat, climate, species, composition, abundance and distribution.

Seasons and Quotas

Seasons for trapping furbearing animals are necessary in order to restrict the time period during which they may be taken. This ensures that animals are protected during the breeding and rearing seasons. Seasons also attempt to encourage trapping when furs are at their prime, thus increasing the revenue to trappers. Seasons, therefore, discourage waste of a resource.

Quotas are necessary in order to conserve the species by limiting the total take. This practice helps prevent over-harvesting. Quotas, therefore, ensure that an equitable harvest of a limited surplus is shared among the trappers.

Furbearer seasons will close in 48 hours when a Trapping District species quota is reached prior to the end of the regular season. Current harvest information is available from FWP regional offices. Seasons may also be closed prior to reaching quotas when conditions or circumstances indicate the quota may be reached within the 48-hour closure notice period.

Reporting, Pelt Tagging, and Collection of Carcasses/Skulls

In order to provide current harvest data for conserving the resource, there are a number of special requirements associated with bobcat, otter, wolverine, swift fox, fisher, and marten. These requirements vary by species:

- Bobcat, otter, wolverine, swift fox and fisher harvest must be reported within 24 hours for up-to-date tracking of district quotas
- Marten must be tagged by FWP personnel residing in the trapping district where the animal was taken no later than 10 days after the close of the season.
- Otter, wolverine, fisher, and bobcat pelts must be tagged within 10 days after harvest.

It is mandatory that the entire and intact carcass of all otter, wolverine, swift fox, fisher and the skulls of bobcat be turned into FWP, in good condition, at the time the pelt is presented for tagging. Upon request, skulls will be returned. Additionally, trappers are required to provide harvest registration data for these five species at the time the pelt is presented for tagging.

Trappers may also receive a voluntary questionnaire through the mail requesting information on their trapping activities and fur harvest. It is in the trappers best interest to complete and return this questionnaire to contribute data needed for good management of Montana's furbearer resource.

Signs of Overabundance or Under Harvest

The trapper should consider increased harvest when:

- Disease, parasites, dead animals are common, and animal's condition is poor (skinny and red marrow in the bones).
- Habitat is changing or food becoming scarce (e.g. beaver cut trees far from pond.)
- Signs of fighting become evident (scars on pelts very common - muskrats).
- Tracks, droppings, dens, lodges, etc., are abundant.
- Population trends are noticed. If catching mostly young and male animals, this may be a sign that the population is increasing (this analysis should be based on a sufficiently large sample).
- A constant pattern of animals moving out of the area observed.

Sign of Scarcity or Over-harvesting

The trapper should consider reduced harvest when:

- There is little sign of disease, parasites, etc.
- Animals are usually in good condition (lots of fat, yellow marrow, and are few in number).
- Food sources are abundant (few bobcat, lots of rabbits).
- Less sign of fighting or competition is evident.
- Population trends are noticed. If mostly catching older female animals, this may be a sign that the population is declining (analysis should be based on a sufficiently large sample).
- There is a scarcity of animal signs (tracks, etc.).
- There is little or no sign of habitat overuse by animals.

Signs of Stability

The trapper should maintain harvest pressure when:

- Animal populations seem to be in balance with food supplies (animals in generally healthy physical condition).
- Catching good cross-section of population - average number of all ages, sexes, etc. (This analysis should be based on a sufficiently large sample.)
- Generally adequate sign of animal numbers.
- Little or no habitat overuse by animals.

Each year, trappers should perform a pre-season assessment of the furbearers and other related animal populations as well as habitat conditions on their trapping areas and record the information.

Winter Feeding and Carcass Disposal

The carcasses of captured animals, which are not required for bait or food, should be left on or returned to the trapping area as food for birds and other animals. If disease is suspected, the carcass should not be used in this manner and instead, should be reported to the nearest Fish, Wildlife and Parks office.

When leaving carcasses in the field, avoid placing them where they will be readily seen by people. Distribute them throughout the area so that animals will not congregate too much in one area as this may give disease a better chance to spread through the population.

Studies have shown with some animals, such as marten, when they receive supplemental feed during the critical late winter months when food is scarce, had a higher survival rate and produced more young the following spring.

.....Trapping seasons encourage trapping when furs are at their prime...

.....Reporting, tagging collecting carcasses/skulls are required with bobcat, otter, wolverine, fisher and marten...

.....Trappers should observe signs of overabundance or under harvest in their trapping areas...

.....Trappers should observe signs of scarcity or over harvest in their trapping areas...

.....Animals in generally healthy physical condition are a sign of a stable population...



CHAPTER 5

TRAPLINE EQUIPMENT

Trapping equipment may vary considerably in value depending upon the size of the operation. The important point is that the quality and quantity of the equipment is adequate for the job, not excessive or inadequate.

Since the type and condition of trapping equipment will greatly affect the success of the operation, it is essential that the needs are carefully assessed in terms of suitability and economy, and that the trapper maintains and repairs the equipment regularly in order to get the full value from it so as not to possibly have the loss of time, traps and fur. Some things a trapper should consider in assessing equipment needs are;

- The type of area that is being trapped (size, location, etc.).
- The conditions, seasons, etc., that trapping will take place.
- Other occupations the trapper may be involved in.
- The number and species of animals that are likely to be trapped.

The main categories of equipment are:

- Capture equipment.
- Trapping accessories.
- Fur handling equipment.
- Transportation equipment and living accommodations.

Trapping Equipment

A checklist of capture equipment is as follows:

1. Traps
 - a. Lethal (Conibear type or other types).
 - b. Foot hold (to hold or dispatch).
 - c. Submarine
 - d. Live
2. Snares (Require break away device)
 - a. Power Foot (for holding).
 - b. Lethal (non power)
3. Guns
 - a. To dispatch live animals

With some types of equipment, personal preference may play a significant role in what is selected. However, with capture equipment, the choice should be governed by what is the most humane and efficient device available for a given species.

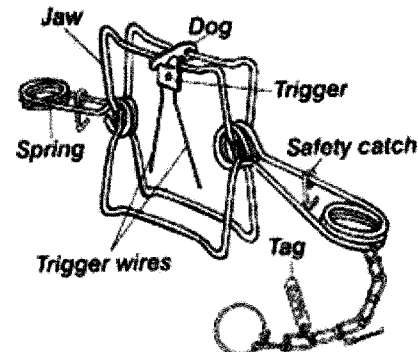
The proper care of traps is very important to the successful trapper. New and used traps should be individually checked every year prior to the opening of the season.

Bodygrip type traps should be carefully inspected, set, and tested. Damaged triggers should be replaced and the trigger mechanism properly shaped and adjusted for the intended species. Be sure the safety hooks are in place. Check the chains for wear and springs for weakness.

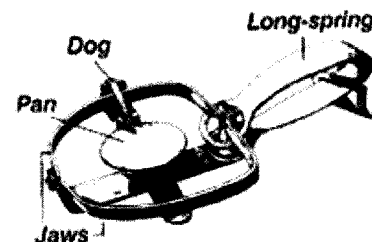
Foot hold trap triggers should be set, tested, and adjusted until they function properly. The trap pan should be level when the trap is set and the dog and pan notch square. If they are not, they should be filed. Chain links and all swivels should be checked for weakness and the trap jaws have to be secure in the frame. If the rubber is damaged on cushioned traps, it should be replaced. Repair any other defects that may be found and replace all weak springs. All of the above traps should be treated (cleaned and dyed) before the opening of the season.

Submarine traps do not need to be treated if they are constructed from galvanized metal. They are most useful in nuisance situations or for removing a muskrat population that is doomed to freeze out. Their use is often limited because of their un-wielding size. Great care must be exercised in the use of these traps because of the danger of over-harvesting.

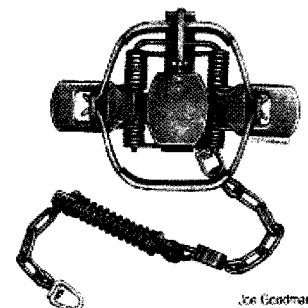
Live traps are normally used only for special situations as their size prohibits greater use. They are mostly used for removing nuisance animals out of season for restocking elsewhere, or in very populated areas where lethal or foothold traps should not be set. They can be successfully used for capturing marten, raccoon, fisher, skunk, squirrel, beaver, mink, weasel, and muskrat. These sets must be checked often or the device soon becomes inhumane.



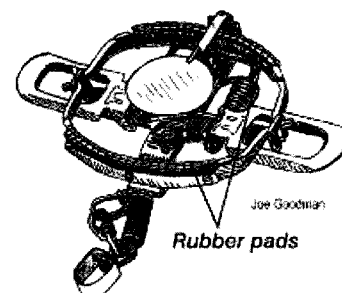
Kill-type body-gripping trap.



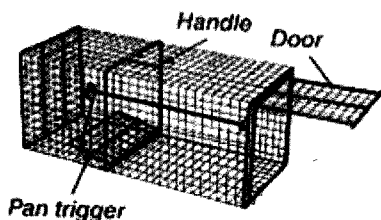
Live-restraining single long-spring trap with plain jaws.



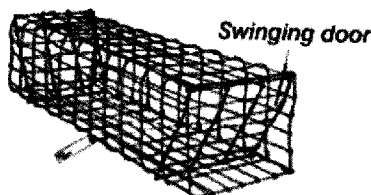
Modified coil-spring trap.



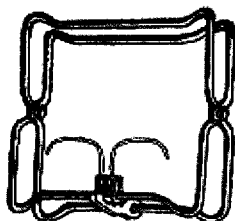
Coil-spring padded foothold trap.



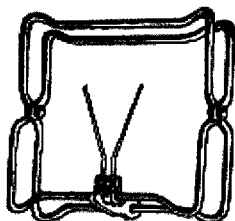
Live-restraining cage trap.



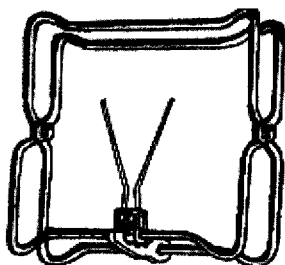
Kill-type submarine or colony trap.



Small – for mink



Small – for muskrats



Medium – for raccoon and fisher

Snares can either be purchased ready made or they can be made by the trapper. In either case, it is of the utmost importance that the snare be constructed properly and from good materials. All snares in Montana must have a break away device (BAD) on them.

Snare operation should be checked before use. The lock should move down the wire smoothly and lock on return. Do not reuse snares once they have captured an animal (retain the lock only if it is undamaged). Use new wire or cable, figure 8 and ferrules to build new snares. Snares, especially new ones, have to be treated. See page 76.

Cage Traps and Selective Harvesting

There are instances when the trapper will want to consider the use of traps which catch furbearers alive. Trapping of nuisance animals in urban areas is best accomplished by cage traps. They make it easy to release non-target animals and are best for public acceptance.

Another very important use of cage traps is as a means of selectively harvesting a certain sex or age class. For example, leaving the reproductive females may be an important part of the trappers management strategy for marten.

During certain times, some populations of furbearers will be stressed and will not be able to support a harvest. It is difficult to stop trapping furbearers such as fisher, many which are caught in sets intended for other species. Cage traps permit trappers to harvest only those species they wish to trap.

The use of cage traps will not be feasible for all trappers and all trap areas. Only those trappers who are able to check their traps every day should use cage traps. Preparing cage traps for some species requires a lot of effort. For instance, marten are susceptible to the cold and wet, and will easily die if not protected. In wet areas, cage traps for marten need to be encased in plastic and placed in a secure cubby built out of boughs. All cage traps should be provided with bedding material, such as straw, dry moss or boughs.

Most cage traps are either solid boxes or wire mesh cages.

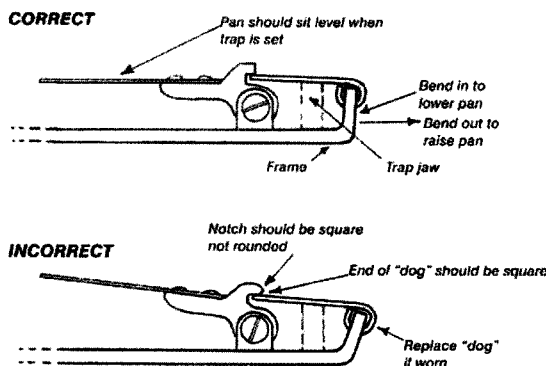
Details of Trigger Mechanism on Bodygrip Type Traps

Most new bodygrip type traps will need little or no adjustments. However, at times, the plate where the trap dog is placed may be too shallow. This will prevent the trap dog from holding when the trap is set and allow it to spring shut.

To overcome this problem, it may be necessary to file the notch in the trigger plate a little deeper. Be sure not to get the notch too deep. This will lower it away from the dog and give it too much "free play" on the trigger so it will have to move too far to spring the trap. Check and make these adjustments before going into the field.

Trigger Modification - Foot Hold Traps

The pan on foot hold traps should set level with the jaws when the trap is set. The end of the dog engaged in the pan notch should be filed square and the pan trigger filed short to create a hair trigger.



Trapping Accessories

There are many trapping accessories that may be included in every trapper's list of equipment and supplies. Other items are required for more specialized purposes or conditions. It is up to the individual trapper to decide which trapping accessories are necessary. The following is a checklist of some trapping accessories:

- Pliers
- First aid kit
- Snare Parts
- Compass and/or GPS
- Waterproof matches
- Flashlight
- Log book or diary
- Sharpening tools
- Chain Saw
- Pail
- Ammunition
- Ax
- Swede Saw
- Ice chisel
- Hammer
- Nails
- Rope
- Wire
- Needles/Thread
- Trap dye and wax
- Trap stakes and anchors
- Shovel or spade
- Trapping information book (s)
- Trap and other spare parts
- Scent, bait, and lures
- Comb and brush for fur
- Bodygrip safety gripper
- Flagging tape
- Dirt sifter
- Shipping bags or cartons
- Trap setter
- Specialized clothing
- Rubber gloves
- Rubber boots
- Packsack and/or basket
- Trap and snare treating container

There are modifications and changes constantly being made to improve the harvest of animals. The longer you trap, the more accessories you will collect and develop to make your trapping and fur handling easier and quicker.

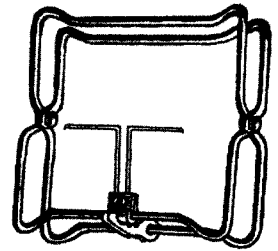
Fur Handling Equipment

Good fur handling equipment will make the job of pelt preparation much easier and will help to ensure that the trapper gets the full value from the fur.

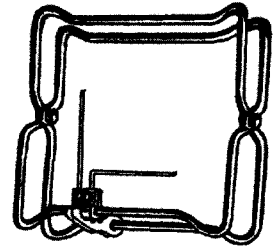
The selection must be judged by the individual trappers based on the species and quantities of these species that they are likely to harvest.

The following is a checklist of fur handling equipment:

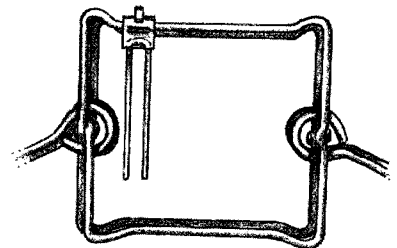
- Fur forming boards, stretchers and drying boards
- Flat board with patterns or hoops for open pelts.
- One piece boards for cased pelts
- Split forming boards (two piece) or stretchers for cased pelts.
- Bags (to transport trapped animals).
- Knives, Fleshers, scrapers, tail stripper, tail splitting guide
- Latex Gloves.
- Utility knife (with small hooked blade).
- Fleshing Apron.
- Push pins
- Skinning gambrel (for hanging animal while skinning).
- Belly sticks
- Leg and tail boards
- Fleshing beams (large, medium, small).
- Other special skinning tools.
- Special needles and thread



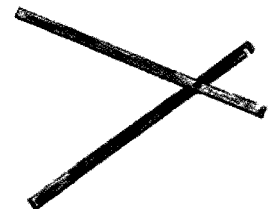
Large - beavers and otters



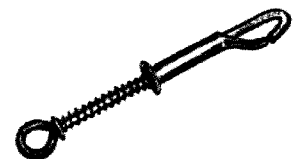
Large - beavers, not otters



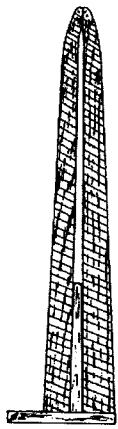
Large - beavers, not otters



Body-grip trap setting tongs.



Body-grip trap safety gripper.



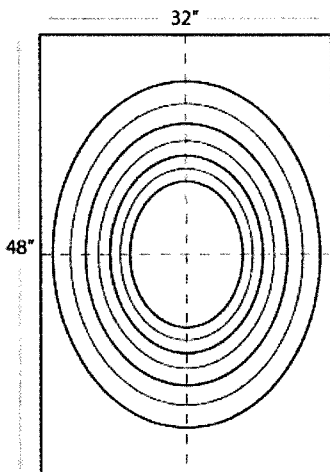
**Adjustable
Wooden Frame**



**Wooden Frame with
Belly Board**



Wire Frame



Open Pelt Board

Forming and Drying Boards

The purpose of the forming and drying board or stretcher is not to stretch the pelt to its maximum size, but rather to hold the pelt in its natural form while the pelt dries.

If the pelt is not formed or dried properly, it will either be overstretched or be shrunk, wrinkled and spoiled. Either way, its value will be greatly reduced. Trappers should remember that they cannot improve on what nature produced, but that through poor handling, the value of a pelt can be reduced or entirely lost.

Cased pelts are formed and dried on solid, split forming board or wire stretcher. If a solid board is used, a belly stick should be inserted to ensure free air circulation and to allow for easy removal of the pelt as it shrinks and tightens during drying.

Split boards are usually used for the larger cased pelts and do not require a belly stick.

Wire stretchers may be used for coyote, bobcat, fox, muskrat, raccoon or weasel.

All boards should be free of knots or other irregularities on the outer edges, be sanded smooth and the edges rounded. The boards must be of the proper shape, size and thickness.

Boards for open pelts can be made from a sheet of plywood. Poplar plywood, being soft, makes the best beaver boards. If small diameter nails are used, the boards will last much longer. Wire hoops are sometimes used where it is inconvenient to transport plywood to the trapping location.

The Open Pelt Board

The figure on the left shows the proper way of marking the nailing lines on a board for beaver. The patterns are available from the fur depots. They were designed to produce correctly shaped beaver, and also save the trapper time by providing guide lines for nailing the edge of the pelt.

One 4' x 8' sheet of plywood, used on both sides, will produce three 48 x 32 inch boards, or six sides, on which to nail pelts. Two push pins place in the board along each quarter of the center lines (eight pins in all) will make tracing patterns faster. Also, when tracing the patterns, you may want to use indelible felt markers to produce alternate lines of red and black. Use 3/4 inch plywood.

Forming Boards for Cased Pelts

When individual forming boards have been cut to size and shape the edges must be sloped on both sides with a plane, hand ax or knife. When completely shaped, the entire board should then be sanded smooth.

Forming boards have slightly different methods of releasing the pelt sections for easy removal of the dried pelt. The three piece type can be used on a wider range of pelt sizes than the solid forming board, but is more complicated to build.

Use wooden boards; they are far superior than wire forms to maximize size and to improve the appearance of the pelts. Whether using split or solid boards, make sure they are not too wide.

See the size charts for specific measurements on page 67.

Coyote and Wolverine Forming Boards

Boards are made 1/2 or 5/8 inches thick.

A tapered belly stick is required for solid boards. (No more than 1 1/2 inches wide tapering to 1/2 inch; about 42 inches long).

Fisher Forming Boards

Small and medium fisher are both boarded on the small boards.

A tapered belly board is required for solid boards (no more than 3/4 inches wide tapering to 1/4 inch).

Fox Forming Boards

Boards are made 1/2 to 5/8 inches thick.

A tapered belly stick is required for sold boards. (No more than 1 1/2 inches wide tapering to 1/2 inch).

Two size of fox boards will fit most red or colored fox.

Fox boards are narrow at the nose and neck to accommodate the pointed nose and narrow neck of the fox. If boards are made too wide at the head and neck, fox will be short and wide.

Marten Forming Boards

XXL boards may be made using a 4 1/2 inch base.

A tapered belly stick is required for solid boards (no more than 3/4 inches wide tapering to 1/4 inch).

Wild Mink Forming Boards

If there is fat under the saddle, remove the fat or remove the saddle completely without making nicks/cuts in the leather.

Board the mink correctly - male mink on male board, female mink on female board.

Place the hind feet on the same side as the tail and do not overstretch the hind feet or the tail.

Muskrat Forming Boards

One piece board - use belly stick.

Otter Forming Boards

Boards are made 1/2 to 5/8 inches thick.

A tapered belly stick is required for solid boards. (No more than 1 1/2 inches wide tapering to 1/2 inch).

Raccoon Forming Boards

Small boards no narrower than 7 inches wide at 25 inches.

Large board no wider than 8 1/2 inches wide at 30 inches.

More than two boards may be used varying in size as indicated.

A belly stick is required on solid boards (no more than 1 inch wide tapering to 1/2 inch).

Boards are 1/2 to 5/8 inches thick.

Ermine (weasel) Forming Board

All boards are 3/16 inches thick

Ermine boards may be made smaller or larger from 1 3/4 to the base.

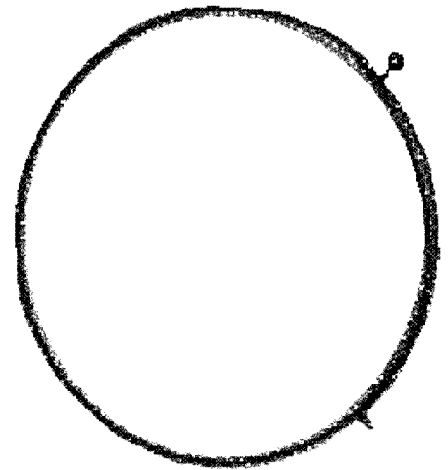
Construction of Split Forming Board

Mark lines across both boards and then drill into center of board from middle toward outside following the lines. Then tap nail snugly into one board and fit the second board into the nails protruding from the first board. The nails should just fit into the previously drilled holes. Pre-drill 4 holes and tie together with string or wire.

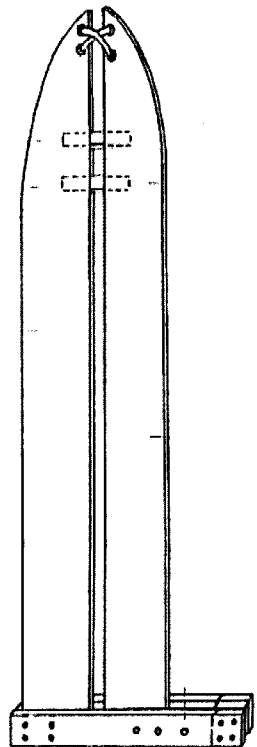
Nails with heads cut off usually 3" long. Use 4" long nails for a very large board. These nails keep the boards from twisting while still allowing the boards to be spread apart to tighten the pelt.

Holes drilled through base spreader board. A nail is slipped through the holes to hold the form at desired width.

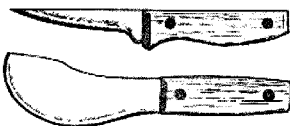
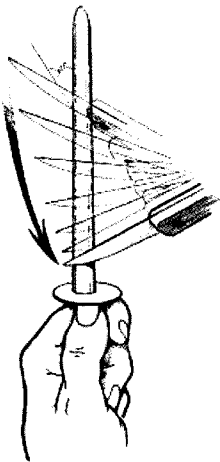
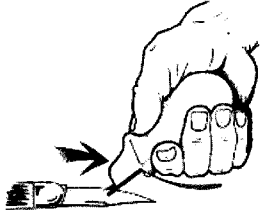
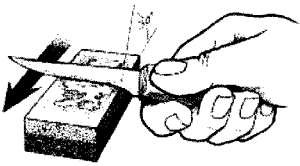
Split board may be constructed by using the solid board dimensions noting that maximum width when expanded should not exceed that of the solid board.



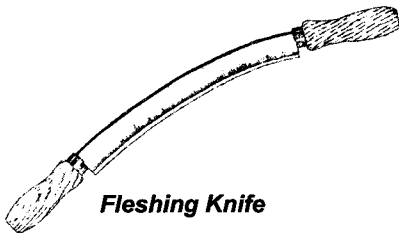
Adjustable Wire Hoop



Split Forming Board



Skinning Knives



Fleshing Knife

.....a sharp knife is a must; however fleshers should not be overly sharp...

Knives

There are many shapes and styles of knives. The most important thing is that the steel is able to hold a good edge, as a sharp knife is a must. While a narrow blade is used for starting cuts, a skinning type blade is used where there is a need for a lot of cutting, such as in skinning beaver. Most trappers will experiment with various knives over their trapping careers, always searching for one that works better. The knowledgeable trapper soon learns to use a different blade for general skinning than the one used for cutting around bone, since bones will quickly dull a blade. Have a number of knives available and keep them sharp.

Sharpening Devices

The triangle sharpener is a device that automatically gives the proper angle of the blade to the stone for effective sharpening. After your knife has been treated on a stone or triangle sharpener, a steel will give you an extra sharp edge, and can also be used between sharpening's to touch up the edge of the blade.

Always carry a stone or some type of sharpening device with you while on the trap line. It will save you a lot of time and trouble if you must do some skinning on your trap line.

Fleshing Beams

Although fleshing can be done on a forming board or even on one's knee, the job is accomplished much more quickly and easily with the use of a beam. For some pelts, such as raccoon, badger, and wolverine, it is a virtual necessity. The surface of the beam must be perfectly smooth, as any irregularities may result in a cut pelt.

Fleshers

The fleshers should not be overly sharp; experience will indicate the proper edge. A straight flesher is used on a beam, square and stirrup flesher is used on a flat board.

Transportation and Living Accommodations

Be sure all transportation equipment and accommodation is in good repair before the start of the season.

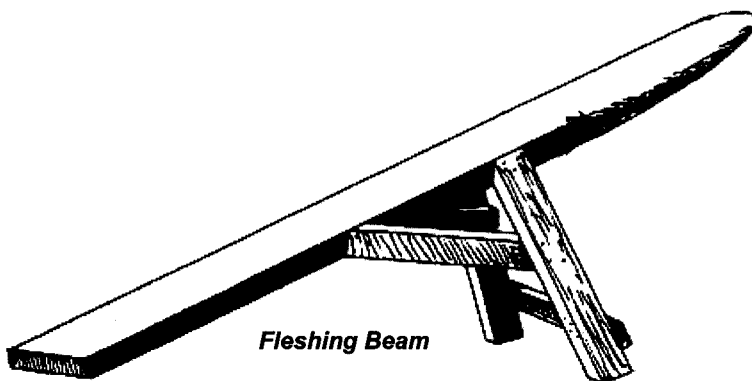
The selection of equipment here is largely a matter of personal preference, but trapping conditions and expense may dictate what is to be used.

Snow machines and ATVs can be a valuable asset in many areas, but be sure you know their general maintenance and select a machine that is suitable for the situation.

Keep in mind that the cost of a truck or other major items may be partially off set as a tax deduction.

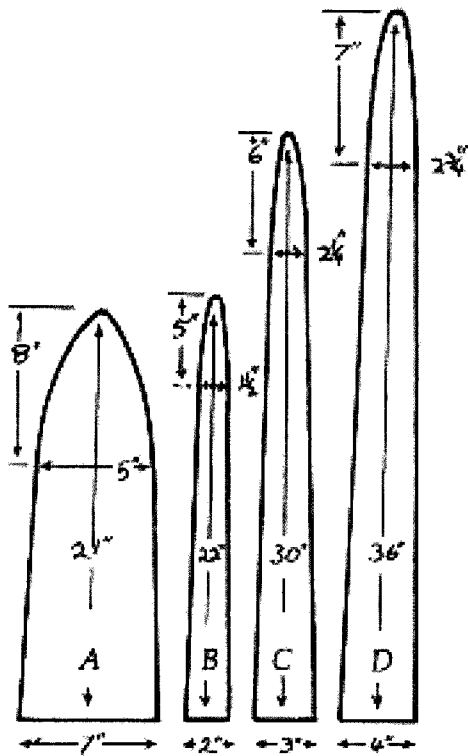
A canoe and snowshoes are also investments that can pay off.

With these large, expensive items, it is essentially important to keep economy and efficiency in mind. Do not buy more than you can afford or need. On the other hand, modern equipment can help to ensure success.

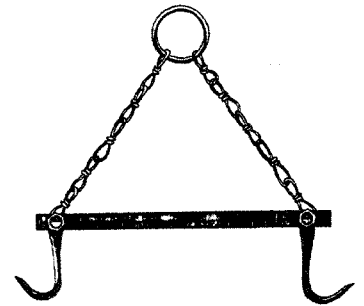
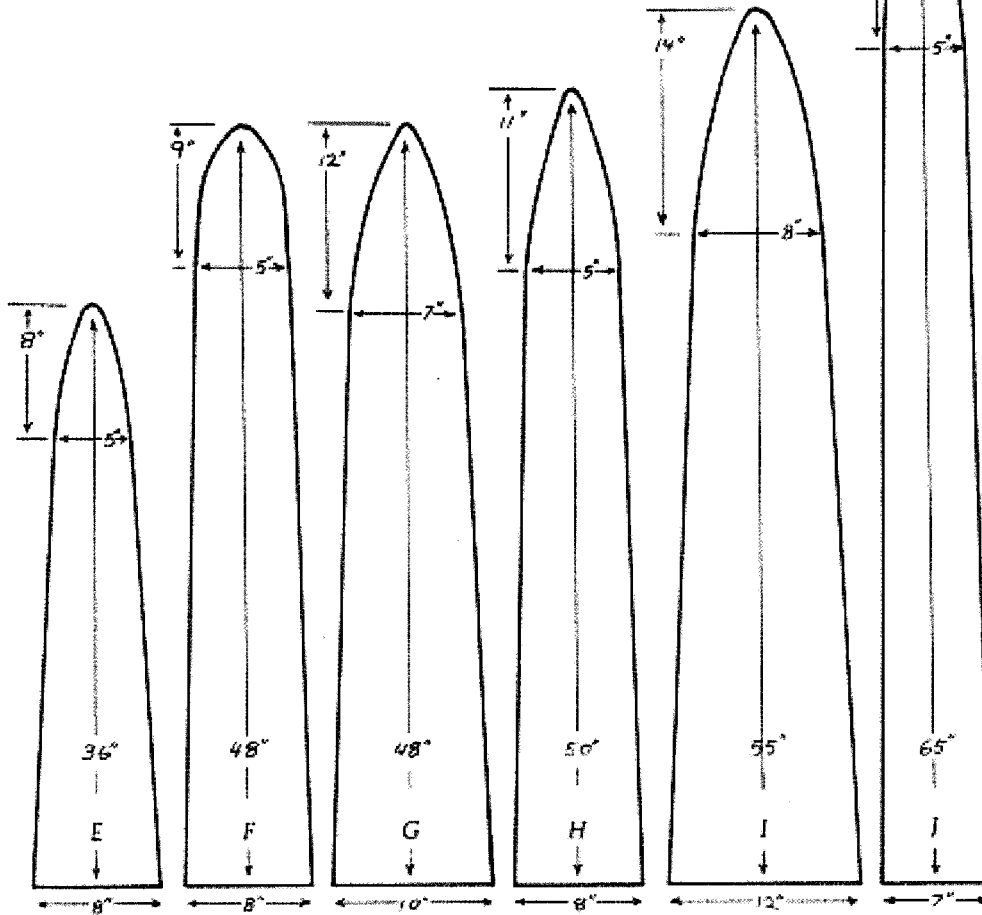


Fleshing Beam

Wooden Stretcher Sizes



- A. Muskrat**
- B. Weasel**
- C. Female Mink**
- D. Male Mink & Marten**
- E. Skunk & Female fisher**
- F. Opossum**
- G. Raccoon & Bobcat**
- H. Fox & Male Fisher**
- I. Coyote & Large Bobcat**
- J. Otter**



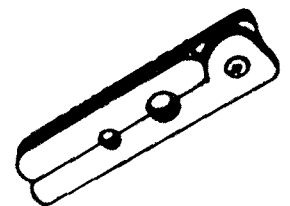
Skinning Gabriel



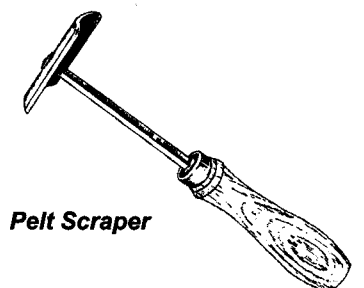
Sharpening Steel



Fur Comb



Tail Stripper



Pelt Scraper

CHAPTER 6

PRIOR & POST SEASON PREPARATION AND BUSINESS MANAGEMENT

Trapping Area Management

Some trappers may develop the activity beyond that of a hobby and begin to derive income.

Trapping can be a business and like most other businesses today, it is being affected by increasing costs and fluctuating returns.

In order to help ensure economic viability, trappers should thoroughly plan and organize their operations.

The trapper should try to think in terms of dollars per day and, using a realistic price average, set daily and yearly goals before the season opens. At the end of the season, the results should be analyzed to see why the goals were or were not attained.

The following is a suggested management plan which trappers can use as a guide to what planning and activities they should be involved in during different seasons.

Management Plan

There are four stages to the fur harvest Management Plan:

1. Overall planning stage
2. Pre-season preparation stage
3. Operational stage
4. Post-season stage

Stage Overall Planning

Develop a plan and set goals:

- Set realistic dates for each stage
- List activities to be completed during each stage.
- Use maps, aerial photos, etc. to assist the harvest plan (i.e. travel routes, set locations and habitat areas).
- Plan both business and biological aspects
- Set harvest quotas for each species.

Develop Record Systems

- Budgeting and taxation
- Cost/revenue balance sheet.
- Fur harvest data (set location and type).
- Bait, scent or lure used.
- Species type and number harvested
- Weather and other conditions.
- Dates

Pre-Season Preparation Stage

- Equipment preparation (i.e., sufficient quantity and in good repair).
- Trap treating and repair.
- Snare Construction.
- Fur forms and fleshing beams.
- Other equipment (snowmobile, vehicle, boat/canoe, etc.).
- Prepare baits, scents and lures.
- Pre-season trapping area prospecting
- Trail preparation
- Pre-season set preparation

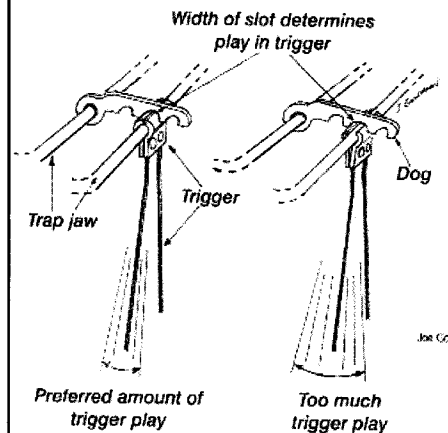
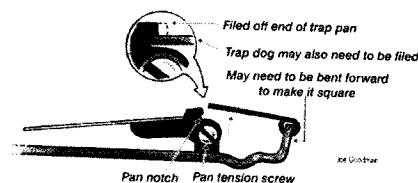
Operational Stage

- Harvesting (peak primeness).
- Fur Handling
- Marketing

Post-Season Stage

- Inventory, clean, repair and storage of equipment (order and/or purchase of new or replacement equipment).
- Analyze records

.....When the season opens, the trappers should be involved in setting their traps, not in searching for set materials such as anchors, running poles, adjusting traps and other activities which should have been accomplished prior to season opening..





HARVEST RECORD				
Species _____		Year _____		
Day/Month	Trap Set	# Trapped		Comments
		Males	Females	
Totals				

Harvest Record

.....The successful trapper is a well organized trapper...

Map and aerial photos are a valuable asset to the trapper. Public land management agencies such as the Forest Service and BLM have good quality small scale maps of the areas they administer. These maps are available at district offices, some local businesses such as sporting goods stores and on the internet.

More and more, the public is learning that trappers are wildlife managers. If trappers are to properly manage their areas, it is important for them to keep records of their catch. Using this information, they can then decide on the best management plan for the next season.

Records of catches should be kept each day, along with weather and other conditions. Changes in harvest become quickly noticeable when you have records to refer to. You can compare weather conditions and determine which have positive or negative effects on your trapping. Success with lures and baits, and effectiveness of various sets, can be ascertained. These are all facts which are very difficult to remember from year to year without written records. These records will become more valuable as a management tool in each subsequent year. If your strategy is correct, you should see maintenance or steady improvement in production, coupled with greater efficiency each year.

- Date
- Weather
- Sets made
- Lures used
- Animals caught
- Primeness

- Income
- Pelts sold

When the season opens, the trappers should be involved in setting their traps, not in searching for set materials such as anchors, running poles, etc.

Holes, den locations and beaver house entrances should be marked in advance of the season if you are going to trap under ice.

Pre-baiting or scenting sets before the season opens will get you off to an early start. It may be best to bait sets several times in order to get the animals accustomed to feeding securely at the location. This can be done once a week for 2 or 3 weeks before the season opens.

Other preparations include placing raccoon or marten boxes in position, cutting and placing poles, wiring anchors or drags, and driving stakes. These all can save a great deal of time so that when the season opens, you only have to place the trap and bait/scent and be on your way to the next set. Although not every set location can be prepared early, the majority can be. If these pre-season activities are recorded in a notebook and or map, you will know in advance what equipment and bait/lure will be required. The successful trapper is a well organized trapper.

Lures are widely used to take advantage of animals' investigative curiosity and sense of smell. The lure is used to attract an animal to the set location from a distance. A lure will improve the effectiveness of many sets and will be essential in some others.

In order to use lures successfully you should understand the differences between them and know the basic techniques for their use.

Lures include:

- Scents
 - ◆ gland scents
 - ◆ curiosity scents
 - ◆ food scents
- Bait
 - ◆ fresh bait
 - ◆ tainted bait
- Urine
- Visual

Purpose, Preparation and Use of Lures

Animal Glands

Webster's Dictionary describes a gland as "an organ for secreting a substance or substances to be used in, or eliminated from, the body".

The most well known of the animal glands is beaver castor. This gland is located in both male and female in the lower body cavity, beneath the vent. After skinning the beaver, with the animal on its back, you can feel these glands on both sides of the vent. Care could be taken so that the castors are cleaned of fat and meat. If pulled slowly, while steadily cutting away the tissue, the castors will remain together. They can be dried by hanging them over a wire in a dry place. Twist them to prevent the liquid from running out. The oil sac is next to the castor, and is much more fragile. Great care must be taken or the sac will be punctured.

Both these glands are used for lure-making with the castor being more valuable for both lure-making and for sale. The castors are well worth saving.

Muskrat glands are next in importance and easy to obtain. Only the male muskrat has these glands, and they are valuable only in the spring when they are filled with liquid. These glands will normally adhere to the pelt and are, therefore, easily removed. To dry these glands, lay them on a wooden board or screen frame in any airy place, turning them over several times as they dry. They are a pleasant, sweet-smelling gland. They are a good lure for muskrat when used by themselves the following spring, or for various furbearers when mixed with other glands.

The weasel family anal glands have a nasty odor, so be careful when removing these. It is best to cut too much flesh out, rather than cut into the glands. Mink, marten, fisher and otter anal glands are all used in lure-making. Mink musk can be used by itself.

Skunk glands are located, as on all members of the weasel family, on each side of the vent. A hypodermic needle and syringe (available at ranch supply store) can be used to extract the liquid from the gland. To save, cut a hole in the middle of a lid of a small jar, glue an inner tube patch over the hole, insert the syringe through the rubber patch and expel the skunk musk into the jar. Glands from fox, coyote and other harvested animals can also be used.

To save these glands, they may be put in clean glass bottles, and preserved with a light covering of pure canning salt. Put only one kind of gland into a jar and label the jar. Glands also keep well when frozen.

Tips on Preparing and Using Lures

Although lures, if properly used, can greatly improve the effectiveness of a set, they will not make up the shortcomings of a poor set. If improperly used, many lures will actually scare off the intended furbearer.

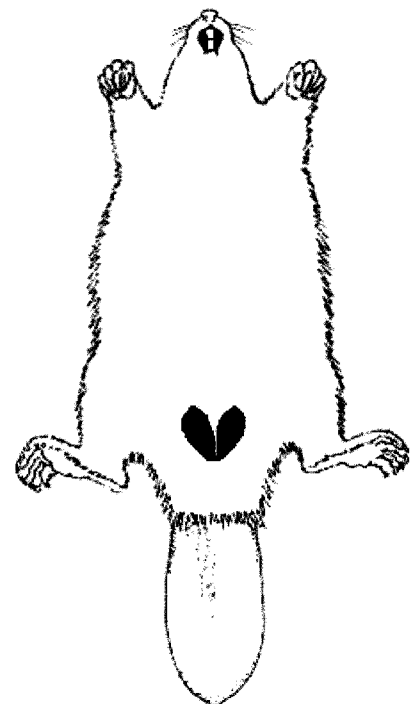
This is especially true with the use of scents. The use of too much scent will have the opposite effect of what is desired. However, scent is generally more effective than bait, as it lasts longer, broadcasts the odor farther, and creates greater curiosity in the animal being attracted.

There are many commercial lures and scents available on the market. Test any lure or scent you use for effectiveness before depending on it. To do this, you will need to keep records. A good practice is to vary the scent or lure used at every other trap location, especially for foxes and coyotes.

.....Weasel family anal glands have a nasty odor...

.....Lures, if properly used, can greatly improve the effectiveness of a set, they will not make up the shortcomings of a poor set...

.....The most well known of the animal glands is beaver castor...

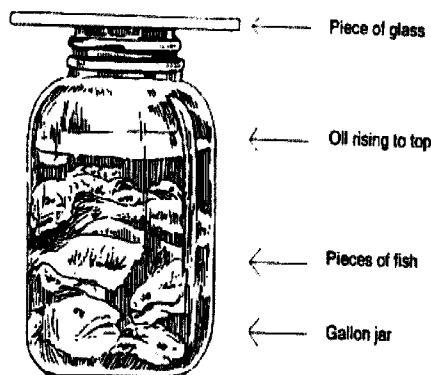


Castor Gland Location

.....Beaver castor makes a good base for any scent mixture ...

.....To give lure or bait greater cold weather drawing power, add skunk musk...

.....A good supply of fish oil should be prepared in the summer for fall and winter trapping...



Fish Oil Preparation

Beaver castor makes a good base for any scent mixture as it holds odor for a long time. Even by itself, it will attract most animals, including other beaver. A mixture of the beaver castor and the beaver oil gland is a good lure for marten and bobcat. Beaver flesh is a good bait to use because its fatty consistency holds odor even in cold weather.

Meat can be tainted for use as bait by placing it in a glass jar or can and burying it in the ground for 7 to 10 days. Cover it with about 4 inches of dirt. Borax powder added to the bait will prevent it from spoiling any further after it has been tainted the desired amount.

Livers of the animals to be attracted, fermented in the summer months, are particularly good for coyotes and fox. After the livers have fermented, you may add a variety of ingredients, such as beaver castor, muskrat glands or, to give it greater cold weather drawing power, skunk musk.

A good bobcat lure is a mixture of beaver castor, muskrat musk and black poplar buds, picked just before they open in spring.

Mink musk with honey also attracts most animals. To prepare this lure, take the musk gland from several mink and either press the musk in one pound of liquid honey or place the entire gland into one pound of warmed liquid honey. The warm honey will help to release the musk from the whole glands. Stir the honey to ensure the musk is well mixed in.

Fish oil is not only an important part of many lure formulas, but is also a very effective attractor when used alone. Pure fish oil is especially attractive to raccoons, mink, skunks and foxes. A good supply of fish oil should be prepared in the summer for fall and winter trapping.

Any fatty fish will make good fish oil. Cut fish into chunks and put them into a heavy glass gallon jar. Lay a flat piece of glass over the top of the jar with a rock to hold it down, permitting the gases to escape and preventing flies from entering the jar. Keep the jar in full sun at all times and away from cats and dogs. A good place for the fish oil jar is on the roof of a small building.

As the solids deteriorate, oil will begin to appear on the surface. After several weeks in the sun, a few inches of clear yellow to amber colored oil will have risen to the top.

Pour off or siphon the oil into a clear bottle (a large syringe or turkey baster will also work well for this process). Put the jar back in the sun. Additional ounces will be produced within a few weeks.

Use about twenty drops of pure fish oil at a set. Fish oil may also be used in conjunction with other lures and baits.

An excellent fox lure is lard cracklings--the fatty tissue of pork or beef from which the lard has been rendered. After making the set, scatter a few cracklings around in such a manner that the fox must cross and re-cross the trap while retrieving the lure (make sure the cracklings are lightly covered to prevent the capture of birds).

Fish oil with beaver castor makes an attractive lure for fisher. Another good fisher lure is a mixture of one pint fish oil, muskrat musk (two glands), 10 drops Aniseed oil, and 10 drops Asafetida.

A coyote and fox lure can be made from 4 beaver castors, 4(springtime) muskrat glands, 6 drops of Aniseed oil, about half a drop of skunk gland, a good handful of powdered wild catnip, mink glands (about 2 small ones), a few blades of green grass, about 4 deer glands (from the legs) and about 5 pounds of meat (deer or similar).

Grind the meat or chop it into chunks. Put this into a wood or glass container big enough to hold 4 gallons. Break or grind the glands, mix them with the catnip, and add the meat. If it does not mix well, add just enough clean fresh water to cover. This should then be put aside, covered with a screen, and left to work for the summer. Check it occasionally to see it does not get too dry. When it has settled into a well-mixed mass, it can be put into jars, where it will keep for a long time. A bit of this lure will often bring coyotes and foxes straight in and will attract other animals as well.

Preparing Traps for Use

The proper care of traps is very important to the successful trapper. Check both new and used (old) traps each year before the season, by setting and adjusting the triggers. If they do not set properly, adjust them. The foothold trap pan must be level when the trap is set, and the dog and pan notch square. Check chain links and the swivel where it is attached to the trap, and see that the jaws are secure in the frame. Repair any problem you find and replace weak springs.

Inspect and test-set lethal traps before the season. Adjust the triggers as may be needed. Be certain that safety hooks are in place. Check trap chains for wear and springs for loss of tension. Dye and/or wax all traps before the trapping season opens. Prepare traps used for fox and coyote before they are to be used, and allow them to air away from any odors.

Most trappers prefer to have the traps dyed to a dark color. For this, new traps must first be rusted before dying. As traps get older they take on a better (darker) color. Older traps must be clean before being waxed or dyed. Put a small nail between trap jaws on foothold traps to make sure that the jaw edges are also dyed and waxed. This is not recommended on "Softcatch" traps as the wax inside the jaws may make the rubber slippery. Wear gloves while working with traps to protect hands. Wire traps together in groups of three to six, leaving extra wire for a handle.

Boil new traps in a proper container (one half or two thirds of a 45-gallon drum or barrel is good). Let traps boil for a few minutes, then add water to float oil and scum out of the drum and overflow the sides. Only then lift the traps out and rinse with clean water. Now that the oil is removed the traps will rust. Leave them lying in the grass and sprinkle with water in the evenings, until a very light coat of rust has formed.

Dyeing

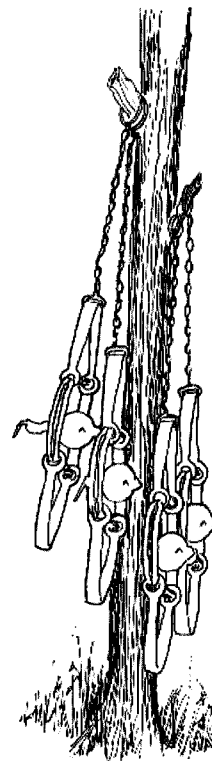
After new traps have a very light coat of rust, they can be dyed. Because dye turns the trap black, some trappers in areas with sandy or light-colored rock bottoms in their waters prefer just to remove excess rust on those traps to be used for water animals and wax the trap, leaving it a brownish color.

To dye your traps, place them in your container, two thirds filled with clean water. Alder, spruce and fir twigs can be used instead of log wood dye. Bring this liquid to a boil and simmer for about one hour. The heat opens the pores of the steel traps, allowing the dye to seep in.

Start with traps that require dyeing most, because the solution is strongest at the beginning. After removing traps from the dye container, rinse new traps with clear water to remove the extra dye that has not stuck to the traps.

There are also commercial "cold dip" treatments available, most of which require mixing with gasoline or white gas such as Coleman lantern fuel. Traps treated in this manner must be aired out for some time prior to use. Although many of these treatments work very well, for obvious reasons, the use of gasoline in this manner can be extremely dangerous. The operation should be conducted well away from buildings and any possible ignition source.

There are some water-based cold dips available that are much safer than those requiring the addition of gasoline. You may want to experiment with various trap treatment methods to find what works best for the soil and water conditions in your area.



Drying Traps



Boiling Traps or Snares



.....Have a lid available to cover the waxing container in case of fire...

.....Snares can be purchased ready to use, but many trappers will buy the materials to make their own...

Waxing

Before waxing traps you should first understand why you wax and what effect it has on the trap. Waxing the trap serves four purposes, all very important.

CAUTION: Always wear leather gloves and goggles to protect your hands and eyes. Be very careful when waxing traps. Do not overheat wax. Do not put water or wet traps into hot wax. Have a lid available to cover the waxing container in case of fire.

1. The wax allows movement of the trap parts with much less friction, providing a very fast trap.
2. The trap is protected from weather and will not rust.
3. Fur of the animal will not stick to the trap as quickly. Your traps can last longer when cared for in this manner.
4. Waxing bodygrip traps will produce hair-trigger conditions. It is advisable to remove wax from trigger and dog areas before setting.

To wax, a trap must be as hot as the melted trap wax, so that it soaks up some wax but does not allow extra wax to cling to its surface. A properly waxed trap will have a shiny surface with no surplus wax. If you are getting a lot of wax on your trap, it means your trap is not hot enough.

There are two ways to wax traps. One is to melt the special trap wax on top of your dyeing solution or water in your drum, and pull the hot traps up through the melted wax. The other is to melt wax in a small container and place the trap in the pure wax, usually one at a time and remove once completely coated.

Traps, after being prepared, should either be hung in a clean area or packed in a clean box ready for use.

Snare Treating

Snare treating by boiling in a solution of baking soda and water is a recommended practice that results in three main benefits:

1. Reduces light reflection from the snare so it will be less visible to the animal.
2. Removes undesirable odors to make the snare more difficult for the animal to detect.
3. Imparts natural odors to mask or replace any remaining objectionable scent, so the animal's suspicion will not be aroused.

Snares can be purchased ready to use, but many trappers will buy the materials to make their own.

For a snare to perform efficiently and reliably, it must be constructed from good quality material and be assembled with care. The basic components of a snare consist of cable, lock, and ferrules (figure 8 wire is an option). Special attention should be given to make sure that each part of the snare is the correct size and strength.

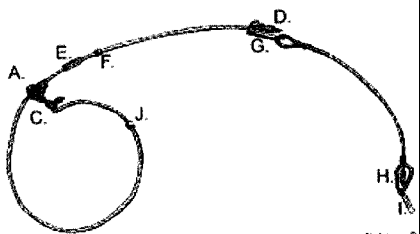
Be sure the cable is not twisted when making the snare. You can avoid this by laying the cut lengths on a flat surface and making sure they lay flat before assembling the snare.

All the snares you will need for the season should be made ahead of time and be treated so they are ready for use. If you require a lot of snares, it is well worth purchasing a ferrule crimper and a very good pair of cable cutters.

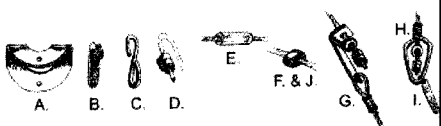
Snares should not be reused except for the lock, if it is in good condition. Remember, any money you might save by reusing snares could be lost many times over by the loss of a single animal.

Loop size, height of loop off the ground and other factors are critical to the humane and effective operation of a snare. Remember, any device is only as good as the materials used, and the knowledge and care with which it is used.

Either purchased or homemade snares must conform to the Montana State regulations requiring a break-away lock device designed to release when 350 ft/lbs or more of force is applied.



- A. Nonmechanical Lock (NML)
- B. Below - Side Profile of NML
- C. J-Hook Breakaway Device
- D. End Ferrule
- E. Stabilizer Tube (Whammy)
- F. Maximum Loop Stop
- G. Inline Swivel
- H. End Swivel
- I. Trap Tag
- J. Deer Stop



Post-Season

- Remove all traps and snares as per regulation.
- Clean, repair and store all equipment.

Trapping Area Records

Records should be completed and analyzed so the next season's activities can be planned. These records will become more valuable as a management tool in each subsequent year.

TAX AND THE TRAPPER

Income Tax

Trapping income is taxable just like income from any other source. Your fur income or services for animal damage control show up as a deductible expense on the tax records of other individuals or businesses. Therefore, it is in your best interest to become familiar with income tax and how it applies to the trapper.

The first item a trapper should be aware of is the importance of keeping complete and accurate records. Your taxable income is calculated by deducting expenses incurred in your trapping operation. Allowable deductions include most expenses directly related to generating income. This requires keeping receipts for all trapping costs as well as check stubs or other records of income. You have to be able to back up the figures used on your income tax form.

Maintaining adequate tax records is not a big chore if you keep up with it. A simple ledger format listing expenses and income by date and type is easy to maintain, along with a file containing receipts, stubs and vehicle logbook. Trappers serious about generating income will find their tax records quite useful in determining which portions of their operation are profitable and which are not.

It is very helpful, and even necessary at some point, for accurate tax records to maintain trapping business accounts separate from all other household or other accounts. A separate checking account for fur income and expenses is a good idea. If properly used, a credit card greatly facilitates supply ordering and travel expenditures. A credit card account, even with a small limit, enables a young person to establish a favorable credit rating that will serve them well later in life.

If fur production and animal damage control start to provide a significant portion of income, a trapper would be well advised to invest in a visit with a tax accountant. The tax professional will set up a simple accounting system tailored to this particular income-generating activity.

Income

All income must be reported for the calendar year in which it is received. For example, if you trap in the fall but don't sell the furs until after December 31st, the income would be attributable to the later year. In addition to income from fur sales or animal damage fees, remember to include sales of by-products such as glands and taxidermy specimens. The sale of used equipment such as traps also generates taxable income.

Expenses

Similar to income, expenses are attributable to the calendar year in which they occur. An example would be a major equipment purchase with recurring monthly payments spread over more than one year. Only the payments made between January 1 and December 31 of that particular tax year may be included as expenses for that year.

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.....Income must be reported for the calendar year in which it is received...

.....Similar to income, expenses are attributable to the calendar year in which they occur...

.....Traps and snares are usually a major expense...

.....Memberships in organizations and publications that provide information or other opportunities that help you generate income through trapping, sale of furs is an expense...

.....Lawyer and accountant fees are deductible if associated with your trapping businesses...

.....Falsifying deductions puts one on the fast track to trouble with the IRS!

Expenses can be broken down under the following headings:

Vehicle Expenses:

This is by far the single most important accountable expense for most trappers because total costs associated with vehicle use are very high. Those working towards generating trapping income typically find this business cost must be monitored very closely. This is one area where good record keeping can pay off by providing the hard facts needed for an accurate cost analysis of the season's operations.

The Internal Revenue Service (IRS) permits a simplified accounting method for vehicle use that works best for most trappers. Instead of actual expenses, which would require a great deal of extra record keeping and calculations, taxpayers are allowed to deduct vehicle expense based on a fixed mileage rate. This requires a simple logbook for daily entry of mileage attributable to business operations. Record the date, starting and ending odometer readings, and purpose, such as "checking traps". Subtract the starting from ending mileage and enter that in a separate column. Rather than run the log season-long, it works better to total up each month. All you have to do at the end of the tax year is add up the monthly figures and multiply by the IRS mileage rate. This rate is updated annually and there is usually a slight increase from one year to the next.

Equipment and Supplies:

Traps and snares are usually a major expense, so you might want to keep track of them separately from all other items. Equipment in the other category are such things as hip boots, snowshoes, backpacks, knives, scrapers, stretchers, beaver boards, trap parts, trap tags and assorted tools or hardware. Equipment can include larger items such as camping gear, boat equipment, and freezers if related primarily to fur production. Supplies include items such as lures, baits, ingredients, containers, plastic bags, nails, wire or other items used up trapping or other processes related to the production of fur or damage control services.

Advertising and Promotion:

This includes such items as business cards, letterhead, or newspaper ads offering animal damage control.

Bank Charges

This includes checking fees and charges for blank checks if you maintain an account devoted solely to trapping. It could also include credit card fees.

Memberships, Publications and License Fees:

This includes memberships in organizations and publications that provide information or other opportunities that help you generate income through trapping, sale of furs, if you provide animal damage control services, or obtain supplies, equipment and services necessary for your trapping operation. The cost of a trapping license is also deductible.

Shipping Fees and Postage:

This includes the cost of shipping furs through commercial carriers or pick-up fees where fur auction organizations provide such a service. Postage related to trapping business is included, such as mailing a supply order or obtaining information from someone such as a fur buyer or supplier.

Legal and Professional

This is one column you generally work very hard to keep blank from one year to the next. However, items such as lawyer and accountant fees are deductible if associated with your trapping businesses. This category would also include such things as payment for professional trapping instruction.

Repairs and Maintenance

This category does not relate to vehicle use, which is treated separately. This would include such items as having welding repairs done to body-gripping beaver traps or sending snowshoes away for new lacing.

Travel, Meals and Room:

This includes the cost of overnight travel, for example, to conventions or fur sales. This category does not include vehicle mileage, which is treated separately.

Other (Miscellaneous) Expenses:

There may be a few expenses that don't fit in one of the major categories listed. One example would be a long distance phone call to ask a buyer about fur prices or set up and appointment to sell furs. Another example might be a fee or payment for trapping rights on private lands or some intensively managed public lands. If it's a cost linked to producing income, it is likely a legitimate deductible expense. However, when in doubt ask a tax expert. Falsifying deductions puts one on the fast track to trouble with the IRS!

NOTE: There are frequent changes in income tax regulations. As a result, this chapter should not be used as a tax guide, but simply as a general accounting guideline for reporting trapping income.

Please consult the most recent edition of IRS Publications - Your Federal Income Tax, or a professional tax accountant, when completing your income tax returns. Other IRS publications that may be helpful are - Business Expenses - and - Starting a Business and Keeping Records. You can obtain these IRS publications and forms pertaining to small business income through the mail and they are also readily available on the internet.

OTHER POINTS TO REMEMBER

Information

The Internal Revenue Service has a toll-free number listed in the current tax guide. They also have an internet site that includes a "Frequently Asked Questions" section, as well as forms and tax guides that may be viewed online or copied on a printer.

Rates and Amounts

Rates and amounts in the tax regulations often change from one year to the next. If in doubt, seek information from the IRS or a professional tax accountant.

Abuse of Trapping as an Income Write-off

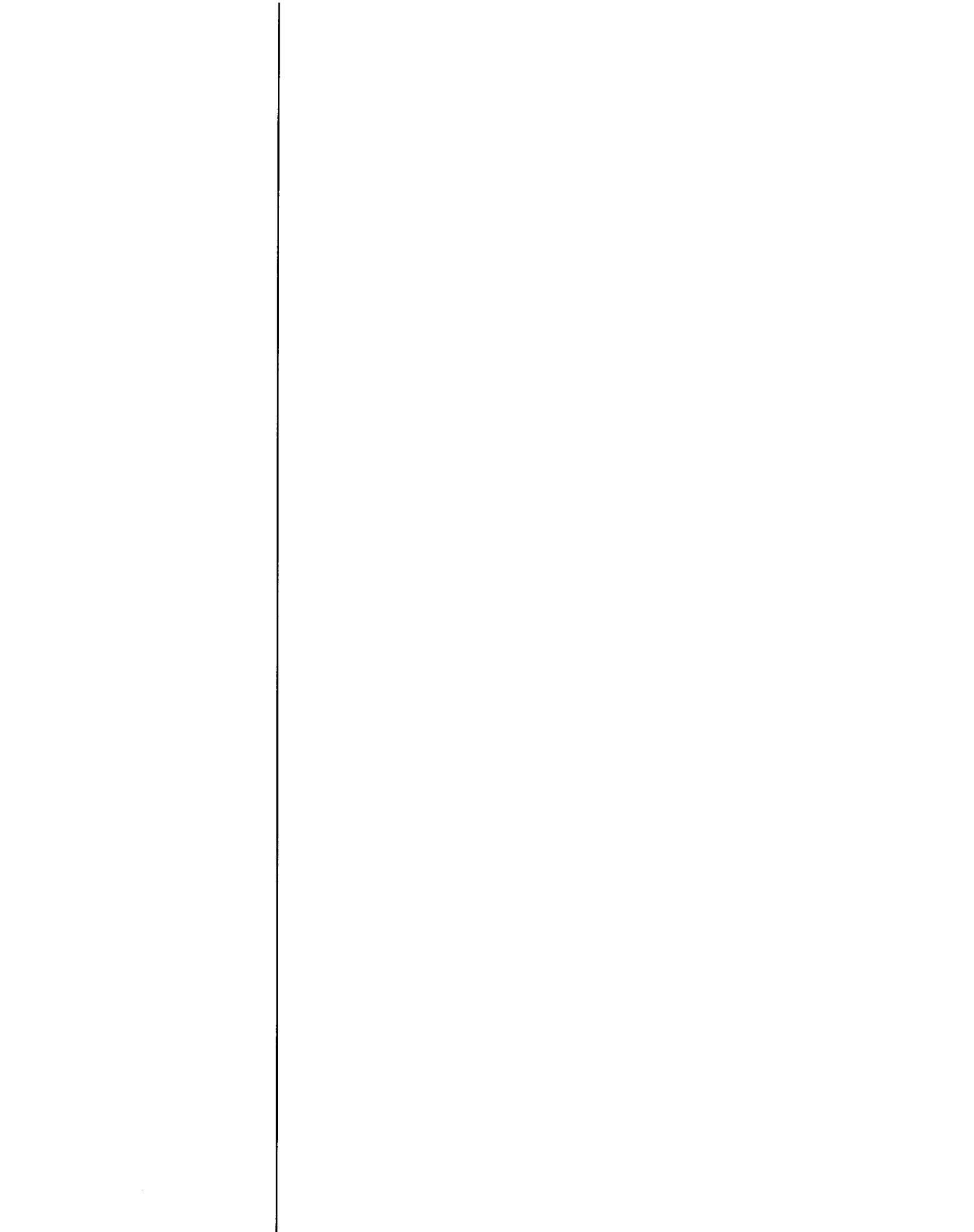
Some may be tempted to declare large losses while trapping in order to reduce tax payable or other income. The IRS reviews questionable tax returns with the aid of computer analysis. Unusually large, or chronic, losses reported by small business are easily identified by computer. These are usually investigated and in some cases people are charged with income tax evasion.

Expense Receipts

Keep all expense receipts. Receipts do not have to be submitted with your income tax return, but the IRS may ask you for them even from several years back.

.....The IRS reviews questionable tax returns with the aid of computer analysis...

.....Keep all expense receipts...



CHAPTER 7

BMP's AND

RESPONSIBLE HARVEST of FURBEARERS

BMPs

In 1996, the Association of Fish and Wildlife Agencies (formerly known as the International Association of Fish and Wildlife Agencies) began a program to develop Best Management Practices for trapping as a way to improve the welfare of captured animals, and to document improvements in trapping technology. This project is one of the most ambitious in the history of the conservation movement.

The Association of Fish and Wildlife Agencies coordinates the development of BMPs for trapping. AFWA's membership includes all 50 state fish and wildlife management agencies, federal agencies, and conservation organizations.

State furbearer biologists, veterinarians, trappers and scientists from the University of Georgia and the University of Wyoming cooperated on the development of BMPs. Most funding for trapping BMP research and development was provided through a Congressional appropriation to the U. S. Department of Agriculture.

BMPs are based on the most extensive research effort on animal traps ever conducted in the United States. Traps tested were selected based on knowledge of commonly used traps, previous research and input from expert trappers.

Trapping BMPs were developed to give wildlife professionals information they need to improve animal welfare. State fish and wildlife agencies will use BMPs to continue the improvement of trapping systems throughout the United States.

Trapping BMPs include suggestions on practices, equipment and techniques that will provide trappers and wildlife biologists with practical information to use in the field. These suggestions will improve animal welfare, help avoid the unintended capture of other animals, and increase public support for trapping.

BMP traps were evaluated using criteria to measure the effects on animal welfare as well as trapping efficiency, selectivity, practicality and safety.

Animal Welfare

Researchers tested live restraining traps for injuries to furbearers using two methods. One system evaluated specific injuries, and the other grouped the injuries into categories from mild to severe. BMP-approved traps must have a low rate of injuries to the furbearing animals being studied. Recommended traps resulted in moderate, low, or no injury to at least 70 percent of the animals trapped.

Efficiency

Traps meeting BMP criteria must be able to capture and hold at least 60 percent of the furbearers that spring the trap.

Selectivity

Traps must be set and used in a fashion that limits the risk of capturing non-furbearing species while increasing the chances of capturing the desired furbearer.

Practicality

Each recommended live restraining trap was evaluated by experienced trappers and wildlife biologists for practicality. Criteria used to measure practicality included cost, ease of use, ease of transport, storage, weight and size, reliability, versatility and the expected life-span of the trap.

Safety

Each recommended live restraining trap was evaluated for safety to the user and other people who might come into contact with the trap.

.....BMPs assist in sustaining regulated trapping as a wildlife management tool, and maintaining the integrity of wildlife conservation programs throughout the United States.....

.....Each state wildlife agency decides how to incorporate Best Management Practices into trapper education and furbearer management programs...

.....All 50 state fish and wildlife agencies support the development of Best Management Practices for trapping...

.....Trapping BMPs are intended to be a practical tool for trappers and wildlife biologists to use for decision-making in the field.....

RESPONSIBLE HARVEST

The Zones

In order for lethal traps to be humane and effective, it is important that the jaws strike the animal from top and bottom in a vital location with the maximum striking and clamping force.

Strike Zone 1

When the strike occurs in this zone, the animal is generally rendered unconscious almost instantly and death is quick.

Strike Zone 2

A strike in this zone will also result in rapid death due to constriction of blood to the brain, asphyxiation and possible severance of the spinal column, but the animal is less likely to be rendered unconscious instantly.

Strike Zone 3

A strike in this zone will collapse the lungs and/or heart resulting in rapid death. However, the animal is not as likely to be rendered unconscious instantly and irreversibly.

Strike Zone X

A strike in this zone will result in a much more prolonged death to a conscious animal and is unacceptable.

Therefore, from a humane standpoint, it is desirable for the animal to be struck in the region from just back of ears to the upper rib cage. The emphasis and goal of every humane trapper should be towards Strike Zone 1.

The Strike Zones are listed in order of preference and assume that all the energy of the trap will reach the correct location (i.e. a single strike). A single strike on an animal with a body shape similar to a beaver would appear to be desirable; however, on other animals with a more uniform body diameter, it might be quite different. The following diagram displays two strike situations.

Selection of Trap Sets

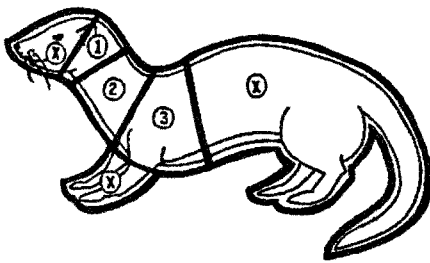
The trap sets which a trapper chooses, and the care with which sets are constructed and maintained, are important and essential to ensuring the humane capture of furbearers.

The trap sets shown in this manual have been carefully selected to meet high standards of humanness and to be acceptable from a conservation standpoint. As well, they are efficient, effective, easy to transport and as economical as possible. It should be kept in mind that, in this manual, only the most basic humane sets are included because there is insufficient space to cover all possible sets. Beginning trappers are far better off thoroughly knowing a few good sets, than being confused by numerous sets which may include many that are mediocre.

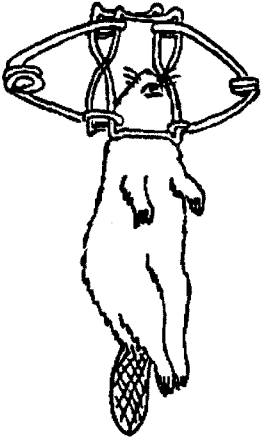
However, all trappers are encouraged to learn new sets. After attending trapper education courses and study of different sets, the trapper will have sufficient knowledge to judge if a given set is humane or not. If the set is not humane, you should not use it!

Humane Dispatch

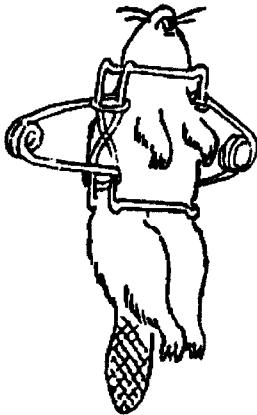
Nearly everyone agrees that animals should be dispatched as humanely as possible. However, their ideas about a particular method might be quite different. Some people believe that guidelines developed by the American Veterinary Medical Association (AVMA) should be followed when dispatching wild animals in the field. We believe, as does the AVMA, that standards developed for veterinarians are not necessarily applicable or appropriate for activities like hunting and trapping. Licensed veterinarians can use lethal drugs that aren't available to the general public, they have more control over animals and don't need to worry about chemicals that make meat unfit for human consumption. While these limitations explain why methods used to dispatch animals on the trap line differ from those used to dispatch animals in a laboratory or clinic, you have the same obligation to dispatch animals as quickly and painlessly as possible – for their sake and yours.



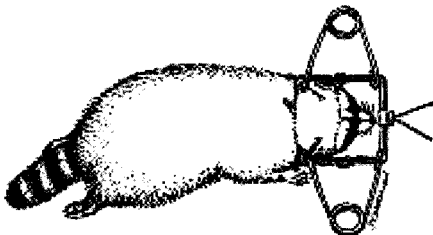
Strike Zones



Desirable Strike



Undesirable Strike



Desirable Strike

The best way to dispatch a live raccoon, coyote, fox, bobcat or badger is with a well-placed shot with a .22 rim fire cartridge. Before firing, check for solid objects that may cause a ricochet. Anyone who comes with you should stand well behind you when the shot is fired. For a more complete overview of hunter safety, we suggest attending one of Montana's hunter education courses.

If a skunk raises its tail before you can get close enough to shoot accurately, approach it slowly from upwind and talk in a soft, monotone voice. Aim for the heart (just behind the front leg between the elbow and shoulder). Avoid shooting the skunk in the head to reduce the risk of transmitting rabies. Skunks also tend to spray when shot in the head and direct contact with the spray can cause temporary blindness.

Using body gripping traps can reduce the need to dispatch the animal directly. However, these traps are effective only for capturing certain species of furbearers. Using submersion systems with foothold restraining systems in or near water also aids in dispatching the animal.

Trappers must plan the method of dispatch prior to setting traps. Planning reduces stress on you and the captured animal.

Your personal safety is the top priority when you release an animal from a live-restraining trap. Your second priority is to release the animal without harming it. If you cannot do this on your own, get help.

The first step in releasing an animal is to restrain it without hurting it. Trapping equipment dealers sell catchpoles for this purpose. To use it, slip the noose over the animal's head and pull it down snugly so the animal cannot escape. Use the pole to steer the animal's head away from the trap while you depress the levers or springs with your feet. When the animal's foot is free you can position yourself behind the animal and release the noose.

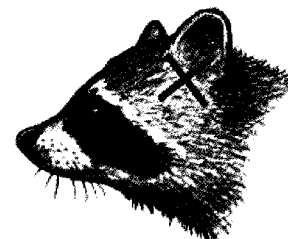
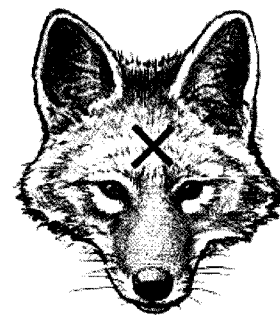
You should have no problems with birds of prey if you have properly covered flesh baits at your set. If by chance you do catch one of these birds, examine it closely for injury. If the bird is injured contact a wildlife officer for help getting it to a rehabilitator. If you can release the animal unharmed, you should cover it with a blanket or coat while you depress the springs on your trap. Be extremely careful. Birds of prey have strong talons and beaks that can cause serious injury. Once the foot is free, remove the covering and allow the bird to fly away.

Do not attempt land trapping if you cannot safely and humanely release nontarget animals.

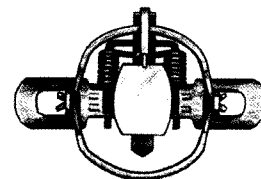
If you catch a domestic animal, examine it for injury before releasing it. Although the animal may appear to be a pet, do not assume it will not bite. Carefully restrain any animal when you release it.

If a domestic animal is injured contact the owner or the landowner and make arrangements for medical care. No one wants to lose an animal or have it live with a permanent injury that could have been prevented with prompt treatment.

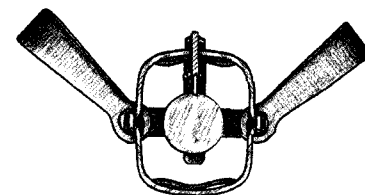
Trappers should carefully assess the risk factors involved in releasing a given animal and should take every reasonable precaution to ensure their own safety. Consult the MTFWP for release protocols of lynx and wolf.



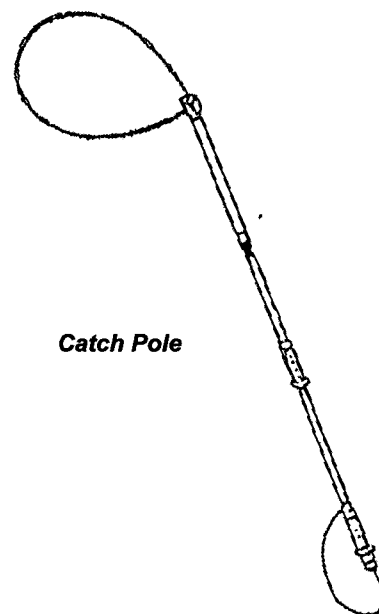
Desirable Shot Placement



Coil Spring Trap

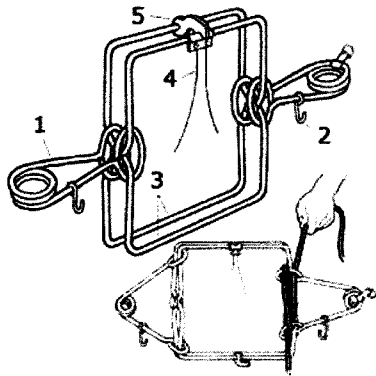


Double Long Spring Trap



Catch Pole

.....Ethics are "unwritten laws" which govern your behavior at all times.....



Releasing an animal from a body-grip type trap.

With a rope or belt make a loop at one end, large enough to fit around your boot. Run the rope or belt up through both spring eyes that enclose the trap jaws. Bring the rope or belt down around and back up through the bottom spring eye. Pull the rope or belt up and away from the loop around your boot, providing the necessary leverage to compress the spring completely. Use the safety catch (2) to secure the spring in the closed position; if the safety catch is missing twist a piece of wire through the spring eyes. Repeat the technique on the other spring to relax the jaws.

Trappers' Code of Respect

Personal codes of ethics are "unwritten laws" which govern your behavior at all times. They are your standard of conduct, based upon your respect for the environment, living things and people. The following is a code of respect for wild fur harvesters.

Respect for the Environment

- Protect and conserve wildlife and its habitat
- Dispose of animal carcasses and garbage properly
- Promptly report the presence of diseased animals to the proper authorities

Respect for animals

- Only use sets which meet the standards for humaneness
- Practice proper releasing or dispatch methods for live caught animals.
- Handle fur to the highest standard of quality.

Respect for People

- Assist landowners having problems with furbearers.
- Encourage and support wild fur management education and public awareness programs.
- Support and cooperate with government wildlife agencies and other conservation organizations.

Trap Set Locations

Species

Badger

Habitat

Open grasslands or farming areas, having abundant burrowing rodents.

Set Locations

At or near den burrow, diggings, baited strong cubby or box

Other Comments

Fresh diggings (particularly) if tracks don't lead away - dirt plugging burrow opening

Species

Beaver

Habitat

Lakes, ponds, streams, channels, ditches, dugouts, marshes, especially if bordered by deciduous trees.

Set Locations

On runs between active lodges, bank dens, near dams, scent mounds, shore channels, near tree cuttings, around feed beds.

Other Comments

Methods of determining an active colony:

- Fresh work or mud plaster on lodge and dam
- Fresh cuttings on bank and lodge
- Fresh material in feed bed
- Moisture of frost in vent hole on top of lodge
- Thinner ice around lodge and other runs
- Absence of tall weed growth on the lodge and dam

Species

Bobcat

Habitat

Avoids heavy forests, prefers thinly treed areas, rocky hillsides, and dry coulees. sometimes found in rocky mountainous country. Also frequents arid regions, farmlands, abandoned farmsteads, creeks and rivers or partially logged areas.

Set locations

On or near bobcat or rabbit trails, along fence rows or field borders, especially where rabbit or mouse sign is abundant.

Other Comments

May frequent arid regions, such as limestone ledges and caves, as den sites.

Species

Coyote

Habitat

Open planes, farmland, forested areas, mountain foothills, suburban areas

Set Locations

Bait stations set well back (75 yards) or more on their trails-leading to or from bait, on or near their trails at narrow points in trail or near scent stations close to creeks, in feed areas where rabbit or other rodent tracts are abundant, snowmobile trails.

Other Comments

Place the bait several weeks prior to setting capture devices, in order that the trails will be well established by furbearers

Species

Fisher

Habitat

Variety of heavy forested areas so long as there is something to eat, avoid large open areas.

Set Locations

Near good active squirrel dens and middens, along slopes above streams, edge areas around water bodies, Bait set on pole.

.....Check your state trapping or furbearer regulations for information on how often you are required to check your traps. Regardless of the law, responsible trappers will visit their traps routinely. Routine checks reduce the potential for injuries to the animal and will increase your success.

Why routine checks increase success:

- *Less chance animals or traps will be stolen*
- *If traps have been disturbed you can remake the set*
- *Less chance of predation or spoilage*
- *Less chance an animal will injure itself or damage its pelt*
- *If you remove an animal and set the trap again you may catch another one*
- *Most furbearers are active at night (nocturnal), so check your traps as early in the day as possible*

.....Don't wait until trapping season opens to ask for permission to trap on private land...

.....Avoid trails used by people and domestic animals...

Species

Fox/Swift Fox

Habitat

Mixed terrain or open plains.

Set Locations

Bait stations set well back (75 yards) on trails leading to or from bait, on or near their trails, especially at narrow points or near where scent stations are located, in areas where rabbit or other rodent tracks are abundant, around fields.

.....Avoid trapping in areas where people regularly exercise pets..

Species

Marten

Habitat

Mature coniferous or mixed boreal forest, edges of burns, steep well timbered valleys in mountains or foot hills.

Set Locations

Where their tracks and other signs are evident, near squirrel dens or middens, grassy or mossy areas with abundant vole or mouse sign. Bait (set on a pole or in a box) on banks or ridges above creeks.

.....Setting bodygrip traps under water may allow and otter to go over the top of the trap, while most beavers will dive to the bottom...

Species

Mink

Habitat

Banks along streams, lakes, ponds, sloughs, marshy areas.

Set Locations

Where tracks or other sign is abundant, in natural or artificial holes on banks or shores, holes in muskrat or beaver lodges, bank runs or brush piles, on trails in thick grass or brushy areas.

.....Small bodygrip traps are good choices for trapping mink and muskrat in shallow water...

Species

Muskrat

Habitat

Marshy areas, ponds, sloughs, lakes, slow moving streams, drainage ditches or dugouts; most places where there is sufficient aquatic vegetation and stable adequate water supply.

Set Locations

On runs between lodges, pushups, shore, bank holes, trails and feed stations, on floating objects (helps if baited and scented), baited sets near muskrat activity.

Other Comments

Submarine traps are often set under ice in runs going to the shore of ponds or lakes. In runs going to pushups, they may be baited with pieces of apple, carrot, parsnip and even pieces of meat.

.....Muskrat, beaver and otters leave distinct trails, sometimes called slides, where they climb out of the water to feed...

Species

Otter

Habitat

Rivers, lakes, streams

Set Locations

Near open water areas in winter such as rapids, bank holes, beaver dam spillways, etc., at abandoned beaver lodges, especially if other sign is evident near toilet areas on shore, on short trails joining water bodies.

.....Muskrats often climb onto floating logs, making a good place to set traps...

Species

Raccoon

Habitat

Forested areas near water, streams, rivers, farmland and urban localities

Set Locations

Along lakes, streams and pond banks where tracks and signs are evident. Near or in abandoned farm buildings, fence lines, hedgerows and around cornfields.

Other Comments

Live traps, including dog proof, are effective in inhabited areas.

Species

Skunk

Habitat

Avoids heavy forest, prefers partially open country with mixture of brush, fields and hedge-row. Often found near human habitation, farms, towns, urban areas, near dumps and abandoned buildings

Set Locations

Near deserted buildings, garbage dumps, culverts etc., at holes in creek banks where sign is abundant, near beaver ponds.

Other Comments

Care should be taken in making sets near human habitation to avoid capturing domestic animals. It may be preferable to use live traps in these situations, as skunks are easily taken in these.

Species

Weasels

Habitat

Boreal forests, fields, old buildings, rock piles, near water

Set Locations

Near brush and rock piles, along creeks, lake shores, beaver ponds and lodges, bank holes, near squirrel dens and middens. Bait in frequented areas, Easily taken in the can set.

Species

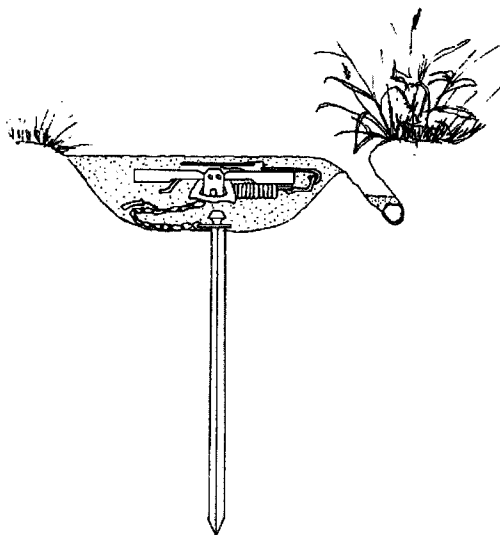
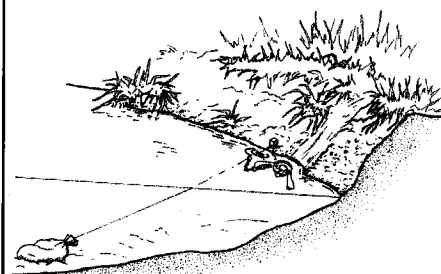
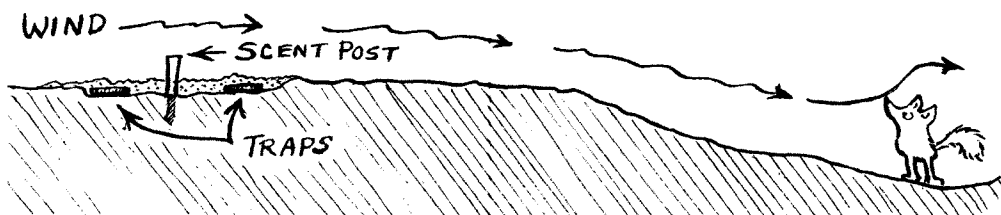
Wolverine

Habitat

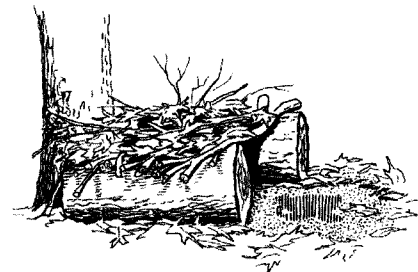
Heavily forested, broken rugged, mountainous areas; often migrates high into sub alpine forests, foraging near timberline and on talus slopes.

Set Locations

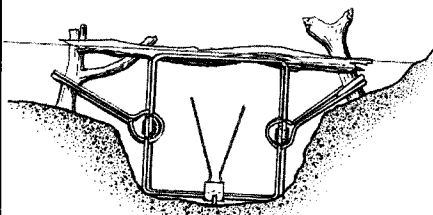
At bait stations, wolf, mountain lion and hunter kills, on or near trails at narrow points or scent post, at trap sets that they have previously raided, on or near snowmobile trails they are frequenting, at rock outcrop edges, lakes or ridges and along tree line areas.

Types of Sets**Dirt Hole Set (Land Set - Foot Hold)****Scent Post Set (Land Set - Foot Hold)**

.....Otter slides make excellent set locations.....



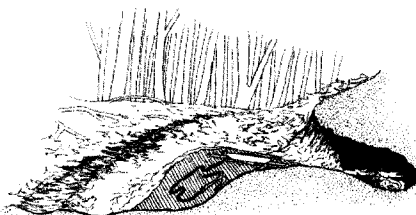
.....A cubby located by a stream can catch a variety of furbearers.....



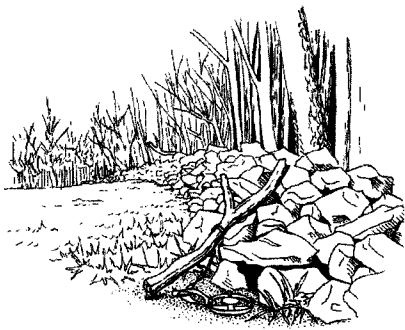
.....Mid size and large size body-grips are effective where streams narrow.....



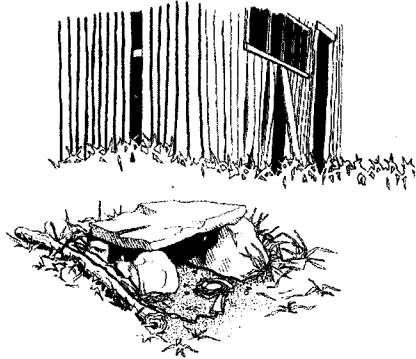
.....A badger trap should always be staked away from the hole.....



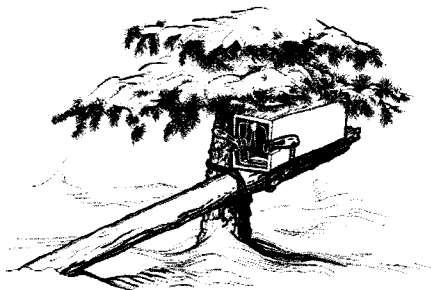
.....Pocket sets next to routes can take a variety of furbearers.....



.....A rock cubby with a bloody bait inside will attract weasels.....



.....A cubby close to abandoned buildings is a good location for skunks.....

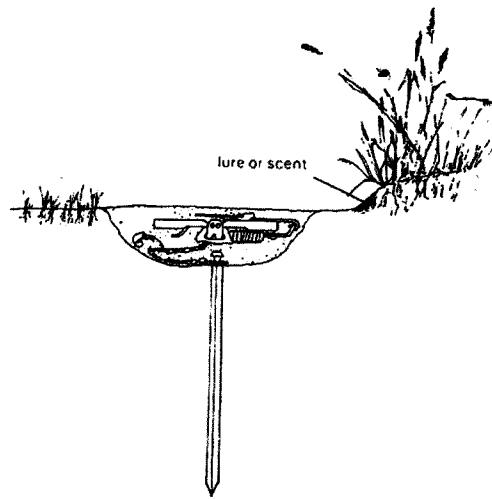


.....Bait should be placed inside the box to attract marten.....

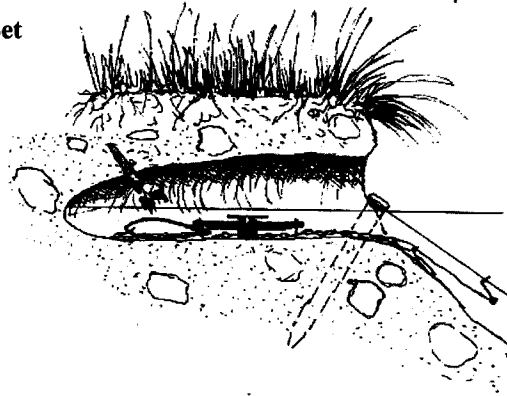


.....Fisher will not go over the trap if bait is kept close to the jaws.....

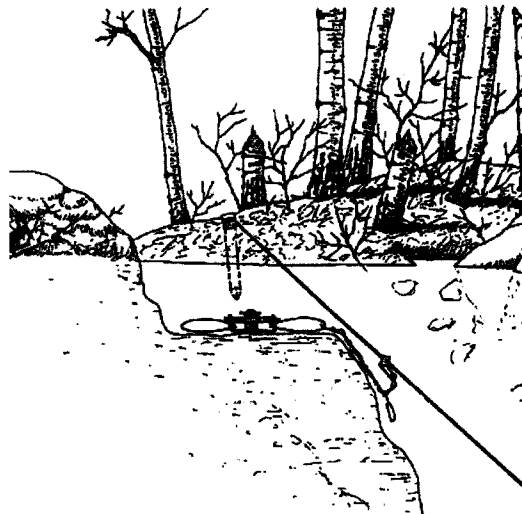
Flat Set (Land Set)



Bank Hole Set



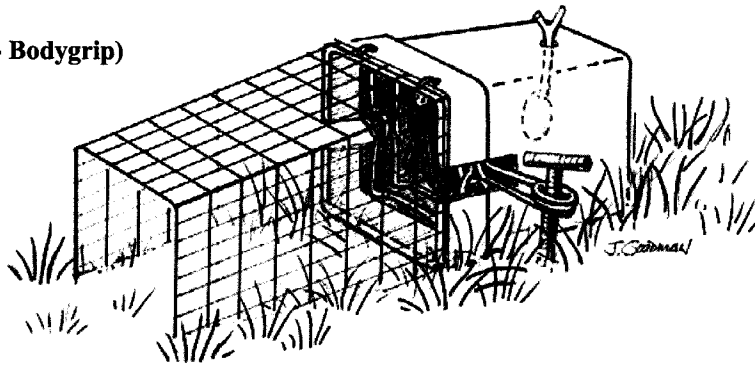
Submersion/Mound Set



Running Pole Set (Kill Set on Land)

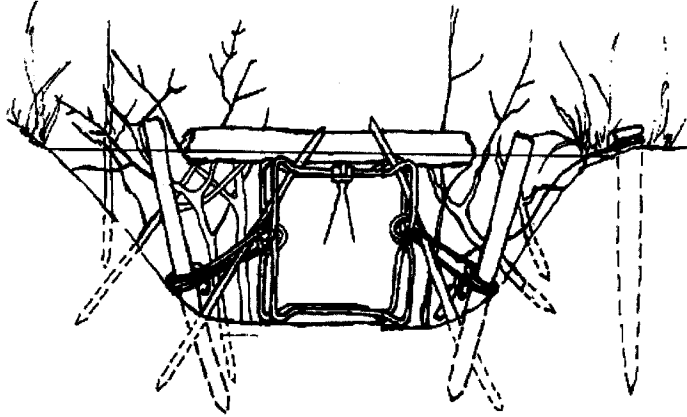


Cubby Set (Land Set - Bodygrip)

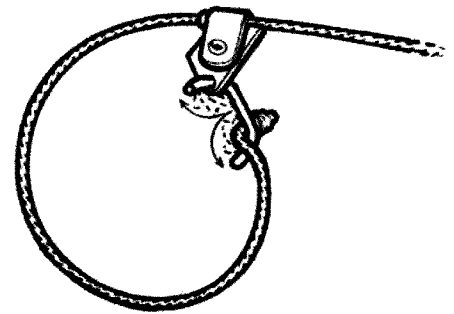
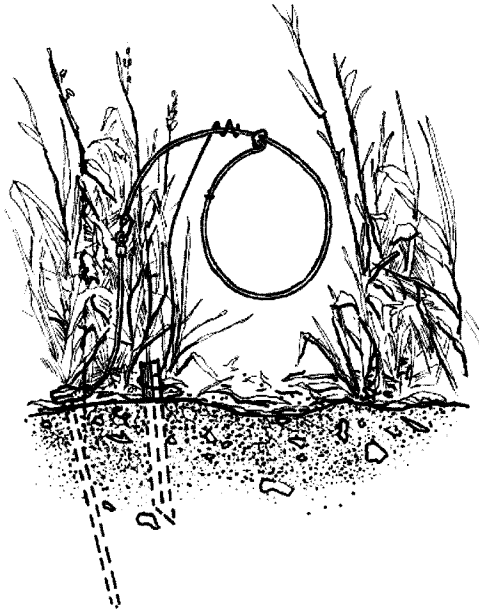


.....On public lands, ground sets using 7 x 7 inches and larger bodygrip traps must have the tripper recessed a minimum of seven (7) inches in wood, plastic and metal enclosures or cubby that provide an opening 52 square inches or less....

Channel Set

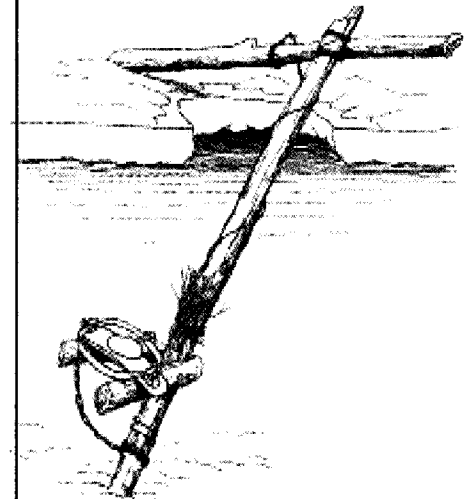


Trail Set (Snare)



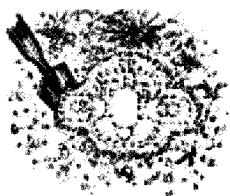
.....A break-away device straightens or breaks away at the snare lock when certain tensions are applied. With a larger-than-target animal, the result is that the snare breaks and falls away harmlessly.....

Slide Set (Snare)



.....A foothold trap under ice can be used near the bait for beaver.....

1



2



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4



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6



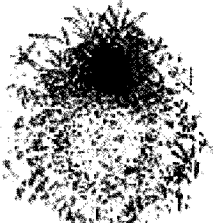
7



8



9



The proper method for bedding a foothold trap at a land set.

1. Dig a hole slightly larger than the outside profile of the trap. The depth will depend on the amount of chain you need to conceal under the trap—the longer the chain, the deeper the hole. When the set is finished, the top of the trap should be covered by 1/8 –1/2 inch of soil and the pan should be slightly lower than the ground around it.
2. Test the hole to make sure your trap will fit and make adjustments if needed. Position and drive your stake at the front of the hole (the side nearest you) where the loose jaw of the trap rest on it.
3. Place the trap chain in the trap bed, cover it with soil and pack it with your hand or fist.
4. Place the trap in the trap bed with the loose jaw resting level on the top of the stake. Twist the trap slightly from side to side to settle it in the dirt.
5. Pack dirt tightly around the outside of the trap except for over the spring levers.
6. Use your finger to apply pressure to each jaw and spring lever (one at a time). If you detect movement, add some soil or a small dirt clod under the low spot.
7. Put a pan cover over the pan (if used). Sift dirt over the trap until it is nearly level with the surrounding area.
8. Locate the pan by brushing away some of the dirt. When you know where it is, pack dirt around the outside of the pan using the back of your hand.
9. If needed, brush or sift a fine layer of dirt over the set to blend it in with the surroundings.

The four-point system check includes:

- Press on the loose jaw
- Press on the other jaw
- Press on a lever
- Press on the other lever

If the trap is wobbly at any point, pack more dirt under that area and repeat the four-point check.

CHAPTER 8

FUR HANDLING

Proper fur handling is the key to getting a good return for your product. Furbearer carcasses can spoil quickly, especially in warm weather. If you don't know how to skin and prepare pelts you may want to consider selling your furs un-skinned on the carcass. Selling your animals on the carcass is less work for you and more work for the buyer. You will receive a lower price for un-skinned furs. If you do decide to skin your own catch, proper fur handling begins in the field. If you choose to have your catch mounted consult a taxidermist for proper techniques.

The fur handler must constantly be aware that wild animals may carry diseases or parasites, therefore certain health precautions should be taken when handling these animals.

Health Precautions

- Cover open cuts or sores on hands or other exposed skin before starting to work on any animal.
- Wear disposable rubber gloves.
- After finishing work on any animal, wash thoroughly in warm soapy water.
- Use bleach water as a disinfectant, to kill all virus and bacteria.
- Where certain diseases are very common ask a doctor about receiving an inoculation.

If a furbearer is trapped in water it should be removed from the trap and rinsed clean of any dirt, mud or vegetation. Shake excess water from the animal, and stroke it from head to tail with your hand to remove as much water as possible. If snow is available, roll the animal vigorously in it to take the moisture from the fur. If it is below freezing don't lay a wet animal on ice or a metal surface. The guard hairs of the pelt will freeze to ice or metal, damaging the pelt when you pick it up. Animals can be placed in a burlap bag to protect the fur while transporting it back to the fur shed. If an animal's fur is still wet when you get home, hang it up in a cool place to dry. Circulating air with a fan will reduce drying time. Generally, pelts should be dry before being skinned and placed on a stretching frame.

If a furbearer is trapped on land and already is dry, simply place it in a burlap bag to protect the fur while transporting it back to the fur shed. Brush or comb the pelt to remove any burrs or dirt prior to skinning. Land furbearers may have external parasites such as fleas, ticks or mites, spray the carcass with an insect killer and place in a air tight bag for a short period of time.

Furbearers should be skinned as soon as possible after they are trapped. The pelt is easier to remove and less likely to be damaged when the animal is fresh. Before skinning, remember to put on a pair of latex gloves. The gloves will help protect you from any diseases the animal might be carrying.

Fur Handling Equipment

(See Equipment Section for full description and picture)

Knives - used in the skinning of your catch

Hone or Sharpener - A fine grained whetstone or metal device used to sharpen knives to insure you have a sharp skinning knife.

Fleshing Tool - A piece of equipment which is used to scrape off fat and tissue from pelt after it is skinned.

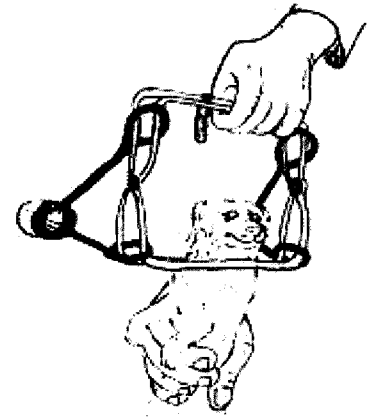
Fleshing Beam - A piece of equipment to place the pelt on to make it easier and quicker to flesh.

Stretchers - Pieces of equipment which come in many shapes and sizes. They are used to stretch and dry the pelt on in shapes which are required by the fur industry. They can be either metal or wood.

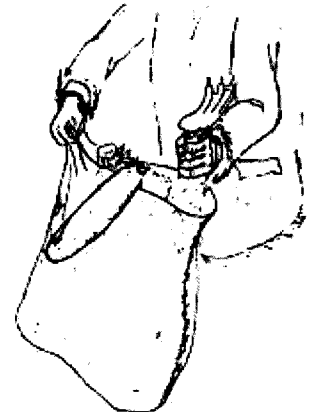
Needle & Thread - Any hard to break thread, such as fine dental floss, upholstery thread, or heavy duty rayon thread can be used to sew shut cuts and tears before putting the pelt on a stretcher.

Clothes Pins - The large size clothes pins are used to hold legs and tail flat when drying on wire stretchers.

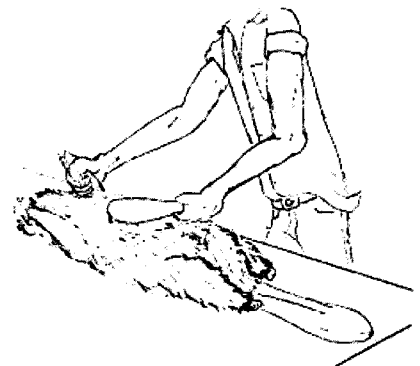
.....Body grip traps with weak springs can cause fur damage...



.....Care should be taken when removing an animal from any trap...

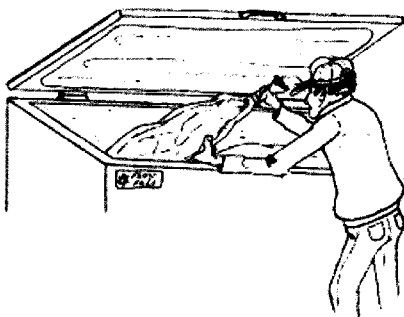


.....Place furbearers in a burlap bag or similar, to protect the fur while transporting...

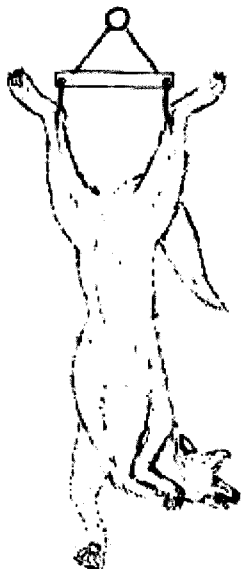


.....Brush out mud, burrs, etc. prior to skinning...

.....If an animal is frozen in a body grip trap, thaw it before removal to prevent fur damage...



.....Store rough skinned pelts in a freezer, until you have time to flesh and board them...



.....If wet, when possible, hang animal until dry prior to skinning...

Leg & Tail Stick - An addition to a wooden stretcher which is used to hold the leg and tail part of the pelt open while drying.

Belly Stick - Used on wooden stretchers or forming boards to allow pelt removal from the stretcher when dried.

Comb or Brush - Used to comb out burrs, mats and dirt from pelts.

Nails or Push Pins - Used to fasten furs on wooden stretchers or forming boards, i.e. beaver, or tails and legs of other pelts.

Fleshing Apron - Used to protect clothing when fleshing pelts on fleshing beam and to help keep clothing clean when skinning.

Tail Splitter - Small knife or special tool used to open the tail all the way to the tip.

Pelt Preparation (Main Steps)

1. Pre-skinning care

- Removal from the trap - Be careful not to damage the fur, especially if the animal is wet or frozen to the trap or ice.
- Transporting the carcass - Be careful to protect the fur by enclosing it in a bag (not plastic if traveling a long distance) or tarp.
- Pre-skinning storage (if necessary) - An animal which cannot be skinned right away should be enclosed in a plastic bag and kept frozen.
- Pre-skinning thawing (if necessary) - The frozen animal should be hung up by a hind leg and allowed to thaw gradually until the pelt can be easily removed.
- Pre-skinning cleaning - Carefully comb or brush the fur (except for mink or otter).

2. Skinning

- Cased pelts should be peeled off the carcass inside-out, like removing a sock.
- Open pelts should be split lengthwise down the center of the belly and skinned off the carcass.

3. Fleshing

- Be sure all visible fat and flesh are removed. However, be careful not to damage the roots of fur by over-scraping. Wipe the skin side with warm water when finished.

4. Pre-forming Care

- Pelts should be washed if they are dirty or bloody. Dirt or sand should be shaken out.

5. Forming

- The pelt is formed by fitting it to the correct size and shape on a forming boarder stretcher and maintained it in that shape until dry. Open pelts are nailed fur side down on a flat board and raised up 1 inch to dry.
- Cased fur-out pelts are turned inside-out (fur-in) and placed on the stretcher until partially dry, then turned fur-out again and left on the stretcher until dry.

6. Finishing

- Sewing - Sew any unwanted holes closed while pelt is wet. Sew/nail leg holes close on beaver pelts.
- Trimming - Trim off bits of unwanted flesh or cartilage, and smooth jagged edges, especially around mouth and nose.
- Drying - Allow the pelt to dry slowly in a cool dry place (60 F). Wipe any oil from the leather. Carefully remove the pelt from the stretcher or forming board when completely dry.
- Final cleaning - Brush or comb the dry fur gently (except for mink and otter).

7. Storage

- Pelts should be stored in a cool dry place, protected from vermin, until ready to be shipped.
- Stack open pelts fur to fur. Hang other pelts by the nose.

8. Shipping

- Pack fur in a cardboard box or bag made of woven, breathable material.
- Be sure pelts are packed fur to fur and kept flat (not folded), if possible.
- Two tags should be sent with each bag or box-one outside, one inside.

The Three Basic Styles of Pelts

1. Open Pelt (beaver, badger)

The pelt is split lengthwise down the center of the belly and spread out flat, or open, to dry. Buyers want to be able to see both the skin and fur sides of the pelt and expect the pelt to be prepared in this way.

2. Cased Pelt Fur-In (mink, muskrat, otter, raccoon, skunk, weasel)

When skinning an animal cased fur-in style, a cut is made crosswise between the hind legs and the pelt is peeled off the animal inside out in the same manner as you would remove a sock. The pelt is dried and sold as is, without turning or splitting the pelt open. Buyers want the fur inside to protect these furs from grease and singeing, and to enable them to see the leather. This is the traditional style for these pelts and buyers become suspicious if they are handled differently. If the hair on the fur-in pelt is excessively wet, wait until dry prior to placing on stretcher.

3. Cased Pelt Fur-Out (coyote, fox, bobcat, badger, marten, fisher and wolverine)

The cased pelt fur-out is skinned in the same manner as the cased pelt fur-in. The only difference is that the pelt is put on the forming board or stretcher, fur side in, and is partially dried. The pelt is then removed from the forming board or stretcher and turned fur side out, after which it is put back on the forming board or stretcher to complete the drying process. The pelt is marketed fur-out. The animals prepared in this way generally have long, silky fur which the buyer wants to examine for quality and color, or rubbing and other damages.

Fur Handling Guide

Open Pelts

This subsection gives a point-form guide on how to handle open pelts from the skinning stage through to finishing, using the beaver as an example. Other open pelts are handled in the same manner as beaver except for differences noted for each species.

Cased Pelts Fur-In

This subsection gives a point-form guide on how to handle cased pelts fur-in from the skinning stage through to finishing, using the mink as an example. Other cased pelts fur-in are handled in the same manner as mink except for the differences noted for each species.

Cased Pelts Fur-Out

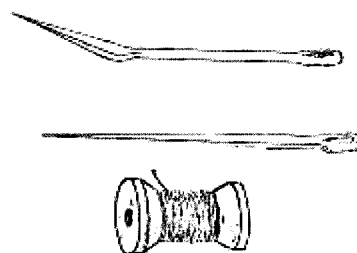
This subsection gives a point-form guide on how to handle cased pelts fur-out from the skinning stage through to finishing using the coyote as an example. Other cased pelts fur-out are handled in the same manner as coyote except for differences listed under each species.

Open Pelts

Beaver

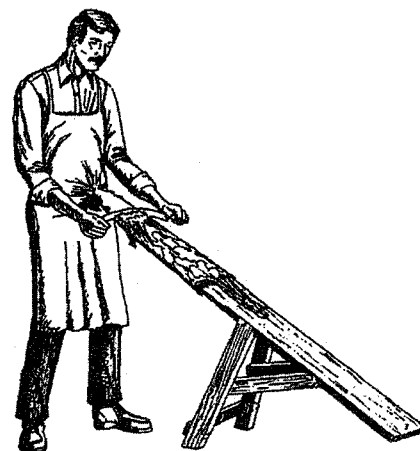
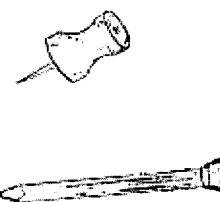
Skinning:

- Cut the feet off at the first joint.
- Cut through the leather around the base of tail or cut the tail completely off.
- Place the beaver on its back and make a straight cut on the belly side from the center of the lower lip to the center of the tail. Be careful not to cut into the castors located just in front of the vent.

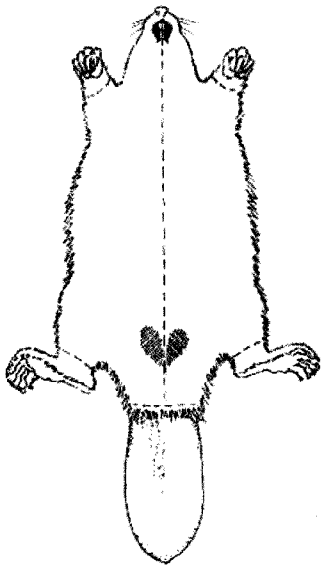


.....Sewing cuts and holes in pelts will increase the value of that pelt ...

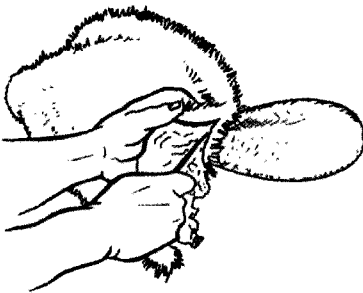
.....Push pins and nails are essential for tacking fur to the forming boards...



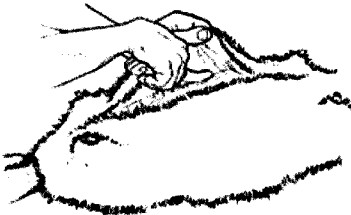
.....A fleshing beam is essential, when fleshing a pelt...



.....Castor location and opening cuts are shown...



.....First cut across the tail...



.....Then, up the belly to the chin...



.....Work the pelt off, tail to head...

(Whether you decide to skin cleanly, or to rough skin and flesh later, may depend upon where the skinning is done. Some trappers rough skin in the field and then flesh the pelt when they get home. Always fold the rough skinned pelts leather to leather, making sure that there is no air between the folds).

Clean Skinning:

Beavers have a thin layer of fat between the pelt and muscle tissue on the belly. Starting at the edge of the cut you made down the beaver's belly, use a round-tipped knife to separate the pelt and fat from the muscle tissue. Continue this process along the entire length of the beaver – take your time and angle your blade toward the muscle tissue to avoid slicing into the leather.

Skin the pelt back from this center line cutting it cleanly away from the carcass and gradually turning the body as you go. Keep the pelt snug to prevent cutting it. Skin around the hind and front legs, cut through the ear channel close to the skull then carefully around the eye and along the cheek to the nose. Continue on around the carcass to about the center line along the back and top of the head.

Turn the carcass end for end and repeat the process on the other side completely detaching the pelt from the carcass.

Note: Beaver castors, on both male and female, are found on each side and just forward of the vent (see illustration). These should be removed carefully with a knife or pulled free with the thumb and finger so the sacks are not broken and no oil runs out. Hang the castors in an airy place to dry for 2 to 3 days then store in a cool room or freeze. The oil sacks adjacent to the castors are used in lure making and can also be removed, using care as they are easily broken.

Beaver pelts are the most difficult to flesh. The skin is covered by a thin layer of fatty material. This layer is covered by a membrane. You must remove both the membrane and the fatty layer for the skin to dry properly. We recommend spending time with a fur buyer or someone else with experience before trying to flesh these species yourself.

You'll need a fleshing beam, plastic apron and two-handed fleshing knife.

The belly is the easiest place to start. Starting at the head, use the dull edge to remove the membrane and underlying fat. Work it off as far as you can reach comfortably then rotate the skin enough to work on the next section. Be careful around the front legs because you can cut or rip through creases or folds of loose skin.

Starting behind the ears, use the sharp side of your knife to slice through the membrane on the neck. Let the blade of your fleshing knife ride under the membrane and push it away from you.

When the part of the pelt nearest you is fleshed all the way around, pull the pelt toward you and use your waist to pin it to the end of the fleshing beam. Continue fleshing all the way to the skirt (bottom) of the pelt. The edge of the skirt should be fleshed clean.

Most people prefer to start behind the ears and work all the way to the tail end of the pelt using the sharp edge of their fleshing knife. After a strip as wide as the shoulders is completed, rotate the pelt and work the fat and membrane off the sides with the dull edge of your fleshing knife. Be careful around the leg holes because it's easy to tear them.

Experienced beaver trappers sometimes skin a beaver partly open, and partly cased. This makes it easier to hold the beaver on a fleshing beam. After fleshing they finish cutting the belly so they can board the beaver.

If drying a beaver pelt on a hoop, position the sewing or clipping points about one (1) inch apart.

The four leg holes on the pelt should be closed, either by nails or stitching.

Pre-Forming and Forming:

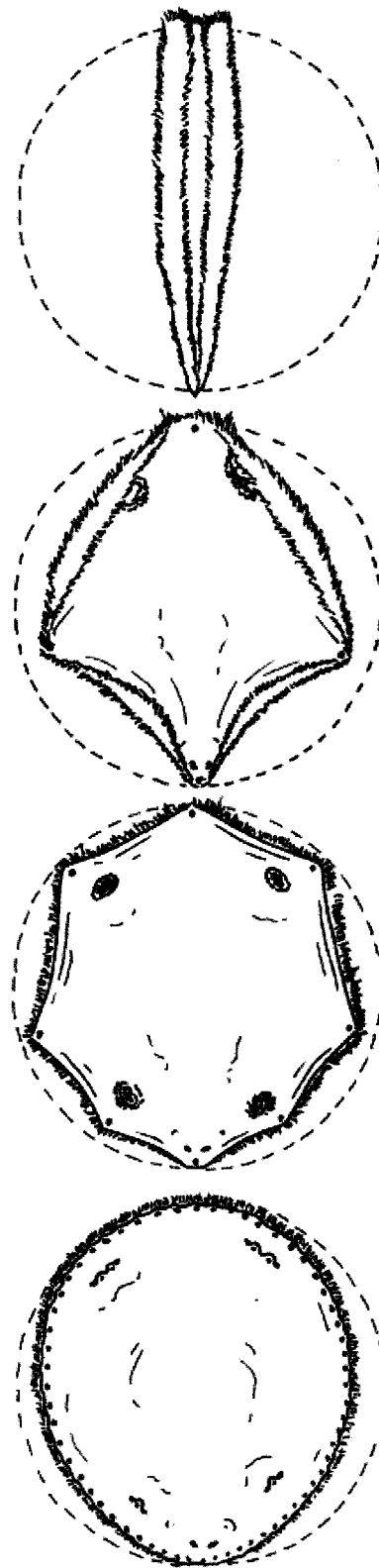
Place the pelt on the forming board, fur side down.

Assess the size of the pelt by grasping the nose and the center of the butt end, pull it to its full-length along the longer center line of the board. Check that the nose and the butt are now at the same pattern position at each end of the board. The nose and butt are then repositioned two pattern line widths (3 inches) smaller. The pelt is then held in this position by nailing (1 3/4 inches straight fluted flooring nails are recommended). One nail is placed half way between the eye holes and the tip of the nose on the center line of the pelt and the board. A second nail is placed at the butt on the center line of the pelt and the board.

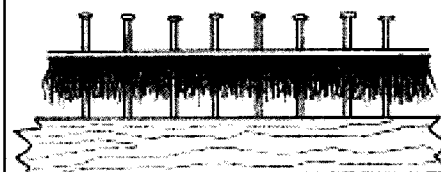
- Place a nail at the top and bottom of the pelt.
- Place a nail opposite each leg hole.
- Re-assess the size of the pelt and make any necessary alterations or adjustments.
- Placing the nails 3/4 inch apart and about 1/8 inch from the edge of the pelt, complete the nailing of the nose end.
- Complete the nailing of the butt end of the pelt.
- Complete the nailing of the sides.
- Remove any remaining excess fat and flesh from the leather side of the pelt.

Finishing:

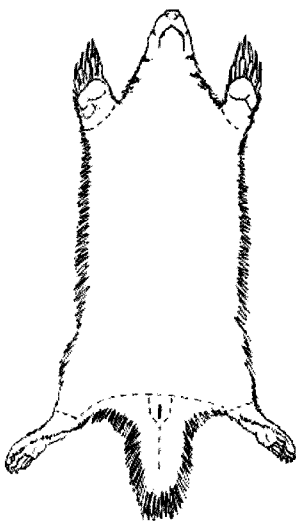
- Trim around all leg holes and neatly sew (or nail) them shut.
- Remove the fat from around the ears.
- Sew any other unwanted holes shut.
- Scrub the leather side of the pelt with warm water to remove any dirt and blood.
- Scrape with a flesher and soak up the excess water and fat with a cloth or paper towel.
- Raise the pelt up on the nails to about 1 inch off the forming board.
- Trim the extra flesh and leather at the nose and tail ends.
- Stand the formed pelt up in a cool (60 F) dry location to dry. Do not try to dry the pelt near a heat source or in the sun.
- After about 12 hours the position of the formed pelt should be reversed so the pelt may dry evenly.
- Wipe off any excess oil from the leather side daily.
- Allow the pelt sufficient time to properly complete drying (4 to 5 days).
- Carefully remove the nails.
- Wipe off any excess oil remaining on the leather side of the pelt and brush the fur.



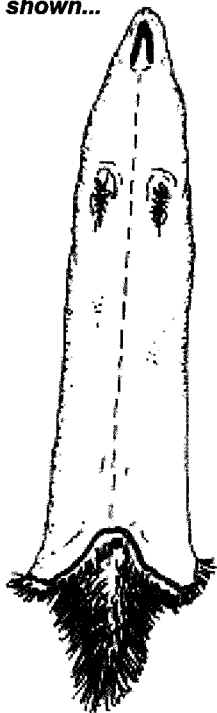
.....Shown above are the steps in forming a beaver to a board...



..... Depiction of a beaver pelt lifted an inch above the board...



.....Opening cuts for a badger are shown...



..... Cut for a badger to be boarded open is shown...



..... Depiction of an open boarded badger...

Badger

The most common problem with Badger fur is the presence of dirt and mud. It is not recommended that you overcomb since the fur will pull out easily. If the badger is really dirty or muddy, wash the whole animal in cold water and hang head up to dry for a few hours before skinning.

Badgers should be skinned and scraped exactly like Raccoons. The leather must be free of all fat and grease.

Badgers can be dried open, or cased fur-out. **The preference is cased and fur-out.** Badgers should be boarded on the large Raccoon board with wedges to hold the leather from tightening on the board and assist in drying. Once removed from the board make sure that all areas of the leather are dry before storing.

Skinning

- Cut the front feet off at the ankle joint.
- Split the front legs along the center of the inside from ankle to the body.
- Split the tail along the bottom in a straight line from the vent to the tip of the tail.
- Cut around the hind legs at the top of the foot and skin them up to the body.
- Hang the carcass by the hind feet and skin out the hips and tail.
- Peel the pelt down over the body.
- Skin downward past the front legs to the ears and cut them off close to the skull.
- Continue skinning toward the front end carefully cutting around the eyes, past the mouth, and cut the pelt free, leaving the nose attached to the pelt.
- There are no castors to be removed.

Fleshing

- Flesh the pelt on a beam using a straight flesher.

Pre-Forming and Forming

- Split the belly in a straight line from the center of the lower lip to the vent.
- Extend the front leg cut to meet the center belly cut.

The pelt is now an Open Style pelt and is handled as described previously.

To dry the pelt cased use the raccoon type stretcher. Allow the pelt to dry until the skin side is no longer tacky (4-12 hours depending on the temperature and humidity). Remove the pelt from the stretcher. Turn it inside out (with the fur facing out). If dry, the front legs can remain inside the pelt when it's turned. NOTE: If a pelt is too dry to turn easily, wrap it with a warm, damp towel for a few minutes and try again.

Case Pelts Fur-In

Mink & Weasel

Skinning

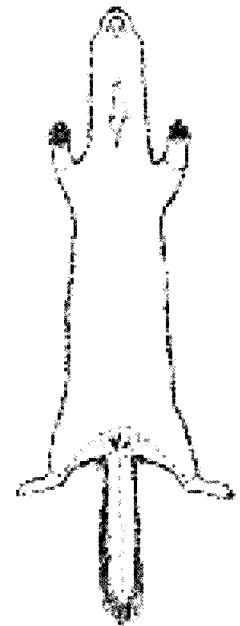
- The location of the initial cut is vital in maximizing the pelt length. The cut must extend from the center of the foot below the anus and to the opposite foot. This places all of the long guard hair found on the back legs onto the back of the pelt, thereby increasing the length of the pelt.
- Carefully remove the scent glands.
- Put some absorbent sawdust on the cut area to prevent blood or grease from getting on the fur. Under no circumstances should the top hair and especially, the under fur come in contact with fat or oil of the mink.
- Work the pelt off the hind legs, hips and pelvis area and around the base of the tail. Pull or cut the pelt free at the feet.
- Pull the tail bone free from the pelt.
- Pull the pelt back over the body, inside out, as far as the shoulders.
- Work the pelt off the front legs, then pull each foot free from the pelt.
- Continue pulling the pelt until you reach the ears. Cut through the ear channel close to the skull and continue to skin toward the eyes.
- Cut around the eyes and on toward the mouth.
- Skin past the rear of the mouth opening and cut off the pelt half way along the lower jaw.
- Finish skinning the upper jaw and nose.

Fleshing

- Split the tail full length along the bottom.
- Use liberal amounts of sawdust in the fleshing process to keep the fat out of the fur around the skirt.
- Flesh away from the rear of the mink first to keep the fur and the skirt clean, then flesh from the head to the rear.
- The mink saddle is the fleshy membrane that remains on the back of the mink when the pelt has been removed from the carcass. Female mink usually have very little fat underneath the saddle, whereas male mink have substantial quantities. Due to excessive fat under the saddle, western and northern wild mink are scraped clean. However, north central and southern mink have less fat and, consequently, saddles are left on. However, if saddles are to remain on the pelt, it is important that all fat under the saddle is removed. If the saddle is to be removed remember that the mink leather is delicate and care must be taken not to over scrape or damage the leather with knife cuts or nicks.

Pre-Forming, Forming and Finishing

- Turn the pelt fur side out and roll it gently in fine sawdust to remove any oil from the fur.



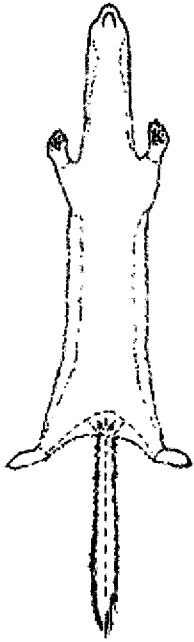
.....Opening cuts for a mink are shown...



.....Mink on board front and back view..



.....On a correctly boarded mink the bunching or pleating of the pelt between the tail and ends of the hind legs increases the fur density...



.....Above opening cuts for weasel are shown...

.....Below, pelt on a board with a belly stick is depicted...



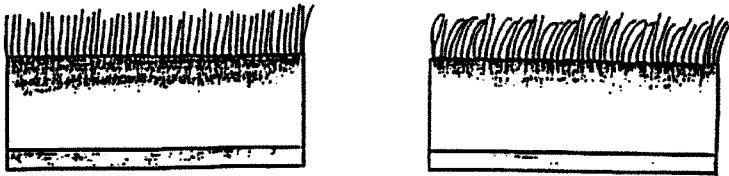
- Shake out the sawdust from the pelt, turn it leather side out and pull it over the forming board or stretcher. Only two mink boards or stretchers are used, one for males and the other for females. Buyers attending an auction either want males or females, not a combination. One board for each gender would result in uniform width, thus simplifying the sizing procedure.
- Center the eyes, ears and tail on the stretcher or forming board. Work the pelt firmly down the stretcher or board being careful not to twist the pelt; keep it straight.
- Hold the tail firmly with one hand and with the other hand stroke the pelt from the head toward the tail. This will give added length to the pelt without overstretching.
- Next, pull up on the tail. This pulls the fur from the belly up onto the inspection area and makes the pinning of the hind legs easier. Place the tail back down on the board or stretch, pull snugly and pin directly in the center of the tail butt.
- Wipe the skin with a wet cloth or paper towel. Gently scrape the entire pelt removing all sawdust, flesh and fat.
- Take each of the hind legs and diagonally spread the leg fur out. This shortens the leg (denser fur). Pin each hind foot beside the tail butt. Do not pull the legs.
- By pinning the remaining fur between the legs and tail down in pleats, the inspection area becomes evident, thereby producing a dense area of fur easily visible to the graders and buyers. At first this will seem awkward, but when completely tacked down it will present a good inspection area with much denser fur.
- Lay the tail flat and spread it out, at the same time pushing it toward the butt. The idea is to have a short, stubby tail.
- The tail may be pinned down with pins, tacks or nails, but the best way is to place a piece of plastic or galvanized screening over the tail. The screen is then pinned down or attached to the stretcher or forming board.
- If desired, a thin edge of fur (1/16 inch) in the inspection area may be cut away in order to make a clean border.
- Insert a belly stick.
- Do not dry too quickly. Low temperature with good air circulation is preferable. When drying, beads of grease will rise to the surface. Periodically wipe this excess off with cloth or paper towel.
- After 3 to 4 days, remove the finished pelt from the forming board or stretcher

Weasel - Notable differences from Mink

- Scent glands are not normally removed unless required for use as a lure.
- Do not split the tail or place a screen over it. Leave it free to dry.
- Do not use sawdust.
- Fleshing is done on the stretcher or forming board using a piece of cheese cloth or burlap to rub the flesh and fat off the skin.
- Using one pin in each hind leg to attach it to the belly side of the board and one pin at the base of the tail centered on the back side of the board.

Otter - Notable differences from Mink

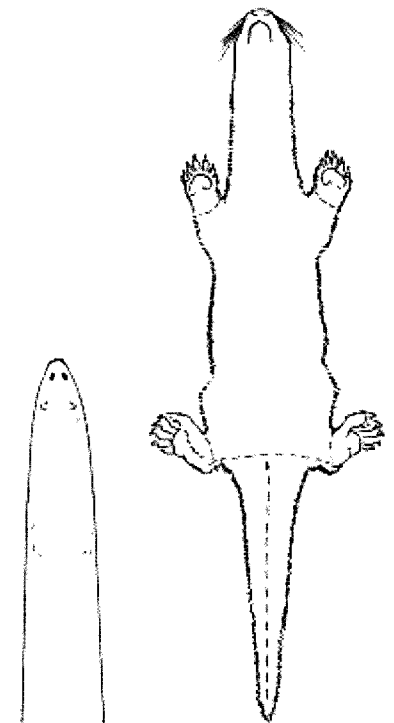
- Split the tail in a straight line from the vent to the tip and skin out the tail.
- Keep the fleshing beam wet and the fur damp to prevent singeing.
- Tail is pinned around the perimeter in a V shape. (If using a split board stretcher, pin the tail and the hind legs on a separate board).
- Cut front legs short and sew them closed, as with beaver.
- A solid forming board or stretcher is recommended for otter as it is easier to pin the hind legs beside the tail.



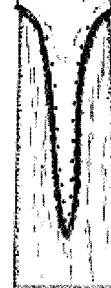
The above graphics shows cross sections of an otter pelt, skin, under fur and guard hair. The graphic on the left show the guard hairs to be straight and the pelt is not singed; the graphic on the right shows the guard hairs curled - the otter pelt is singed

Muskrat - Notable differences from the Mink

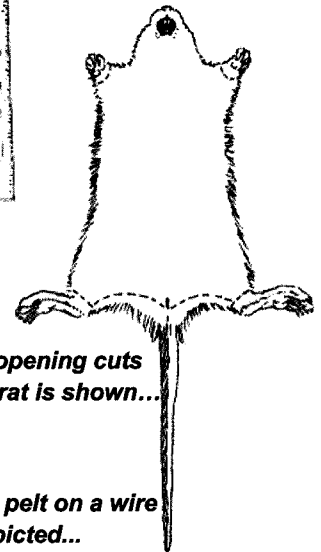
- Cut along the color line from each rear foot pad to the side of the tail. Leave 3/4 inch of tail leather on the pelt. The tail is left on the carcass.
- Do not use sawdust.
- Scent glands are normally not removed unless required for use as a lure.
- It is usually not necessary to trim off the front legs, just tuck them in.
- A tablespoon or a dull table knife may be used as a fleshing tool.
- Flesh on flat flesher, forming board or stretcher.
- Only the fat is removed during the fleshing; the red colored saddle flesh is left on the leather side of the pelt. Over-scraping is usually more of a problem than under-scraping with muskrats. If you apply too much pressure, you'll tear a hole in the pelt. Small specks of fat aren't a problem because they'll dry out when you put the pelt on a stretcher. It's the larger chunks and deposits under the armpits that need attention.
- Put a pin through the small section of tail leather left on the pelt and on both belly and the back side in the center of the board or stretcher, giving the pelt a V shape at the butt end.
- Put a pin in each hind leg area at the side of the board.
- Most people prefer to use wire stretchers for muskrat pelts. Place the pelt on the stretcher with the fur side in. Adjust the pelt so that the eyes and ears are centered on one side and the front leg holes are centered on the other. Poke a small hole through the pelt at a point where the center of the tail would have been attached. Insert the middle tooth of one hook and pull it downward to remove any slack from the pelt. Attach the other hook to the belly with two teeth and remove any slack.
- Hang stretchers from a rafter to keep them away from mice while drying. Temperatures between 40 and 60 degrees are best for drying pelts. Use a fan if the humidity is high.



.....Above opening cuts for an otter is shown...

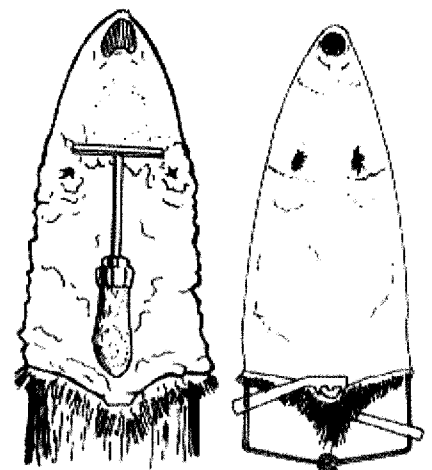


.....Left, otter pelt on a board is depicted...



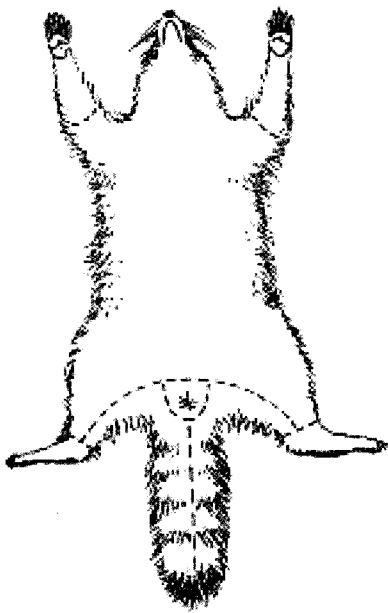
.....Above opening cuts for a muskrat is shown...

.....Below, pelt on a wire form is depicted...



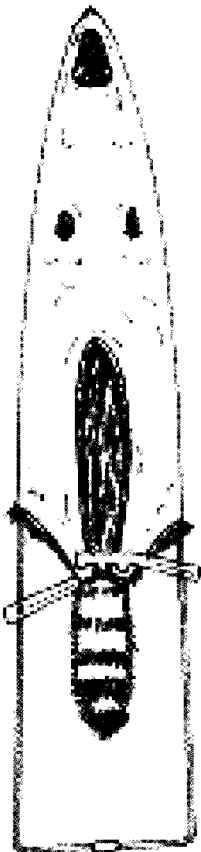
Raccoon & Skunk

Skinning



.....Opening cuts on a raccoon is shown...

.....Below, raccoon pelt on a wire stretcher...



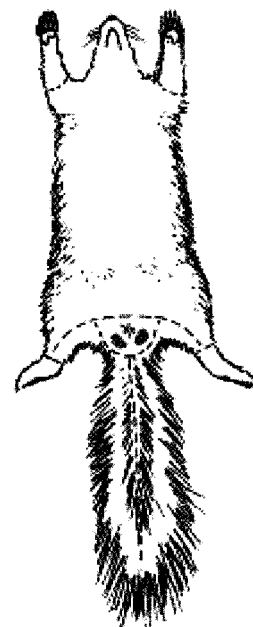
.....When using a knife be careful – a light touch with a sharp blade will get the job done...

- Make cuts around both ankles and wrists. Some people prefer to cut both front feet off at the wrists. Next, make a cut from the inside of one heel to the other, passing approximately 1 ½" below the vent. Grasp the end of the tail and split the underside toward the vent. If you have a tail stripper, you can start the cut about 4-6 inches from the base of the tail. Continue the cut along one side of the vent until it meets the cut that goes from heel to heel. Make a cut on the other side of the anus, forming a triangle around the vent.
- Using your knife, separate the pelt from the muscle around both ankles. You'll need to loosen enough of the pelt to grab it. Pull downward with some force. This should separate the pelt along most of the leg. Repeat this procedure on the other side.
- Work the pelt free near the base of the tail. If necessary, cut some of the connective tissue. Peel the pelt away from the tail bone for a distance of 3-4 inches. Place a tail stripper around the tail bone and yank downward with one hand while using your other hand for leverage against the lower back of the raccoon. If the tail bone doesn't pull out, extend your cut a few inches toward the tip of the tail and try again. Split the tail all the way to the tip after the bone is removed.
- Tails remain attached to the pelts of raccoons, foxes, coyotes, bobcats, badgers, mink, weasels and skunks. After removing the bone, split the tail along its entire length. Using a guide can help you to make a straight cut.
- Pull the base of the tail toward you and run your fist downward between the pelt and the muscle tissue along the backbone. Turn the animal around and loosen the pelt from the belly. If the raccoon is a male, the skin will stop at the tip of the penis; a small cut can be used to separate it from the pelt.
- Run your fist downward between the pelt and the muscle tissue along the centerline of the belly. Pull the pelt downward, freeing the sides. It will stop at the front legs. Using a knife, make a slit through the connective tissue at the shoulder and upper arm. Be careful not to cut through the pelt itself.
- Loosen the pelt near the armpit by pushing between the pelt and muscle tissue with your fingers. After it's started, cup your fingers from both hands through the opening and pull downward. This should separate the pelt to the wrist, where it will pull free. Repeat this procedure on the other side.
- After both front legs are free, pull downward on the pelt. The pelt of young raccoons will usually separate to the base of the skull. The connective tissue on the necks of older raccoons is stronger. You'll probably need to use a knife in some places, but be careful – a light touch with a sharp blade will get the job done, especially if you're applying pressure to the pelt by pulling it downward.
- Continue working the pelt downward until it stops at the cartilage that forms the bases of the ears. Cut through the cartilage at a point close to skull. When both ears are free, pull downward until you reach the eyes. Using a knife, separate them from the pelt by cutting carefully next to the skull. Pull downward again to the tip of the nose and make a small cut through the cartilage to free the pelt.

Fleshing, Pre-Forming and Finishing

- After skinning, place pelt on fleshing beam, fur side out, then brush out dirt, blood mats and burrs. Pelts which are dirty or blood stained should be washed. The removal of burrs and mats is important as the "flow" of the fleshing tool must be uninterrupted. A mat or burr in the fur will cause restriction under the leather when fleshing and possibly result in the fleshing tool cutting into the leather.

- All fat, flesh and gristle (cartilage) must be removed, starting behind the ears and working down the full length. Some trappers remove the gristle from the head, although this is not absolutely necessary. Fat and flesh should be cool enough so the fleshing tool can “bite” into it. Pelts not sufficiently cool are difficult to flesh. The use of sawdust on the fat will help to keep the fur clean, as well as absorbing fat and grease/oil.
- The tail must be split and scraped. If sawdust is used, make sure it is scraped from the leather to give the leather a fresh appearance when dried. Sawdust does not affect grade, however, it can stain the leather.
- Sew any holes that appear in the hide. Do not waste time sewing small holes such as .22 caliber bullet holes.
- Care must be taken not to over-scrape pelts, especially early pelts where the hair roots can be damaged. As the pelt “primes up” the chances of over-scraping are reduced.
- Choose the correct sized wire frames or forming boards for the raccoon sizes as recommended in the board dimensions.
- Pull the pelt snugly on the board or stretcher by working the sides, especially in the neck and abdominal areas. It is important these areas are properly stretched so maximum length is achieved without overstretching.
- To obtain greater fur density in the inspection area, pull up on the tail toward the head and then pull back down toward the base of the board.
- If using boards, gather (pleat) fur “skirt” and nail towards the base of the tail to the edge of the board. This will ensure dense fur in the inspection area. If the skirt is pulled away from the tail it will give the fur a “weak” appearance. This is particularly important with early raccoon which are already weak and lack cushion or strength. The skirt in a straight line with the base of the tail ensures maximum length measurement.
- If wire frames or stretchers are used, form the pelt in the same manner as with wooden forming boards. Be sure you reshape your wire frames or stretchers to conform with the diagram indicating recommended shape. The hooks are placed into the base of the tail and the legs. The edges of the pelt must be pulled down and “pinned” with clothespins, so the skirt is straight across the line with the base of the tail.
- Do not stretch the tail long. Instead, push it towards the inspection area. Wire or plastic screen may be used over the top of the tail if desired. On wire pelt frames, wooden inserts may be used to tack the tail out or it can be left to hang loose to dry.
- The legs are now tacked on the board or, in the case of wire frames, the legs are pulled down. Do not pull down tight on the legs as you will rob fur density from the inspection area. Keep the legs short but snug.
- Cut the front legs short (1/2 to 3/4 inch). Do not cut flush with the pelt as a large hole results. If rosettes are made with the front legs, care must be taken not to roll them too much and impede proper drying. Trim the lower lip off.
- Trim out the inspection window. The cut should be made no higher than the penis opening (or the same vicinity on females), taking care not to extend the cut into the flanks. Never cut a window after the pelt dries. This will cause a weak edge which is sharp and susceptible to tearing. A window cut out green will “seal” at the edge and be strong when dried.
- Dry the pelt slowly. As it dries, wipe off any excess oil which appears on the leather.

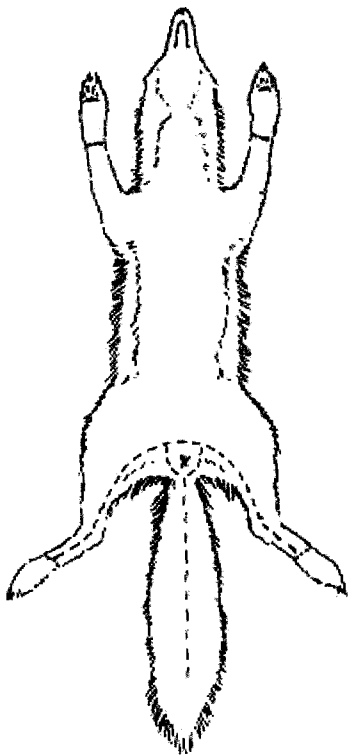


.....Opening cuts on a skunk is shown...

.....Below, skunk pelt on a wood forming board...



.....Skunk Deodorizer will help neutralize the odor on pelts, pets, clothing or equipment. Mix 1 T. dish soap, 1 pt. peroxide and 1 C. baking soda in a container. Soak affected area, rinse and reapply as needed. Single use only, do not cover or cap container...



.....Opening cuts on a coyote is shown...

.....Below, coyote pelt on a wire stretcher...



.....The ear cartilage should be removed, or at least separate one side of the ear from the cartilage. It allows the ear to dry properly...

Case Pelt Fur-Out

Coyote Skinning

- Make a cut along each hind leg from the heel of the foot pad to the vent following the fur color line (where the light and dark colored fur comes together).
- Cut around the vent and scrotum or female sex organs leaving them attached to the carcass.
- Cut the skin around the rear paws. Then pull and cut the skin from the legs until they are skinned up to the body.
- Hang the animal up on a skinning gambrel by one hind foot and finish skinning the area between the legs.
- Fasten the second hind leg on the gambrel and skin the areas over the hips and around the base of the tail.
- Strip the pelt from the tail bone using a tail stripping tool.
- Pull the pelt down over the body to the front of the shoulders.
- Skinning the front legs to below the elbow joint.
- Continue pulling the pelt down over the neck to the ears.
- Cut through the ear channels, close to the skull and continue to skin downward on the head to the eyes.
- Cut carefully around the eyes and down to the mouth.
- Skin past the rear of the mouth opening and cut the pelt off midway along the bottom jaw only. Finish skinning the upper jaw and nose. Cut the pelt free, leaving a thin layer of the nose skin on the pelt (the cartilage is left on the carcass).

Fleshing and Trimming

- Pull the pelt, fur side out, down over the fleshing beam with the nose at the upper end of the beam. Comb pelt to remove burrs, mud & mats.
- Pull the pelt, leather side out, down over the fleshing beam with the nose at the upper end of the beam. Using a semi-sharp, straight flesher, flesh the entire pelt cleanly, working from the nose toward the tail, to remove all excess fat and flesh.
- Split the tail in a straight line full length along the bottom using a tail splitting tool as a guide. Flesh out the tail.
- The ear cartilage should be removed, or at least separate one side of the ear from the cartilage. It allows the ear to dry properly.
- Trim excess flesh from the lips.

Pre-Forming

- Remove the pelt from the fleshing beam and turn it fur side out.
- Wash the pelt in a container with luke warm water and a small amount of mild soap to remove any blood and dirt.
- Wring out the pelt and rinse it in clean water. Wring out the pelt again.

- Time permitting, hang the pelt fur side out and let it drip dry in an airy place (takes up to 8 hours). If pressed for time proceed with forming.

Forming

Solid or split forming boards or stretchers may be used. Use a belly stick when using a solid board. The use of a split forming board or stretcher is described below.

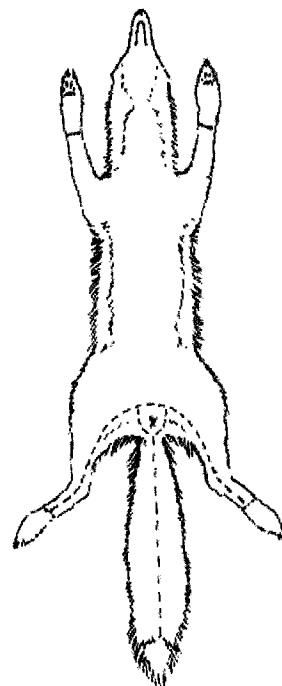
- Turn the pelt leather out and pull it down over a split type forming board or stretcher.
- Fasten the ends of the hind legs to the belly side of each half of the forming board or stretcher.
- Nail along the border of each hind leg to hold them open and flat, spacing the nails 1 inch apart.
- All unwanted holes in the pelt should be sewn shut.
- Center the pelt on the forming board or stretcher.
- Spread the two halves of the forming board or stretcher to snug the pelt the correct width. Place a nail through the spreader board to keep this width.
- Nail the front legs to a separate leg board/boards to hold them open and flat.
- The tail is nailed along the borders to a separate tail board to hold it open. (There are accessories on the market, which eliminate the nailing of the tail.)
- The ears should be propped up by stuffing them with paper or by using wire forms.

Finishing

- Position the forming board or stretcher at an angle of approximately 45 degrees from the floor, with the nose end higher than the butt.
- When the pelt is partially dry (after about 8 to 12 hours) remove it from the forming board or stretcher. If parts of the pelt are too dry it may be softened by wrapping with a damp cloth.
- Turn the ears fur side out.
- Turn the front legs fur side out. (The front legs may be left inside the turned pelt provided that they are completely dry.)
- Turn the pelt fur out, beginning with the nose; roll the nose into the opening of the mouth and continue in this manner until the pelt is fur side out.
- Pull the pelt over the forming board or stretcher and refasten as before.
- Make sure the pelt is centered on the board or stretcher.
- Allow the pelt to dry completely.
- Brush the fur occasionally to fluff up the guard hair and underfur.
- When dry, remove the pelt from the forming board or stretcher.

Fox Notable differences from the Coyote

- Only 3 to 6 hours are required for the first drying stage prior to turning.
- Pelt seldom requires washing.

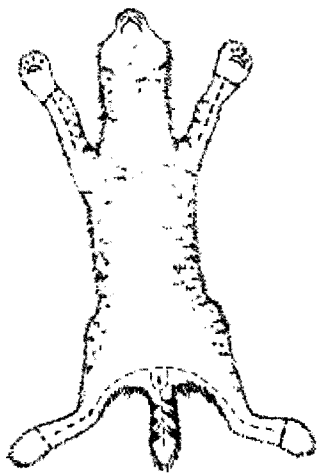


.....Opening cuts on a fox is shown...

.....Below, fox pelt on a wire stretcher...



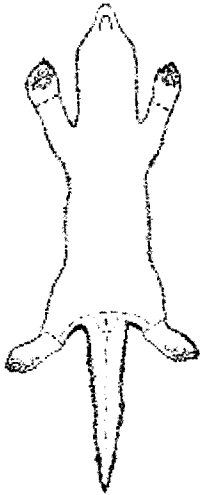
....With all pelts, when finishing, make sure the pelt is centered on the board or stretcher...



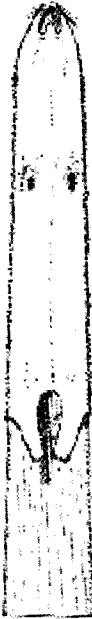
.....Above, opening cuts on a bobcat is shown...



.....Right, bobcat pelt on a wood forming board...



.....Above, opening cuts on a fisher is shown...



.....Right, fisher pelt on a wood forming board...



.....Above, opening cuts on a marten is shown...



.....Right, marten pelt on a wood forming board...

Bobcat - Notable differences from the Coyote

- Cut off claws; unless pelt is to be used in the taxidermy market.
- Front legs should be flat against the pelt and pointed towards the head.
- Hind legs are fastened on the belly side of the board or stretcher.
- Pelt seldom requires washing. Borax should be used to remove any blood or grease.
- Only 2 to 4 hours are required for the first stage prior to turning.

Fisher - Notable differences from the Coyote

- Pelt usually does not require washing.
- Watch out for porcupine quills sometimes imbedded in the head or neck of the fisher.

Marten - Notable differences from the Coyote

- Requires very little fleshing
- Use a full board and a belly stick. Two boards are used, one for females and one for males.
- Pelt seldom requires washing.
- Only about 1 hour is generally required for the first drying stage prior to turning. Keep the front legs inside the pelt, do not turn.

Wolverine - Notable differences from the Coyote

- All wolverine pelts are handled in the same manner as a good quality coyote.



.....When pelting the wolverine, use the same quality control as the coyote except that it is advisable to remove the cartilage from the ears, leave the lips on. Leave the bottom jaw skin on and skin all legs with the pads, toes and claws left on.....

CHAPTER 9

MARKETING OPTIONS

Marketing Options and Strategies

Trappers should explore the marketing options available to them before committing their furs for sale. Knowing what options are available and what advantages or disadvantages are involved with each, will help trappers select the best option to meet their needs.

The most common ways of marketing furs are to sell them to a local buyer, take or send them directly to an auction house, or take them to a receiving depot to be forwarded to an auction house to be sold.

Marketing Locally

The local buyer is an independent businessman who offers the convenience of being readily available and offering immediate payment to the trapper.

Advantages of Marketing Locally

- The trapper has face to face bargaining power.
- Minor travel and shipping costs are involved.
- Immediate payment on the sale of furs.
- The buyer usually knows the trapper and quality of fur in the area.
- Buyer usually will take all furs, good and bad.

Disadvantage of Marketing Locally

- There is a lack of competition for furs.
- The buyer may be able to take advantage of the trapper through ignorance of current market, fur values or an uninformed or first time trapper.
- Buyer may be buying fur for a larger fur house and his percentage comes off the price paid the trapper.

Local and State Auctions

Advantages of selling at the Local and State Auctions

- Low travel and shipping costs to the trapper.
- The price received reflect demand and quality.
- The trapper receives immediate payment.
- Prices may average higher than direct sales.

Disadvantages of selling at the Local and State Auctions

- Few buyers may be present which may affect the price of the fur, usually on the lower end of the price scale.
- Furs that are of lower grade or quality may not sell well, or may not sell at all.

National Fur Market

Advantages of selling on the National Fur Market

- Pelts are offered to worldwide buyers.
- Prices are paid by the grade and quality of the goods received.
- Payment is usually delayed depending on how far the fur is shipped and when the furs are sold after the auction house receives them.
- The trapper will receive a written record of his fur grades.

Disadvantages of selling on the National Fur Market

- The trappers control of the selling price is lost.
- Buyers may grade high or low, depending on experience in the market arena.
- Shipping, drumming charges, service fees and commission may be charged and subtracted from the payment to the trapper.
- Pelts may not sell immediately.

.....Trappers should explore the marketing options available to them before committing their furs for sale...

.....Furs are a worldwide commodity, their value is determined by supply and demand...

.....Take pride in the way you handle your furs, well handled furs are worth more...

.....Know the advantages, disadvantages, and procedures to sell your fur...

Shipping Furs

Trappers wishing to ship furs should be aware that time spans between delivery date of the furs and the actual sale of furs can result in fur deterioration if improperly handled or cared for. The following points will assist you when shipping furs.

If trappers place poor quality and/or carelessly handled pelts on the market, it will have the effect of pulling down the overall average price for the commodity. The trappers' image will also be tarnished. If only, prime, well-handled pelts were on the market, buyers and manufacturers who normally buy poor quality furs would have to compete with other buyers and manufacturers for the better quality furs. This additional competition would have the effect of raising the average price.

- Pelts which are to be shipped should be free of dirt and grease, and absolutely dry.
- Place pelts in a burlap bag of woven material that breathes, or in a cardboard box for protection. Do not ship in air-tight plastic bags or containers as this can result in sweating and mildew growth. Suitable bags are generally available from the fur depots free of charge.
- Open style pelts should never be folded as the skin will be permanently creased and could result in cracking during the dressing process. They should be stacked fur to fur and leather to leather, matching sizes as near as possible, to prevent the edges from getting stained or greasy. Any other fur should not be allowed to come in contact with the leather side of a pelt. Open style pelts may be rolled if absolutely necessary, but this practice should be avoided as the roll is difficult to work out and is a nuisance.
- Cased style pelts (fur-in) should not be folded or rolled. Ship flat. Otter, especially, should never be folded.
- If rope or cord is used to bind the bundle, put cardboard under it to prevent the rope "biting" into the pelt and leaving permanent marks.
- Place a shipping tag inside the bag or box, sew or fasten it closed (being careful not to sew through the pelt), and attach a tag to the outside of the parcel. (Most shipping tags are designed to be torn in half for this purpose.)
- The tags should be completely filled out and include the following information:
 - ◆ Name
 - ◆ Address and zip code
 - ◆ Parcel number and number of packages shipped (1 of 3, 2 of 3, etc.)
 - ◆ Contents: Number and species
- This external identification is required by Montana state law of furs being shipped.
- If fur is being shipped directly to Canada, the trapper must obtain an export permit.
- It is best to make bundles of a convenient size and weight for handling by one person.
- Keep copies of all statements sent with the parcels.
- Beaver castors should be rolled up in paper and put in a paper or cloth (not plastic) bag. They may then be enclosed with the fur bundle or shipped in a separate package.

Important Things to Think about when Marketing Your Fur

A problem in fur marketing is the practice whereby money appears to have been paid for a pelt having no value while, in reality, the value was deducted by the buyer from a better pelt sold by the same trapper. This has the effect of encouraging the continued dumping of un-prime, poorly handled or badly damaged pelts on the market.

The buyer is motivated to do this in order to maintain good customer relations. The trapper becomes involved in this kind of situation when they are unable to judge the true value and quality of their fur. Trappers and others in the industry should strongly discourage this practice as it adversely affects their image.

In order to overcome this problem, trappers are urged to take steps to learn better fur handling techniques, when to harvest furs, and the basics of how fur is graded in order to assess the value of pelts.

Usually the best fur sales occur from December to February, as this is when the greatest quantity of prime pelts are available and the greatest number of buyers are present to bid on the fur.

.....Fur buyers will grade pelts by primeness, size, color, texture, fur density, damage and other characteristics...

.....Using all of the animal is the right thing to do...

.....Meat from some furbearers can be used for human consumption, such as beaver, raccoon, muskrat etc...

.....Glands from some furbearers can be made into lures or sold for commercial use in perfumes...

.....Skulls and other furbearer parts have value...

The Grading of Furs

Fur grading can be defined as “the ability to examine the fur and leather of a pelt and to logically decide what characteristics place a pelt in a particular category”. This may sound relatively simple but in fact fur grading is a very difficult and complex process which takes many years of training and experience to learn well. It is no accident that there are only a handful of expert graders in the world. Nevertheless, it is worthwhile for trappers to learn the basics of fur grading so they know what the buyers want in a pelt and what things to avoid. It will help them estimate the quality and value of their pelts and know if they are being given a fair price.

The general procedure observed in grading is as follows:

- Observe the overall appearance of the pelt. Handling factors, such as shape or form of the pelt, how clean and well fleshed it is, etc., are noted.
- It is then measured to determine the size. All cased pelts, are measured from the tip of the nose to the base of the tail. Beaver are sized by measuring the total length and the total width through the center of the pelt in the form of a cross, and the two measurements are added together.
- The color of the fur and leather are examined; the fur primarily for clarity and the leather for primeness and taint.
- The natural quality of the fur is inspected for density (the thickness of the fur) and completeness (all the guard hairs present—not clipped or rubbed).
- Damages such as cuts, bite marks, shot holes, etc., are taken into account and the pelt is down graded according to the type, extent and location of the damage.
- Finally, the pelt is placed into a grade, such as Firsts, Seconds, Thirds, etc.
- If the best possible value is desired, it is very important to take pelts when they are as close to prime as possible and handle them well. The graders rarely misjudge the quality of a pelt or the results of careless workmanship by the trapper.

The industry has found it necessary to assign different standards for grading furs from several different regions. These are referred to as fur sections or “marks”. This grading system is required because the natural characteristics of any wild animal will vary according to the feed, space, water and climate it inhabits, as well as the genetic makeup of the population. These factors will vary from region to region. The idea that only cold produces the better pelt still persists, but feed, water and shelter are important factors.

Weight and Durability of Furs

Dressed fur (those that have been processed) vary in durability. Another important factor is the weight of the fur. A heavy-leathered fur made into a full length coat may be too heavy for the luxurious comfort most buyers expect from a fur garment.

The following list compares the relative durability and weight of the most common dressed furs, with otter rated at 100 as the standard of greatest durability.

<u>Species</u>	<u>Durability</u>	<u>Weight in ounces</u> per square foot (dressed fur)
Otter	100	4 1/2
Wolverine	100	7
Beaver		
(Natural)	90	4
Beaver		
(plucked)	85	3 7/8
Mink, natural	70	3 1/4
Mink, dyed	35	3 1/4
Marten, natural	65	2 3/4
Muskrat	45	3 1/4
Fox, natural	40	3
Fox, dyed	25	3
Ermine	23	1 1/4

.....Taxidermists often look for high quality specimens to mount...

.....Check regulations and obey the law...

.....Animals with unusual pelts such as albinos, may bring top dollar from taxidermists, but little from a fur buyer...

.....The idea that only cold produces the better pelt still persists, but feed, water and shelter are important factors...

Terms Used to Describe Raw Fur

Badly Sewn: This results when jagged or bloodstained holes of considerable size are poorly sewn.

Badly Shot: This occurs when pelts are peppered by shot, badly holed by a bullet or bitten or otherwise holed in numerous places.

Bitten: This damage usually occurs through battle scars suffered by beaver and muskrats during the mating season.

Boardy: Refers to a condition in raw fur where the leather is stiff; generally occurs in springy pelts. Most noticeable on the back of the neck on fisher.

Burnt: This condition occurs when a pelt can be cracked owing to quick drying by fire, hot sun or by grease burn. The pelt will seldom survive the dressing process and thus, is usually worthless.

Clean: For weasel or muskrat, means seasonable skins free of damage.

Clipped or Sheared: This condition occurs when guard hair and or underfur is missing, caused by knife or other cuts, or where the fur has been eaten away by mice, shrews, etc.

Coarse: This condition describes the texture of the hair when it is harsh to the touch.

Complete: This refers to a pelt that is fully covered with guard hair.

Damaged: A pelt that is rendered incomplete to the extent that it requires expert repairing, or involves a risk in the dressing process. Damage can result from improper handling or can be the result of fighting by the animal or disease.

Density: This refers to the thickness of the underfur, which is more important than depth. Dense underfur is usually accompanied by at least an adequate amount of depth to make a good skin.

Depth: This describes the length of fur.

Drowned: This condition of the pelt occurs when animals are trapped in water and can bring about a taint condition. Usually occurs when animals are left too long in the water.

Flat: This refers to guard hair lying flat on the back, due to lack of underfur.

Flow: This condition refers to a life-like appearance of the fur on a pliable skin when it is handled.

Guard Hair: The long outer hair of the fur which provides protection from the weather. This hair is usually fine, silky and lustrous, but in some animals, can be thick, coarse and dull.

Hair-slip: Hair falling out of the pelt as a result of damage to the hair roots or the fur being left too long on the carcass and spoiling.

Heavy: Refers either to the weight of the fur or, as in the case of muskrat, the thickness of leather and fur.

Immature: This condition refers to pelts taken too early, showing less than full growth of underfur and guard hair.

Loose (open) Flank: Shortage of guard hair along flanks, indicative of overprime pelt.

Loose: This occurs when top hair is coming away from the skin, owing to exposed roots in early caught pelts, or by the seasonal loss of guard hair (shedding) in the case of some late-taken pelts.

.....Properly dispose of any remaining animal parts after processing...

.....There are many fur handling and marketing videos available for reference...

.....Fur damage can result from improper handling or can be the result of fighting by the animal or disease...

.....Hair falling out of the pelt as a result of damage to the hair roots or the fur being left too long on the carcass and spoiling...

Low: This refers to underdeveloped fur.

Over-stretched: Refers to pelts that are stretched too wide, or too long and narrow. Over-stretched pelts may result in a larger size, however, they will lose quality due to the fur being spread more.

Oxidation: The natural process by which all organic material, including fur, ages due to exposure to light and air. It usually manifests itself by a darkening or reddening of the fur and the yellowing of the skin. Modern tanning slows the process, leaving the color more natural.

Prime Pelt: The leather side is clear and white or very slightly blue, usually soft, pliable and slightly greasy - the underfur is dense, deep and completely covered by guard hair. The overall appearance is glossy and the fur full of life and flow to the touch. These pelts are only available in season and, unless damaged, are usually placed in Grades I & II.

Rough: This condition occurs when guard hair and underfur are fully developed. Rough can refer to heavy but rubbed skins of fox.

Rubbed: This condition is usually found in over-developed pelts. The loss of guard hair, due to rubbing or freezing to the snow, is increased and the underfur is exposed as a result of this overprime condition.

Scored: This refers to the area of a pelt where a bullet loosens fur and shows a bare or blood-stained trail on the pelt.

Shedder: A condition that occurs in muskrats late in the season when the leather becomes light and papery, and blotches occur around the kidneys on the side of the raw muskrat pelt.

Short Nap: This is a term used to describe the short fur of some mink and indicates types most desirable for coat purposes.

Silky: This condition describes the texture of the fur when it is soft to the touch.

Singed: A condition in guard hair, especially in late-caught mink and otter, where the ends of the hair are curled or broken. This may be caused by exposure to excess sunlight or rubbing.

Snared: This is caused when the fur is rubbed off down to the skin by a wire snare. The mark is often readily visible on the leather.

Springy: This usually occurs in late-caught pelts that appear lifeless or have faded underfur and often is a rather hard or dry pelt. The guard hair may be rubbed, brittle, incomplete or singed. Can be indicated by black markings on the leather.

Tainted: This is the worst form of damage. When slight, it can be difficult to detect. It causes slipping of guard hair and underfur and is usually indicated by a discolored or transparent patch on the leather side. It can be caused by decomposition of the leather surface when an animal is left too long in a body grip trap, fur left on the carcass too long, or mishandling the furred carcass such as not allowing the belly area to cool quickly. This particular mishandling usually occurs when the animal is placed in a vehicle on its belly, or others place on top of it so it cannot cool quickly.

Unprime Pelt: Occurs when fur is coming into prime or leaving the prime condition.

Underfur: The shorter under hair of furs with guard hair. It is usually denser, more compact and lighter in color than the guard hair. The colder the climate the animal lives in, the denser and more compact (and warmer to wear) the underfur will be.

Veiling: Length of guard hair around head and neck of foxes.

Woolly: Refers to a pelt having thick and lifeless underfur and lacking guard hair, but not necessarily rubbed.

.....Organic material, including fur, ages due to exposure to light and air...

.....Improper snaring may cause fur to be rubbed off to the skin...

.....Tainted is the worst form of damage...

.....When trapped or snared animals are left too long in the water a taint condition may occur...

.....The colder the climate the animal lives in, the denser and more compact the underfur will be...

.....The time of priming will vary from species to species, from one zone to another, and from year to year...

.....The loss of guard hair, due to rubbing or freezing to the snow, causing the underfur to be exposed ; the result of this is an over prime condition...

Early-Caught Skins:

- Leather - blue, greasy and pliable.
- Fur - low or flat in center back.
- Neck - low or flat.
- Complete looking.
- Fur at its best for color.

Late-Caught Skins:

- Hard and/or dry leather, often veined or spotty.
- Faded or poor color, open and weak in appearance, or rubbed.
- Dry and lifeless fur.

Unprime pelts are usually graded as seconds. The leather of very late-caught skins is often blotchy or black, especially in mink and otter. They are graded as thirds or fourths.

Fur Primeness

During the late summer or early fall, furbearers gradually shed their coat of summer fur while replacing it with a new coat of longer, denser, winter fur. In the early stages of growth, the roots of the hair are deeply embedded in the leather and a pelt taken at this time of year (known as under-prime) will appear dark or bluish on the skin as a result of the roots showing through.

As the hair grows toward prime, the roots move further up into the leather and a fully prime pelt then has a clean, pale appearance on the flesh side. Eventually, the hair roots reach close to the outer surface of the hide and fall or slip out. This is called an over-prime pelt. Buyers prefer pelts which are just slightly under-prime, as otherwise, it is difficult to gauge whether there will be shedding or not.

The time of priming will vary from species to species, from one zone to another, and from year to year.

CHAPTER 10

TRAPLINE SAFETY AND HEALTH

Trapping is generally a safe sport, but because of the equipment used and animals encountered extra precautions are required to avoid injury. Prevention and avoidance are the two best principles to follow. Try to prevent accidents before they occur. Make sure your equipment is safe and reliable.

- If using a snowmobile have a basic knowledge of in-field repairs.
- Carry snowshoes or skis to get you back to the trailhead if the machine fails. Carry extra clothes, fire starter, and a first aid kit.
- Always let someone know where you will be and when you are expected to return.
- Consider taking a cell phone and/or GPS.
- If trapping from a boat make sure you have and use a life preserver.
- When trapping on ice always carry a long pole that can support your weight if you break through. A sheathed belt knife, hatchet or ice safety picks would be useful to stab into the ice to pull yourself out.
- Avoid crossing an ice flow or moving water where you might be swept under the ice if you break through. Avoid carrying an uncased ax or hatchet in you trapping basket. If you fall and pitch forward it might strike you in the head.
- Never reach through a hole in the ice to check your trap. You could get caught in the trap and not be able to extract your arm back up through the hole to release yourself.
- Know how to release yourself from a foot hold or body grip trap if caught.
- Make sure a trapped animal can not reach you. Stay out of the trap circle. Before approaching a trapped animal make sure it is securely held.
- When using large body-gripping traps, carry setting tongs and a length of rope with a loop in the end. Keep it in a pocket where you easily can reach it with one hand. If you are caught, thread the rope through the ends of the springs. Put your foot in the loop and use your free arm to pull the loose end. This releases the pressure on the springs so you can free yourself.
- Occasionally all trappers are faced with the release of a non-target animal. Any trapped animal is a potential danger and must be handled with great care. A catch-release pole is essential in the releasing of unwanted catches unharmed. Do not attempt to release a large animal such as a deer or lion alone. Call the FWP for assistance.
- Many trappers carry firearms to shoot animals caught in traps. Take a hunter education course from the Montana Department of Fish, Wildlife and Parks to learn about firearm safety. Practice safe habits around firearms at all times.
- When trapping it generally is a good idea to keep your firearm unloaded until you need to use it. It can be difficult to maintain control of a firearm when you are carrying gear and making sets.
- When you shoot a firearm at an animal in a trap be careful about ricochets off the trap or rocks. If you are trapping with companions, everyone should stand behind the shooter.
- Always look beyond your target when shooting a firearm and only shoot if it is safe. Keep the muzzle under control and pointed in a safe direction at all times, even when the gun is not loaded.
- Most trapping is done in the colder months when the fur is prime. Therefore frostbite and hypothermia are always a present danger.

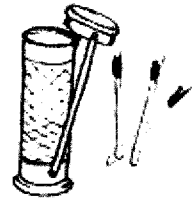
Hypothermia

Hypothermia is a leading cause of death among people who enjoy outdoor recreation. Cold weather, wind and water can lead to a loss of body heat. When your body temperature starts to lower, hypothermia sets in.

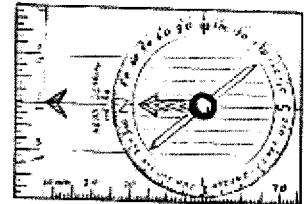
Shivering is one of the first signs of hypothermia. When this happens, go to a warm place, put on warmer clothes, or build a fire. Soon after shivering starts, a person may become confused and clumsy. Watch for signs of hypothermia whenever you are outdoors in cooler weather. Even when air temperatures are in the 50s, hypothermia can occur.

Trappers can prevent hypothermia by wearing warm, dry clothing. Wool clothes are a good choice. Wool insulates even when wet.

When working in or near water, use hip boots (or waders) and gauntlets. If you get wet return to home or camp and put on dry clothes.



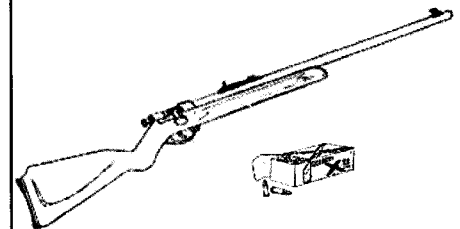
.....Safety/Waterproof matches...



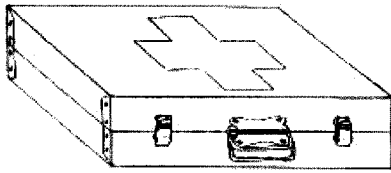
.....Compass...

.....Firearm Safety

- **Treat every gun as if it is loaded.**
- **Control the muzzle direction.**
- **Keep barrel and action clear of obstructions.**
- **Unload firearms when not in use.**
- **Never point a firearm at anything you do not intend to shoot.**
- **Don't climb over obstacles with a loaded gun.**
- **Do not shoot at a flat, hard surface.**
- **Avoid alcoholic beverages when trapping.**



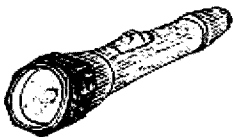
.....Firearm and ammunition...



.....First Aid kit...

.....Do not risk your health or the health of others by handling sick or diseased animals...

.....Assume every animal has a disease that can be transmitted to you ...



.....Flashlight...



.....Maps...

Frostbite

Frostbite occurs when ice crystals form in your body's cells. It is a common cold weather injury to people's cheeks, ears, nose, toes, and fingers. Frostbite symptoms include white to grayish yellow skin and an intense cold, numb feeling. Pain and blisters also may be present. Protect frostbitten skin from further injury. Drink warm fluids, put on more clothes, or wrap up in blankets. The frozen area can be soaked in warm water (102 to 105 degrees F). Never rub frostbitten skin as rubbing will cause further injury.

Protect exposed skin from the elements

Carry fire starting material and know how to start a fire in case you get wet or cold.

Avoiding Sickness and Disease

Cuts and chapped hands are very common. Clean all cuts with soap and water and apply topical antiseptic and dressing. Try to keep skin lubricated to avoid chapping.

Do not handle animals, carcasses or excrement without hand protection. Wear disposable gloves when skinning. Wash your hands before eating.

It is a good idea to get your tetanus vaccination up to date. If you have not had one in the last ten years, you are overdue.

Assume every animal has a disease that can be transmitted to you either directly through a bite, indirectly from fleas or tick living on the animal or body fluid exposure due to a cut or scrape in your skin. Most land animals and many aquatic dwellers carry fleas, ticks, and/or lice. A good practice to rid the animal of these pests before taking it home to skin is to place it in a plastic bag or other airtight container and spray it with insecticide. Then seal the container for a short period of time. Remove the animal from the container and air outside for a few minutes before taking into the skinning area.

Always use disposable surgical type gloves when skinning and when possible avoid contact with blood, body fluid and excrement, brain tissue, or spinal fluid. Use good knife handling techniques to avoid cutting oneself. Wearing a rubber apron and a long sleeved shirt used just for skinning is a good idea.

After skinning or handling carcasses never eat or drink without first washing your hands thoroughly.

Keep your skinning area clean and uncluttered. Diluting a cup of household bleach with two quarts of water can make a good disinfectant. Wipe down the skinning area with this including the floor. Wash your skinning equipment in soap and water and disinfect with the same bleach solution.

Common Zoonotic Diseases and Parasites of Furbearing Animals

Zoonotic diseases are diseases of animals that can be transmitted to humans. Although it is beyond the scope of this manual to discuss specific diseases in detail, some general comments and examples are appropriate. All animals should be considered capable of transmitting disease and should be handled with caution. Be especially wary of animals that appear sick or have died of unknown causes. Wearing disposable latex or nitrile gloves while skinning animals, and frequent hand washing are good precautions to reduce your risk of being exposed to zoonotic diseases of wildlife.

Many of the signs and symptoms of zoonotic diseases such as plague, tularemia, and Leptospirosis are non-specific and mimic the flu or a common cold – for example, fever, aches, rashes, swollen glands. Many health practitioners are unfamiliar with uncommon zoonotic diseases. It is a good idea to alert your physician that you are a trapper and may have been exposed to a zoonotic disease.

Viral Diseases

RABIES: Rabies is caused by a virus that grows in nervous tissues of mammals. Most cases of rabies in North America are caused from bites by non-immunized dogs and cats, but wild animals and domestic livestock can harbor the disease. Traditionally, high risk wild animals include raccoons, foxes, skunks, and bats. Transmission to humans occurs through a bite from an infected animal, or when an open wound is exposed to saliva or spinal fluid of an infected animal. Rabies may also be transmitted by splashing infective saliva or spinal fluid into the eyes or mouth. A few cases of rabies have been attributed to inhalation and aerosol transmission in caves inhabited by infected bats. Although never reported, rabies could theoretically be contracted by inhalation of aerosols in dens of infected skunks and raccoons. It is important to vaccinate pets to protect them from rabies virus.

If exposure to rabies is suspected, immediately wash the wound with soap and water and call your physician right away. If an animal suspected of having rabies is killed, handle the carcass as little as possible, and always wear gloves. Do not discard the carcass. The brain is required for rabies testing of wildlife species. The local health department can be contacted for assistance with submission of wildlife species suspected to have rabies.

HANTA VIRUS: Hanta virus includes a group of viruses that can cause serious illness and often death in humans. Early stages of the disease may cause flu-like symptoms, but this may progress to cause breathing difficulty and build-up of fluid in the lungs. Rodents are the primary reservoir hosts of hantaviruses and do not show signs of disease. Deer mice are the primary reservoirs for the most dangerous strains of these viruses. Humans can contract the virus directly when bitten by an infected rodent, but more commonly, humans are infected by inhaling virus particles that are aerosolized from rodent urine, feces, or saliva.

CANINE DISTEMPER: Distemper is a common virus in unvaccinated domestic dogs and can also affect wildlife species such as foxes, raccoons, and skunks. Wild animals with distemper may have respiratory symptoms or diarrhea, but often they have neurologic symptoms that can appear very similar to rabies. This virus can be transmitted from wildlife to domestic pets via consumption of an infected carcass, or from exposure to virus that has contaminated clothing or shoes while handling an infected animal. Distemper can be fatal to an unvaccinated dog, however available vaccines are quite effective at protecting domestic dogs against this virus.

Tick Borne Diseases

COLORADO TICK FEVER: This illness is caused by a virus transmitted by a tick (primarily a wood tick) that feeds on an infected animal. Symptoms include chills, headache, fever (often relapsing), muscle aches, and rarely a rash. Symptoms are usually mild in young people, but recovery may take months in older adults.

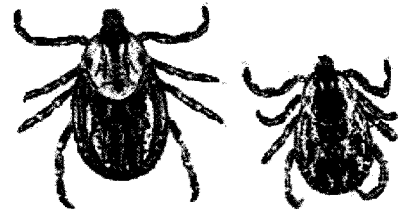
ROCKY MOUNTAIN SPOTTED FEVER: This illness is caused by a specific type of bacteria called *Rickettsia* that is transmitted by the bite of a tick (primarily a wood tick). Symptoms of RMSF can appear very suddenly, and often begin with moderate to high fever. Muscle pain, headache, and chills are common. A rash typically occurs on the extremities, from the second to the sixth day of fever, and generally occurring on the palms, soles of the feet, ankles, and forearms.

TULAREMIA: This illness can be transmitted to humans by exposure to blood or tissue of infected animals (see bacterial diseases below), but can also be transmitted by the bite of the wood tick. Symptoms depend on the strain of the bacteria, but characteristically, a sore forms at the site of the tick bite. Swelling and tenderness of lymph nodes is not uncommon.

TICK-BORNE RELAPSING FEVER (TBRF): This illness is very similar to Lyme Disease, and is caused by a bacteria called *Borellia hermsii*, which is very similar to the bacteria that causes Lyme Disease. The tick that transmits TBRF is transmitted by ticks of the genus *Ornithodoros*. These ticks are classified as "soft ticks", which are different from the Ixodid (hard ticks) that transmit more common diseases such as Lyme disease, Rocky Mountain Spotted Fever. Symptoms of TBRF include repeating bouts of fever, chills, headache, muscle and joint aches, and nausea lasting from 2-7 days, punctuated by periods of wellness that last for about a week. A spotted and itchy rash may appear during the first episode of illness. The number of relapses ranges from 2-10 and each is less severe than the previous one. Serious complications are rare, but are most common in very young, elderly, pregnant, or debilitated individuals.

.....Several diseases can be transmitted to humans through tick bites...

.....Ticks commonly found in Montana are shown below...



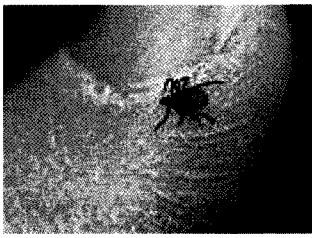
American Dog Tick



Brown Dog Tick



Rocky Mountain Wood Tick



.....Deer Tick, shown actual size on adult thumb...

.....Rodents are the main carriers of tularemia...

.....The "plague" is transmitted to humans by fleas which live on rodents and other animals...

.....Salmonella is a common bacteria that contaminates food and water...

.....Tularemia is sometimes referred to as rabbit fever or beaver fever...

LYME DISEASE: The deer tick is the primary tick that transmits Lyme Disease. Although the deer tick and Lyme Disease are primarily found in the Eastern United States, a few cases have been diagnosed in Montana. Many of these cases may have occurred in individuals who have traveled to the Eastern U.S.. It is possible that Montana's wood tick can carry a bacteria that causes a disease very similar to Lyme Disease. A red, bull's eye rash at the site of the tick bite is a characteristic sign of Lyme Disease. Flu-like symptoms such as fever, headache, and muscle aches are common.

Bacterial Diseases

TULAREMIA: Tularemia is caused by a bacteria called *Francisella tularensis*. Rabbits, hares and rodents are the most commonly affected animals, but it has been reported in over 45 species. The most important route of transmission is by flea and tick bites, but the disease can also be transmitted to humans by consumption of poorly cooked meat, inhalation of aerosolized excrement, bites, or through an open wound. Rabbits with Tularemia may be asymptomatic, or may appear slow, depressed and uncoordinated. The liver and spleen of an infected animal often has many pinpoint size white spots. Disease in humans typically involves fever, infected wound at entry site, swollen lymph nodes, and flu-like symptoms. Human tularemia can quickly become severe, so prompt treatment with appropriate antibiotics is critical.

PLAGUE: Plague is caused by a bacteria called *Yersinia pestis*. The bacteria is most often transmitted to humans through a flea bite. The disease is carried by rodents. There are three forms of plague, each causing a particular set of clinical signs.

- Bubonic plague- Enlargement of lymph nodes, fever, headache, drainage at exposure site.
- Pneumonic plague- Infection of lungs and pleural cavity, can cause death if not treated
- Septicemia- Bacteria becomes present in the blood and can affect vital organs like the heart, liver, etc. Bubonic and pneumonic plague can advance to septicemia if not treated.

SALMONELLOSIS: Salmonellosis is usually caused by ingestion of *Salmonella* bacteria in contaminated food or water. The bacteria can also be transferred to food or the mouth from unwashed hands. Symptoms include abdominal pain and cramping, nausea, vomiting, diarrhea, and fever. Symptoms may be most severe in the very young or immune compromised.

SHIGELLOSIS: Shigellosis is caused by ingestion of the bacteria *Shigella* from contaminated food or water. *Shigella* can also be transferred to food or the mouth on unwashed hands. Symptoms are very similar to those of Salmonellosis, including abdominal pain, nausea, vomiting, diarrhea, and fever.

LEPTOSPIROSIS: Leptospirosis is caused by species of bacteria known as *Leptospira interrogans*. Virtually all mammals are likely susceptible to Leptospirosis. Leptospirosis is transmitted primarily through ingestion of food or water contaminated with urine of an infected animal. Transmission can also occur by contact with contaminated water, fur, body fluids, carcasses, and soil. Human infection can be asymptomatic, but can also result in fever, headache, weakness, and vomiting. In severe cases, meningitis, kidney failure, and death could occur.

TUBERCULOSIS: Tuberculosis is caused by a bacterium called *Mycobacterium bovis*. Most mammal species are susceptible to tuberculosis. Transmission of *M. bovis* occurs by ingestion or inhalation of the bacteria shed by nasal discharge, saliva, draining abscesses, or aerosolized bacteria when coughing. The bacteria may be shed in feces, urine, or milk. Contaminated food and water can also be a source of infection. Most human TB cases are the result of infection with a different *Mycobacterium* (*M. tuberculosis*), but *M. bovis* is infectious to people. Many people exposed to *M. bovis* develop a positive skin test and are given preventative treatment. Typical signs of *M. bovis* infection in humans include cough, fever, and swollen lymph nodes.

Internal Parasites

GIARDIA: Caused by a parasite that is carried by many rodents and water-dwelling mammals such as beavers, hence the name “beaver fever”. The parasite is typically contracted by drinking contaminated water. Human symptoms include diarrhea and abdominal cramping.

ECHINOCOCCOSIS: *Echinococcus multilocularis* is a type of tapeworm that requires two hosts to complete its life cycle. The intermediate hosts are rodents, and the definitive hosts are carnivores such as foxes and coyotes. The parasite often does not cause any significant health problems for the definitive host, which is where the tiny adult tapeworms live in the intestine. Humans may be exposed by ingesting *Echinococcus* eggs that are shed in the carnivore feces. Eggs can also stick to the fur of an infected carnivore. Infected humans act as an intermediate host for the parasite, which means that the parasite develops into cysts within the body. Symptoms in humans depend upon the number and location of these cysts, and range from asymptomatic to debilitating.

Echinococcus granulosus is a very similar parasite but uses cervids as the intermediate host, and the wolf as the definitive host.

Risk of exposure to *Echinococcus* can be greatly reduced by wearing gloves when handling carnivores, using good hygiene, and deworming domestic dogs that may consume organs of deer, elk, or moose.

VISCERAL LARVA MIGRANS (toxocara roundworms – cat and dog): These parasites are most common in raccoons, foxes, coyotes, and bobcats. The roundworms live in the intestinal tract of infected animals. Transmission occurs by accidental ingestion of eggs which are passed in the feces of the animal host. Symptoms may include abdominal pain, diarrhea, and weight loss

CUTANEOUS LARVAL MIGRANS (hookworms): Hookworms are common in young raccoons, foxes, coyotes, and bobcats. Transmission occurs through direct contact of the skin, with a raised, itchy area and hemorrhage under the skin. Symptoms include hemorrhage and swelling of the area where the parasite entered the skin.

TRICHINELLOSIS: This disease is caused by a parasite of the genus *Trichinella*. A wide range of animals are susceptible, including wild swine, bears, wolves, wolverines, raccoons, foxes, rats, and birds. Naturally infected wild animals almost never develop symptoms, even though the larvae invade the muscles of the body. Transmission to humans most often occurs from the ingestion of larvae in undercooked meat of an infected animal. Human symptoms may include muscle pain, diarrhea, heart muscle failure (if heart muscle affected).

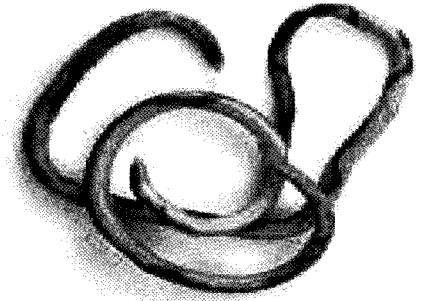
External Parasites

SARCOPTIC MANGE: “Scabies” is caused by sarcoptic mites which are obligate parasites. This means that all stages of the life cycle occur on the host animal. These mites burrow and tunnel into the skin. Sarcoptic mange is common in many parts of North America and can infect domestic swine, dogs, foxes, coyotes, and wolves. The parasites are transmitted between animals through direct contact or by contact with objects that infected animals may have rubbed on or bedded on. In animals, this parasite causes intense irritation and itching as the mites burrow into the skin, resulting in inflammation, weeping of fluid onto the skin, crusting and thickening of the skin, and hair loss. Severely infected animals die from secondary bacterial infection, or hypothermia and exposure. The “human” *Sarcoptes* mites are a different species than those that normally infect animals. However, mites from an infected animal can get on a human and cause itching, irritation, and rash. The animal *Sarcoptes* mites do not normally live long on humans. If an infected domestic dog goes untreated, the owner could have longstanding problems because of a continuous source of new mites, not because of a chronic established mite infestation.

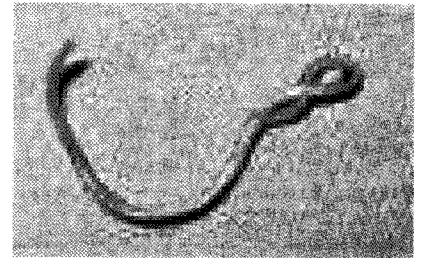
FLEAS: Fleas irritate the host animal by constantly biting and secreting toxic and sometimes allergenic products in their saliva. Infected animals will often break the skin creating a “hot spot” which can be infected by bacteria. Fleas can also carry bacterial diseases such as plague. Fleas are transmitted to humans by direct contact when the flea jumps from the animal to the human. Flea bites on humans typically create small, red, itchy spots which can become infected, especially after scratching. Some humans are more allergic to flea bites than others.



.....Image of a tapeworm...



.....Image of a roundworm...



.....Picture of a hookworm...



.....Magnified image of a sarcoptic mange mite...



.....Healthy Fox and a Fox with sarcoptic mange...



.....Magnified image of a flea...



.....Magnified image of a louse...

LICE: There are two types of lice, sucking lice and biting (or chewing) lice. Heavy lice infestations on infected animals may lead to hair loss, irritability, poor body condition, and susceptibility to secondary bacterial infection and disease. Lice tend to be relatively species specific, meaning that certain species of lice prefer a specific host. Although lice from an animal may get onto a human who is in close contact, and may even attempt to bite and cause some itching, it is unlikely that lice from animals will establish a full infection on a human.

This is a description of some of the more notable zoonotic diseases of wildlife, and was not intended to be an in-depth review but rather a brief introduction to bring awareness that animals can carry a variety of illnesses that can be transmitted to humans either directly through bites or contamination of wounds and mucous membranes with excrement, or from bites of fleas and ticks. The signs and symptoms of many of these diseases are very similar and can mimic the flu or common cold.

GENERAL PRECAUTIONS TO PREVENT INFECTION

- Look for health problems in animals by observation
- Cover open cuts/wounds on hands and exposed skin before handling an animal
- Wear disposable latex or nitrile (rubber) gloves. Clean tools and work area well when finished.
- Wash thoroughly with warm, soapy water after working with animals
- Never skin an animal found dead of unknown cause (i.e. no evidence of road kill or predation). Inform proper authorities of suspicious carcasses, and handle such carcasses with caution
- Observe strict hygiene when working with all wild species
- Seek medical attention immediately if you suspect you have been exposed to any disease carried by animals, or if you exhibit any symptoms of disease.
- Be cautious if you become ill after handling animals. Many zoonotic diseases present with flu-like symptoms.
- Use common sense on the trapline when dealing with wild animals which may carry disease.
- Common chlorine bleach is an effective anti-viral and anti-bacterial agent and can be used as a disinfectant to clean hands and surfaces.
- If you will be using meat of trapped animals for human consumption, use a separate knife to remove the meat from the carcass.

Glossary

Activist	A person who takes direct, often confrontational, action to support or oppose a cause.
Additive Mortality	Harvests that exceed natural mortality and reduce a species' population.
Aesthetic	Concerning the appreciation of beauty.
Airborne	Virus or bacteria that have been exposed to the air to enable their transmission by breathing in droplets
AFWA	Association of Fish and Wildlife Agencies.
Animal Rights	The belief that animals should have the same "rights" as humans.
Apathetic	Indifference, lacking interest or concern.
Aquatic	Growing or living in water
Asphyxiate	To stop the breathing of an animal.
Bacteria	Common one-celled micro-organisms. Some cause disease. Others assist in the breakdown of plant and animal matter.
Badly Sewn	Where leg holes and cuts are poorly sewn or where bad damage has been caused by too much sewing.
Badly Shot	A pelt peppered by a shotgun or large rifle. Bad bites may also be listed in this grade.
Bag Limit	Number of animals legally allowed to be taken in a day or a season.
Belly Stick	Piece of wood inserted up along the belly of mink, otter and marten pelts while they are on the forming board or stretcher.
Best Management Practices	The use of recommended equipment and techniques as determined by experts in an activity.
Biological Carrying Capacity	The number of animals a given area of habitat is capable of supporting throughout the year.
Bitten	Pelt has holes caused by bites. This is most common in muskrats and beaver during late winter or early spring when they're breeding and defending or establishing territories.
Blue Pelt	An unprimed pelt. When dried, shows dark blue or black on the skin side.
BMP	Short for Best Management Practice
Body-Gripping Trap	A trap designed to close on an animal's body and quickly kill it.
Boreal	Northern or higher areas on mountains, located just below the timberline.
Breeding Season	The time of year when an animal mates and bears young.
Burnt	Pelt is brittle and sometimes cracked, usually from drying too fast near a heater or in the sun or wind. Can also be caused by leaving too much fat on the pelt.
Cable Stake	An earth anchor attached to a cable and driven into the ground used to secure a trap without using a stake.
Cache	Food stored for use at a later time, for example, the food pile of branches made by a beaver, or a mouse buried by a fox.
Cage Trap	A trap designed of wire mesh to enclose an animal and hold it alive.
Carcass	The part of an animal which remains after the pelt has been removed by skinning.
Carnivore	An animal that eats other animals.
Carion	Dead or decaying flesh.
Carrying Capacity	A term referring to the number of animals that a given area of habitat is capable of supporting.
Cartilage	Firm, tough elastic substance of the skeleton.
Cased Pelt	A pelt skinned by cutting along the hind legs and pulled down over the body.
Castor	An odorous, glandular substance obtained from beaver, used in lures and perfume.
Catchpole	A slip-noose on a rigid handle used to hold an animal while releasing it.
Caterwauling	Howling or screeching.
Clear Pelt	In mink and otter, this term indicates an even change in fur color from underfur to guard hairs.

<i>Clipped</i>	Patches of guard hair that have been chewed off by rodents.
<i>Colony Trap</i>	A wire mesh kill-type trap used in runways underwater for mink and muskrats, capable of catching multiple animals.
<i>Compensatory Mortality</i>	Harvests that do not add to or exceed mortality from natural causes.
<i>Conservation</i>	The careful guarding of an asset. Conservation allows for the use of resources within limits.
<i>Consumptive use</i>	The act of using or tending to consume; such as using a renewable resource.
<i>Cotton Mink</i>	A mink pelt with white underfur.
<i>Course</i>	Guard hairs are dull, lifeless and hard to the touch. Usually seen in late-caught furs.
<i>Crepuscular</i>	Active at morning and/or evening twilight.
<i>Cubby Set</i>	Placing a trap in a small, enclosed place, using branches, leaves, wood and grass from the surrounding area to attract the targeted species being trapped.
<i>Cultural</i>	The total product of human creativity and intellect.
<i>Cultural Carrying Capacity</i>	The number of animals that humans will accept in a given area. When people want to reduce animal populations that are otherwise within the biological carrying capacity for the area, biologists may need to reduce the population until people find it acceptable.
<i>Cutaneous</i>	Having to do with the skin.
<i>Deadfall</i>	A primitive device designed to kill an animal with a falling log or rock, commonly used before the manufacture of modern traps. Deadfalls are not legal in most areas.
<i>Delayed Implantation</i>	In animal reproduction, this refers to the fertilized egg not implanting and beginning development for some time after mating occurs.
<i>Dispatch</i>	To kill an animal without delay in a humane manner.
<i>Dispersal</i>	The one-way movement of animals from their place of birth or home range, often coinciding with sexual maturity.
<i>Diurnal</i>	Active during the day.
<i>Drowning Device</i>	Properly called a submersion device. A trap chain is attached to a slide lock on a cable leading to deep water. A trapped animal can go into deeper water, but not return, leading to death.
<i>Echinococcus</i>	A tapeworm parasite that can form cysts in humans and other wild animals.
<i>Ecological Succession</i>	The progressive changing of types of plants in a landscape that occurs over time.
<i>Ecology</i>	The science of relationships between organisms and their environment.
<i>Ecosystem</i>	A community of plants, animals and microorganisms linked by energy and nutrient flows that interact with each other and with the physical environment.
<i>Efficiency</i>	Skillfulness in avoiding wasted time and energy.
<i>Endangered Species</i>	A species whose population is so small that it is in danger of extinction.
<i>Ermine</i>	White color phase of the weasel as seen during winter.
<i>Ethics</i>	A person's personal code of behavior, moral values, and principles.
<i>Excise Tax</i>	A tax that is measured by the amount of business done.
<i>Extinction</i>	No longer in existence. Total extermination.
<i>Extirpation</i>	Elimination of a species within a range or boundary where it once existed.
<i>Flat</i>	Guard hairs lay flat because the underfur isn't fully developed. Usually seen in early-caught furs.
<i>Fleshing</i>	Removing fat and meat from a pelt.
<i>Fleshing Beam</i>	Wooden or fiberglass form to hold and support a pelt while removing the fat and meat left after skinning.
<i>Foot Snare</i>	A capture device designed to catch long-legged animals by locking its foot in a wire noose.
<i>Foothold Trap</i>	A capture device designed to hold an animal by the foot. May be used to hold animals alive, or to kill them in submersion sets.
<i>Fossorial</i>	An animal adapted for burrowing or digging.

<i>Frostbite</i>	A serious health hazard involving the freezing of the skin or other body tissues.
<i>Fur Bearers</i>	Animals which have soft hair covering their skin.
<i>Fur Dressing</i>	The tanning process.
<i>Fur Stretcher</i>	A frame that holds a pelt in a standard shape while drying.
<i>Gait</i>	The way that an animal moves its feet when it walks or runs.
<i>Gambrel</i>	A frame or device used for hanging an animal by the hind legs for skinning.
<i>Gestation Period</i>	Length of pregnancy.
<i>Grapple</i>	A hook-like device attached to the trap chain which allows an animal to move from the trap site and become entangled.
<i>Green Pelt</i>	A pelt that has not been stretched or dried.
<i>Grizzled</i>	Greyish or grey haired.
<i>Guard Hairs</i>	Long, glossy hairs that overlap and protect the soft, dense underfur.
<i>Guarded Trap</i>	A foothold trap with a spring device that pins the animal and prevents it from twisting or pulling free.
<i>Habitat</i>	A place that provides all the food, water, shelter and space an animal needs to live.
<i>Hair Follicle</i>	The part of the skin that produces and holds the hair or fur.
<i>Harvest</i>	A gathering or collecting of a natural product.
<i>Herbivore</i>	An animal that normally feeds on plants.
<i>Heritage</i>	Practices handed down from the past by tradition.
<i>Hibernation</i>	A state of inactivity that some animals enter in winter.
<i>Home Range</i>	The area where an animal lives or travels day to day.
<i>Hudson's Bay Company</i>	An early Canadian fur trading company is still active today as North American Fur Auctions.
<i>Hypothermia</i>	A serious health risk that involves the loss of body heat.
<i>Lap Link</i>	A metal ring attaching a trap to a stake. It allows the chain to rotate around the stake.
<i>Leather</i>	In furbearers, the skin to which the hair is attached.
<i>Live-Restraining</i>	A trap or device designed to hold an animal without killing it.
<i>Loose</i>	Guard hairs are coming out, usually because the roots have been cut by over-fleshing. Sometimes seen in early-caught furs.
<i>Lyme Disease</i>	A disease transmitted to humans by certain ticks.
<i>Molt</i>	The shedding of fur, feathers, skin, etc.
<i>Mortality</i>	The death rate or the number of a species that die annually.
<i>Nocturnal</i>	Active at night.
<i>Non-powered Cable Device</i>	A capture device using multi-strand steel cable that closes when an animal passes through it without the aid of a spring or other powering device.
<i>Non-retractile</i>	Cannot be drawn back.
<i>Omnivore</i>	An animal that eats both plants and animals.
<i>Open Pelt</i>	A pelt skinned by cutting down the midline of the belly.
<i>Opportunist</i>	An animal that takes advantage of the most abundant or easily obtainable source of food.
<i>Overstretch</i>	Stretching the pelt beyond normal size; thins the leather and gives a flat and weak appearance.
<i>Pan Cover</i>	A piece of canvas, cloth, wax paper or other material used to cover a trap pan and prevent soil from getting underneath it.
<i>Pan Tension</i>	The amount of force, measured in weight, that it takes to trip a trap pan.
<i>Pan Throw</i>	The distance a trap pan must move before the trap is sprung.
<i>Parasite</i>	A plant or animal that lives in or on a host, and derives nourishment from the host.
<i>Pelage</i>	An animal's hair or fur.
<i>Pelt</i>	An animal's raw skin and raw fur after it has been taken off the body.

<i>Photoperiod</i>	The length or amount of daylight; it regulates biological changes in animals, for example, primeness of fur, breeding and hibernation.
<i>Poaching</i>	Killing protected animals, or killing animals out of season or by unlawful means.
<i>Powered Cable Device</i>	A capture device using multi-strand steel cable designed to catch and hold an animal with the aid of a powering device, such as springs.
<i>Predatory</i>	A animal that hunts, kills and feeds on other animals.
<i>Preservation</i>	Protecting something from loss or danger. Implies very little or no use of a wildlife resource.
<i>Prey</i>	A animal that is hunted and is a source of food for other animals.
<i>Prime Pelt</i>	A desirable pelt with the winter fur grown in and mature hair follicles.
<i>Privilege</i>	A special advantage or benefit not enjoyed by all.
<i>Protected Species</i>	A species that may not be harmed or killed. Eagles, hawks and owls, for example, are protected species.
<i>Rabies</i>	A serious animal disease that can be transmitted to humans, primarily by saliva from infected animals.
<i>Rare Species</i>	A species that is very uncommon, even in its favored habitat.
<i>Raw Fur</i>	A pelt that has not been tanned or salted.
<i>Renewable Resource</i>	A naturally reproducing resource that generates a surplus that can be harvested.
<i>Rickettsia</i>	Microorganisms midway between a virus and bacteria, a parasite that cannot live outside a living cell.
<i>Riparian</i>	Of, or on the bank of a river, lake or stream.
<i>Responsibility</i>	An obligation. The social force that binds you to your obligations and the courses of action demanded by that force.
<i>Right</i>	An abstract idea of something that is due to a person by law, tradition, or nature.
<i>Rubbed Fur</i>	Parts of a pelt where fur is damaged by an animal rubbing it on dens, roots or other objects.
<i>S-Hook</i>	A device for attaching a trap chain to a stake, allowing the chain to rotate around the stake.
<i>Safety Gripper</i>	A device used to hold a body-gripping trap in the set position while it is being handled by a trapper.
<i>Samson Pelt</i>	A pelt lacking or nearly lacking guard hairs.
<i>Sarcoptic Mange</i>	An infection caused by mites that burrow under the skin.
<i>Scat</i>	Animal droppings or feces.
<i>Scavenger</i>	An animal that feeds on dead animals instead of killing its own food.
<i>Scored</i>	Mark left by a bullet or knife that cut part-way through the leather.
<i>Selectivity</i>	Tendency for a capture device set to target a single species.
<i>Semi-Aquatic</i>	Living part of the time in or around water.
<i>Set (Trap Set)</i>	The area where a capture device has been set along with other preparations made by the trapper.
<i>Shedder</i>	Fur “sheds” easily from the pelt when raked with the fingers. Can be seen with late caught furs or caused by putting the pelt on a stretcher while the fur is still wet.
<i>Singed Fur</i>	Metallic sheen on otter fur caused by curled tips of the guard hairs. This damage can occur from excessive dry heat, direct sunlight, stroking dry fur, contact with freezing metal, or by the otter itself during the late season.
<i>Skirt</i>	The lower part of a cased skinned pelt, where the hind legs and tail are located.
<i>Slough</i>	A swampy place.
<i>Snare</i>	A restraining device made from a cable and a locking mechanism, and a term used to describe old style devices made from other materials.
<i>Snared</i>	A term used to describe fur that is rubbed off the pelt by snare cable.
<i>Social Carrying Capacity</i>	The number of animals people will tolerate in a given area.
<i>Species</i>	A group of like animals capable of interbreeding.
<i>Spirochete</i>	Any bacteria that have a spiral shape.
<i>Springy</i>	Underfur is falling out or kinked or wooly in appearance. Usually seen in late caught furs.

Submarine Trap

Submersion Set

Subsistence

Sustainable

Swivel

Tainted

Tanning

Territory

Threatened Species

Trap Bed

Trap Hook

Trap Line

Tularemia

Underfur

Understretch

Utilitarian

Visceral

Voyageurs

Weaned

Welfare

Zoonotic

A “cage” type trap that is set underwater in a channel or in front of a den for muskrats, mink, or otters.

A capture device attached to a slide cable, or one where a tangle stake is used, designed to cause a furbearer to asphyxiate underwater. Sometimes called a “drowning” set.

A means of surviving.

Capable of being maintained indefinitely.

A device used at the ends and/or middle of a trap chain to reduce injury to a trapped animal.

Part of the pelt is spoiled. Usually caused by waiting too long before skinning an animal or failing to remove enough of the tissue and fat during the fleshing process.

Treating a hide to make it into leather.

The part of an animal’s home range that it will defend from other animals of the same species.

A species that is rare and declining, and likely to become an endangered species in the foreseeable future through most or all of its range.

A hole or depression dug in the ground where a trap is placed.

A pole with a hook at one end to help find and recover traps from water. Often used as a wading stick.

All of the traps and sets in use at a given time by a single trapper.

A bacterial disease of rabbits and rodents that can be transmitted to humans through cuts or scratches while skinning infected animals.

Soft, dense fibers lying below the guard hairs. Provides primary insulation for the animal.

Stretching smaller than normal size causing wrinkles and sloppy appearance.

Someone who believes that a value of a thing or animal depends on its usefulness.

Having to do with the soft inside parts of the body.

French Canadians employed by the early fur companies to transport furs and trade goods through the wilderness, primarily by canoe.

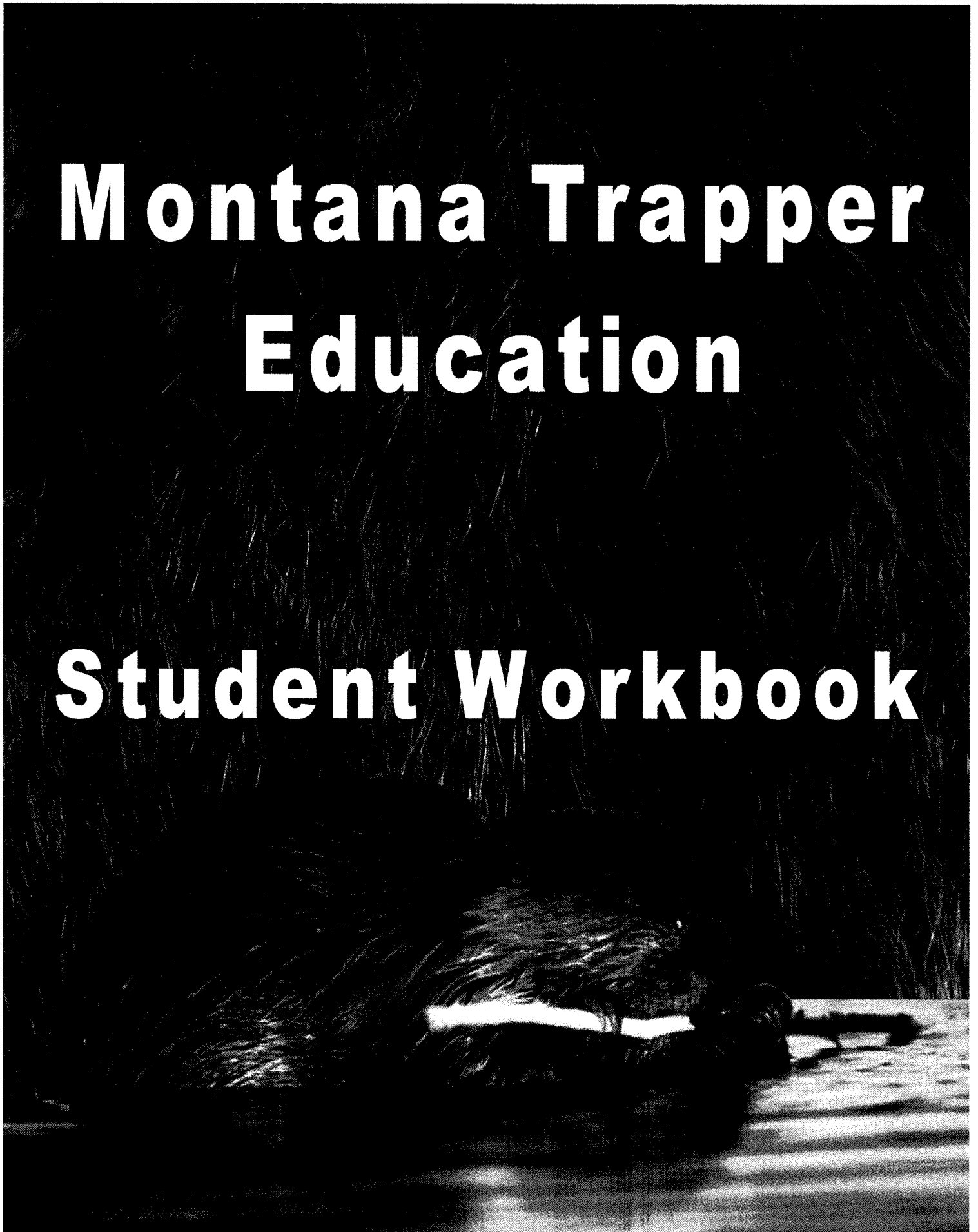
When young begin to eat food other than its mother’s milk.

Something that aids or promotes wellbeing.

Infectious diseases which can be transferred from animals to humans by contact with blood, saliva, urine or feces.

Montana Trapper Education

Student Workbook





*Thank You to the committee members who
have contributed time and effort to complete
this workbook; with their continued help it
will be an evolving valuable tool in teaching
trapper education.*

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Comments from students and instructors on this workbook will be greatly appreciated, and where possible, incorporated into future revisions. Students and instructors are encouraged to submit positive and constructive comments or ideas, with a view to improving the content of this workbook.

MTEP Workbook Contents

Acknowledgements	i
Production and Printing	ii
Table of Contents	iii
Chapter 1 - History	1
Chapter 2 - Ethics, Education & Social Concerns	2
Chapter 3 - Ecosystems & Biology	4
Chapter 4 - Conservation & Furbearer Management	6
Chapter 5 - Trapline Equipment	7
Chapter 6 - Prior & Post Season Preparation & Business Management	11
Sub Section Chapter 6 - Tax & the Trapper	12
Chapter 7 - BMP's & Responsible Harvesting	13
Chapter 8 - Fur Handling	15
Chapter 9 - Marketing	17
Chapter 10 - Trapline Safety & Health	18



CHAPTER 1 – HISTORY

1. What are the three (3) different periods of the use of trapping that contributed to the exploration and development of the North American continent?

1. _____
2. _____
3. _____

2. During which period was the steel trap developed? _____.

3. It was first develop to catch? _____

A. bears
B. fox
C. poachers
D. fish

4. Fur trading posts were first established in the United States.

True False

6. During the Modern Period the Montana Legislature instituted closed season in 1876 on

_____, _____ and _____.

7. Trapping and the fur industry is maintained and managed due to the cooperation of _____

A. MT Department of FWP officers
B. Biologists
C. Trappers
D. All of the above

- 8 Why is trapper education needed? _____

A. The industry is changing
B. Regulations are constantly being changed
C. Pressure from anti-trapping groups
D. Stay abreast of current trapping BMP's
E. All of the above

9. List three (3) things you should learn when you take a trapper education course.

1. _____
2. _____
3. _____

CHAPTER 2 – ETHICS, EDUCATION & SOCIAL CONCERNS

1. Define "trapping ethics"

2. The Montana Trappers Association articles of conduct are _____

- A. Respect the animal - trap humanely
- B. Urge that furs be used for true needs of people
- C. Take good care of furs from trap line to market
- D. Respect fellow trappers and other land users
- E. Support research in trapping methods and requirements for furbearing wildlife
- F. Know the laws, obey the laws, help enforce the laws
- G. All of the above

3. Trappers working within the law benefit rather than diminish wildlife.

True False

4. Furbearing animals are not a public resource.

True False

5. Trapping is a privilege not a right.

True False

6. Traps should be set in a manner that will reduce non target catches.

True False

7. It is an ethical practice to waste fur.

True False

8. Anyone wasting furs has no right on a trap line.

True False

9. In cooperating with other recreationalists trappers must _____

- A. Be aware that other people may be using the area
- B. Leave an area if you feel that your presence may offend others
- C. Be polite
- D. All of the above

10. An animal is not your property until your trap closes on it.

True False

11. A trapper is just a taker of furs.
True False
12. Animals must be dispatched as quickly and humanely as possible.
True False
13. Types of landowners in Montana are _____
A. Private landowners
B. Public lands
C. Both of the above
14. Disease, population control and damage to crops and property are some reasons that landowners permit trapping on their land.
True False
15. According to Montana State law, the 3 classifications of animals that trappers can harvest are:
1. _____
2. _____
3. _____
16. Trappers need to be active at the local and state levels to insure trapping will continue.
True False
17. Trappers must trap in a manner that is acceptable to the general public.
True False

CHAPTER 3 – ECOSYSTEMS & BIOLOGY

1. Biology is simply the study of the life history of an animal.

True False

2. There are seven (7) life zones or ecosystems in Montana. Complete each sentence describing each one.

A. Alpine is only found in the highest _____ and is too cool for _____ growth.

B. Montane has a _____ to form the upper limit of this zone.

C. Inter-mountain Grassland is similar to the lower _____.

D. Riparian is close to _____ and include _____, _____, along _____, _____ and wetlands.

E. Shrub Grassland is primarily _____ grassland.

F. Plains Grasslands are generally flat and rolling but can contain eroded _____ in parts of Montana.

G. Plains forest occupy areas in the _____ half of Montana's plains.

3. Mammals feed their young grass.

True False

4. One of the animal families classified as carnivores in furbearer identification is _____

- A. rodents
- B. mountain lion
- C. raccoon
- D. none of the above

5. The otter is a member of the weasel family.

True False

6. Rodent furbearer characteristics include a high reproductive rate and sharp chisel-shaped _____.

7. A bobcat is a member of the feline or _____ family.

8. All mammals are _____ blooded.

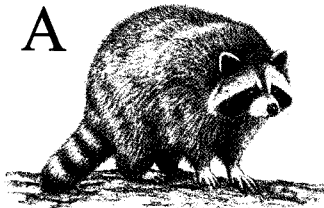
A. warm B. cold

9. Another word for the dog family is _____.

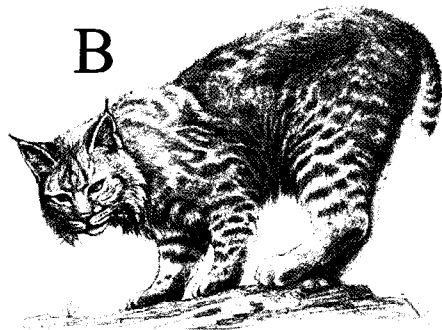
10. Identify the following furbearers.

- i. Beaver _____
- ii. Bobcat _____
- iii. Fox _____
- iv. Otter _____
- v. Pine Marten _____
- vi. Coyote _____
- vii. Muskrat _____
- viii. Ermine _____
- ix. Badger _____
- x. Raccoon _____
- xi. Mink _____
- xii. Fisher _____

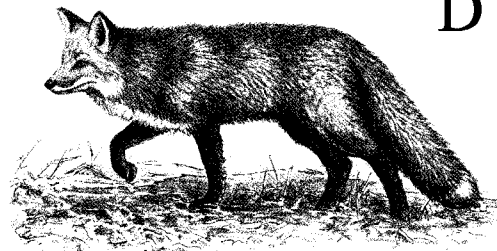
A



B



D



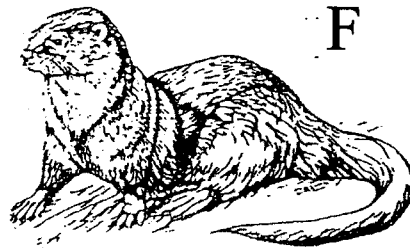
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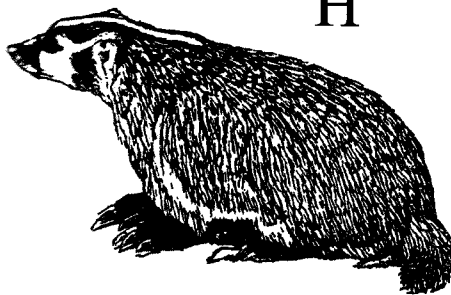
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F



H



I



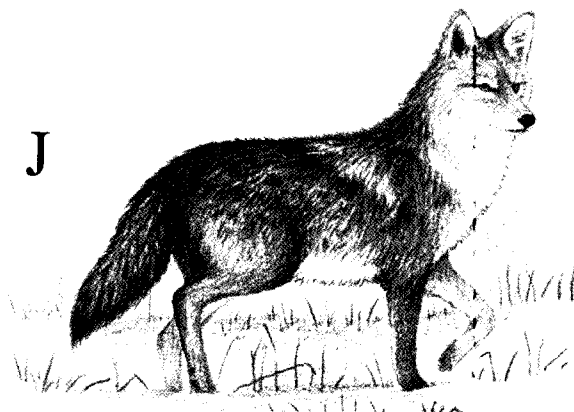
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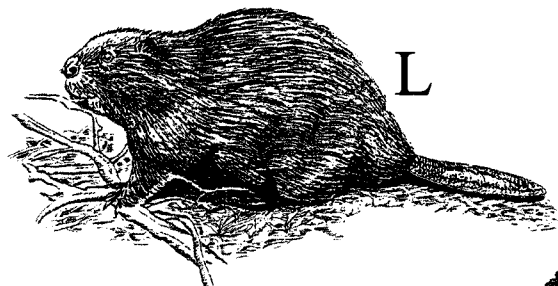
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CHAPTER 4 – CONSERVATION & FURBEARER MANAGEMENT

1. The wildlife of Montana is managed under the legal authority of _____ and the _____.
2. Furbearer management decisions are made from information received from _____, _____ and _____.
3. Changes in furbearer habitat cause by man will not have an impact on furbearer numbers.
True False
4. Trappers help estimate furbearer population trends by providing information through questionnaires, _____ and _____ collection.
5. Standard trapping licenses sold in Montana are _____, _____, _____, and _____.
6. Trapping is allowed in all lands in Montana administered by the National Park Service.
True False
7. Montana is divided into _____ trapping districts.
8
6
7
10
8. Trapping quotas are used to _____ the species by limiting the total take in an area.
9. Some species of furbearers require _____
 - A. reporting
 - B. pelt tagging
 - C. carcass collection
 - D. skull collection
 - E. all of the above
10. Three (3) areas a trapper should observe when managing a trapping area are _____, _____, and _____.

11. Natural resources fall into two categories _____ & _____ .

12. A responsible trapper will utilize carcasses of harvested furbearers as winter feed stations by returning them to remote areas to help other birds and animals during the winter months.

True False

13. A trapper will plan his harvest strategy to take furbearers at the best time of the year to conserve _____.

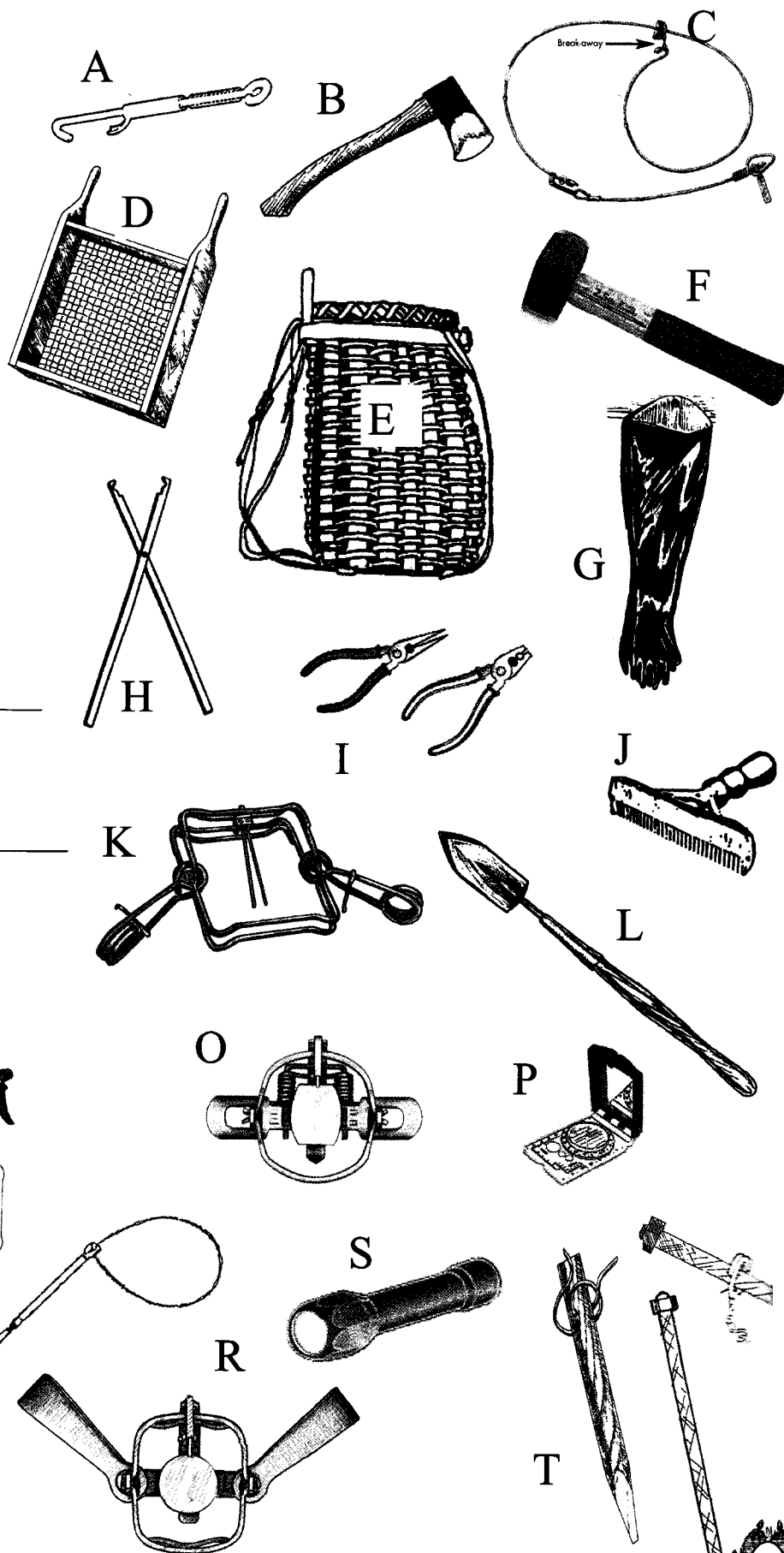
14. Define sustainable management of furbearer populations.

CHAPTER 5 – TRAPLINE EQUIPMENT

1. What must all snares in Montana have? _____
 - A. a swivel
 - B. a break away device
 - C. a spring
 - D. a relaxing lock
 - E. all of the above
2. What trap is the best choice for trapping in urban areas? _____
 - A. foothold
 - B. Bodygrip
 - C. cage trap
 - D. snare
 - E. all of the above
3. The pan on foothold traps should be set _____ with the jaws when the trap is set.
4. What is the purpose of the forming and drying board or stretcher? _____
 - A. hold the pelt in it's natural form while the pelt dries
 - B. stretch the pelt to it's maximum size
 - C. aid in skinning
 - D. none of the above
5. When using a solid board for drying pelts you need to insert a belly stick/wedge.
True False
6. A trapper usually only has one knife for all skinning applications.
True False

7. Identify the traps and accessories that are needed to successfully maintain a trap line.

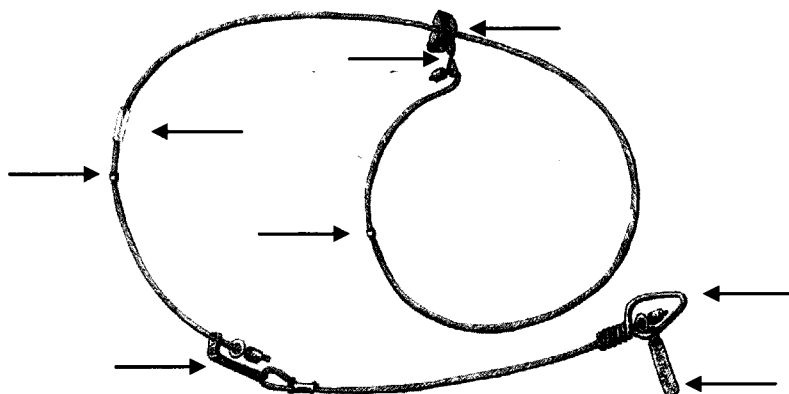
- i. Hammer _____
- ii. Shovel/Trowel _____
- iii. Fur Comb _____
- iv. Rubber boots _____
- v. Pliers _____
- vi. Catch Pole _____
- vii. Body Grip Trap _____
- viii. Snare _____
- ix. Rubber Gloves _____
- x. Compass _____
- xi. Flashlight _____
- xii. Hatchet/Ax _____
- xiii. Dirt Sifter _____
- xiv. Pack Basket _____
- xv. Bodygrip Setting Tool _____
- xvi. Coil Spring Trap _____
- xvii. Stakes _____
- xviii. Bodygrip Safety Gripper _____
- xix. Baits & Lures _____
- xx. Long Spring Trap _____



8. Label the parts on the snare & trap diagrams.

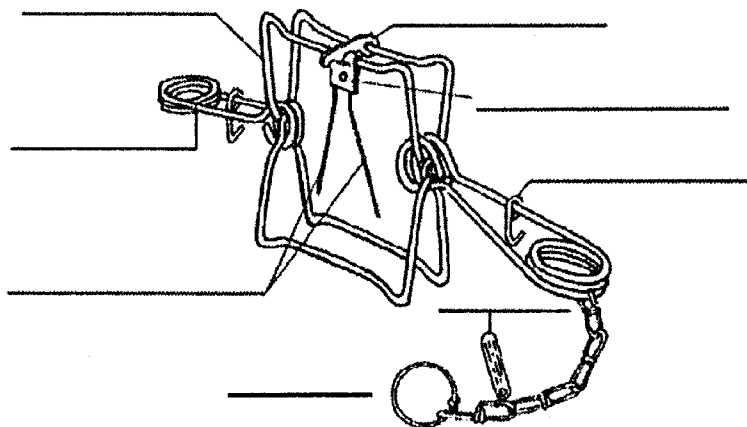
SNARE

- A. Break away device
- B. Wammie/Stabilizing tube
- C. Lock
- D. Maximum Loop Stop
- E. Minimum Loop Stop
- F. Trappers Tag
- G. Mid Cable Swivel
- H. End Swivel/Anchoring Device



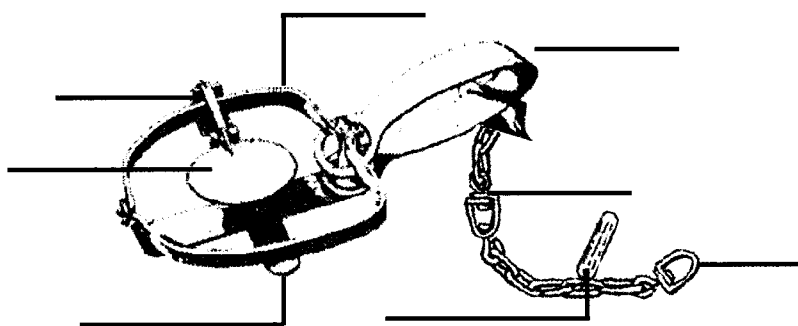
BODY GRIP TRAP

- A. Spring
- B. Trigger
- C. Trigger Wires
- D. Trappers Tag
- E. Jaw
- F. Safety Hook
- G. Dog
- H. Chain With Anchor Ring



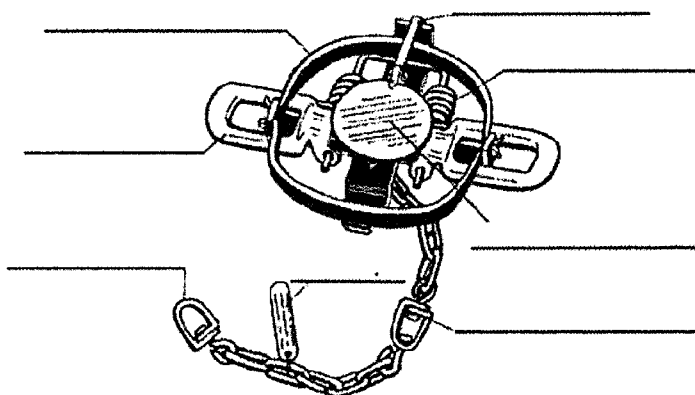
LONG SPRING FOOTHOLD

- A. Jaw
- B. Spring
- C. Mid Chain Swivel
- D. End Swivel/Anchoring Device
- E. Dog
- F. Pan
- G. Trappers Tag
- H. Base/Cross



COIL SPRING FOOTHOLD

- A. Dog
- B. Spring
- C. Pan
- D. Trappers Tag
- E. Mid Chain Swivel
- F. End Swivel/Anchoring Device
- G. Jaw
- H. Lever



CHAPTER 6 – PRIOR & POST SEASON PREPARATION AND BUSINESS MANAGEMENT

1. It is important to keep good records pertaining to your harvest when trapping.
True False
2. Maps and aerial photos do not help the trapper.
True False
3. Cleaning and dying traps before the trapping season starts is not necessary.
True False
4. Lures that are used for attractants are _____.
A. scents
B. bait
C. urine
D. visual
E. all of the above
5. What are the four (4) stages of a fur harvest management plan?
1. _____
2. _____
3. _____
4. _____
6. When trappers keep records it helps them become better wildlife managers from season to season.
True False
7. Harvest records kept every day can help determine how _____ has a positive or negative effect on trapping.
8. The most well known of the animal glands is _____.
9. Glands can be used from harvested animals for lures or for sale.
True False
10. Scents are more effective than bait because it lasts _____, broadcasts odor _____ and creates greater _____.
11. Baits can be tainted or fermented before they are used for attractants.
True False
12. Waxing traps can be dangerous and proper protection for your hands and eyes should be practiced.
True False

13. Three reasons to treat snares before using them are:

1. _____
2. _____
3. _____

14. A post season trapping requirement or law is to _____ all traps and snares.

SUB-SECTION CHAPTER 6 – TAX AND THE TRAPPER

1. It is a good idea to save all receipts related to your trapping venture.
True False
2. Do you have to report trapping income on your tax return? _____
A. On the advice of your tax preparer
B. If it is a significant amount
C. No,
D. Yes
3. You cannot deduct your trapping mileage on your vehicle.
True False
4. Which expenses listed below are tax deductible as trapping expenses.
A. baits and lures
B. trapping license
C. repair and maintenance
D. professional tax advice
E. all of the above
5. In addition to fur sales a trapper reports income from the sale of _____,
and _____.
6. You can deduct expenses from publications that provide trapping information that helps generate income.
True False

CHAPTER 7 - BMP'S & RESPONSIBLE HARVESTING

1. Define "humane trapping":

2. Define "lethal threshold":

3. Reasons for Best Management Practices are _____

- A. Animals deserve humane treatment
- B. Animal welfare and humane methods are more efficient
- C. Animal welfare and humane methods result in less pelt damage
- D. The practice of humane methods promotes good public relations
- E. All of the above

4. Animals must be dispatched in the quickest and most humane methods.

True False

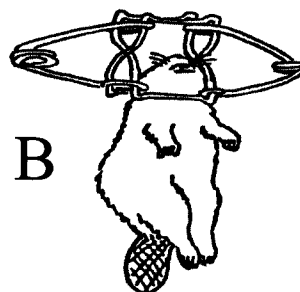
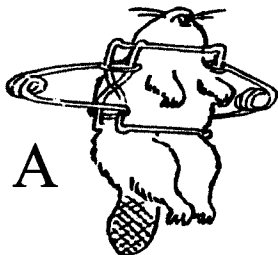
5. The Trappers Code of Respect for wild fur harvesters _____

- A. Respect for the environment
- B. Respect for animals
- C. Respect for people
- D. All of the above

6. BMP (Best Management Practices) is a program to improve the welfare of captured animals and to document the improvement of technology in trapping.

True False

7. Identify the proper strike zone for a body gripping trap. _____

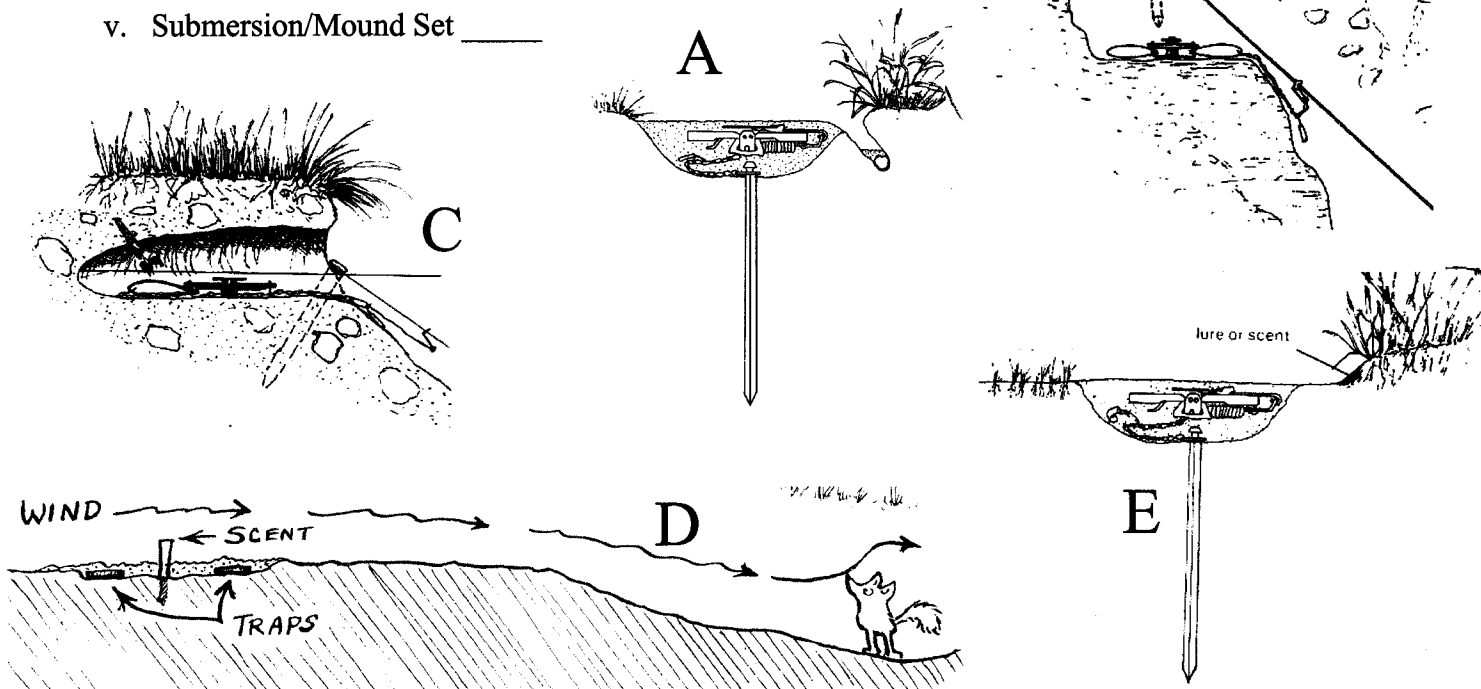


8. Identify the proper placement to dispatch a live caught furbearer by placing an X there.



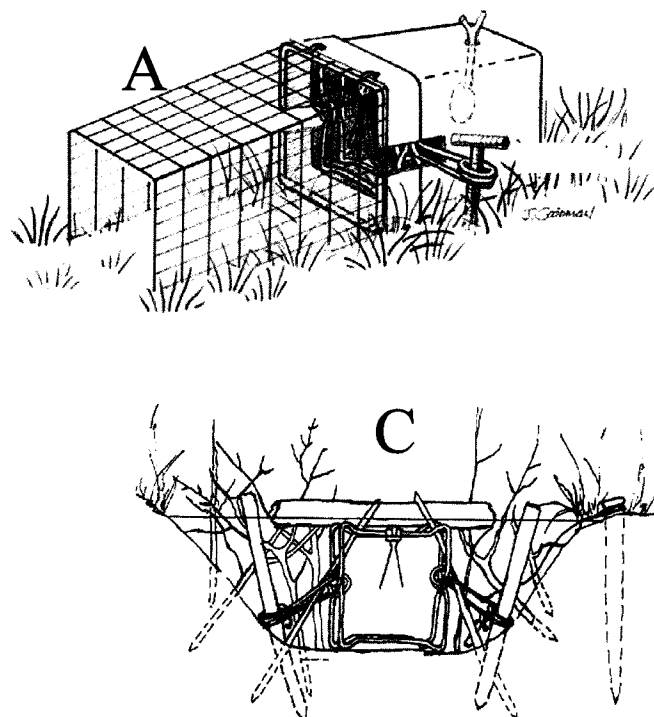
9. Identify the following sets using a foothold trap.

- i. Scent Post Set _____
- ii. Dirt Hole Set _____
- iii. Pocket Set _____
- iv. Flat Set _____
- v. Submersion/Mound Set _____



10. Identify the following sets using a bodygrip trap.

- i. Channel Set _____
- ii. Recessed Cubby Set _____
- iii. Running Pole Set _____

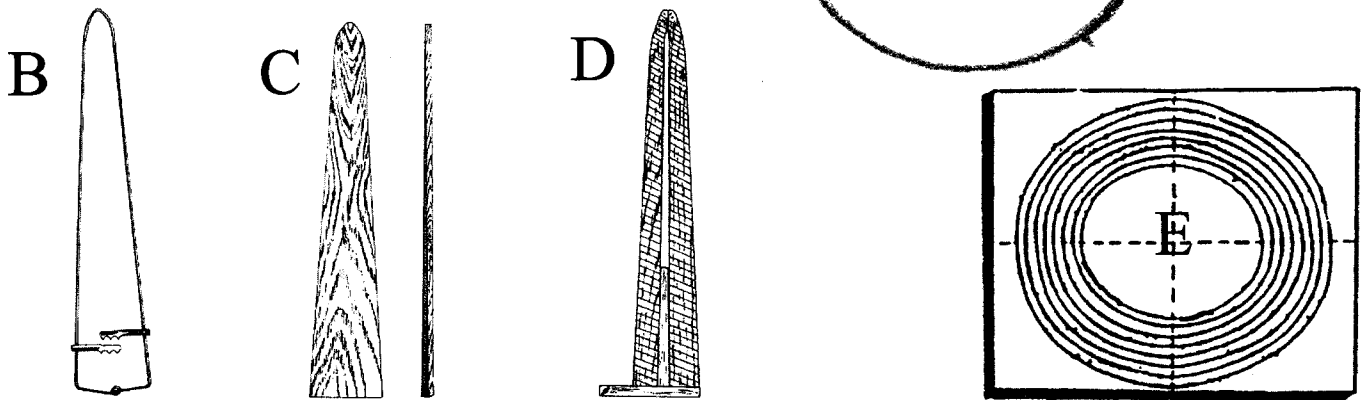


CHAPTER 8 – FUR HANDLING

1. Which of the following are health precautions a trapper can take to protect themselves from disease and parasites? _____
 - A. cover open cuts, sores or other exposed skin before starting to work on any animal
 - B. wear disposable gloves
 - C. wash thoroughly in warm soap water when done
 - D. ask a doctor about receiving an inoculation
 - E. all of the above
2. Which of the following animals is not put up cased fur-in? _____
 - A. raccoon
 - B. skunk
 - C. muskrat
 - D. coyote
3. Which animal should have the hind leg part of the pelt tacked down on the same side as the tail? _____
 - A. fox
 - B. mink
 - C. raccoon
 - D. bobcat
4. What animal requires the fur and fleshing beam to be damp to prevent singeing? _____
 - A. mink
 - B. muskrat
 - C. beaver
 - D. otter
5. The pelt preparation starts with removal of the animal from the trap.
True False
6. When nailing or tacking a beaver pelt to a board how far apart should the nail or tacks be? _____
 - A. 2 - 4 inches
 - B. 1 - 2 inches
 - C. $\frac{3}{4}$ of an inch
 - D. it doesn't really matter
7. Except for the beaver and badger, all furbearers should be _____ skinned.

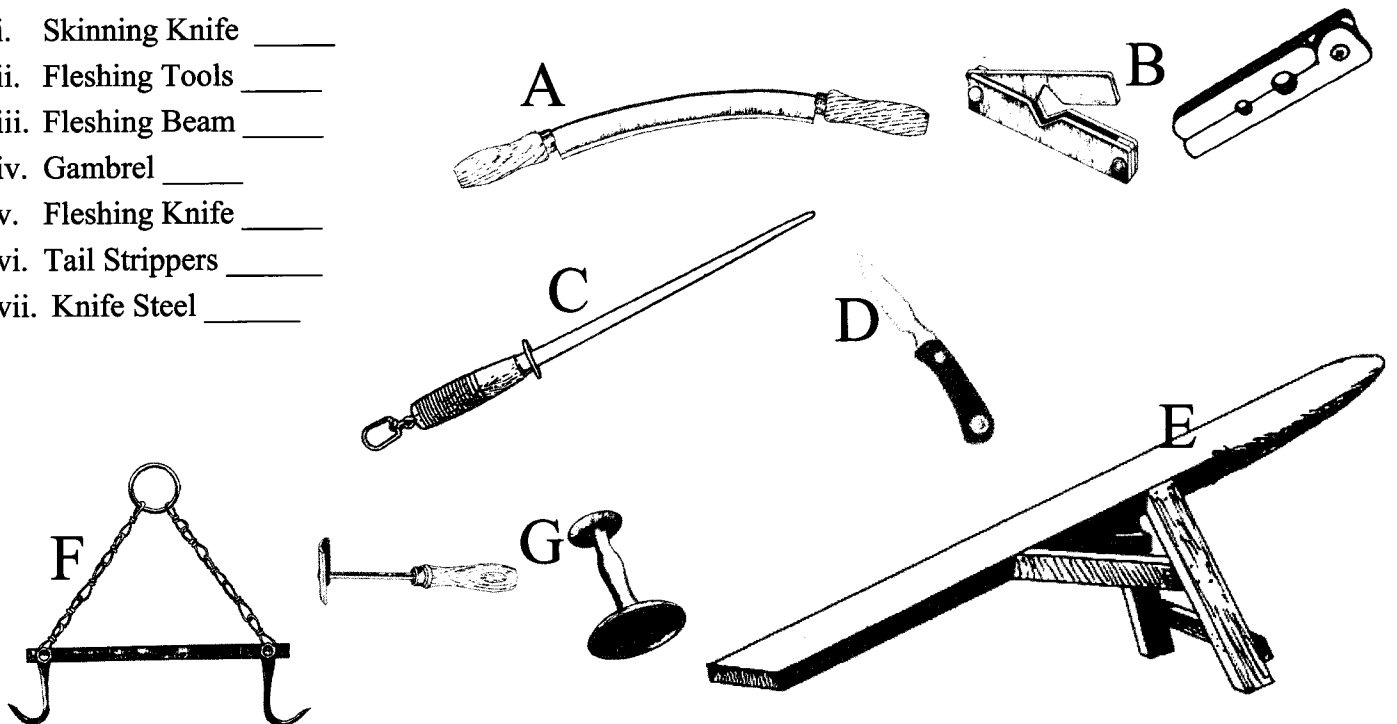
8. Identify below the different types of equipment on which you should put your pelt to dry before selling.

- i. Wooden Stretcher Adjustable _____
- ii. Beaver Board _____
- iii. Wire Beaver Hoop _____
- iv. Wooden Form W/Belly Board _____
- v. Wire Stretcher _____



9. Identify below some of the equipment you will need to properly prepare your fur to be sold.

- i. Skinning Knife _____
- ii. Fleshing Tools _____
- iii. Fleshing Beam _____
- iv. Gambrel _____
- v. Fleshing Knife _____
- vi. Tail Strippers _____
- vii. Knife Steel _____



CHAPTER 9 – MARKETING

1. What four (4) dominant factors determine the demand for a pelt?
 2. _____
 3. _____
 4. _____
 5. _____
2. List the common ways of marketing furs.
 - A. _____
 - B. _____
 - C. _____
3. When marketing locally, a buyer will usually take both good and bad fur.
True False
4. Marketing locally involves minor travel, shipping costs and immediate payment on the sale of furs.
True False
5. Local or state auctions may average lower prices than a direct sale.
True False
6. A trapper will receive a written record of his fur _____ from a National Fur market.
7. If handled improperly, fur will _____ before the actual sale occurs.
8. Furs can be shipped in air-tight plastic bags or containers without harm.
True False
9. Identification tags should include; _____, _____,
_____ and _____.
10. External identification is required of fur shipped under the _____.
11. Usually the best fur sales occur from _____ to _____.
12. A trapper should learn the basics of fur grading so they know the quality and value of their pelts and are given a fair price.
True False
13. Fur primeness is the result of the decrease in the length of day light.
True False
14. In an over-prime pelt the hair roots are near the surface causing the hair to fall out or _____.

CHAPTER 10 – TRAPLINE SAFETY & HEALTH

1. What is a zoonotic disease? _____
 - A. a disease you get at the zoo
 - B. germs in water at the zoo
 - C. disease or parasite transmitted from animals to humans
 - D. the method of euthanizing sick animals at the zoo
2. What are the types of zoonotic diseases? _____
 - A. viral diseases
 - B. bacterial diseases
 - C. parasites
 - D. all of the above
3. Rabies is a zoonotic disease.
True False
4. Many of the symptoms of zoonotic diseases mimic the flu or common cold.
True False
5. Rubber gloves provide no protection when skinning or handling harvested animals.
True False
6. Three (3) types of plague that can be transmitted to humans from animals.
True False
7. You can always identify a sick animal.
True False
8. You should never tell other people where you are trapping.
True False
9. Hypothermia happens when your body temperature gets too _____
 - A. hot
 - B. cold
10. When frostbite happens you should rub the area with snow.
True False
11. You can get sick but not die from some zoonotic diseases.
True False

12. A 5 foot length of rope with a loop on the end is good to carry on a trapline to _____

- A. rope a horses
- B. snag a beaver
- C. release a large body grip or conibear trap

13. Three viral diseases are:

- 1. _____
- 2. _____
- 3. _____

14. Lyme disease is cause by a spirochete.

True False

15. In addition to tick bites, tularemia can occur through digesting _____ cooked meat.

16. In humans, sarcoptic mange is called _____.

17. An effective anti-viral, anti-bacterial agent for a disinfectant is common _____.