which they excavate in the ground. The Texan Wolf inhabits the latitude of Texas and southward. It is of a tawny red color and nearly as large as the grey species, possessing the same savage nature.

In April or May the female wolf retires to her burrow or den, and her young, from six to ten in number, are brought forth.

The wolf is almost as sly and cunning as the fox, and the same caution is required in trapping the animal. They are extremely keen scented, and the mere touch of a human hand on the trap is often enough to preclude the possibility of capture. A mere footprint, or the scent of tobacco juice, they look upon with great suspicion, and the presence of either will often prevent success.

The same directions given in regard to trapping the fox are equally adapted for the wolf. The trap (size No. 4, page 141) should be smoked or smeared with beeswax or blood, and set in a bed of ashes or other material as therein described, covering with moss, chaff, leaves or some other light substance. The clog should be fully twice as heavy as that used for the fox. Some trappers rub the traps with "brake leaves," sweet fern, or even skunk's cabbage. Gloves should always be worn in handling the traps, and all tracks should be obliterated as much as if a fox were the object sought to be secured.

A common way of securing the wolf consists in setting the trap in a spring or puddle of water, throwing the dead body of some large animal in the water beyond the trap in such a position that the wolf will be obliged to tread upon the trap, in order to reach the bait. This method is described both under the head of the Fox and the Bear.

Another plan is to fasten the bait between two trees which are very close together, setting a trap on each side and carefully concealing them as already directed, and securing each to a clog of about twenty pounds in weight. The enclosure described on page 144 is also successful.

There are various scent or trail baits used in trapping the wolf. Oil of Assafœtida is by many trappers considered the best, but Oil of Rhodium, powdered fennel, fenugreek and Cummin Oil are also much used. It is well to smear a little of the first mentioned oil near the traps, using any one of the other substances, or indeed a mixture of them all, for the trail. This may be made by smearing the preparation on the sole of the boots and walking in the direction of the traps, or by dragging from one trap to another a piece of meat scented with the substance, as described under the head of Mink.

The wolf is an adept at feigning death, playing "possum" with a skill which would do credit to that veritable animal itself.

A large dead-fall, constructed of logs, page 17, when skilfully scented and baited, will often allure a wolf into its clutches, and a very strong twitch-up, with a noose formed of heavy wire, or a strip of stout calf hide, will successfully capture the crafty creature.

In skinning the wolf the hide may be removed either by, first ripping up the belly, or in a circular piece, as described connection with the fox, both methods being much used. The board and hoop stretchers used in preparing the skin are described on pages 273 and 275.
THE PUMA.

The puma, commonly known also as the panther or cougar, is the largest American representative of the Cat tribe, and for this reason is often dignified by the name of the "American Lion." It is found more or less abundantly throughout the United States; and although not generally considered a dangerous foe to mankind, it has often been known in the wild districts to steal upon the traveller unawares, and in many instances human beings have fallen a prey to the powerful claws and teeth of this powerful animal.

The life of the puma is mostly in the trees. Crouching upon the branches it watches for, or steals, cat-like, upon its prey. Should a solitary animal pass within reach, the puma will not hesitate in pouncing upon the unfortunate creature; but if a herd of animals, or party of men, should be travelling together, the caution of the brute asserts itself, and he will often dog their footsteps for a great distance, in hopes of securing a straggler. Birds are struck down by a single blow of the puma's ready paw, and so quick are his movements that even though a bird has risen on the wing, he can often make one of his wonderful bounds, and with a light, quick stroke, arrest the winged prey before it has time to soar beyond reach. The puma is a good angler. Sitting by the water's edge he watches for his victims, and no sooner does an unfortunate fish swim within reach, than the nimble paw is outstretched, and it is swept out of the water on dry land, and eagerly devoured.

A puma has been known to follow the track of travellers for days together, only daring to show itself at rare intervals, and never endeavoring to make an attack except through stealth. The animal will often approach cautiously upon a traveller until sufficiently near to make its fatal spring; but if the pursued party suddenly turn round and face the crawling creature, the beast becomes discomfited at once, and will retreat from the gaze which seems to it a positive terror. So long as a puma can be kept in sight, no danger need be feared from the animal but it will improve every opportunity of springing unobservedly upon a heedless passer by. The total length of the puma is six feet and a half, of which the tail occupies a little over two feet. Its color is of a uniform light tawny tint, fading into light grey on the under parts, and the tip of the tail is black. The puma is one of the few members of the Cat tribe, which are without the usual spots or stripes so observable in the tiger and leopard. The lion has the same uniformity of color, and it is perhaps partly on that account that the panther is so often known as the American lion. In infancy the young pumas possess decided tiger-like markings, and leopard-like spots, but these disappear altogether as the animal increases in size. The cougar has learned by experience a wholesome fear of man, and as civilization has extended throughout our country, the animals have been forced to retire from the neighborhood of human habitations and hide themselves in thick, uncultivated forest lands.

Sometimes, however, the animal, urged by fierce hunger, will venture on a marauding expedition for several miles, and although not an object of personal dread to the inhabitants, he often becomes a pestilent neighbor to the farmer, committing great ravages among his flocks and herds, and making sad havoc in his poultry yard. It is not the fortune of every puma, however, to reside in the neighborhood of such easy prey as pigs, sheep and poultry, and the greater
number of these animals are forced to depend for their subsistence on their own success in chasing or surprising the various animals on which they feed.

When a puma is treed by hunters, it is said to show great skill in selecting a spot wherein it shall be best concealed from the gazers below, and will even draw the neighboring branches about its body to hide itself from the aim of the hunter's rifle. While thus lying upon the branches the beast is almost invisible from below, as its fur, when seen, harmonizes so well with the the bark which covers the boughs, that the one can scarcely be distinguished from the other.

The puma loves to hide in the branches of trees, and from this eminence to launch itself upon the doomed animal that may pass within its reach. It may, therefore, be easily imagined how treacherous a foe the creature may be when ranging at will among the countless trees and jungles of our American forests.

Although so stealthy and sly a creature the cougar possesses very little cunning and is easily trapped. The Gun trap, page 20, is commonly and successfully employed in South America in the capture of the jaguar, as our title illustration, page 15, represents, and it may also be used with the same success in trapping the puma. The Bow trap, page 23, and the dead-fall described in the early part of the book, will all be found to work admirably in the destruction of this treacherous beast.

The animal may be entrapped alive, should any of our young trappers dare to try the experiment.

There are two ways of accomplishing this. The first is by the aid of a huge coop of logs, as described on page 30 or 33, and the other by the Pit-fall, as exemplified on page 31. Huge twitch-ups may also be constructed, using very strong wire. The bait may consist of a fowl, sheep's head, or the heart of any animal. Fresh meat of any kind will answer the purpose, and in the case of the
Pit-fall a live fowl is preferable to a dead one as it will attract the puma by its motions, or by its cackling, and thus induce him to spring upon his prey, which will precipitate him to the bottom of the pit and thus effect his capture.

They are commonly taken with the steel trap. The puma seldom leaves the vicinity of the carcass of an animal it has killed until it is all devoured. When such a carcass can be found the capture of the beast is easily effected. Set the trap, size No. 5, page 143, near the remains, and cover the carcass with leaves. The next visit of the animal will find him more attached to the place than ever,—so much so that he will be unable to "tear himself away."

The skin of the puma is properly removed by first cutting up the belly as described under the Beaver, using great care about the head and face. Use the hoop stretcher, page 275.

THE CANADIAN LYNX.

The lynx represents another of the Cat tribe, and as its name implies is a native of the regions north of the United States, although sometimes found in upper Maine and on the lower borders of the great lakes. It is commonly known throughout Canada as the Peshoo, or "Le Chat."

Our illustration is a truthful representation of the animal. Its total length exceeds three feet, and its tail is a mere stub. The fur is thick, and the hairs are long, the general color being grey, sprinkled with black. The legs are generally darker than the body, and the ears are often edged with white. The limbs and muscles are very powerful, the paws are very large for the size of the animal, and are furnished with strong white claws, which are imbedded in the fur of the feet when not in use, they are shown in our illustration. The ears of the lynx form a distinct feature, by which the animal could be easily identified; they are long and tipped with stiff projecting hairs, giving the creature a very odd appearance.

The peshoo can not be said to be a very dangerous animal, unless it is attacked, when it becomes a most ferocious antagonist. The writer knew of a gentleman who was pounced upon and very nearly killed by one of these infuriated creatures, and there are many like instances on record.

The principal food of the lynx consists of the smaller quadrupeds, the American hare being its favorite article of diet. It is a good swimmer, and a most agile climber, chasing its prey among the branches with great stealth and dexterity. Like the wolf, fox, and many other flesh eating-animals, the lynx does not content itself with the creatures which fall by the stroke of its own talons, or the grip of its own teeth, but will follow the trail of the puma, in its nocturnal quest after prey, and thankfully partake of the feast which remains after its predecessor has satisfied its appetite.

While running at full speed, the lynx presents a most ludicrous appearance, owing to its peculiar manner of leaping. It progresses in successive bounds, with its back slightly arched, and all the feet striking the ground nearly at the same instant. Powerful as the animal is, it is easily killed by a blow on the back, a slight stick being a sufficient weapon wherewith to destroy the creature. For this reason the "Dead-fall" is particularly adapted for its capture, and is very
successful, as the animal possesses very little cunning, and will enter an
enclosure of any kind without the slightest compunction, when a tempting bait is
in view. The dead-fall should of course be constructed on a large scale, and it is
a good plan to have the enclosure deep, and the bait as far back as will
necessitate the animal being well under the suspended log in order to reach it.
The bait may consist of a dead quadruped or of fresh meat of any kind.

The Gun trap, page 20, and the Bow trap, page 23, will also be found efficient,
and a very powerful twitch-up, constructed from a stout pole and extra strong
wire will also serve to good purpose. The lynx is not so prolific as many of the
feline tribe, the number of its young seldom exceeding two, and this only once a
year. The fur of the animal is valuable for the purposes to which the feline skin
is generally adapted, and commands a fair price in the market. Those who hunt
or trap the lynx will do well to choose the winter months for the time of their
operations, as during the cold season the animal possesses a thicker and warmer
fur than it offers in the summer months.

When the steel trap is used, it should be of size No. 4, page 141, set at the
opening of a pen of stakes, the bait being placed at the back of the enclosure in
such a position, as that the animal will be obliged to step upon the pan of the trap
in order to reach it. Any of the devices described under "Hints on Baiting" will
be found successful.

The skin of the animal may be removed as directed in the case of the fox,
being drawn off the body whole, or it may be removed after the manner of the
beaver, and similarly stretched.

THE WILD CAT.

This animal is one of the most wide-spread species of the Cat tribe, being
found not only in America, but throughout nearly the whole of Europe as well as
in Northern Asia. In many parts of the United States, where the wild cat was
wont to flourish, it has become exterminated, owing to civilization and the destruction of forest lands.

Many naturalists are of the opinion that the wild cat is the original progenitor of our domestic cat, but there is much difference of opinion in regard to the subject. Although they bear great resemblance to each other, there are several points of distinction between the two; one of the most decided differences being in the comparative length of the tails. The tail of the wild cat is little more than half the length of that of the domestic cat, and much more bushy.

The color of the wild animal is much more uniform than in the great raft of "domestic" mongrel specimens which make night hideous with their discordant yowls, although we sometimes see a high bred individual which, if his tail was cut off at half its length, might easily pass as an example of the wild variety.

The ground tint of the fur in the wild cat is yellowish grey, diversified with dark streaks over the body and limbs, much after the appearance of the so-called "tiger cat." A row of dark streaks and spots extends along the spine, and the tail is thick, short and bushy, tipped with black and encircled with a number of rings of a dark hue. In some individuals the markings are less distinct, and they are sometimes altogether wanting, but in the typical wild cat they are quite prominent. The fur is rather long and thick, particularly so during the winter season, and always in the colder northern regions.

The amount of havoc which these creatures often occasion is surprising, and their nocturnal inroads, in poultry yards and sheep folds, render them most hated pests to farmers in the countries where these animals abound. They seem to have a special appetite for the heads of fowls, and will often decapitate a half dozen in a single night, leaving the bodies in otherwise good condition to tell the story of their midnight murders. The home of the wild cat is made in some cleft of rock, or in the hollow of some aged tree, from which the creature issues in the dark hours and starts upon its marauding excursions. Its family numbers from three to six, and the female parent is smaller than the male, the total length of the latter being three feet.
Inhabiting the most lonely and inaccessible ranges of rock and mountain, the wild cat is seldom seen during the daytime. At night, like its domestic relative, he prowls far and wide, walking with the same stealthy step and hunting his game in the same tiger-like manner. He is by no means a difficult animal to trap, being easily deceived and taking a bait without any hesitation. The wild cat haunts the shores of lakes and rivers, and it is here that the traps may be set for them. Having caught and killed one of the colony, the rest of them can be easily taken if the body of the dead victim be left near their hunting ground and surrounded with the traps carefully set and concealed beneath leaves moss or the like. Every wild cat that is in the neighborhood will be certain to visit the body, and if the traps are rightly arranged many will be caught. The trap No. 3, page 141 is generally used. We would caution the young trapper in his approach to an entrapped wild cat, as the strength and ferocity of this animal under such circumstances, or when otherwise "hard pressed," is perfectly amazing. When caught in a trap they spring with terrible fury at any one who approaches them, not waiting to be assailed, and when cornered or hemmed in by a hunter they will often turn upon their pursuer, and springing at his face will attack him with most consummate fury, often inflicting serious and sometimes fatal wounds. When hunted and attacked by dogs, the wild cat is a most desperate and untiring fighter, and extremely difficult to kill, for which reason it has been truthfully said that "if a tame cat has nine lives, a wild cat must have a dozen."

The twitch-up, erected on a large scale, is utilized to a considerable extent in England in the capture of these animals; and these, together with steel traps and dead-falls, are about the only machines used for their capture. We would suggest the garrote, bow and gun trap also as being very effective. The bait may consist of the head of a fowl or a piece of rabbit or fowl flesh: or, indeed, flesh of almost any kind will answer, particularly of the bird kind.

In skinning the wild cat the same directions given under the head of the Fox may be followed, or the pelt may be ripped up the belly and spread on a hoop stretcher, page 275.

THE BEAR.

There are several species of the Bear tribe which inhabit our continent, the most prominent of which are the Grizzly, and the Musquaw or common Black Bear. There is no other animal of this country which is more widely and deservedly dreaded than the grizzly bear. There are other creatures, the puma and wild cat, for instance, which are dangerous when cornered or wounded, but they are not given to open and deliberate attack upon human beings. The grizzly, however, or "Ephraim," as he is commonly termed by trappers, often displays a most unpleasant readiness to attack and pursue a man, even in the face of fire arms. In many localities, however, where hunting has been pursued to considerable extent, these animals have learned from experience a wholesome fear of man, and are not so ready to assume the offensive, but a "wounded" grizzly is one of the most horrible antagonists of which it is possible to conceive, rushing upon its victim with terrible fury, and dealing most tearing and heavy blows with its huge claws.

In length this formidable animal often exceeds eight feet, and its color varies from yellowish to brownish black, and some specimens are found of a dirty grey color.
The legs are usually darker than the rest of the body, and the face is generally of a lighter tint. The fore limbs of the animal are immensely powerful; and the foot of a full-grown individual is fully eighteen inches long, and armed with claws five inches in length. The grizzly inhabits the Rocky Mountain regions and northward, being found in considerable numbers in the western part of British America. Its hair is thick and coarse, except in the young animal, which possesses a beautiful fur.

All other creatures seem to stand in fear of this formidable beast. Even the huge bison, or buffalo, of the Western Prairies sometimes falls a victim to the grizzly bear, and the very imprint of a bear's foot upon the soil is a warning which not even a hungry wolf will disregard.

Its food consists of whatever animal it can seize, whether human or otherwise. He also devours green corn, nuts, and fruits of all kinds. In his earlier years he is a good climber, and will ascend a tree with an agility which is surprisingly inconsistent with the unwieldy proportions of his body.

The average weight of a full-grown grizzly is over eight hundred pounds, and the girth around the body is about eight feet.

The Black bear, or Musquaw, which we illustrate is common throughout nearly all the half settled-districts of North America. But as the fur and fat are articles of great commercial value, the hunters and trappers have exercised their craft with such skill and determination that the animals are gradually decreasing in numbers. The total length of the black bear is seldom more than six feet, and its fur is smooth and glossy in appearance. The color of the animal is rightly conveyed by its name, the cheeks only partaking of a reddish fawn color.

It possesses little of that fierceness which characterizes the grizzly, being naturally a very quiet and retiring creature, keeping itself aloof from mankind, and never venturing near his habitations except when excited by the pangs of fierce hunger. When pursued or cornered it becomes a dangerous antagonist; and its furious rage often results in fearful catastrophes to both man and beast. Nothing but a rifle ball in the right spot will check the creature, when wrought up to this pitch of fury, and an additional wound only serves to increase its terrible ferocity. Bear-chasing is an extremely dangerous sport; and there are few bear-hunters in the land, however skilful, but what can show scars from the claws or teeth of some exasperated bruin.

The food of the black bear is mostly of a vegetable character, animal diet not being indulged in unless pressed by hunger. At such times it seems to especially prefer a young pig as the most desirable delicacy; and even full-grown hogs, it is said, are sometimes lifted from their pens and carried off in his deadly embrace.

Honey is his especial delight; and he will climb trees with great agility in order to reach a nest of bees, there being few obstacles which his ready claws and teeth will not remove where that dainty is in view. He is also very fond of acorns, berries, and fruits of all kinds.

The young of the bear are produced in January or February, and are from one to four in number. They are very small and covered with grey hair, which coat

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they retain until they are one year of age. The flesh of the bear is held in high esteem among hunters, and when properly prepared is greatly esteemed by epicures.

The fat of the animal is much used under the title of "Bear grease," and is believed to be an infallible hair rejuvenator, and therefore becomes a valuable article of commerce.

The bear generally hibernates during the winter, choosing some comfortable residence which it has prepared in the course of the summer, or perhaps betaking itself to the hollow of some tree. Sometimes, in case of early snow, the track of the bears may be distinguished, and if followed will probably lead to their dens, in which they can be secured with logs until it is desired to kill them.

The black bear has a habit of treading in a beaten track, which is easily detected by the eye of an experienced hunter or trapper, and turned to good account in trapping the animal.

There are various modes of accomplishing this result. The bear Dead-fall, described on page 17, is, perhaps, the most commonly used, and the Pit-fall, page 31, and "Giant Coop" trap are also excellent. The Gun trap and stone dead-fall, page 20, we also confidently recommend. When a steel trap is used it requires the largest size, especially made for the purpose. It should be supplied with a short and very strong chain firmly secured to a very heavy clog or grappling-iron page 147. If secured to a tree or other stationary object, the captured animal is likely to gnaw or tear his foot away, if, indeed, he does not break the trap altogether by the quick tightening of the chain. The clog should be only heavy enough to be an *impediment*, and may consist of a log or heavy stone. The grappling-iron, however, is more often used in connection with the bear trap. It is a common method in trapping the bear to construct a pen of upright branches, laying the trap at its opening, and covering it with leaves. The bait is then placed at the back in such a position that the animal, on reaching for it, will be sure to put his foot in the trap.

An experienced trapper soon discovers natural openings between rocks or
trees, which may be easily modified, and by the addition of a few logs so improved upon as to answer his purpose as well as a more elaborate enclosure, with much less trouble. Any arrangement whereby the bear will be obliged to tread upon the trap in order to secure the bait, is, of course, all that is required. The bait may be hung on the edge of a rock five feet from the ground, and the trap set on a smaller rock beneath it. He will thus be almost sure to rest his forefoot on the latter rock in order to reach the bait, and will thus be captured.

Another way is to set the trap in a spring of water or swampy spot. Lay a lump of moss over the pan, suspending the bait beyond the trap. The moss will offer a natural foot-rest, and the offending paw will be secured.

Bears possess but little cunning, and will enter any nook or corner without the slightest compunction when in quest of food. They are especially fond of sweets, and, as we have said, are strongly attracted by honey, being able to scent it from a great distance. On this account it is always used, when possible, by trappers in connection with other baits. These may consist of a fowl, fruit, or flesh of any kind, and the honey should be smeared over it. Skunk cabbage is said to be an excellent bait for the bear; and in all cases a free use of the Oil of Anise page 152, sprinkling it about the traps, is also advisable. Should the device fail, it is well to make a trail (see page 153) in several directions from the trap, and extending for several rods. A piece of wood, wet with Oil of Anise, will answer for the purpose.

The general method of skinning the bear consists in first cutting from the front of the lower jaw down the belly to the vent, after which the hide may be easily removed. The hoop-stretcher page 275, will then come into good use in the drying and preparing of the skin for market.

THE RACCOON.

Although allied to the Bear family, this animal possesses much in common with the fox, as regards its general disposition and character. It has the same slyness and cunning, the same stealthy tread, besides an additional mischievousness and greed. It is too common to need any description here, being found plentifully throughout nearly the whole United States. The bushy tail, with its dark rings, will be sufficient to identify the animal in any community. Raccoon hunts form the subject of many very exciting and laughable stories, and a "coon chase," to this day is a favorite sport all over the country. The raccoon, or "coon," as he is popularly styled, is generally hunted by moonlight. An experienced dog is usually set on the trail and the fugitive soon seeks refuge in a tree, when its destruction is almost certain. Hence the term "treed coon," as applied to an individual when in a dangerous predicament. Besides possessing many of the peculiarities of the fox, the "coon" has the additional accomplishment of being a most agile and expert climber, holding so firmly to the limb by its sharp claws as to defy all attempts to shake it off.

The home of the raccoon is generally in a hollow tree; the young are brought forth in May, and are from four to six in number.

In captivity this animal makes a very cunning and interesting pet, being easily tamed to follow its master, and when dainties are in view becomes a most adroit pickpocket. Its food is extensive in variety, thus making it quite an easy matter
to keep the creature in confinement. Nuts and fruits of all kinds it eagerly devours, as well as bread, cake and potatoes. It manifests no hesitation at a meal of rabbit, rat, squirrel, or bird, and rather likes it for a change, and when he can partake of a dessert of honey or molasses his enjoyment knows no bounds. Frogs, fresh water clams, green corn, and a host of other delicacies come within the range of his diet, and he may sometimes be seen digging from the sand the eggs of the soft-shelled turtle, which he greedily sucks. We cordially recommend the coon as a pet. He becomes very docile, and is full of cunning ways, and if the young ones can be traced to their hiding-place in some hollow tree, and secured, if not too young, we could warrant our readers a great deal of real sport and pleasure in rearing the little animals and watching their ways.

In cold climates the raccoon lies dormant in the winter, only venturing out on occasional mild days; but in the Southern States he is active throughout the year, prowling about by day and by night in search of his food, inserting his little sharp nose into every corner, and feeling with his slender paws between stones for spiders and bugs of all kinds. He spies the innocent frog with his head just out of the water, and pouncing upon him, he despatches him without a moment's warning. There seems to be no limits to his rapacity, for he is always eating and always hungry. The print of the raccoon's paw in the mud or snow is easily recognized, much resembling the impression made by the foot of a babe.

The best season for trapping the coon is late in the fall, winter, and early spring, or from and between the months of October and April. During this time the pelts are in excellent condition. Early in the spring when the snow is disappearing, the coons come out of their hiding places to start on their foraging tours; and at this time are particularly susceptible to a tempting bait, and they may be successfully trapped in the following manner:—

Take a steel trap and set it on the edge of some pool, or stream where the coons are known to frequent: let it be an inch or so under the water, and carefully chained to a clog. The bait may consist of a fish, frog, or head of a fowl, scented with Oil of Anise, and suspended over the traps about two feet higher, by the aid of a sapling secured in the ground. (See title page at the head of this section.) The object of this is to induce the animal to jump for it, when he will land with his foot in the trap. Another method is to construct a V shaped pen set the trap near the entrance, and, fastening the bait in the angle, cover the trap loosely with leaves, and scent the bait as before with the anise. The trap should be at such a distance from the bait that the animal, in order to reach it, will be obliged to tread upon the pan, which he will be sure to do, his greed overcoming his discretion. Any arrangement whereby the animal will be obliged to tread upon the trap in order to reach the bait will be successful.

The beaten track of the coons may often be discovered in soft ground, and a trap carefully concealed therein will soon secure its victim. Another method is to set the trap near the coon tracks, spreading a few drops of anise on the pan and covering the whole with leaves. The coon, attracted by the scent, will feel around in the leaves for the bait, and thus "put his foot in it."

In the South they construct a coon trap from a hollow log, either having the ends supplied with lids, which fall just like the Rat trap page 100 as the animal passes through, or else constructed with nooses, similar to the Box-snares, page 56. Box traps of a style similar to that described on page 103 are also excellent,
and a strong twitch-up, of any of the various kinds we have described, will be found to work admirably.

Many of the suggestions in trapping the mink, page 190, will be found equally, serviceable in regard to the coon.

The skin of this animal should be removed as recommended for the fox, and similarly stretched. It may also be skinned by first ripping up the belly, and spread on a hoop stretcher, page 275.

**THE BADGER.**

The American Badger is mostly confined to the Northwestern parts of the United States, and it is a curious little animal. In size its body is slightly smaller than the fox. Its general color is grey, approaching to black on the head and legs. There is a white streak extending from the tip of the animal's long nose over the top of the head and fading off near the shoulders. The cheeks are also white, and a broad and definitely marked black line extends from the snout back around the eyes ending at the neck. The grey of this animal is produced from the mixture of the varied tints of its fur, each hair presenting a succession of shades. At the root it is of a deep grey; this fades into a tawny yellow, and is followed by a black, the hair being finally tipped with white. The fur is much used in the manufacture of fine paint brushes, a good "Badger blender" being a most useful accessory in the painter's art. The badger is slow and clumsy in its actions, except when engaged in digging, his capacities in this direction being so great as to enable him to sink himself into the ground with marvellous rapidity. The nest of the animal is made in the burrow, and the young are three or four in number. His diet is as variable and extensive as that of the coon, and consists of anything in any way eatable. Snails, worms, rats, mice and moles, seem to have a particular attraction for him; and he seems to take especial delight in unearthing the stores of the wild bees, devouring honey, wax and grubs together, and caring as little
for the stings of the angry bees as he would of the bills of so many mosquitoes, the thick coating of fur forming a perfect protection against his winged antagonists. The badger is very susceptible to human influence, and can be effectually tamed with but little trouble. Although his general appearance would not indicate it, he is a sly and cunning animal, and not easily captured in a trap of any kind. He has been known to set at defiance all the traps that were set for him, and to devour the baits without suffering for his audacity. He will sometimes overturn a trap and spring it from the under side, before attempting to remove the bait. Although not quite as crafty as the fox, it is necessary to use much of the same caution in trapping the badger, as a bare trap seldom wins more than a look of contempt from the wary animal.

The usual mode of catching the creature is to set the trap size No. 3 at the mouth of its burrow, carefully covering it with loose earth and securing it by a chain to a stake. Any of the methods used in trapping the fox will also be found to work admirably. The dead-fall or garrot will also do good service. Bait with a rat, mouse, or with whatever else the animal is especially fond, and scent with Oil of Anise or Musk. In early spring, while the ground is still hard, badgers are easily captured by flooding their burrows. After being satisfied that the animal is in its hole, proceed to pour in pailful after pailful of water at the entrance. He will not long be able to stand this sort of thing, and he may be secured as he makes his exit at the opening of the burrow.

The skin should be removed whole, as in the case of the fox, or as described for the beaver, and stretched as therein indicated.

THE BEAVER.

The Beaver of North America has now a world-wide reputation for its wonderful instinct and sagacity. The general appearance of this animal is that of a very large muskrat with a broad flattened tail, and the habits of both these animals are in many respects alike. The beaver is an amphibious creature and social in its habits of living, large numbers congregating together and forming little villages, and erecting their dome-like huts like little Esquimaux. The muskrat has this same propensity, but the habitation of the beaver is on a much
more extensive scale. These huts or "Beaver lodges," are generally made in rivers and brooks; although sometimes in lakes or large ponds. They are chiefly composed of branches, moss, grass and mud, and are large enough to accommodate a family of five or six. The form of the "lodges" is dome-like, and it varies considerably in size. The foundation is made on the bottom of the river, and the hut is built up like a mound, often twenty feet in diameter and projecting several feet above the surface of the water. The walls of this structure are often five or six feet thick, and the roofs are all finished off with a thick layer of mud laid on with marvellous smoothness. These huts form the winter habitations of the beavers, and as this compost of mud, grass and branches becomes congealed into a solid mass by the severe frosts of our northern winter, it can easily be seen that they afford a safe shelter against any intruder and particularly the wolverine, which is a most deadly enemy to the beaver. So hard does this frozen mass become as to defy even the edges of iron tools, and the breaking open of the "Beaver houses" is at no time an easy task. Beavers work almost entirely in the dark; and a pond which is calm and placid in the day time will be found in the night to be full of life and motion, and the squealing and splashing in the water will bear evidence of their industry. Lest the beavers should not have a sufficient depth of water at all seasons, they are in the habit of constructing veritable dams to ensure that result. These dams display a wonderful amount of reason and skill, and, together with the huts, have won for the beaver a reputation for engineering skill which the creature truly deserves. In constructing these ingenious dams the beavers, by the aid of their powerful teeth, gnaw down trees sometimes of large size, and after cutting them into smaller pieces float them on the water to the spot selected for the embankment. In swift streams this embankment is built so as to arch against the current, thus securing additional strength, and evincing an instinct on the part of the animal which amounts almost to reason. In cutting down the trees the beaver gnaws a circular cut around the trunk, cutting deepest on the side toward the water, thus causing the trunk to fall into the stream. The first step in constructing the embankment is to lay the logs down cautiously in
the required line of the dam, afterwards weighting them with heavy stones, which the beavers by their united efforts roll upon them. The foundation of the embankment is often ten feet in width, and is built up by continued heaping of branches, stones and mud, until it forms a barrier of immense strength and resisting power. In many cases, through a lapse of years, and through a consequent accumulation of floating leaves, twigs, and seeds of plants, these embankments become thickly covered with vegetation, and, in many cases in the Hudson Bay country, have even been known to nurture trees of considerable dimensions. The broad flat tail of the animal serves a most excellent purpose, in carrying the mud to the dams or huts, and in matting and smoothing it into a solidity.

The entrances to the various huts are all beneath the water, and they all open into one common ditch, which is purposely dug in the bed of the river, and is too deep to be entirely frozen. In the summer time the huts are vacated, and the beavers make their abode in burrows on the banks of the stream, which serve as a secure retreat at all times, and particularly in winter when their houses are molested. The Indians of the Northwest are aware of this fact, and turn it to good account in the capture of the animals.

When the beaver's village is in a small creek, or brook, it is first necessary to stake the water across both above and below the huts. The next thing is to ascertain the exact spots of the burrows in the banks, and when we consider the river is covered with ice, this seems a rather difficult problem. But this is where the Indian shows his skill. He starts upon the ice, provided with an ice chisel secured to a long, stout handle. With this he strikes upon the ice, following the edge of the stream. The sound of the blow determines to his practiced ear the direct spot opposite the opening of the burrows, and at this point a hole a foot in diameter is made through the ice. Following the edge of the bank he continues his search, and in like manner cuts the holes through the ice until all the retreats are discovered. While the expert Indians are thus engaged, the "squaws" are occupied in the more laborious work of breaking open the houses, and the beavers, alarmed at the invasion of their sanctums, make for the banks, and the ready huntsmen stationed at the various holes, watch for their victims beneath the openings. The entrance to the holes in the bank are then instantly closed with stakes and the beaver is made prisoner in his burrow. When the depth of the burrow will admit, the arm of the hunter is introduced, and the animal pulled out, but otherwise a long hook lashed to a pole is employed for this purpose. Scores of beavers are sometimes taken in this way in a few hours. Spearing is also often successfully resorted to, and when the ice is thin and transparent the beavers may be clearly observed as they come to the surface, beneath the ice, for air.

The general color of the animal is reddish brown, this tint being imparted principally by the long hairs of the fur. There is an inner and softer down of a grey color, which lies next the skin, and which is the valuable growth of the fur. The total length of the animal is about three feet and a half, the flat, paddle-shaped, scale-covered tail being about a foot in length.

The young are brought forth in April or May, from three to seven at a litter, and take to the water when a month old. The first four years in the beaver's life is spent under the "maternal roof," after which period they shift for themselves. To trap the beaver successfully, requires the utmost caution, as the senses of the
animal are so keen, and he is so sagacious withal, that he will detect the recent presence of the trapper from the slightest evidences. The traps should be washed clean and soaked in ley, before using, and thereafter handled with gloves, as a mere touch of the finger will leave a scent which the acute sense of the beaver will easily perceive. All footprints should be carefully obliterated by throwing water upon them, and some trappers say that the mere act of spitting on the ground in the neighborhood of the traps has been known to thwart success.

Almost the only bait used in trapping the beaver is the preparation called "barkstone" by the trappers, or "castoreum" in commerce. This substance is fully described on page 150 under the head of "Scent Baits."

To the barkstone the trapper is mostly indebted for his success, and the effect of its odor on the beaver is something surprising. Our best trappers inform us that these animals will scent this odor for a great distance, and will fairly "squeal with delight," not being easy until the savory bait is discovered, which almost invariably results in capture.

Taking advantage of this curious propensity, the trapper always carries a supply of castoreum in a closed vessel.

There are various ways of trapping the beaver, of which we shall present the best. An examination of the river bank will easily disclose the feeding place of the beavers, as evinced by the absence of the bark on the branches and trunks of trees. At this spot, in about four inches of water, set your trap, which should be a Newhouse No. 4. Weight the end of the chain with a stone as large as your head, and, if possible, rest it on the edge of some rock projecting into deep water, having a smaller rope or chain leading from the stone to the shore. A small twig, the size of your little finger, should then be stripped of its bark, and after chewing or mashing one end, it should be dipped in the castoreum. Insert this stick in the mud, between the jaws of the trap, letting it project about six inches above the water. The beaver is soon attracted by the odor of the bait, and in reaching for it, his foot is caught in the trap. In his fright he will immediately jump for deep water, thus dislodging the stone, which will sink him to the bottom, and thus drown him. The smaller chain or rope will serve as a guide to the trap, and the victim may be drawn to the surface. Another plan is to set the trap in about a foot of water, chaining it fast to a stout pole securely driven in the mud further out in the stream, and near deep water. Bait as before. The trap being thus fastened will prevent the efforts of the animal to drag it ashore, where he would be certain to amputate his leg and walk off. There is another method, which is said to work excellently. The chain is secured to a very heavy stone, and sunk in deep water, and the trap set and baited near shore, in about a foot of water. This accomplishes the same purpose as the pole first described, and is even surer, as the animal will sometimes use his teeth in severing the wood, and thereby make his escape. In the case of the stone a duplicate rope or chain will be required to lift it in case of capture.

The trap may be set at the entrance to the holes in the banks, two or three inches under water, implanting the stick with the castoreum bait directly over the pan, a few inches above the water. If the water should be deep near this spot, it is an excellent plan to weight the end of the chain with a large stone with a "leader" from it also, as already described. Insert two or three sticks in the bank beneath the water, and rest the stone upon them.
When the beaver is caught he will turn a somersault into deep water, at the same time dislodging the stone, which will sink him. No sooner is a break ascertained in the dam than all the beavers unite in fixing it, and this peculiarity of habit may be turned to account in trapping them. Make a slight break in the dam, five inches across, beneath the water. On the under side of the break, and of course, on the inside of the dam, the trap should be set. The beavers will soon discover the leak and the capture of at least one is certain. The trap may be also set where the beavers are wont to crawl on shore, being placed several inches below the water in such a position that they will step on it when in the act of ascending the banks. Where the weighted stone is not used, the sliding pole page 145 should always be employed, as it is necessary to drown the animal, to prevent amputation and escape.

The food of the beaver consists chiefly of the bark of various trees, together with aquatic plants. The fur is valuable only in the late fall, winter, and early spring.

In skinning the beaver, a slit is made from the under jaw to the vent, after which it is easily removed. It should be tacked to a flat board, fur side in, or stretched by means of a hoop, as described on page 275.

THE MUSKRAT.

The muskrat, or musquash, is very much like a beaver on a small scale, and is so well-known throughout the United States that a detailed description or illustration will hardly be necessary. Reduce the size of the beaver to one foot in length, and add a long flattened tail, instead of the spatula-shaped appendage of this animal, and we will have a pretty good specimen of a muskrat. The body has that same thick-set appearance, and the gnawing teeth are very large and powerful. Like the beaver, the muskrat builds its dome-like huts in ponds or swamps, which it frequents; and although not as large as those of the beaver they are constructed in the same manner and of the same materials. Muskrats are mostly nocturnal in their habits; they are tireless swimmers, and in the winter travel great distances beneath the ice; all of which peculiarities are like the beaver. Their food is quite variable, consisting of grass and roots, oats, corn and other grain, apples and nuts, and even tomatoes, turnips, carrots, mussels and clams, whenever these can be found.

The muskrat is a native of all of the Eastern, Western, and Middle States and also the Southern States, with the exception of Georgia, Alabama and Florida. They are also found in Canada and the Arctic regions, and in the North-west. They are hunted and captured as a means of support to the native tribes of Indians who sell or trade the furs to Eastern dealers. The fur somewhat resembles that of the mink in texture, although not as fine, and the color varies from dark brown above to grey beneath. It is in its best condition during the winter, especially in March. The animal possesses a musky smell, from which it takes its name. It is said by many that the flesh of the animal, when carefully prepared, becomes quite palatable food.

Their houses are so nearly like those of the beaver that a second description is scarcely necessary. They are often five or six feet in height, and the entrances are all under water. Dozens of these huts may often be seen in ponds and marshes, and sometimes they exist in such numbers as to give the appearance of a veritable Esquimaux village. These houses are used only in the winter season.
In general the muskrat lives in burrows, which it excavates in the banks of ponds or streams, bringing forth its young, from three to nine in number, in the nest, which it forms at the end of the tunnel. They are very prolific, producing three litters a year. Like the beaver, otter and mink, the muskrat can travel long distances under the ice with only one supply of fresh air, and its method is certainly very interesting. Before plunging beneath the ice the animal fills its lungs with air, and when under the water it swims until it can no longer hold its breath. It then rises up beneath the ice, empties its lungs, the air remaining in bubbles beneath the ice. In a short time this air absorbs sufficient oxygen from the water and ice as to be life-sustaining, when the animal again inhales it and proceeds on its journey. It is by this means that the beaver, muskrat and mink are enabled to travel such great distances beneath unbroken ice, and it is certainly a very novel and interesting method. Where the ice is thin and transparent these animals are sometimes captured through the means of this habit. A heavy stroke on the frozen hut will drive its occupants to the water, and their course may easily be followed through the ice. If one of them is tracked, he will presently be seen to stop at the surface of the water for fresh oxygen, as already described. The bubbles will soon appear, and if the hunter immediately strikes with an axe or heavy stick directly on the spot, the submerged animal will be literally driven away from its breath, and will of course drown in a very few minutes. A short search will soon reveal the dead creature, after which he may be taken out through a hole cut in the ice. Otter and mink are sometimes taken in the same way. In many localities great numbers of muskrats are also captured by spearing, either through the ice or through the walls of their houses. In the latter case, two are often taken at once. This method is quite uncertain and unreliable, as the walls of the hut are often so firmly frozen as to defy the thrust of the hardest steel, and a fruitless attempt will drive the inmates from their house at once. The spear generally used consists of a single shaft of steel about eighteen inches in length and half an inch in diameter, barbed at the point, and is feruled to a solid handle five feet long. In spearing through the hut the south side is generally selected, as being more exposed to the heat of the sun. Great caution is necessary, as the slightest noise will drive out the inmates. The spear should be thrust in a slanting direction, a few inches above the surface of the ice. Where many houses exist it is well to destroy all but one. Into this the whole tribe will centre, and by successive spearing they may all be captured. When the spear has been thrust into the house, it must be thus left until a hole is cut with a hatchet, through which to remove the game. Spearing through the ice is a better method, but for general service there is no means of capture more desirable than by trapping. The steel trap No. 1 or 2 is the size particularly adapted for the muskrat, and may be set in various ways. The most common method is to set the trap under two inches of water on the projecting logs or stones on the border of the streams where the "signs" of the animal indicate its recent presence. The trap should of course be secured by a chain, ringed to a sliding pole, page 145, which will lead the animal into deep water when captured, and thus effect its speedy death by drowning. In this case bait is not necessary. If their feeding grounds can be discovered, or if their tracks indicate any particular spot where they crawl ashore at the water's edge, at this point a trap may be set with good success. In this instance it is well also to set it under water, baiting with a piece of turnip, parsnip, apple, or the like, suspended a few inches above the pan of the trap. Late in the fall, when collecting their building material, they often form large beds of dried grasses and sticks, and a trap set in these beds and covered with some loose substance, such as grass, chaff, or the like, will often secure the animal. The trap, in this case should be attached to a spring-pole, page 145 as the muskrat is a wonderful adept at self-amputation, when its escape depends upon it.
The trap is sometimes set in the interior of the house, and may be accomplished by first breaking an opening in the wall, near the ice, the trap being inserted and set, afterwards covering it with the loose grass and moss, which is generally abundant in the interior of these huts. When this is done, the chain should be secured to a stick on the outside, and the hole repaired. No spring or sliding-pole is necessary in this method, as the animal when caught will immediately run for the water, and the weight of the trap will sink and drown its prisoner.

Scent baits are sometimes used in trapping the muskrat, the musk taken from the female animal being particularly valued. The Oils of Rhodium and Amber, page 151 are also successfully employed by many trappers; a few drops of either in the neighborhood of the trap, or directly upon it, being sufficient.

Although steel traps are most generally used, there are several other devices which are equally if not even more desirable. Chief among these is the barrel trap, commonly and successfully employed in many parts of New England, where these animals often exist in such numbers as to render their destruction a matter of necessity.

The above trap consists merely of an old barrel, sunk to its upper edge in the river bank, and about half filled with water. On the surface of the water a few light pieces of wood are floated, over which the bait, consisting of carrot, sweet apple, or turnip, is placed. A trail is then made by dragging a piece of scented meat from the barrel in various directions, and a few pieces of the bait are also strewn along these trails. The muskrats will thus be led to the barrel, and will be certain to jump in after the tempting morsels, and their escape is impossible. No less than a dozen muskrats have been thus caught in a single barrer in one night, and a few of these traps have been known almost to exterminate the musquashes in localities where they had previously existed in such numbers as to become a pestilence to the neighborhood.

A barrel trap constructed on the principle described on page 131 is also equally effective, although rather more complicated in construction. The Twitch-up is often used, and possesses the advantage of a trap and spring-pole combined. Box traps, page 103, are also to be recommended.

The skin of the muskrat may be removed in the same manner as hereinafter described for the otter, with the exception of the tail. This is considered the best method. It may also be taken off flat by ripping from the under jaw to the vent, and peeling around the eyes and mouth, letting the skin of the legs come off whole, without cutting.

Another common method consists in cutting off the feet, and then ripping with a knife from the front of the lower jaw down the neck and belly to a point a little beyond the forelegs. The lips, eyes, and ears are then carefully skinned, and the hide is stripped backwards from the body. In the latter method the bow-stretcher, page 274, is used.

**THE OTTER.**

The fur of this animal is of such exquisite softness and beauty as to be in great demand for commercial purposes, bringing a very high price in the fur market.
The otter cannot be said to be a common animal, although it is found throughout the United States and Canada, being rather more plentiful in the cold northern localities than in the southern latitudes. It is an amphibious animal, and can remain for a long time beneath the water. In size it is larger than a cat, and it possesses a tapering tail some eighteen inches in length. Its fur is of a rich brown color, and the hair is of two kinds, the one a close, fine, and exquisitely soft down, which lies next the skin, and which serves to protect the animal from the extremes of heat and cold, and the other composed of long shining coarser hairs, which permit the animal to glide easily through the water. In producing the beautiful otter furs of fashion these long hairs are plucked out, leaving only the softer down next the hide. The food of the otter mostly consists of fish, for the pursuit of which he has been admirably endowed by nature. His body is lithe and supple, and his feet are furnished with a broad web, which connects the toes, and is of infinite service in propelling the animal through the water when in search of his finny prey. His long, broad and flat tail serves as a most effectual rudder, and the joints of his powerful legs are so flexible as to permit of their being turned in almost any direction.

The habitation of the otter is made in the banks of the river which it frequents, or sometimes in a hollow log or crevice beneath rocks. The animal generally prefers to adopt and occupy a natural hollow or deserted excavation, rather than to dig a burrow for itself. The nest is composed of dry rushes, grasses and sticks, and the young, three or four in number, are produced in early spring.

The track which the otter makes in the mud or snow is easily distinguished from that of any other animal, on account of the "seal" or impression which is made by a certain ball on the sole of the foot. Otter hunting is a favorite sport in England, and indeed in the northern parts of our own country. Hounds are used to pursue the animal, and on account of the powerfully scented secretion with which the creature is furnished by nature, its track is readily followed. When attacked, the otter is a fierce and terrible fighter, biting and snapping with most deadly energy and never yielding as long as life remains in the body. The bite of
an angry otter is extremely severe, and for this reason we would caution the amateur trapper on handling the animal should one be taken alive.

Although so fierce and savage when attacked, the otter is easily tamed when taken young, and can be taught to catch fish for the service of its master, rather than for the gratification of its own palate.

In the winter when the snow is on the ground, the otter navigates by sliding, and when on the ice he may often be seen to run a few steps and then throw himself on his belly and slide the distance of several feet. They are very fond of playing in the snow, and make most glorious use of any steep snow-covered bank, sloping toward the river. Ascending to the top of such an incline they throw themselves on the slippery surface and thus slide swiftly into the water. This pastime is often continued for hours, and is taken advantage of in trapping the playful creatures. A short search will reveal the place where they crawl from the water on to the bank, and at this spot, which will generally be shallow, a steel trap should be set on the bed of the river, about four inches under water. The trap should be secured by a stout chain, the latter being ringed to a sliding pole, page 145, which will lead the animal when caught into deep water. If deep water is not near at hand, the spring pole, page 144, may be used, the object of either being to prevent the animal from gnawing off its leg and thus making its escape.

The trap may also be placed at the top or the slide, two or three feet back of the slope, a place being hollowed out to receive it and the whole covered with snow. To make success more certain a log may be laid on each side of the trap, thus forming an avenue in which the animal will be sure to run before throwing itself on the slope. Care should be taken to handle nothing with the bare hands, as the otter is very keen scented and shy. Anoint the trap with a few drops of fish oil or otter musk, see page 151. If none of these are handy, ordinary musk will answer very well.

The trap may also be set and weighted with a heavy stone and chain, as described for trapping the beaver. Another method still is to find some log in the stream having one end projecting above water. Sprinkle some musk on this projecting end and set the trap on the log in three or four inches of water, securing it firmly by a chain, also beneath the water.

A rock which projects over the stream may also be utilized in the same way as seen in the page title at the opening of this section. Smear the musk on the edge which juts into the water, and secure the trap by the chain as before. When the animal is caught he will fall or jump into the water, and the weight of the trap and chain will sink him. In every case it is necessary to obliterate every sign of human presence by throwing water over every footprint, and over everything with which the naked hands have come in contact. Where the traps are thus set in the water it should be done while wading or in a boat. In the winter when the ponds and rivers are frozen over the otters make holes through the ice at which they come up to devour their prey. Where the water is a foot deep beneath any of these holes the trap may be set in the bottom, the chain being secured to a heavy stone. When the otter endeavors to emerge from the hole he will press his foot on the trap and will thus be caught. If the water is deep beneath the hole the trap may be baited with a small fish attached to the pan, and then carefully lowered with its chain and stone to the bottom. For this purpose the Newhouse, No. 3, is best adapted, as the otter is in this case caught by the head.
The beaten track of the animal may often be discovered in the snow in the winter time, and a trap carefully sunk in such a furrow and covered so as to resemble its surroundings, will be likely to secure the first otter that endeavors to pass over it. A trap set at the mouth of the otter's burrow and carefully covered is also often successful, using the sliding pole, page 145, to lead him into deep water.

Every trapper has his pet theories and methods of trapping all the different animals, and the otter has its full share. We have given several of the best methods; and anyone of them will secure the desired result of capture, and all of them have stood the test of time and experience.

The skin of the otter should be removed whole, and the operation may be performed in the following manner: Slit down the hind legs to the vent; cut the skin loose around the vent, and slit up the entire length of the tail, freeing it from the bone. With the aid of the knife the skin should now be peeled off, drawing it backward and carefully cutting around the mouth and eyes before taking it from the head.

With the fur thus inside, the skin is ready for the stretcher as described on page 273, and the tail should be spread out and tacked around the edges.

**THE MINK.**

This animal, as will be seen by our illustration, has a long, slender body, something like the weasel, to which scientific family it belongs. It inhabits the greater part of North America, and is also found abundantly in Northern Europe. The color of its fur varies considerably in different individuals, the general tint being a rich, dark brown. The chin and throat are light colored, sometimes white, and this spot varies considerably in size in different individuals, sometimes extending down on the throat to a considerable distance. The total length of the animal is from thirteen to sixteen inches, its size being variable.

The fur of the mink is excellent in quality, and has for many years been one of the "fancy furs" of fashion, a good prime skin often bringing from ten to twelve dollars. The introduction of the fur seal, however, and the universal demand for this as well as otter fur, has somewhat thrown the mink into comparative shade, although extra fine skins will still command high prices.

The mink is an aquatic animal, inhabiting small rivers and streams, and living somewhat after the manner of the otter. It has a most wide range of diet, and will eat almost anything which is at all eatable. Fishes, frogs, and muskrats are his especial delight, and he will occasionally succeed in pouncing upon a snipe or wild duck, which he will greedily devour. Craw fish, snails, and water insects of all kinds also come within the range of his diet, and he sometimes makes a stray visit to some neighboring poultry yard to satisfy the craving of his abnormal hunger. A meal off from his own offspring often answers the same purpose; and a young chicken in the egg he considers the ne plus ultra of delicacies. The voracity of this animal is its leading characteristic, and is so largely in excess of its cunning or sagacity that it will often run headlong into a naked trap. Its sense of smell is exceedingly well developed, and through this faculty it is often enabled to track its prey with ease and certainty. The mink lives in burrows, in
steep banks, or between rocks or the roots of trees, and the young, five or six in number, are brought forth in May.

The chief occupation of the mink consists in perpetual search for something to eat, and, when so engaged, he may be seen running along the bank of the stream, peering into every nook and corner, and literally "leaving no stone unturned" in its eager search. Taking advantage of this habit, it becomes an easy matter to trap the greedy animal. Set your trap, a Newhouse No. 2, in an inch of water near the edge of the stream, and directly in front of a steep bank or rock, on which you can place your bait. The bait may be a frog, fish, or head of a bird, suspended about eighteen inches above the water, and should be so situated that in order to reach it, the mink will be obliged to tread upon the trap. The trap may also be set in the water and the bait suspended eighteen inches above it, by the aid of a switch planted in the mud near the trap. It is a good plan to scent the bait with an equal mixture of sweet oil and peppermint, with a little honey added. If there is deep water near, the sliding pole, page 145, should be used, and if not, the "spring pole" in every case, in order to prevent the captured mink from becoming a prey to larger animals, and also to guard against his escape by amputation, which he would otherwise most certainly accomplish.

The trap may be set on the land, near the water's edge, baiting as just described, and lightly covered with leaves or dirt. Any arrangement of the trap whereby the animal is obliged to tread upon it in order to secure the bait, will be found effectual.

The trap may be set at the foot of a tree, and the bait fastened to the trunk, eighteen inches above it. A pen, such as is described on page 144, may be constructed, and the trap and bait arranged as there directed. Minks have their regular beaten paths, and often visit certain hollow logs in their runways. In these logs they leave unmistakable signs of their presence, and a trap set in such a place is sure of success.

Some trappers set a number of traps along the stream at intervals of several
rods, connecting them by a trail, see page 153, the mink being thus led directly and almost certainly to his destruction. This trail is made by smearing a piece of wood with the "medicine" described at page 153, and dragging it on the line of the traps. Any mink which crosses this trail will follow it to the first trap, when he will, in all probability, be captured. A dead muskrat, crow, fish, or a piece of fresh meat dragged along the line answers the same purpose. The beaten tracks of the mink may often be discovered, and a trap set in such a track and covered with leaves, dirt or the like, will often be successful.

Minks may also be easily caught in the dead-fall. Garrote trap or a twitch-up, baiting with fish, muskrat, flesh, or the head of a bird, of which the animal is especially fond. A liberal use of the "medicine" is also desirable.

The fur of the mink is in its best condition in the late autumn, winter, and early spring, and the animal should be skinned as described for the fox.

THE PINE MARTEN.

This animal belongs to the tribe of "weasels," and is closely allied to the celebrated sable, which it greatly resembles. The pine marten is so called because it inhabits the northern climates where pine forests abound, and spends much of its life in the trees in search of its prey. Its general appearance is truly represented in our illustration, its fur being of a rich brown color, with a lighter or white patch on the throat. Its total length, including the tail, is about twenty-eight or thirty inches, of which the tail represents ten inches. It is mostly confined to the forests in the far north, and is comparatively rare further south than the latitude of Maine and the lakes. The fur of the pine marten is of considerable value, particularly if the animal be killed in the winter. A really fine skin is but little inferior to the celebrated sable, and is hardly distinguishable from it. The hair is long and glossy, and the under fur is beautifully soft and very thick. The dark colored skins are the most valuable. Although so nearly like the sable, the same comparison does not exist in regard to their proportionate market values, the marten fur bringing a much lower price.

The marten is a shy and wary animal, withdrawing itself as far as possible
from the sight of man, and building its habitation in the tops of trees, often seizing on the ready nest of some squirrel or bird, and adapting it to its purposes.

It is a night prowler, and in the dark hours it traverses the trunks and branches of the trees in search of its prey. It moves with wonderful stealth and activity, and is enabled by its rapid and silent approach to steal unnoticed on many an unfortunate bird or squirrel, seizing it in its deadly grip before the startled creature can think to escape. Coming across a bird's nest, it makes sad havoc with the eggs or young, often adding the parent bird to his list of victims. Rabbits, partridges, and mice also fall into the marten's "bill of fare," and the list is often further increased by a visit to a poultry yard, when the animal murders and eats all it can and kills the rest for sport. In pouncing upon its prey, the marten invariably seizes its victim by the throat, often dispatching the luckless creature with a single bite.

The martens generally are said to be very susceptible to human influence when taken young, and are very lively in a state of domestication. They are among the most graceful of animals, and in place of the disagreeable scent which renders many of their tribe offensive, this creature possesses an odor which is quite agreeable, and for this reason is often called the sweet marten in contradistinction to the foul marten or pole cat of Britain, which is like unto our skunk in the disgusting stench which it exhales.

The dead-fall and Garrote traps are very successful in trapping the marten. They should be set several rods apart, in the forest or on the banks of streams, and a trail established by dragging a dead or roasted crow, entrails of a bird, or fresh meat from one trap to another, as described in relation to the mink, page 190. The twitch-up may also be used, and possesses the additional advantage of acting as a spring pole, thus holding the captured victim out of reach of larger animals, to which it might otherwise become a prey. Any of the varieties described under the title of "twitch-up" will answer the purpose, and a little experimenting will soon prove which one will be the most successful for this particular animal. The bait may consist of a bird's or fowl's head, fish, liver, or any fresh meat or entrails.

The common box trap, page 103, or the box snare, page 56, may also be used to good purpose, but the former will need to be carefully watched lest the enclosed prisoner gnaw his way out and thus escape.

When the steel trap is employed, it should be of the size of Newhouse, No. 2-1/2, set on the ground beneath some rock, and covered with leaves, rotten wood, or earth, and the bait fastened or suspended about eighteen inches above it, in such a position that the animal will be obliged to step upon the trap in order to reach it. An enclosure may be constructed of stones piled together, the trap being set and covered in the opening and the bait secured at the back. A staked pen, such as is described on page 143, with the trap and bait arranged as there directed, also works well. Wherever or however the trap is set, the bait should be so placed that the animal cannot possibly climb on any neighboring object to reach it. The hollow of a tree trunk forms an excellent situation for the trap, and the same hollow may also be baited at the back and a dead-fall constructed across its opening. The box or barrel pit-fall, described on page 127, is said to be very successful in trapping the marten, always baiting it with the platform secure for a few days before setting for capture. The same methods directed for the capture of the mink are also useful in trapping the marten. The animal should be
skinned as described for the fox.

THE FISHER.

This animal is classed among the martens, and is principally to be found in Canada and the Northern United States, where it is known as the black cat, or woodshock. In our natural histories it is described under the name of the pekan.

In general habits, this species resembles the other martens, but its body inclines more to the weasel shape. The fur is quite valuable, and much resembles the sable. Its color is generally of a greyish brown, the grey tint being found chiefly on the back, neck, head and shoulders, the legs, tail, and back of the neck being marked with dark brown. Like the marten, the fisher prowls by night, frequenting swampy places in quest of food.

It builds its habitation in hollow trees, and in burrows, which it excavates in the banks of rivers or streams, and its young (generally twins) are produced in early spring. The trapping season for the fisher commences at about the middle of October, and extends to the middle of May, after which time the fur decreases in value.

In trapping the fisher, the same plans may be used as for the marten and mink, as these animals much resemble each other in general habits. The steel trap arranged in an artificial or natural enclosure, or otherwise so set as that the animal will be obliged to step on it in order to reach the bait, will be successful and the use of composition "scent bait," described on page 153 will be found to enhance success. In every case where the steel trap is used the spring pole, page 144, should always be employed, for the reasons already described.

Dead-falls, garrotes, box-traps, twitch-ups, or pit-falls, may all be employed to good advantage. Bait with a fish or bird, or fresh meat of any kind, and connect the various traps by a trail, as described for the mink and marten.

Remove the skin as directed for the fox, and stretch as described on page 273.

THE SKUNK.

This disgusting animal has won the unenviable but deserving reputation of being the most foul-smelling creature on the face of the globe. He belongs to the weasel tribe, and all these animals are noted for certain odors which they possess, but the skunk is pre-eminent in the utter noisomeness of the horrid effluvium which it exhales.

This scent proceeds from a liquid secretion which collects in a gland beneath the insertion of the tail, and the animal has the power to eject or retain it at will.

It must have been given to the creature as a means of defence, for there seems to be no animal that can withstand the influence of its fetid stench. Dogs are trained to hunt the animal, but until they have learned from experience the right method of attacking the fetid game, and have discovered the whereabouts of the animal's magazine of ammunition, they are of little use to the hunter, and are only too glad to plunge into some neighboring brook, or roll in some near earth,
in hopes of ridding themselves of the stench which almost distracts them. The offensive propensities of the skunk are only exercised when the animal is alarmed or frightened. There are generally certain "premonitory symptoms" of attack which the creature usually exhibits, and it is well to retire from his "shooting range" as soon as they are observed.

When the animal is ready to discharge his battery, he suddenly elevates his large bushy tail, over his body, and turns his back on his enemy. The result of the discharge fills the air for a great distance around, and man and beast fly from the neighborhood of the indescribable and fetid effluvium, which fairly makes one's nostrils ache.

A single drop of this disgusting secretion on the clothes is enough to scent the whole garment, and it is almost impossible to rid the tainted fabric from the odor.

It is extremely acrid in quality, and if a very small quantity fall upon the eyes, it is very apt to produce permanent blindness.

Dogs, in their first experiences with the skunk, are frequently thus blinded, and there are well authenticated instances of human beings who have been deprived of their sight through their close proximity to an infuriated skunk.

The writer, in his extreme youth, learned, through dear experience, the putrid qualities of this noisome quadruped. It was on one bright Sunday, in New England, and he was out in his Sunday clothing, gathering wild strawberries. He suddenly discovered a pretty little playful animal with bushy tail, romping in the grass near him. The creature was seemingly gentle, and showed no inclination to run away, and the pet-loving nature of the writer prompted an irresistible desire to capture so pretty a creature. Encouraged by its gentle manner, he eagerly ran towards the tempting prize, and grasping it by the bushy tail, which the animal had raised perpendicularly, as if for a handle, the pretty creature was locked in
the affectionate embrace of its youthful admirer. But alas! he soon repented his rashness, and the treacherous "pet" was quickly flung away leaving its victim in such a foul state of overwhelming astonishment as can be more easily imagined than described.

Every article of clothing worn on that eventful Sunday had to be buried, and it took weeks of Sundays before the odor could be thoroughly eradicated from the hair and skin of the individual who wore those Sunday garments. After this adventure, the youth became more cautious with respect to pretty little playful animals, with black and white fur and bushy tails.

There is hardly a farmer in the country but what has had some amusing or serious experience with the skunk, and almost every trapper has, at one time or another, served as a target for his shooting propensities. Natural histories are replete with anecdotes of which this animal is the mephitic hero, and volumes might be filled to the glory of his strong-smelling qualities.

Perhaps it is through the prejudice of the writer that he cannot enthusiastically recommend the skunk as a domestic pet; but it is nevertheless asserted, on good authority, that these animals, when reared from the young, become very interesting and playful in the household, and completely shut down on their objectionable faculties.

Our illustration gives a very good idea of the animal, and it is so unlike any other creature that a further description will not be necessary. The prevailing colors are white and black; but these vary much in proportion, the animal sometimes being almost totally white, or altogether black. The fur is long, and comparatively coarse, being intermixed with long, glossy hairs, and is most valuable in the black animal. The body of the creature is about a foot and a half in length, exclusive of the tail, which adds about fourteen inches more.

The skunk is generally nocturnal in its habits, secreting itself during the day in hollow trees, or crevices in rocks, or wood-piles. At night it ventures forth in quest of its food, which consists chiefly of grasshoppers, worms and other insects, wild fruit and such small animals in the shape of frogs, mice and birds as it can capture. The poultry yard often offers an irresistible temptation, and both fowls and eggs often serve to appease his appetite.

The skunk is common throughout the greater part of North America, and in many localities the numbers increase very rapidly unless checked. The young are brought forth in burrows or holes in rocks during April or May, and are from six to nine in number.

"Skunk fur" does not sound well when thought of in connection with a set of fashionable furs; and for this reason the pelt of this animal is dignified by the name of Alaska sable by all dealers in the article. When known by this fancy title it suddenly becomes a very popular addition to fashion's winter wardrobe, and is one of the leading furs which are exported to meet the demand of foreign countries. Foul as the animal is, it seldom soils its own fur with its offensive fluid; and when carefully skinned the fur is as saleable as that of any other animal.

The Skunk is trapped in a variety of ways; and as the animal is not cunning, no great skill is required. The steel trap is most commonly used, as other wooden
varieties, box traps or dead-falls, for instance, are apt to absorb and retain the stench of the animal. In using the steel trap the size No. 2 should be taken. It may be set at the entrance to their burrows or in their feeding grounds. It should be covered with loose earth or chaff, or some other light substance, and baited with small bits of meat, dead mice, or eggs placed around it. The enclosure illustrated on page 143 also answers well, and in all cases the spring pole, page 144, should be used. The dead-fall, page 107, is often employed, and the twitch-up, page 43, is a particularly effective contrivance for their capture, often preventing the evil consequences of the odor by causing instant dislocation of the neck, and this without injuring the fur. A stroke upon the backbone near the tail, by producing paralysis of the parts, also prevents the animal from using his offensive powers, and a dead-fall so constructed as to fall upon the animal at this part will accomplish the same effect. To manage this it is only necessary to place the bait far back in the enclosure, so that the skunk on reaching it will bring the rear portion of his body beneath the suspended log. The scent of the skunk is as we have said, almost ineradicable, but we would recommend chloride of lime as the most effectual antidote.

It is also said by some trappers that the odor may be dissipated by packing the garment in fresh hemlock boughs, letting it thus remain for a couple of days. This is certainly a valuable hint if true, and is well worth remembering.

For skinning the skunk, see Beaver, Otter and Fox.

**THE WOLVERINE.**

This, one of the most ferocious as well as detestable of American animals, is principally found in British America and the upper portion of the United States. It has won a world wide reputation for its fierceness and voracity, and on this account is popularly known as the Glutton. It is not confined to America, but is also found in Siberia and Northern Europe.
The general appearance of this animal, ugly in disposition as in appearance, is truthfully given in our illustration. It is not unlike a small bear in looks, and was formerly classed among that genus.

The general color of the wolverine is dark brown. The muzzle, as far back as the eye-brows, is black, and the immense paws partake of the same hue. The claws of the animal are long and almost white, forming a singular contrast to the jetty fur of the feet. So large are the feet of this animal, and so powerful the claws, that a mere look at them will tell the story of their death dealing qualities, a single stroke from one of them often being sufficient for a mortal wound. Although the wolverine is not as large as the bear, its foot prints in the snow are often mistaken for those of that creature, being nearly of the same size.

The glutton feeds largely on the smaller quadrupeds, and is a most determined foe to the beaver during the summer months; the ice-hardened walls of their houses serving as a perfect protection against his attacks in the winter time.

To the trapper of the north the wolverine is a most detested enemy, following the rounds of the traps and either detaching the baits or tearing away the dead animals which have fallen a prey to them. The trapper's entire circuit will be thus followed in a single night, and where the veritable "glutton" does not care to devour its victim it will satisfy its ferocious instinct by scratching it in pieces, leaving the mutilated remains to tell the story of its nocturnal visit.

The wolverine is a dangerous foe to many animals larger than itself, and by the professional hunter it is looked upon as an ugly and dangerous customer.
There are several methods of trapping this horrid creature, and in many localities successful trapping of other animals will be impossible without first ridding the neighborhood of the wolverines. Dead-falls of large size will be found to work successfully, baiting with the body of some small animal, such as a rat or squirrel. A piece of cat, beaver or muskrat flesh is also excellent, and by slightly scenting with castoreum success will be made sure. Several of these traps may be set at intervals, and a trail made by dragging a piece of smoked beaver meat between them. The gun trap, as described on page 20, will also do good service in exterminating this useless and troublesome animal.

Steel traps of size No. 3 or 4 are commonly used to good purpose. They may be arranged in any of the various methods already described, the plan of the enclosure, page 143, being particularly desirable. In all cases the trap should be covered with leaves, moss or the like, and the bait slightly scented with castoreum. Like all voracious animals, the perpetual greed of the wolverine completely overbalances its caution, and thus renders its capture an easy task.

The home of the animal is generally in a crevice or cave between rocks, and its young, two or three in number, are brought forth in May.

In removing the skin, it may be ripped up the belly, or taken off whole, as described for the fox.

THE OPOSSUM.

The opossum is found more or less throughout nearly all the United States. In size it equals a large cat, the tail being about fifteen inches long, very flexible and covered with scales. The general color of the fur is grayish-white, slightly tinged with yellow, and the legs are of a brownish hue, which color also surrounds the eyes to some extent.

The fur is comparatively soft and woolly, and thickly sprinkled with long hairs, white at the base and brown at the tips.

The nature and habits of the animal are very interesting. Its nest is made in some sheltered hollow in an old fallen or live tree, or beneath overhanging roots or rocks, and composed of moss and dead leaves. The young are produced in several litters during the year, and when born are transferred by the mother to a pouch situated in the lower front portion of her body. Here they remain and are nourished by the parent until they are five weeks old, at which time they emerge and travel with their mother, and their little ring tails do them good service in holding fast to their guardian. It is an amusing sight to see a family of young 'possums thus linked together, and so "attached to each other."

The opossum is a voracious and destructive animal, prowling about during the hours of darkness and prying into every nook and corner in hope of finding something that may satisfy the cravings of imperious hunger. Rats, mice, nuts, berries, birds, insects and eggs are all devoured by this animal; and when not content with these he does not hesitate to insinuate himself into the poultry yard, and make a meal on the fowls and young chickens. His fondness for fruit and Indian corn often leads him to commit great havoc among plantations and fruit trees, and his appetite for the fruit of the persimmon tree is proverbial. While
feeding on these fruits he frequently hangs by his tail, as seen in our illustration, gathering the persimmons with his fore paws and eating them while thus suspended. He is a most agile climber, and his tenacity and terminal resources in this direction are admirably depicted in that well known Methodist sermon, as follows: "An' you may shake one foot loose, but 'tthers thar; an' you may shake all his feet loose, but he laps his tail around the lim' an' he clings forever."

He is an adept at feigning death, "playing 'possum" so skilfully as frequently to deceive an expert.

"'Possums" are hunted in the Southern States much after the manner of coons; and to the negroes a "'possum hunt" signifies most unbounded sport."

Though cunning in many ways, the opossum is singularly simple in others. There is hardly any animal more easily captured; for it will walk into the clumsiest of traps, and permit itself to be ensnared by a device at which an American rat would look with utter contempt.

The dead-fall, garrote, or stout snare may all be employed, being baited with any of the substances already described. The steel trap 2-1/1 or 3 is most commonly used, being set in the haunts of the animal, and slightly scented with musk.
See Fox and Beaver, for directions for skinning, stretching, etc., etc.

THE RABBIT.

The rabbit or "cotton tail," as he is familiarly termed, is too well-known to need any description here. From Maine to Texas our woods abound with these fleet-footed little creatures, of which there are several American species. They are the swiftest of all American quadrupeds, and have been known to clear over twenty feet in a single leap. They are all natural burrowers, although they often forego the trouble of excavating a home when one can be found already made, and which can be easily modified or adapted to their purposes. The common rabbit of New England often makes its home or "form," beneath a pile of brush or logs, or in crevices in rocks. Here it brings forth its young, of which there are often three or four litters a year. The creature becomes a parent at a very early age, and by the time that a rabbit is a year old it may have attained the dignity of a grand parent.

The food of the rabbit consists of grasses, bark, leaves, bulbs, young twigs, buds, berries and the like, and of cultivated vegetables of all kinds, when opportunity favors. When surprised in the woods it manifests its alarm by violently striking the ground with its feet, causing the peculiar sound so often noticed at their first jump. The animal is fond of pursuing a beaten path in the woods, and is often snared at such places. Its enemies, beside man, are the lynx, and other carnivorous animals, hawks, owls, and even the domestic cat.

The rabbit is a favorite game with all amateur sportsmen, and the devices used in its capture are multitudinous. It is by no means a difficult animal to trap, and a glance through the second and fourth sections of our book, will reveal many ingenious snares and other contrivances, commonly and successfully used.

The Box trap, page 103, is perhaps the most universal example of rabbit trap, but the Self-setting trap, page 110, and Double-ender, page 109, are also equally effective where the animal is desired to be taken alive. If this is not an object, the snare is to be recommended as simple in construction and sure in its result.

The above constitute the only devices commonly used for the capture of the rabbit, the steel trap being dispensed with. On page 109 will be found additional remarks concerning the rabbit, and many hints no baiting, etc., are also given under the heads of the various traps above alluded to.

The skin of the rabbit is very thin and tender, and should be carefully removed, either as described for the fox, or in the ordinary method, by incision up the belly. Full directions for curing and tanning the skins will be found under its proper head in a later portion of this work.

THE WOOD-CHUCK.

This animal also called the marmot, is so well-known to most of our readers, that a detailed description will not be necessary, suffice it to say that the general color is brownish grey above, changing to reddish brown on the under parts. The head, tail and feet partaking of a darker color. The length of the animal is about a foot and a-half, exclusive of the tail, which is four inches long.
The woodchuck is a clumsy looking animal, and anything but active in its movements. It is very unintelligent, and is always too ready to use its powerful teeth on the hand of any one who may attempt to handle it. It is naturally a timid animal, but when cornered or brought to bay, it fights most desperately.

The woodchuck is an expert excavator, and where the animals exist in large numbers great damage is done by their united burrowing. They generally remain in their burrows during the day, only venturing out casually to see what is going on, and keeping near their entrance. Towards evening they start out to feed, devouring certain grasses and weeds, and also pumpkins and green corn with avidity, ever and anon sitting upright on their haunches, to see if the coast is clear. In case they are surprised in their meal, they hurry home in a pell-mell sort of a way, giving as much the appearance of rolling as running, but, nevertheless, getting over the ground with fair speed for such an unwieldy animal. The skin is loose and very tough, and possesses no commercial value, being principally used for whiplashes. Their burrows are generally on the slope of a hill, and often at the foot of a rock or tree. These tunnels vary from ten to thirty feet in length, sloping downward from the opening, afterward taking an upward turn and terminating in a roomy chamber, in which the animal sleeps in winter and where the young from three to eight in number are brought forth. The woodchuck is found throughout nearly the whole of the United States, and is especially abundant in New England, where it is a decided nuisance. It is found as far south as Tennessee, and westward to the Rocky Mountains. The flesh of the woodchuck is by many much esteemed as food, particularly in the Fall. When used for this purpose, the animal should be skinned and carefully cleaned immediately after death, taking especial care to remove the masses of fat which lie inside of the legs, as these, if allowed to remain, are sure to taint the flesh in cooking.

The animals are easily caught by setting the traps at the entrance of their burrows, and carefully covering them with loose earth, no bait being required. They may also be captured by the aid of a spring-pole, with noose attached, the pole being bent down and caught under a notched stick, and the noose being arranged at the opening of the burrow, see page 43, the Woodchuck in passing in or out will become entangled in the noose, and in his efforts to escape the pole will be loosened from the peg, thus lifting the animal in mid-air. Woodchucks are also sometimes drowned out of their holes, and the turtle is often put to good use for the purpose of smoking the animals from their subterranean dwellings. A ball of wicking saturated with kerosene is attached by a wire to the tail of the reptile. When the ball is ignited the creature is introduced into the entrance of the hole, and of course in fleeing from its fiery pursuer it traverses the full length of the burrow, and as another matter of course drives out its other occupants, which are shot or captured as they emerge.

The woodchuck's skin is generally taken off as described for the muskrat, and stretched accordingly.

THE GOPHER.

This remarkable little animal somewhat resembles the Mole in its general appearance and habits. It is also commonly known as the Canada Pouched Rat, and is principally found west of the Mississippi and northward. It is a burrowing animal, and like the Mole drives its subterranean tunnels in all directions, throwing up little hillocks at regular intervals of from five to twenty feet. Its
body is thick set and clumsy and about ten inches long, and its Mole-like claws are especially adapted for digging. Its food consists of roots and vegetables, and its long and projecting incisors are powerful agents in cutting the roots which cross its path in making its burrow. The most striking characteristic of the animal, and that from which it takes its name, consists in the large cheek pouches which hang from each side of the mouth and extend back to the shoulders. They are used as receptacles of food which the animal hurriedly gathers when above ground, afterward returning to its burrow to enjoy its feast at its leisure. It was formerly very commonly and erroneously believed that the Gopher used its pouches in conveying the earth from its burrow, and this is generally supposed at the present day, but it is now known that the animal uses these pockets only for the conveyance of its food.

The color of the fur is reddish-brown on the upper parts, fading to ashy-brown on the abdomen, and the feet are white.

In making its tunnels, the dirt is brought to the surface, thus making the little mounds after the manner of the mole. After having dug its tunnel for several feet the distance becomes so great as to render this process impossible, and the old hole is carefully stopped up and a new one made at the newly excavated end of the tunnel, the animal continuing on in its labors and dumping from the fresh orifice. These mounds of earth occur at intervals on the surface of the ground, and although no hole can be discovered beneath them, they nevertheless serve to indicate the track of the burrow, which lies several inches beneath.

The Gopher is a great pest to western cultivators, and by its root feeding and undermining propensities does extensive injury to crops generally. They may be successfully trapped in the following manner: Strike a line between the two most recent earth mounds, and midway between them remove a piece of the sod. By the aid of a trowel or a sharp stick the burrow may now be reached. Insert your hand in the tunnel and enlarge the interior sufficiently to allow the introduction of No. (0) steel trap. Set the trap flatly in the bottom of the burrow, and then laying a piece of shingle or a few sticks across the excavation replace the sod. Several traps may be thus set in the burrows at considerable distances apart, and a number of the animals thus taken. The traps are sometimes inserted in the burrows from the hillocks, by first finding the hole and then enlarging it by inserting the arm and digging with the hand beneath. The former method, however, is preferable.

The skin of the Gopher may be pulled off the body either by cutting up the hind leg, as described in reference to the Fox, or by making the incision from the lower jaw down the neck, as decided for the muskrat, a simple board stretcher being used.

THE MOLE.

Of all the mammalia the Mole is entitled to take the first place in the list of burrowers. This extraordinary creature does not merely dig tunnels in the ground and sit at the end of them, as is the case with many animals, but it forms a complicated subterranean dwelling place with chambers, passages and other arrangements of wonderful completeness. It has regular roads leading to its feeding grounds; establishes a system of communication as elaborate as that of a modern railway, or, to be more correct, as that of the subterranean network of the sewers of a city. It is an animal of varied accomplishments. It can run
tolerably fast, it can fight like a bull-dog, it can capture prey under or above ground, it can swim fearlessly, and it can sink wells for the purpose of quenching its thirst. Take the mole out of its proper sphere, and it is awkward and clumsy as the sloth when placed on level ground, or the seal when brought ashore. Replace it in the familiar earth and it becomes a different being, full of life and energy, and actuated by a fiery activity which seems quite inconsistent with its dull aspect and seemingly inert form.

We all know that the mole burrows under the ground, raising at intervals the little hillocks or "mole hills" with which we are so familiar; but most of us little know the extent or variety of its tunnels, or that the animal works on a regular system and does not burrow here and there at random. How it manages to form its burrows in such admirably straight lines, is not an easy problem, because it is always done in black darkness, and we know of nothing which can act as a guide to the animal. As for ourselves and other eye-possessing creatures, the feat of walking in a straight line with closed eyelids is almost an impossibility, and every swimmer knows the difficulty of keeping a straight course under water, even with the use of his eyes.

The ordinary mole hills, so plentiful in our fields, present nothing particularly worthy of notice. They are merely the shafts through which the quadruped miner ejects the material which it has scooped out, as it drives its many tunnels through the soil, and if they be carefully opened after the rain has consolidated the heap of loose material, nothing more will be discovered than a simple hole leading into the tunnel. But let us strike into one of the large tunnels, as any mole catcher will teach us, and follow it up to the real abode of the animal. The hill under which this domicile is hidden, is of considerable size, but is not very conspicuous, being always placed under the shelter of a tree, shrub, or a suitable bank, and would scarcely be discovered but by a practiced eye. The subterranean abode within the hillock is so remarkable that it involuntarily reminds the observer of the well-known "maze," which has puzzled the earliest years of youth throughout many generations. The central apartment, or "keep," if we so term it, is a nearly spherical chamber, the roof of which is almost on a level with the earth around the hill, and therefore situated at a considerable depth from the apex of the heap. Around this keep are driven two circular passages or galleries, one just level with the ceiling and the other at some height above. Five short descending passages connect the galleries with each other, but the only entrance into the keep is from the upper gallery, out of which three passages lead into the ceiling of the keep. It will be seen therefore that when the mole enters the house from one of its tunnels, it has first to get into the lower gallery to ascend thence into the upper gallery, and so descend into the central chamber. There is, however, another entrance into the keep from below. A passage dips downward from the centre of the chamber, and then, taking a curve upwards, opens into one of the larger burrows or high roads, as they may be fitly termed. It is a noteworthy fact that the high roads, of which there are several radiating in different directions, never open into the gallery opposite one of the entrances into the upper gallery. The mole therefore is obliged to go to the right or left as soon as it enters the domicile before it can find a passage to the upper gallery. By the continual pressure of the moles upon the walls of the passages and roof of the central chamber, they become quite smooth, hard, and polished, so that the earth will not fall in, even after the severest storm.

The use of so complicated a series of cells and passages is extremely doubtful, and our total ignorance of the subject affords another reason why the habits of
this wonderful animal should be better studied.

About the middle of June the moles begin to fall in love, and are as furious in their attachments as in all other phases of their nature. At that time two male moles cannot meet without mutual jealousy, and they straightway begin to fight, scratching, tearing, and biting with such insane fury that they seem unconscious of anything except the heat of battle. Indeed the whole life of the mole is one of fury, and he eats like a starving tiger, tearing and rending his prey with claws and teeth, and crunching audibly the body of the worm between the sharp points. Magnify the mole to the size of the lion and you will have a beast more terrible than the world has yet seen. Though nearly blind, and therefore incapable of following its prey by sight, it would be active beyond conception, springing this way and that way as it goes along, leaping with lightness and quickness upon any animal which it meets, rending it in pieces in a moment, thrusting its blood-thirsty snout into the body of its victim, eating the still warm and bleeding flesh, and instantly searching for fresh prey. Such a creature would, without the least hesitation, devour a serpent twenty feet in length, and so terrible would be its voracity that it would eat twenty or thirty of such snakes in a day as easily as it devours the same number of worms. With one grasp of its teeth and one stroke of its claws, it could tear an ox asunder; and if it should happen to enter a fold of sheep or enclosure of cattle, it would kill them all for the mere lust of slaughter. Let, then, two of such animals meet in combat, and how terrific would be the battle! Fear is a feeling of which the mole seems to be utterly unconscious, and, when fighting with one of its own species, he gives his whole energies to the destruction of his opponent without seeming to heed the injuries inflicted upon himself. From the foregoing sketch the reader will be able to estimate the extraordinary energies of this animal, as well as the wonderful instincts with which it is endowed.

The fur of the mole is noted for its clean, velvety aspect; and that an animal should be able to pass unsoiled through earth of all textures is a really remarkable phenomenon. It is partly to be explained by the character of the hair, and partly by that of the skin. The hair of the mole is peculiar on account of its want of "set." The tops of the hairs do not point in any particular direction, but may be pressed equally forward or backward or to either side. The microscope reveals the cause of this peculiarity. The hair is extremely fine at its exit from the skin, and gradually increases in thickness until it reaches its full width when it again diminishes. This alternation occurs several times in each hair, and gives the peculiar velvet-like texture with which we are all so familiar. There is scarcely any coloring matter in the slender portion of the hair, and the beautiful changeable coppery hues of the fur is owing to this structure. Another reason for the cleanliness of the fur is the strong, though membranous muscle beneath the skin. While the mole is engaged in travelling, particularly in loose earth, the soil for a time clings to the fur; but at tolerably regular intervals the creature gives the skin a sharp and powerful shake, which throws off at once the whole of the mould that has collected upon the fur. Some amount of dust still remains, for, however clean the fur of a mole may seem to be, if the creature be placed for an hour in water, a considerable quantity of earth will be dissolved away and fall to the bottom of the vessel. The improvement in the fur after being well washed with soft tepid water and soap, is almost incredible. Many persons have been struck with such admiration for the fur of the mole, that they have been desirous of having a number of the skins collected and made into a waist-coat. This certainly can be done, but the garment thus made is so very hot that it can only be worn in winter. Such garments are very expensive, and owing to the tender quality of the skin, possess but little lasting powers. There is also a wonderfully
strong smell about the mole; so strong, indeed, that dogs will sometimes point at moles instead of game, to the great disgust of their masters. This odor adheres obstinately to the skin, and even in furs which have been dried for more than ten years, this peculiar savor has been noticed.

We have given much space to the mole, not particularly on account of its particular usefulness to the trapper, but because of its many claims to our notice. If the creature were a rare and costly inhabitant of some distant land, how deep would be the interest which it would incite. But because it is a creature of our country, and to be found in every field, there are but few who care to examine a creature so common, or who experience any feelings save those of disgust when they see a mole making its way over the ground in search of a soft spot in which to burrow.

In many localities this interesting animal exists in such numbers as to become a positive nuisance, and the invention of a trap which would effectually curtail their depredations has been a problem to many a vexed and puzzled farmer.

Mole traps of various kinds have found their way into our agricultural papers, but none has proved more effectual than the one we describe on page 119. An arrangement of the figure four, page 107, is also sometimes employed with good success. In this case the bait stick crosses the upright stick close to the ground, and rests over the burrow of the mole, the earth being previously pressed down to the surrounding level. The stone should be narrow and very heavy, and of course no bait is required.

The pieces should be set carefully, and so adjusted that the lifting of the soil beneath the stick as the mole forces its way through the compressed earth will dislodge the bait stick and let down the stone with its crushing weight.

Another method consists in embedding a deep flower pot in one of the main tunnels of the animal, and carefully replacing the soil above. The mole in traversing his burrow thus falls into the pit and is effectually captured. This is a very ingenious mode of taking the animal, and rewarded its inventor with seven moles on the first night of trial.

There are a number of other devices said to work excellently, but the above we believe to be the most effectual of all.

There are several species of American moles, the star-nosed variety being familiar to most of us. The most common moles are the shrew moles, with pointed noses. The silver mole is a large species, of a changeable silvery color, found on the Western prairies. The Oregon mole is nearly black, with purplish or brownish reflections.

The most beautiful of all the moles is found at the Cape of Good Hope. It is of about the size of the ordinary American species, and its soft fur glistens with brilliant green and golden reflections. The fur of this species is probably the most wonderful and beautiful in the whole animal kingdom.

SQUIRRELS.

There are many species of squirrels found in the United States, but their fur is
of little value, and of trifling importance in the fur trade; the squirrel fur of our markets being that of a small grey European variety. Squirrels, as a class, possess much the same peculiarities and habits. Their claws are particularly adapted for life among the trees; their tails are long and bushy, covering over the backs of the animals when in a sitting posture. They are all lithe and quick of movement, and their senses of sight and hearing are especially keen. They are constantly on the alert, and are full of artifice when pursued. Their food consists chiefly of nuts, fruits, and grain, but when pushed by hunger, there is no telling what they will not eat. They generally provide for the winter months by laying up a store of the foregoing provisions, either in holes in trees or interstices in the bark, or in cavities under ground. The shag-bark hickory offers an especial inducement to these provident creatures in the numerous crevices and cracks throughout the bark. It is not an uncommon thing to find whole handfuls of nuts carefully packed away in one of these cracks, and a sharp stroke with an ax in

the trunk of one of these trees will often dislodge numbers of the nuts. The writer has many a time gone "nutting" in this way in the middle of winter with good success. The nests of squirrels are generally built in trees, either in a crotch between the branches or in some deserted woodpecker's hole. Some species live in burrows in the ground, and those individuals who are lucky enough to be in the neighborhood of a barn often make their abode therein, taking their regular three meals a day from the granary. In many localities these animals thus become a perfect pest to the farmers, and their destruction becomes a matter of urgent necessity.

Squirrels, although resembling each other much as regards their general habits, differ considerably in the size and color of the different species.

The principal varieties found on our continent are:—

The large grey squirrel, which is common in the Eastern and Middle States, and which is about two feet in length, including the tail. The common red
squirrel, or chicaree, smaller than the foregoing, and found more or less all through the United States. The black squirrel, which is about the size of the grey, and found in the north-eastern part of the United States, near the great lakes. In the Southern States there is a variety known as the fox squirrel, about the size of the red squirrel, and quite variable in color. The Middle States furnishes a species called the cat squirrel, rather smaller than the preceding. Its tail is very broad, and its color varies from very light to very dark grey.

The ground squirrel, or chipmuck, with its prettily striped sides, is common to most of our readers, its general color being red and the stripes being black and white.

Another burrowing species, known as the Oregon or downy squirrel, is found in the Territory from which it takes its name, and also northward in British America. In size it resembles the chipmuck, and its color is light red above, pure white beneath, and silver grey at the sides.

The beautiful silky variety, known as the flying squirrel, with its grey chinchilla-like fur and loose skin, is found throughout the United States east of the Mississippi.

Louisiana and Texas furnish the golden-bellied squirrel, which is about twenty inches in length, with tail golden yellow beneath, and golden grey above. The sooty squirrel is also found in this locality, being about the same size as the last mentioned, and black above and brownish red beneath.

There are other varieties in California known as the woolly, soft-haired, and weasel squirrels; and in the Western States we find the large red-tailed squirrels, which are about the size of the large grey variety of the Eastern and Middle States.

Squirrels, as a tribe, are much sought for as pets, and most of the species are easily tamed.

Box traps of various kinds are used in taking them alive. The varieties on pages 103, 106 and 110 are especially adapted for this purpose, and should be set either in the trees or on the ground, and baited with an apple, a portion of an ear of corn, or of whatever the animal is particularly fond.

When the animals exist in such numbers as to become a destructive nuisance to the farm, the small-sized steel trap, No. 0, arranged with bait hung above it, will work to good advantage. Twitch-ups are also successful, and we might also recommend the traps on pages 107, 116 and 128 as worthy of trial when the animal is not desired to be captured alive.

Squirrels may be skinned either by ripping up the belly, or in a whole piece, as described in regard to the fox.

We pause before going further into the mysteries of trapping in connection with the animals which we are about to consider, as they are generally exempt from the wiles of the trapper's art, coming more properly in the field of the hunter or sportsman. The idea of trapping a deer, for instance, seems barbarous indeed; but are not all the ways of deceiving and killing these splendid animals equally so? Are not the various strategies and cunning devices of the sportsman,
by which these noble creatures are decoyed and murdered, equally open to the
same objection? As far as barbarity goes, there is to us but little choice between
the two methods; and, generally speaking, we decry them both, and most
especially do not wish to be understood as encouraging the trapping of these
animals, except where all other means have failed, and in cases where their
capture becomes in a measure a matter of necessity. This is often the case in the
experience of professional trappers. The life of the trapper during the trapping
season is spent almost entirely in the wilderness, often many miles from any
human habitation; and at times he is solely dependent upon his gun or trap for
his necessary food.

Sometimes in a dry season, when the leaves and twigs crackle under foot, the
rifle is as good as useless, for it becomes impossible to approach a deer within
shooting range. And there are other times when ammunition is exhausted, and
the trapper is thus forced to rely only on his traps for his supply of food. In such
circumstances, the necessities of the trapper are paramount, and the trapping of
deer, in such straits, as the most desirable food is rather to be recommended than
condemned. The same remarks also in a measure apply to the moose and prong-
horn antelope, as well as to several other animals hereinafter mentioned, as they
are generally considered more in the light of the hunter's than the trapper's game.

THE DEER.

There are upwards of eight varieties of this animal which inhabit North
America. The common red or Virginian deer is found throughout the United
States. The stag or Wapiti deer is now chiefly confined to the country west of the
Mississippi and northward to British America. The moose we shall speak of
hereafter. The Rocky Mountain mule deer, and the long-tailed deer of the same
locality, are two more species, and there are also the black-tailed deer and the
reindeer, the latter of which is a native of British America. The scope of our
volume will not of course admit of detailed directions for trapping each variety,
but, as the habits of all the species are in a measure similar, our remarks will
apply to them in general, and particularly to the red or Virginian deer, which is
the most important to American trappers.

The trap for taking deer should be large, strong, and covered with spikes. The
Newhouse (No. 4) is particularly adapted, and is especially arranged for this
purpose.

When the path of the deer is discovered on the border of a stream or lake, the
trap should be set beneath the surface of the water, near the tracks of the animal,
and covered by a handful of dried grass thrown upon it. When thus set, it may
either be left to run its chances, or success, further insured by the following
precaution: In winter the principal food of the deer consists of the twigs, buds,
and bark of various forest trees, and particularly those of the basswood and
maple. In the season when the traps are set as above described, a most tempting
bait is furnished by a large branch of either of those trees, freshly cut, and laid
near the trap. The deer in feeding are thus almost sure to be captured. There are
certain glands which are located on the inner side of the hind legs of the deer,
and which emit a very strong and peculiar odor. The scent of these glands seems
to attract the animal, and for this reason are cut out and used by trappers as a
scent-bait. In the case already described, it is well to rub the glands on the twigs
of the trees, thus serving as an additional attraction to the bait. There is still
another method of trapping deer, which is commonly employed in the winter
time. The trap is sunk in the snow at the foot of a tree, and the bait, consisting
of an ear of corn or a few beards of other grain, is fastened to the tree, above the
trap, three or more feet from the ground. The animal, in reaching for the bait,
places its foot in the trap and is secured.

When first caught, the deer becomes very wild and violent; so much so that if
the trap were chained or retarded by a heavy clog, the chain, or even the trap
itself, would most likely be broken. The weight of a trap of this size is generally
a sufficient impediment, no clog, or at best a very light one, being required. The
first frantic plunge being over, the entrapped creature immediately yields and
lies down upon the ground, and is always to be found within a few rods of where
the trap was first sprung upon him. During the winter the traps may also be set in
the snow, using the same bait already described. It is a common method to fell a
small tree for the purpose, setting the traps beneath the snow, around the top
branches. The deer, in browsing in the tender twigs or buds, are almost certain to
be captured. Dead-falls of different kinds are sometimes used in trapping the
deer, with good success; using the scent bait already described, together with the
other bait. The food of the deer during the summer consists of nuts, fruits,
acorns, grass, berries, and water plants, and when in convenient neighborhood of
cultivated lands, they do not hesitate to make a meal from the farmer's turnips,
cabbages, and grain.

As we have said, the winter food consists chiefly of the twigs of trees. When
the snow is deep the deer form what are called "yards," about such trees as they
particularly select for their browsing. These yards are made simply by tramping
down the snow, and large numbers of the deer are often thus found together. As
the supply of food is consumed, the yard is enlarged, so as to enclose other trees
for browsing, and where deep snows abound throughout the winter, these
closures often become quite extensive in area. Panthers, wolves, and
wolverines take especial advantage of these, and easily secure their victims. By
wolves especially entire herds of deer are thus destroyed, and whole yards
depopulated in a single night. Panthers secrete themselves in the trees above the
boughs overhanging the "yards," and, with stealthy movements, approach and
pounce upon their unsuspecting prey. The blood-thirsty wolverine secretes
himself in the nooks and by-ways to spring upon its tawny victim unawares.
These, together with man, form the principal foes of the deer, and we can
truthfully assert that the hunter is much more its enemy than the trapper.

As we do not wish to encourage the wanton trapping of this noble creature, it
would perhaps be well for us to devote also few words in describing the various
modes of hunting the animal, adopted by the "professional sportsmen"
throughout the land. The most common method is that called "still hunting,"
most generally pursued in winter. The hunter is shod with deer-skin or other soft
sandals, and starts out with his rifle and ammunition. Finding the fresh track of
the deer, he cautiously and noiselessly follows up the trail, keeping a sharp
lookout ahead. A practised deer-hunter becomes very skillful and accurate, and
the animal is nearly always tracked to discovery, when he is shot. The deer's
sense of smell is extremely acute, and, when in shooting range, it is very
necessary to approach them in the face of the wind, the direction of which may
be easily determined by holding the finger in the mouth for a moment, afterward
pointing it upward toward the sky. The cool side of the finger will indicate the
direction from which the wind blows, and toward that direction the deer should
always be approached, or as far toward that direction as possible. It will
sometimes happen that the hunter will surprise the buck, doe, and fawn together.
In order to secure the three, shoot the doe first. The buck and fawn will remain near the spot. The buck should next be shot, and then the fawn, the charge being aimed at the breast. Never approach a wounded deer without reloading the gun, as he is often more frightened than hurt, and is likely to start and run away, unless prevented by another shot. During the snow season, deer are always watchful of their back track. They are generally at rest during the day, starting out late in the afternoon on their usual ramblings, which they continue through the night. During the dark hours they love to resort to the water side in quest of aquatic plants, and are here often taken by hunters, many of which consider "night hunting" the favorite and most exciting sport. It is pursued in the following manner: The hunter requires a boat or canoe, page 261, a good rifle, and a lamp. The lamp, with a screen or reflector behind it, is placed at the bow of the boat. One hunter takes the oar, and, with noiseless paddle, propels or sculls the boat from the stem. The armed hunter crouches behind the light, with the muzzle of his rifle projecting beyond the screen sufficiently to easily show the forward sight on the tip of the barrel. A dark lantern is sometimes used as a light. The eyes of the deer shine very perceptibly at night, and his presence on the banks is thus easily detected. If he is noiselessly approached, he will remain transfixed by the effect of the light from the boat, and he may be neared even to a very close range, when he is easily despatched. Hundreds of deer are thus taken during the summer and autumn. Deer are also chased by dogs until they are forced to take refuge in the nearest rivers or lakes, when the hunter in his canoe overtakes and shoots them. Another method is frequently employed in the hunting of the deer. These animals are very fond of salt, and with it they are often decoyed to a spot where the hunter lies in wait for them. These places are called "deer licks," or salting places, and can be made as follows: Select a locality where deer are known to frequent, and place a handful of salt either on a smooth spot of ground or in the hollow of a log. A section of a log is sometimes slightly dug out at one end and the other inserted in the earth, the salt being placed in the hollow. The hunter secretes himself in a neighboring tree, sometimes erecting a bench or scaffolding for comfort, and, provided with gun and ammunition, he awaits the coming of the deer. Hunters say that a deer seldom looks higher than his head, and that a sportsman on one of these scaffoldings, even though he is clumsy in his movements, is seldom noticed by the animal.

The salt lick is also utilized for night hunting. A head-lantern is generally required. This can be made in the following manner: Construct a cylinder of birch bark or paste-board or any like substance, ten inches in height, and of sufficient size to fit closely on the head. A circular partition should next be firmly inserted at about the middle of the cylinder, and the centre of the partition should be provided with a socket for the reception of a candle. On this end of the cylinder a piece should now be cut to admit of the passage of light from the candle on that side. Having this fire-hat at hand wait patiently for the game. When a significant noise is heard light the candle and place the cylinder on the head, with the open cut in front, thus directing the light toward the ground. As the deer approaches, his fiery eyes will easily be seen, and the light from the candle will shine sufficiently on the rifle to clearly reveal the sights and admit of a sure aim. There is still another method of night hunting by the salt lick. The rifle is aimed directly at the salted spot, and thus firmly fixed—this preparation being made in the daytime. When night approaches, the hunter finds a piece of phosphorescent wood or "fox fire," and places it on the ground, at a point which he has previously determined to be on a direct line of the aim of his gun. The "fox fire" is plainly seen from the tree, and as soon as it is darkened he knows that it is obscured by the deer, and he pulls the trigger and kills his game.
Deer are hunted at all seasons of the year, but ought not to be hunted during the summer. The sport legitimately begins in September, when the buck begins to harden his horns, and when his flesh is in its best condition for food. In October the deer is more shy, and during this month and after, the sport is at its height. The deer should be skinned from an incision down the belly, and the hide spread on a hoop stretcher, page 275.

**THE MOOSE.**

We have already given so much space to the hunting of the deer that we shall be obliged to cut short our remarks on the Moose, particularly as it is a representative of the same family. This animal is the largest of the Deer tribe, being seven or eight feet in height and often weighing over fifteen hundred pounds. It is supplied with immense flat spreading horns, sometimes expanding to the distance of six feet between the tips. It is found in Maine, Oregon and Washington Territories, and in the neighborhood of the great lakes, and inhabits the regions as far north as the Arctic Sea. Its color is yellowish brown. The fur is thicker in winter than summer, and on the neck of the animal the hair is very coarse and hangs in an immense tuft of over a foot in length. The flesh is most excellent food and is much esteemed by trappers. The habits of the moose are in most respects identical with the deer, already described, and like them they form "yards" during the winter season.

In the North the moose is hunted on snow-shoes by the natives, and in summer they are shot like the deer. They are often very dangerous and terrible creatures to hunt, and the utmost care and skill, as described in regard to the deer, is required on the part of the hunter in order to avoid detection through the exquisite sense of smell which the animal possesses. The moose is easily
trapped. The Newhouse, No. 6, is especially adapted for the purpose, and it should be chained to a clog of stone or wood of over fifty pounds in weight. Set the trap in the "yard," or beneath the snow where the moose frequents, or in the summer, or fall seasons, as described for the deer, using the same methods in regard to baiting, etc.

Skin after the manner of cattle, and stretch the hide on a hoop-spreader. Page 275.

ROCKY MOUNTAIN SHEEP.

These creatures are natives of the entire range of the Rocky Mountains, and are especially prized on account of the superior quality of their flesh as food. They are much larger and more powerful than the domestic sheep, and the ram is provided with enormous curved horns. The wool of the animal is intermixed with coarse grey hairs, and the general appearance of the fur is russet grey, with the exception of the rump and under parts, which are of a dirty white color. The animal is generally very wary and retiring, and inhabits the most secluded and inaccessible mountain regions and rocky cliffs.

They are easily captured by the steel trap (No. 5) set in their haunts. The dead-fall is also used in some instances. Remove the skin as described for the deer.

THE BUFFALO.

The Buffaloes or Bison of the Western plains is too well known to need description. They travel in migrating herds of thousands, and are found from Texas to British America. Their food consists chiefly of grass, of which the "Buffalo grass" is their great delight. They graze and travel through the day and rest by night. They are more the game of the hunter than the trapper, although the largest side Newhouse would effectually secure one of the animals. The Buffalo is generally hunted on horseback, the usual method being that of stealing into the drove while grazing, always moving against the wind in order to avoid being scented. The flesh is palatable and by many much relished. The Buffalo skins of commerce are furnished by the cows. The bull skins are almost devoid of fur on the hinder parts, the hair being confined to the huge heavy mass on the hump and mane. Skin the animal as described for the Moose.

THE PRONG HORN ANTELOPE.

This sole American representative of the Antelope tribe we believe is seldom trapped; but as it is a well-known animal on the Western plains, a short mention of it is required here. In general shape this creature bears considerable resemblance to the deer, the form of the horn being its chief peculiarity, each one of which is provided with a single prong, from which the animal takes its name, of Prong Horn. The color of the body is brownish-yellow, with the exception of the rump and belly which are almost white. The Antelopes generally travel in herds, and are much hunted by the Indians who surround them and destroy them with heavy clubs. Like the deer, their sense of smell is especially keen and the same caution is required in hunting them. In size they are about the same as the Virginian Deer. They are wonderfully graceful in all their movements, and are even more fleet of foot than the deer. These Antelopes
inhabit the Western Prairies and wooded borders from New Mexico northward, and their flesh is much esteemed as an article of diet. They may be caught in their feeding places, as recommended for the deer, using the same sized trap.

The dead fall is also efficacious in their capture, and they are also sometimes taken in large pit-falls covered over with light sticks and leaves, to resemble the natural surroundings. On this false covering, the bait, consisting of green corn or other vegetables, is strewn and a high wall of logs or stones is erected around it, in order that the animal will be obliged to jump slightly in order to reach the bait.

Remove the hide as recommended for the deer.

**SHOOTING AND POISONING.**

Until the introduction of the steel-trap, shooting was a common method of taking fur bearing animals, and even to the present day it is quite prevalent in some localities. Anyone who has had any experience with the fur trade must have learned that furs which are "shot," are much affected in value. Some furriers will not purchase such skins at any price; and they never meet with any but a very low offer. "Trapped furs" and "shot furs" are terms of considerable significance in the fur trade, and anyone who wishes to realize from a profitable sale of his furs, should use his gun as little as possible. A shot grazing through the fur of an animal cuts the hairs as if with a knife, and a single such furrow is often enough to spoil a skin. It is these oblique grazing shots which particularly damage the fur, and an animal killed with a **shot gun** is seldom worth skinning for the value of its pelt. If firearms are used, the rifle is preferable. If the animal chances to be hit broadside or by a direct penetrating bullet, the two small holes thus made may not particularly effect the value of its skin, although even then the chances are rather slight.

Trapped furs are of the greatest value.

The use of poison is objectionable as a means of capture in animals especially desired for their fur. Strychnine is the substance generally employed, and unless its victim is skinned *immediately* after death the pelt becomes considerably injured by the absorption of the poison. It has the effect of loosening the fur and the hair sheds easily.

The poison is principally used in the capture of Wolves and animals considered in the light of vermin. For a wolf or fox, the poison is mixed with lard or tallow and spread on pieces of meat, or a small amount of the powder is inclosed in an incision in the bait. The amount sufficient for a single dose may be easily held on the point of a knife blade, and death ensues in a very few moments after the bait is taken. For a Bear the dose should be a half thimbleful, and it should be deposited in the centre of a piece of honey comb, the cells being emptied of their honey for that purpose.

Other animals may be taken by proportionate quantities of the poison, but for general purposes we discourage its use.
BOOK VII.

CAMPAIGN LIFE IN THE WILDERNESS.

It has been the author's object in the preparation of this book not
simply to content the reader with a mere superficial knowledge of so-called "Amateur trapping," but to carry him further into the art professionally considered, and for this reason we present in the following chapter a full catalogue of the trapper's outfit, containing detailed descriptions of all the necessaries for a most thorough campaign, including boats and canoes, log cabins, shanties and tents, snow shoes and camp furniture of all kinds, together with numerous and valuable hints on trapper's food.

**PLAN OF CAMPAIGN.**

The first thing to be considered in reference to a campaign is the selection of a trapping ground, and it is always desirable to choose a locality where travel by water can be resorted to as much as possible. Otter, mink, beaver and muskrat are among the most desirable game for the trapper, and as these are all amphibious animals, a watered district is therefore the best on all accounts. Lakes, ponds, and streams, bordered by wild woods, form the best possible grounds for general trapping, and the mountain lakes of the Adirondacks and Alleghenies, and all similar regions are especially desirable on this account. Almost any wild country, intersected with streams, lakes, and rivers, is apt to abound with game, and some trappers confine their labors to the borders of a single lake, and adjoining forest. This plan is especially to be recommended to the amateur, as much of the travelling to and fro can be done by boat, the labor being thus much lightened. Having decided upon the seat of operations, the young trappers should immediately set to work at building their shanties and boats. The home shanty is of the greatest importance, and should be constructed first. Select some flat bit of land near the water and clear it of brush wood, or other rubbish and proceed to work as described on page 242. A good axe is the only tool required by an experienced trapper in the construction of such a shanty. Should the trapping lines be very extensive, additional bark shanties, page 245, will require to be made at intervals along the line, for sleeping stations and shelters in case of storm. The professional trapper generally attends to the building of his shanties and boats before the trapping season commences, and thus has everything in readiness for his campaign. If in a birch bark country the Indian canoe, page 260, is the most desirable craft, on account of its lightness and portability. The dug-out, or bateau, described on page 259, will also do good service.

The trapping season begins in October, and everything should be in readiness at this time, so that the trappers may devote all their time strictly to business.

The route of the professional trapper often extends over fifty miles, and the number and weight of traps and provisions which these rough-and-ready individuals often carry as personal luggage is most astounding. Fifty or sixty pounds apiece is considered a fair burden, and they deem no one a fit physical subject for a campaign who cannot at least manage thirty pounds with comparative ease. The number of the trapping party generally consists of from two to four. A few days prior to the opening of the trapping season, the party start out, laden with their burden of traps and provisions, and deposit them at intervals along the line, the provisions being mainly kept in the "home shanty." Several trips may be necessary to complete these preparations, unless the trapping ground is readily accessible by wagon or boat, in which case the transportation is much easier.

The "home shanty" is generally built only when the trapping grounds are far in
the wilderness, miles away from civilization. If the line extends from the outskirts of some town or village, such a hut may be dispensed with. It is used principally as a storehouse for furs, provisions, ammunition, tools, and other valuables, and also serves as a point of rendezvous, or a home, for the trappers, one of the number being generally left in charge to "keep shanty" while his companions are on their tramps in search of game. If desired, a boy may be taken along for this especial purpose. In every case, some such guardian is very necessary, and particularly in wild districts, abounding in wolves and bears, as these animals have an odd trick of breaking into unguarded shanties, and often make sad havoc with its stores. Steel traps are almost exclusively used by the professional trapper, and the supply for a single campaign will often exceed one hundred and fifty. Many of the traps described in the early part of this work are also used, and for the amateur who has not the ready cash to layout in steel traps, are decidedly to be recommended and will be found very efficient. From thirty to fifty traps would be a fair number for an ordinary amateur trapping season, and the probable cost of such a lot would be from $15 to $25. The sizes of the traps will depend upon the game sought, No. 2-1/2 being a good average. With this supply, relying somewhat on dead-falls, twitch-ups, and the various other devices described in our early pages, we can guarantee lively sport, of course, presuming that good judgment has been used in the selection of a trapping ground. In later articles, under the proper headings, we give full details concerning food and cooking utensils, shelter and bedding, as well as many other requisites for the trapper's comfort. To complete the list he should provide himself with a good sharp axe, and hatchet, and if the log canoe is in anticipation he will also require the other tools mentioned on page 259 an oilstone being carried in order to keep the various tools in good repair; an auger, saw, and some large nails are also to be desired, and a small parcel containing needles, thread, pins, scissors, etc., will be found indispensable. "Cleanliness is next to Godliness," and there are no more luxurious necessities in camp life than a piece of soap and a clean towel. For light it is advisable to carry a supply of candles, or a lantern with a can of oil. The latter is, of course, more bulky, and for a campaign wholly on foot is hardly to be recommended on this account.

Each trapper should be provided with a stout jack-knife, pocket-compass, and a supply of matches, a number of these being always carried on the person to provide for the emergencies to which the hunter is always subject.

One of the party should carry a double-barrelled shot-gun and another a rifle, or both may be combined in a single weapon. A revolver is also a desirable acquisition. Purified neats-foot oil should be used on the fire-arms, and in lieu of this, some trappers use the melted fat of the grouse for the same purpose. A good supply of fishing tackle is almost indispensable, and with these valuable equipments the young trapper may defy the wilderness with all its hazards. With his traps, gun and rod, together with his store of provisions, he may look forward to a larder well stocked and may calculate on an appetite which will do it justice.

The list of portable provisions and cooking utensils best adapted for a campaign are given under their proper title, and will be found to cover all the wants of the most fastidious. The stove is the most cumbersome article, but trappers generally dispense with its use altogether, looking at it rather in the light of a luxury as well as a nuisance. The open camp fire will answer every purpose, both for cooking and for comfort in cold weather.

For clothing it is desirable to carry at least two suits, in order to have a
"change." They should be of woolen, and from the hunter's point of view, should be of a sombre shade, so as to be as inconspicuous as possible. The use of high-top boots is to be deprecated, as they are tiresome and unwieldy. Short boots, with thick, iron-pegged soles, are generally preferred by trappers, and in order to render them soft, pliable, and waterproof they may be soaked or smearsed with a hot mixture, composed of one part rosin, two parts beeswax, and three parts tallow. Simple tallow, or even the fat of the deer, is sometimes used for the same purpose.

Calculating on a successful campaign, a supply of board-stretchers, page 273, will be needed for the curing of the skins, and if our adventurous enthusiasts should extend their experience along into the winter, the toboggan and snow-shoes will come into good use for convenient winter travel.

The trapping season properly commences in October and ends in April. The pelts of fur bearing animals are in their best condition during this time, and in the winter are in their prime. The various modes of setting and baiting traps for all our leading animals are clearly set forth in another part of this volume. And in the accompanying engravings will be found life like representations of each species.

In a trapping campaign it is an excellent plan to select a central point for the home shanty, extending the trapping lines in several directions therefrom, following the borders of the lakes or streams for the otter, beaver, mink and muskrat; and setting a few lines inland for the capture of martens, racoons, foxes, etc.

For an amateur campaign this a most excellent and convenient arrangement, the lines may extend all the way from one to five miles each, and connect at their edges, the whole ground plan resembling the form of a wheel, the shanty corresponding to the hub, and the trapping lines the spokes, the tire representing the circuit connecting the various lines. Where the latter extend over many miles it is well to construct bark shanties at the limits. Let each trapper take a certain "spoke," and follow it to its terminus, returning on the adjacent line. On his arrival at the shanty he should immediately set to work skinning the animals taken, and stretching their furs. Full directions for skinning the various game are given under their respective titles, and the curing of skins is treated in detail in another chapter of this work. We also present a table of the comparative values of the various American furs at the present date of publication. Of course these values are constantly varying, but the table will serve at least to gauge the relative values of common and scarce furs. Great care should always be used in removing the skins from the various animals, as the final value of the fur much depends upon this. They should not be removed from the stretchers until perfectly dry, and should then be laid in a cool, airy place. When near a village or settlement it is advisable to send "into town" every few days with a batch of furs for safe keeping, and particularly so when the skins are valuable, and in cases where the home shanty is left unguarded. The value of prime otter or mink pelt is a matter of no small importance, and a good trapping ground furnishes a rare field for light fingered prowlers who are well posted on the market price of raw furs, and who are constantly on the lookout for such prizes, either in the shape of the prepared skin, or on the back of the live animal. These "trap robbers," or poachers, are the pests of trappers, and many have learned from dear experience the advisability of placing their choice furs beyond the reach of the marauders.
The hut in which they are stored is nearly always kept guarded, and, where this is impracticable, the skins are hid in hollow trees, or carried to some near settlement, as we have already mentioned.

If the campaign proves successful and promises well for another season, it is customary to hide the traps beneath rocks, thus saving the labor of a second transportation. In order to keep the traps from rusting, it is well to cover them with oat or buckwheat chaff. The rock should be first rolled from its resting place, and a bed of the chaff made beneath it, in which the traps should be covered, the rock being afterwards replaced. In a few such places all the traps may be effectually stored away, and they will be found in prime order and ready for business on the following season.

In the months of September and October trappers are much annoyed by gnats and mosquitoes, and, as a preventive against the attacks of these pests, we give on page 255 some valuable receipts, which have stood the test of time, and are still the most effective remedies. The "smudge," consisting of a smouldering pile of birch bark is also used where the insects infest the tents or shanties by night. The bark should be dry, and should not be allowed to blaze. The smudge is generally placed at the entrance of the tent, and the trapper may then take his choice between smoke or mosquitoes, both cannot exist together, and a tent infested with the blood-thirsty pests may be effectually cleared in a few minutes by the introduction of smoking brand for a few seconds. If the tent is now closely buttoned and the smudge kept burning directly outside, there will be no further trouble with the mosquitoes, and the odor of the smoke is, after all, but a slight annoyance and to some is even enjoyable after being once accustomed to it. When the home shanty is infested, it may be cleared in the same way, and by the aid of two or more smudges on the windward side may be kept free from the insects.

FOOD AND COOKING UTENSILS.

The professional trapper on a campaign depends much upon his traps for his food, and often entirely contents himself with the subsistence thus gained. We encourage and believe in "roughing it" to a certain extent, but not to that limit to which it is often carried by many professional "followers of the trap" throughout our country. The course of diet to which these individuals subject themselves, would often do better credit to a half civilized barbarian than to an enlightened white man, and when it comes to starting on a campaign with no provision for food excepting a few traps, a gun, and a box of matches, and relying on a chance chip for a frying-pan, he would rather be "counted out." In ordinary cases we see no necessity for such deprivation, and, on the other hand, we decry the idea of transporting a whole kitchen and larder into the woods. There is a happy medium between the two extremes, whereby a light amount of luggage in the shape of cooking utensils and closely packed portable food, may render the wild life of the trapper very cozy and comfortable, and his meals a source of enjoyment, instead of a fulfilment of physical duty. What with the stock of traps, necessary tools, blankets, etc., the trapper's burden is bound to be pretty heavy, and it becomes necessary to select such food for transportation as shall combine the greatest amount of nutriment and the least possible weight, and to confine the utensils to those absolutely necessary for decent cooking.

The trapper's culinary outfit may then be reduced to the following items, and in them he will find a sufficiency for very passable living.
One of the most nutritious and desirable articles of food consists of fine sifted Indian meal; and it is the only substantial article of diet which many trappers will deign to carry at all.

By some it is mixed with twice its quantity of wheat flour, and is thus used in the preparation of quite a variety of palatable dishes. One or two pounds of salt pork will also be found a valuable addition; boxes of pepper and salt and soda should also be carried. With these simple provisions alone, relying on his gun, traps and fishing tackle for animal food, the young trapper may rely on three enjoyable meals a day, if he is anything of a cook. Pork fritters are not to be despised, even at a hotel table; and with the above they can be made to suit the palate of the most fastidious.

Indian meal is a valuable accessory with cooks generally, and to the trapper it often becomes his great "staff of life." If our young enthusiast desires to try his hand at roughing it to the fullest extent, compatible with common sense and the strength of an ordinary physical constitution, he may endeavor to content himself with the above portable rations; but with anything less it becomes too much like starvation to arouse our enthusiasm. For cooking utensils, a small frying-pan and a deep tin basin are indispensable; and a drinking cup is also to be desired. The kind known as the telescope cup, constructed in three parts, which close within each other, when not in use, possesses great advantages on account of its portability. With these one can get along pretty decently.

The pork fritters already mentioned form a favorite dish with trappers generally, and can be made in the following way; have at hand a thick batter of the Indian meal and flour; cut a few slices of the pork, and fry them in the frying-pan until the fat is tried out; cut a few more slices of the pork; dip them in the batter and drop them in the bubbling fat, seasoning with salt and pepper; cook until light brown and eat while hot. The question now arises, "What shall we eat them with?" If you are "roughing it," such luxuries as plates and knives and forks are surely out of the question; and you must content yourself with a pair of chop sticks "a la Chinee," or make your jackknife do double purpose, using a flat chip or stone as a plate. A small tin plate may be added to the list of utensils if desired, but we are now confining ourselves to the "lowest limit" of absolute necessities. That wholesome dish known as "boiled mush," may come under the above bill of fare; and fried mush is an old stand-by to the rough and ready trapper. In the first case the Indian meal is slowly boiled for one hour, and then seasoned as eaten. It is then allowed to cool, and is cut in slices and fried in fat. Indian meal cakes are easily made by dropping a quantity of the hot mush in the frying-pan, having previously stirred in a small quantity of soda, and turning
it as soon as the lower side is browned. A Johnny cake thus made is always appetizing, and with the addition of a little sugar, it becomes a positive luxury. Hoe cakes, so much relished by many, can be made by mixing up a quantity into a thick mass, adding a little soda. Bake in the fire on a chip or flat stone. The trapper's ground is generally in the neighborhood of lakes or streams, and fresh fish are always to be had. They may be cooked in a manner which would tempt a city epicure; and when it comes to the cooking of a fresh brook trout, neither a Prof. Blot nor a Delmonico can compete with the trapper's recipe. The trout is first emptied and cleaned through a hole at the neck, if the fish is large enough to admit of it; if not, it should be done by a slit up the belly. The interior should be carefully washed and seasoned with salt and pepper; and in the case of a large fish, it should be stuffed with Indian meal. Build a good fire and allow the wood to burn down to embers; lay the fish in the hot ashes and cover it with the burning coals and embers; leave it thus for about half an hour, more or less, in proportion to the size of the fish (this may be easily determined by experiment); when done, remove it carefully from the ashes, and peel off the skin. The clean pink flesh and delicious savor which now manifest themselves will create an appetite where none before existed. All the delicate flavor and sweet juices of the fish are thus retained, and the trout as food is then known in its perfection.

By the ordinary method of cooking, the trout loses much of its original flavor by the evaporation of its juices; and although a delicious morsel in any event, it is never fully appreciated excepting after being roasted in the ashes, as above described.

The other method consists in rolling the fish in the Indian meal and frying it in the frying-pan with a piece of the salt pork. Seasoning as desired.

Partridges, ducks, quail, and other wild fowl are most delicious when cooked in the ashes as described for the trout. The bird should be drawn in the ordinary manner, and the inside washed perfectly clean. It should then be embedded in the hot coals and ashes, the feathers having been previously saturated with water. When done, the skin and feathers will easily peel off, and the flesh will be found to be wonderfully sweet, tender, and juicy. A stuffing of pounded crackers and minced meat of any kind, with plenty of seasoning, greatly improves the result, or the Indian meal may be used if desired. A fowl thus roasted is a rare delicacy. A partridge, squirrel, pigeon, woodcock, or any other game can be broiled as well in the woods as at home, using a couple of green-branched twigs for a spider or "toaster," and turning occasionally. For this purpose the bird should be plucked of its feathers, cleanly drawn and washed, and spread out by cutting down the back. Venison, moose, or bear meat, can be deliciously roasted in joints of several pounds before a good fire, using a green birch branch as a spit, and resting it on two logs, situated on opposite sides of the fire. The meat can thus be occasionally turned and propped in place by a small stick, sprinkling occasionally with salt and pepper. The above manner of making the fire is that adopted by most woodsmen. Two large green logs, of several feet in length, being first laid down at about three feet distant, between these the fire is built, and when a kettle is used a heavy pole is so arranged as to project and hold it over the fire. A cutlet of venison fried in the pan is delicious, and a "Johnny cake" cooked in the fat of this meat is a decided dainty.

With the above hints for a "rough and ready" campaign, we think the young trapper ought to be able to get along quite comfortably.
We will now pass on to the consideration of what the average professional trapper would call "luxuries." The stock of these depends much upon the location of the trapping ground. If accessible by wagon or boat, or both, they may be carried in unlimited quantities, but when they are to be borne on the back of the trapper through a pathless wilderness of miles, the supply will, of course, have to be cut short. When two or three start out together it becomes much easier, one carrying the traps and tools; another the guns, cooking utensils, etc.; the third confining his luggage to the food. One of the most necessary requisites for a journey on foot consists in a knapsack or large square basket, which can be easily strapped to the back of the shoulders, thus leaving the hands free. Matches are absolutely indispensable, and a good supply should be carried. They should always be enclosed in a large-mouthed bottle with a close fitting cork, to prevent their being damaged by moisture. For further safety in this regard the matches may be rendered perfectly water-proof by dipping their ends in thin mastic or shellac varnish. If not at hand, this varnish can be easily made by dissolving a small quantity of either sort of gum in three or four times its bulk of alcohol. It is well to dip the whole stick in the solution, thereby rendering the entire match impervious to moisture. Lucifer matches are the best, and, when thus prepared, they may lay in water for hours without any injury. It is a fearful thing to find oneself in the wilderness, cold and hungry, and without the means of lighting a fire, and to prepare for such an emergency it is always advisable to be provided with a pocket sun glass. So long as the sun shines a fire is thus always to be had, either by igniting a small quantity of powder (which the trapper is always supposed to carry) or using powdered "touch wood" or "punk tinder" in its place. Fine scrapings from dry wood will easily ignite by the sun glass, and by fanning the fire and adding additional fuel it will soon burst into flame. In cloudy weather, and in the absence of matches, a fire may easily be kindled by sprinkling a small quantity of powder on a large flat stone, setting a percussion cap in its midst, and covering the whole with dry leaves. A smart strike on the cap with a hammer will have the desired result, and by heaping additional fuel on the blazing leaves the fire soon reaches large proportions. If the young trapper should ever be so unfortunate as to find himself in the wild woods, chilled and hungry, minus matches, powder, caps, and sun glass, he may as a last resort try the following: Scrape some lint or cotton from some portion of the garment, or some tinder from a dry stick, and lay it on the surface of some rough rock, white quartz rock if it can be found. Next procure a fragment of the same stone, or a piece of steel from some one of the traps, and strike its edge sharply, and with a skipping stroke into the further side of the tinder, the direction being such as will send the sparks thus produced into the inflammable material. Continue this operation until the tinder ignites. By now gently fanning the smoking mass it may easily be coaxed into flame. At least so our Adirondack guide told us last summer. The author has never had occasion to test the merits of the plan for himself, and has no special desire of being so placed, as that his life will hang upon its success. He presents it therefore as a mere suggestion without endorsing its practicability, and would rather prefer matches in the long run. The open fire generally serves both for purposes of warmth and cooking, but by many, a camp stove is considered a great improvement. Stoves of this character, and for this especial purpose, are in the market. They are small and portable, with pipe and furniture, all of which pack away closely into the interior. A fire is easily started in one of these stoves, and, by closing the damper, a slow fire may be kept up through the night. The stove is generally set up at the entrance of the tent, the pipe passing through the top, in a hole near the ridge pole. The furniture consists of three pots or kettles, which pack easily into each other, and when in the stove still leave ample room for a considerable amount of provisions.
The kettles are made of block-tin, and frying-pans also, as these are much more light and portable than those made of iron. The lid may be used as a plate, and for this purpose the handle consists of an iron ring, which will fold flat against the surface when inverted. Knives, forks, and spoons are easily stowed away in the stove or knapsack, and a coffee-pot should always be carried. There is a knife known as the combination camp-knife, which is much used by hunters and trappers, and contains a spoon, fork, knife, and various other useful appendages, in a most compact form. It costs from one to two dollars.

For provisions, potatoes will be found excellent, both on account of their portability and the variety of ways in which they may be served. They are healthy and nutritious, and always palatable. Beans are also very desirable for the same reasons. Wheat flour will form a valuable addition to the trapper's larder, and particularly so, if the "self-raising" kind can be had. This flour contains all the required ingredients for light bread and biscuit, and is sold by grocers generally, in packages of various sizes, with accompanying recipes. We strongly recommend it where a stove is employed; and to anyone who is fond of biscuit, bread, or pancakes, it will be appreciated. Butter, lard, sugar, salt, pepper and mustard are valuable accessories, and curry-powder, olive oil, and vinegar will often be found useful. Olive oil is often used by camping parties with the curry powder, and also as a substitute for lard in the frying-pan. Pork, Indian meal and crackers, wheaten grits, rice, and oat-meal are desirable, and coffee and tea are great luxuries. For soups, Liebig's extract of beef is a most valuable article, and with the addition of other ingredients, vegetables or meat, the result is a most delicious and nutritious dish. This extract is obtainable at almost any grocer's, and full directions and recipes accompany each jar. Canned vegetables are much to be desired on account of their portability, and are never so delicious as when cooked over a camp fire. Lemonade is always a luscious beverage, but never so much so as to a thirsty trapper. A few lemons are easily carried and will repay the trouble.

All provisions, such as meal, flour, sugar, salt, crackers, and the like, should be enclosed in water-proof canvas bags, and labelled. The bags may be rendered water-proof either by painting, (in which case no lead or arsenic paints should be used) or by dipping in the preparation described on page 247. If these are not used, a rubber blanket, page 250, may be substituted, the eatables being carefully wrapped therein, when not in use. The butter and lard should be put up in air-tight jars, and should be kept in a cool place, either on the ground in a shady spot, or in some cool spring.

For a campaign on foot, the knapsack, or shoulder-basket, already alluded to on page 234, is an indispensable article. It should be quite large and roomy, say fifteen inches in depth and ten by twelve inches in its other dimensions. The material should be canvas, rubber cloth, or wicker, and, in any case, the opening at the top should have a water-proof covering extending well over the sides. The straps may consist of old suspender bands, fastened crosswise on the broad side of the bag. The capacity of such a knapsack is surprising, and the actual weight of luggage seems half reduced when thus carried on the shoulders. When three or four trappers start together, which is the usual custom, and each is provided with such a shoulder basket, the luggage can be thus divided, and the load for each individual much lightened.

Venison is the trapper's favorite food, and in mild weather it sometimes happens that the overplus of meat becomes tainted before it can be eaten. To
overcome this difficulty the following process is resorted to, for the
preservation of the meat, and the result is the well-known and high-priced
"jerked venison" of our markets. The flesh is first cut into small, thin strips, all
the meat being picked off from the bones. The pieces are then placed on the
inside of the hide of the animal and thoroughly mixed with salt, a pint and a half
being generally sufficient. The salt being well worked in, the fragments should
be carefully wrapped in the hide, and suffered to remain in this condition for two
or three hours. The meat is then ready to be dried,—"jerked."

Four forked poles should be first driven into the ground, about six feet apart, in
the form of a square, the forks being four feet above ground. Lay two poles of
green wood across the forks on the two opposite sides of the square, and cover
the space between them by other poles laid across them, an inch or two inches
apart. On to this mammoth gridiron the strips of flesh should now be spread, and
a steady fire of birch or other clean, fresh wood should be kept steadily burning
beneath for about twenty-four hours. At the end of this time the meat will have
reduced much in size and weight. The salt will have been thoroughly dried in,
and the flesh so prepared maybe kept for almost any length of time. In its present
condition it is excellent eating, and it is always at hand for frying, and may be
cooked in a variety of ways. Moose and bear meat may be dried in a similar
manner, using a proportionate amount of salt. Fish may also be prepared in the
same way, for which purpose they should be scaled as usual and afterward
spread open by cutting down the back, the bone being removed. We cordially
recommend this method of preparing both flesh and fish, and no trapper's "recipe
book" is complete without it.

In localities where wolves abound, the nocturnal invasions of these creatures
often render the keeping of fresh meat a very difficult task, and in this
connection it may be well to give directions for the preservation of game desired
to be used either as fresh meat or for purposes of drying.

The spring-pole is most commonly and successfully used.

Select some stout sapling, bend it down, and cut off a limb several feet from
the ground. Hang the meat in the crotch thus formed, and allow the tree to swing
back. By dividing the meat into several parts it may thus all be protected. When
a moose or deer is killed at such a time or place, or under such circumstances as
render its immediate dressing impossible, its carcass may be defended against
mutilation by another means. Wolves are naturally sly and sagacious, and have a
wholesome fear of a trap. Any unnatural arrangement of logs and stones
immediately excites their suspicion, and the trapper takes advantage of this wary
peculiarity to good purpose. Laying his dead game near some fallen tree or old
log he strews a few branches over the carcass, or perhaps rests a log over it.
Sometimes he hangs the entrails of the animal over the body, on a forked stick,
anyone of which devices is said to have the desired result. The wolverine is
another pest to the trapper, and not being so sly as the wolf, never hesitates to
pounce upon any flesh within its reach. The former method, therefore, is always
the safest plan for absolute protection against all animals.

The moose and deer are the favorite food of trappers in the country where
these animals abound, and the trappers of the Far West find in the flesh of the
Mouflon, or Rocky Mountain sheep, a delicacy which they consider superior to
the finest venison. The prong-horn antelope of the Western plains is another
favorite food-animal with hunters, and the various "small game," such as
squirrels, rabbits, woodchucks, etc., are by no means to be despised. The author once knew a trapper who was loud in his praises of "skunk meat" for food, and many hunters can testify to its agreeable flavor when properly dressed and cooked. It is hard, to be sure, to get up much enthusiasm over a skunk, dead or alive, but where other food is not to be had we would discourage the young trapper from being too fastidious.

The buffalo, or bison, is the great resource of the trappers of the West. The tongue, tenderloin and brisket are generally preferred, but all the meat is eatable. The flesh of the cow is best. It much resembles beef, but has a more gamey flavor. In winged game there is no food superior to the flesh of the grouse, and the great number of the species and wide range of territory which they inhabit render them the universal food game of trappers throughout the world. The ruffed grouse or partridge, pinnated grouse or prairie hen, spruce or Canada grouse, and the cock-of-the-plains or sage cock, are familiar American examples of the family, and their near relatives, the ptarmigans, afford a valuable source of food to the trappers and hunters, as well as general inhabitants of our northern cold countries. Here they are known as "snow grouse," and there are several species. The willow ptarmigan is the most common, and in Rome localities exists in almost incredible numbers. Flocks numbering several thousand have been frequently seen by travellers in the Hudson's Bay territory; and the surface of the snow in a desirable feeding ground, is often completely covered by the birds, in quest of the willow tops, which form their chief food during the winter season. The Indians and natives secure the birds in large numbers, by the trap described on page 75, and Hearne, the traveller and explorer of the Hudson's Bay region, asserts that he has known over three hundred to be thus caught in a single morning, by three persons.

Of water fowl, ducks and geese are especially to be recommended. The former are hunted with decoys and boats, and are sometimes trapped, as described on pages 94. The species are distinguished as sea ducks and river or inland ducks. The latter are considered the most desirable for food, being more delicate and less gamey in flavor than the salt-water, or fish-eating varieties. The mallard, teal, muscovy, widgeon, and wood-chuck are familiar species of the inland birds, and the merganser and canvass-back are the two most esteemed salt-water varieties. Wild geese are common throughout North America, and may be seen either in the early spring or late fall migrating in immense numbers. They form a staple article of food in many parts of British America, and great numbers are salted down for winter supply. They are trapped in large numbers, as described on page 75, and are hunted with tame geese as decoys, the hunter being secreted behind a screen or covert, and attracting the game by imitating their cries.

Fish form an agreeable change to the trapper's diet, and may be caught by the hook and line, or by spearing. The latter method requires considerable practice and skill, but is very successful. The Indians of the North are great experts in the use of the spear, and the number of salmon taken by them annually is enormous. The spear generally consists of five or six steel prongs an inch apart and barbed at the ends. It is mounted on a heavy handle, and when it strikes its victim its grip is sure death. The spearing is generally performed either at the spawning beds or at the falls.

Salmon trout are generally speared in the night time by boat, the spawning ground, generally a gravel bank near the shore, being the seat of operations. A fire of pitch pine and birch bark is ignited on an elevated "jack" in the bow of
the boat, the "jack" consisting of an ox-muzzle, or other concave wire contrivance which will hold the inflammable materials. This is secured to a post or crotched stick, as a prop, and the spearman stands near the burning mass with his spear in readiness. As his companion in the stern of the boat paddles, he keenly watches for his victim, and, seeing his opportunity, makes his lunge and lands his prize. To become a successful spearman requires much practice and no small degree of skill. To retain one's balance, acquire quickness of stroke, and withal to regulate the aim so as to allow for the refraction of the light in the water, all tend to invest the sport with a degree of skill which only experience can master.

Fishing through the ice in winter is a rare sport, and large numbers of brook and lake trout are often taken at this season by cutting holes through the ice and fishing with hook and line. The baits commonly used consist of cow's udder or hog's liver, these being especially preferred on account of their toughness. Angle worms are also excellent, and any kind of raw meat may be used if other bait is not to be had.

It is asserted by some sportsmen that bait scented with assafoetida is much more attractive to the fish, and will insure a capture which would otherwise be impossible. Sweet cicely and anise are also used for the same purpose. When the trout bite lively, fishing through the ice is a most exciting sport, and by the aid of "tip-ups" a single person may command a great number of lines. The winter resort of the brook trout is in water two or three feet deep, over sandy beds. The lake trout frequent deeper water.

The holes are made in the ice at intervals of one or two rods, and a line set in each hole.

The "tip-up" consists of a narrow strip of lath or shingle, with a hole bored through it near the large end. At this end the line is attached, and the hook thrown in the water. A branch is now inserted through the aperture, and its ends are rested across the opening in the ice. No sooner does the fish bite than the long end tips straight in the air, and thus betrays its captive. Ten or fifteen of these contrivances will often keep one pretty busy, and do good service. By some an ordinary cut fish pole, arranged on a crotch, is used instead of the tip-ups just described. Pickerel fishing through the ice is a favorite winter sport in many localities. The line should be about thirty feet in length, and the bait should consist of a small, live fish, hooked through the back. A small cork float should be attached to the line at such a distance as will keep the bait above the bottom, and the superfluous line should be laid in a loose coil near the hole, the end being attached to a small switch or bush, stuck up in the ice near by. The pickerel, on taking the bait, should be allowed to play out the whole line before being pulled in, as the fish requires this time to fully swallow his prey, after which the hook is sure to hold him firmly. Twenty or thirty lines may thus be attended at once, the bush or twig acting the part of a tip-up, or sentinel.

Pickerel spearing is another successful mode of capture during the winter months. A large hole is made in the ice, in about two feet of water, and covered by a spacious box or board hut, six or seven feet square, and provided with a door. The spearman, concealed within, lowers his bait, consisting of an artificial fish with silver fins, made especially for the purpose. This he continually twirls in the water, and as the pickerel approaches the bait, he gradually raises it, until the fish is decoyed nearly to the surface of the water, when a quick stroke of the
spear secures his victim, and the line is again lowered. This is capital sport, and is very successful.

There is a very curious device for fishing by night commonly employed by some anglers, and sometimes known as the "lantern, or fish trap." Many kinds of fish are attracted by a light, but to use a light as a bait, submerged beneath the water, certainly seems odd. It may be done, however, in the following way: The "fish lantern" used for this purpose consists of a bottle containing a solution of phosphorus in sweet oil. Procure a piece of the stick phosphorus the size of a small cherry, and submerging in a saucer of water, proceed to cut it into small pieces. Have in readiness a three-ounce white glass bottle half filled with sweet oil. Drop the pieces of phosphorus into the oil and cork the bottle tightly. In the space of a few hours the phosphorus will have been completely dissolved, and the contents of the bottle will present a thick, luminous fluid, which in a dark room, will afford considerable light. This is the fish lantern. To use it, the cork is firmly inserted and the bottle, with fish line attached, is lowered through the hole in the ice. The water becomes luminous for several feet around, and the unusual brightness attracts the fish in large numbers. They are plainly, discernible, and are readily dispatched with the spear, or captured by a circular net, sunk on the bottom, beneath the luminous bait. This is certainly an odd way of catching fish, but it is often a very efficacious method.

It has not been our intention to enter very extensively into the subject of fishing, but only to give such hints as will be found especially useful and practical to the trapper in relation to his food. The above methods, together with those of trolling and fly-fishing, are those most commonly employed by trappers and hunters generally, and we commend them to the amateur.

We give, on page 120, a unique device for the capture of fish, which might also be found useful.

With the above general remarks on the campaign, together with what follows in the detailed articles on the subject, we think that the ground will have been completely covered. Every possible requirement has been anticipated, and every ordinary emergency foreseen and provided against.

THE TRAPPER'S SHELTER.

The life of the professional trapper is a life of hardship and severe exposure, and a man not only requires considerable courage, but also great bodily vigor, in order to combat successfully the dangers of such a wild, adventurous existence.

The cold and the storm not only imperil his life, but he is often exposed to the attacks of wild beasts. A shelter, therefore, in one form or another, becomes a necessity while it is always a decided comfort, in comparison to a campaign without it.

The reader will find below descriptions of the various shelters alluded to in other parts of this work, and used by trappers throughout the land.

The most substantial of these is the log shanty, commonly known among trappers as the "home shanty," on account of its being constructed as the only
permanent shelter on the trapping line.

It is used as a "home," a place of rendezvous, and a storehouse for provisions, furs, and other necessities and valuables. Other temporary shelters, known as bark shanties, are also constructed along the trapping lines at intervals of five or ten miles, as resting places. These we describe under the proper title.

Although, to the amateur trapper, the log shanty is not likely to become a necessity, we will nevertheless describe its mode of construction, in order to satisfy our more earnest and adventurous readers, who aspire to a full taste of wild life.

Our illustration gives a very clear idea of such a shanty.

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**THE HOME SHANTY.**

It may be constructed of any size, but one of about twelve by ten feet will be found large enough for ordinary purposes. Select straight logs, about eight inches in diameter. The whole number required will be thirty-six. Of these one-half should be twelve feet in length and the other ten. These should now be built up in the square form, on a level piece of ground, laying the ends of the logs over each other, and securing them by notches at the corners, so deep as to allow the edges of the logs to meet. Lay two short logs first, and continue building until all the thirty-six logs are used, and we will now have four symmetrical sides about six feet in height. The place for the door should now be selected. The uppermost log should form its upper outline, and the two sides should be cleanly
and straightly cut with a crosscut saw. The window openings, one or more, may next be cut, commencing beneath the second log from the top, and taking in three beneath it. Replace the logs above, and on the ends of those thus cut, both in windows and doors, proceed to spike a heavy plank, driving two nails into each log, about five inches apart, one above the other. This will hold them firmly in place, and offer a close-fitting jam for the door, and neat receptacle for the window sashes, which latter may now be put in after the ordinary manner.

The gable ends should next be built upon the smaller sides of the hut. Commence by laying a long log (notched as before) across the top of the frame work, and about two feet inside the edge. This should of course be done on both sides of the hut, after which they should be overlapped at the corners with logs eight feet in length. Next lay two more long logs, parallel with the first two, and about a foot inside them, notching as before. The ends of these should be spanned with beams eight feet in length. Two more long logs are next in order—let them be one foot inside the last two. Overlap these with beams five feet and a half in length, and in the exact centre of these last pieces chop notches for a heavy log for a ridge pole. The gable outline, direct from the ridge pole to the eaves, should now be cut off by the aid of a sharp axe. This may be done either while the pieces are in position, or the line may be marked with a piece of chalk, and the logs taken down in order to accomplish it. The roof is now required. This should consist either of strips of bark or the rounded sides of logs split off and hollowed into troughs. The latter method is preferable, on account of its greater strength and durability, but the bark will answer the purpose very well, and is much more easily obtained. The manner of adjusting the roof pieces is clearly shown in our illustration. The first row is laid on with the hollow side up, securing them at top and bottom by nails driven through each into the ridge pole and eaves-log, care being taken that one of these pieces projects well over the gable, on both ends of the hut. These pieces are now overlapped by the second row, and with the addition of the large piece which covers them all at the ridge pole, the roof is complete, and will stand a heavy ram with little or no leaking. The crevices should now be stopped with moss, dried grass or clay, after which the log cabin is complete. When the bark roof is made, additional poles may be inserted beneath as props. They should be three or four inches in diameter, and run parallel with the ridge pole, at intervals on the slope, notches being cut to secure them.

Our engraving represents a chimney, which may be constructed if desired, but the necessity of this may be done away with by using a small camp stove, and making a small opening in the gable end of the hut for the passage of the pipe. If it stove should not be at hand, and our amateur should decide to "rough it" to the full extent, he may build his fire-place and chimney as follows: It will be necessary to cut away an opening in the logs at the gable end, as was done for the door and windows. This should be about three feet square, and the fire place should be built of stone and clay, or cement, to fill the opening, and project inside the hut.

The chimney may then be built up outside in the same manner, sufficiently high to overtop the gables.

Inside the hut overhead will be found abundant room for the hanging of the skins, and any number of cross-poles may be rested across the beams. There are facilities for the swinging of a hammock, if desired, and, in fact, a hut constructed like the foregoing is a perfect one in its way. There are other
methods of building a log cabin, but we will content ourselves with what we consider the best way of all, and pass on to the

**BARK SHANTY.**

This is made by first driving into the ground two forked poles seven or eight feet in height and stout enough to sustain a ridge pole of moderate size. Against this ridge pole other poles should be rested at intervals of two feet, and sloping to the angle of forty-five degrees. The frame-work thus formed should now be covered with bark, commencing at the ground and allowing the edge of each piece to overlap the one beneath after the manner of shingles, in order to shed the rain in case of storm. Spruce or birch bark are excellent for this purpose, and the pieces may be secured with nails, and kept flat by the weight of another series of poles rested against them. The sides of the shelter should be treated similarly, the front being usually left open to face the fire, which the trapper generally builds a few feet distant. In constructing a bark shanty, it is well to select some spot protected from the wind, close to the foot of a mountain or in the midst of trees, always letting the open side face the direction most sheltered.

If desired, the front can be enclosed after the manner of the sides and top, but this is not required where the fire is used.

This style of shelter is represented in our page title to this section, and certainly looks very comfortable.

**TENTS.**

Shanties like the foregoing are in general use among the old veteran trappers of all countries, and even to the amateur there is a charm in a shelter constructed from the rude materials of the woods which the portable tents do not possess.

Tents, however, are much used both by professionals and amateurs, and are indeed valuable acquisitions to the trapper's outfit, and where time is valuable, do away with the labor which the construction of a hut or shanty involves.

Tents are of several kinds. Those most commonly used by the trapper are the house-tent, fly-tent, and half-tent, or shelter-tent.

The first of these is made for prop-poles and a ridge pole, closed on one end and buttoning up at the other. The sides are perpendicular for two or three feet, before the slope commences, and the stay-ropes are fastened to the eaves.

The fly-tent is generally a large, square piece of canvas, with ropes extending from opposite sides. This is thrown over a ridge pole, or over a rope extending between two trees, and the sides are held to the proper slope by tightening and pegging the side ropes to the ground. Fly-tents are also made with ends, which can be lowered, and the whole tent may be pegged close to the ground.

The shelter-tent, when erected, resembles, in general shape, the bark shanty already described. It consists of a strip of canvas, having each end cut off to a point. The tent is pitched over three slanting poles, and the ends are brought down and securely pegged. This is clearly shown in our illustration.
We do not propose giving any extended directions for making tents, as they are a staple article of trade, and, as a general thing, can be bought for a figure which would render their domestic manufacture of little saving or profit. The shelter-tent, however, is so useful an affair, and withal so very simple made, that we will give a few directions in regard to its manufacture. It should be made from stout cotton drilling, or very heavy sheeting. Let the piece be about thirteen feet in length by six in width. Each end of the piece should now be cut to a rectangular point, commencing to cut at a distance of three feet from each corner. In order to render the cloth waterproof, it should now be dipped in a pail containing a solution of equal parts of alum and sugar of lead, a couple of handfuls of each, in tepid water. It should be allowed to remain several minutes in soak, being dipped and turned occasionally, after which it should be spread out to dry. This treatment not only renders the cloth impervious to rain, but the alum tends to make it fire-proof also. A spark from the fire falling upon a tent thus prepared, will often rest upon the cloth until it goes out, without doing the slightest damage.

The manner of pitching the tent has already been alluded to, and is clear from our illustration. The poles should be three or four in number, and seven feet in length, inserted in the ground at the angle denoted. The two outside poles should be seven feet apart, and the intermediate ones equally disposed. The tent piece should now be laid over the poles, and the ends brought down and pegged to the ground at the apex, and rear corners of each side through loops, which should have been previously attached to these parts. A tent, thus arranged, affords a safe shelter from the wind or a moderate storm, and with a bright fire in front, is warm and comfortable.

BEDS AND BEDDING.

Many a trapper does away with these commodities, merely rolling himself in a
blanket and using his arm for a pillow; but we do not propose to encourage or recommend any such half-way comfort as this, when by a very little labor a portable bed can be prepared on which the weary hunter can rest as serenely as if

slumbering on the congenial softness of a hair mattress. A bed of this kind we illustrate, and it can be made in the following manner: Procure a large piece of canvas, sacking or other strong, coarse material six and a half feet square. If a single piece of this size cannot be found, several parts may be sewed together to the required dimensions. After which two opposite sides should be firmly stitched together, thus forming a bottomless bag, if we may be allowed to use the expression. Two stout poles seven or eight feet in length and as large as the wrist should now be cut. Insert them through the bag, allowing the ends to project equally on each side. These ends should now be rested on two logs, one placed across each end of the canvas. In order to hold the poles in place notches should be cut in the logs at such distances as will draw the bag to its full width. The interior of the canvas should now be filled with dried grass, leaves, moss or spruce boughs, after which the bedstead and bed is complete.

The yielding elasticity of the poles and the softness of the warm filling in the bag, give the effect of a spring and straw mattress combined, lifting the sleeper above the cold, damp ground, and by the addition of a blanket above, insuring warmth on all sides. If the logs are not at hand four forked stakes may be used, driving them firmly into the ground at such distances as will draw the bag to its full width, when the poles are rested upon them. If by the weight of the body the forked props should tend to incline towards each other this trouble may be easily remedied by inserting short poles as braces between them. If desired a bed of this kind may be used as a hammock and hung in a tree without much trouble. It is only necessary to secure the long poles firmly at their full width by a stout brace pole at the ends, letting the latter be deeply notched at the tips in order to receive the bed supports. The joints should then be tightly bound with stout twine in order to prevent slipping, after which the bed may be hung in mid-air by ropes at each end, and the tired trapper may swing himself to sleep with perfect comfort and safety. For this purpose the ropes should be attached at the joints, using a loop of six feet for each end. In the centre of this loop a small one should be made by doubling the rope and winding twine about it, leaving only a small aperture. Through these small loops, by the aid of other ropes, the bed is attached to the tree. By using this precaution the unpleasant experience of being turned or dumped out of bed will be impossible. For bed clothes a woollen
blanket should always be carried, and if convenient a large bag of thick Canton flannel is a most excellent acquisition.

Bags of this sort are in common use among amateur trappers, hunters and camping parties, and are very warm and comfortable. They should be nearly seven feet in length and of a "loose, easy fit." With one of these contrivances it is impossible to "kick the clothes off" and the warmth is continual instead of "intermittent," and even on the bare ground it is said to be sufficient protection. Hammocks are also in very general use, but we can confidently recommend the suspended bed above described as decidedly preferable.

There are various kinds of hammocks in the market, from the light fibered silk, weighing only a few ounces, to the large corded variety of several pounds weight and capable of holding many persons. They are an established article of trade, and as the details of their manufacture would be of little practical use to the reader, we will leave them without further consideration. They can be had at almost any sporting emporium, at comparatively small cost.

**TENT CARPETING.**

We have described a most excellent contrivance for a bedstead and recommend its use whenever possible; but when the bed is desired to be made on the ground the following method is usually employed, by which the whole interior of the tent, hut or shanty is carpeted with a soft, even covering of green.

Spruce or hemlock boughs are generally used, and should be from the tips of the branches where the wood is not too large. Commence at the back part of the shelter, and lay down a row of the boughs with the butt of the branch towards the front. Overlap these with another nearer row and continue the operation, laying the evergreen as evenly as possible until the whole interior is smoothly covered. The projecting ends at the front, should now be secured by the weight of a medium sized log, or by a pole pegged down firmly at intervals. A similar log should now be laid at the back portion of the shelter over the tips of the boughs after which the bed is complete, and will be found easy and comfortable in proportion to the care and skill shown in its construction. A blanket should be thrown over the boughs before reclining to rest, as the fresh green gives forth considerable dampness.

If possible a rubber blanket should be used for this purpose. These consist of thick Canton flannel, coated on one side with Indian rubber, and are used with the rubber side down. They are warm and comfortable, and a valuable acquisition to the trapper's outfit. There is a thinner and cheaper variety, having equal water-proof qualities but which does not possess the warmth of the former. Either will be found useful.

So much for beds and bedding. If the reader will now turn his attention to the following section, "The Trapper's Miscellany," he will find much in detail of what has only been alluded to in the present chapter, besides other hints of great value in reference to a trapping campaign.
BOOK VIII.

THE TRAPPER'S MISCELLANY.
ur enthusiastic novice, as he starts out into the wilderness, should not be unmindful of the swarms of blood-thirsty flies, gnats and mosquitoes, which infest the woods in the summer and early autumn, and are there lying in wait for him. These often become a source of great annoyance to the woodsman, and more often a source of positive bodily suffering.

Although trapping is not generally carried on during this season, the preparations for the coming campaign, including the building of shanties, transporting of traps, etc., are generally made at this time, and unless some preventive is used, the persecutions of the mosquitoes and other winged vermin, become almost unbearable.

**INSECT OINTMENTS.**

These insects seem to have a special aversion for the scent of pennyroyal—an herb growing commonly in sandy localities—and a single plant rubbed upon the face and hands will often greatly check their attacks.

The oil of pennyroyal is better, however, and an ointment made by straining one ounce of the oil into two or three ounces of pure melted lard, or mutton tallow, forms an excellent antidote. This may be carried in a little box or bottle, in the pocket, and applied as occasion requires. Plain mutton tallow is also a most excellent ointment for general use, and in the case of bruises or slight wounds, will give great relief.

Another preparation in very common use amongst hunters and woodsmen, although not quite as agreeable in odor, consists of a mixture of common tar and sweet oil, in equal parts. By some this liniment is considered superior to the other, inasmuch as it also prevents tanning, and is beneficial to the complexion.

During the night time, the tent or shanty often becomes swarmed with the winged pests, and their nocturnal assaults are proverbial for their pertinacity and severity. Their thirst for blood overcomes every other instinct, and pennyroyal often ceases to have any effect. Our Adirondack guide, in narrating his experience with these insect vampires, even says that on a certain night, becoming exasperated at their indomitable perseverance, and, getting tired of the monotonous occupation of spreading ointment, he arose, lit his candle, and drove the creatures out of the tent. He then buttoned up the opening, and retired to rest. A storm came up in the night, and so completely had his canvas been riddled by the bills of the mosquitoes, that the rain poured through his tent as through a sieve.

We have heard of the man who, when pursued by hungry mosquitoes, took refuge beneath a large chaldran, and, by the aid of a stone, clinched the blood-thirsty bills as they protruded in quest of his life-blood, until, by the united efforts of the winged captives, the chaldran was lifted and wafted out of sight, as
if it were a feather.

One story is just as true as the other, and a summer in the Adirondack woods will tend to strengthen, rather than diminish, the belief in either.

The smoke of smouldering birch bark will effectually drive away the mosquitoes from the tents at night. This method is commonly known as "the smudge," and is more fully described in another part of this work.

The smell of the smoke is often unpleasant at first, but it is always preferable to the insect bites.

Mosquitoes are not the only vampires which infest our wooded lands. The "punkeys" and "midgets" can outstrip them for voracity and the painful character of the wound which they inflict. The "punkey," or "black-fly," as it is called, is a small, black gnat, about the size of a garden ant, and the bite of the insect often results very seriously. The midget is a minute little creature, and is the most everlasting sticky and exasperating pest in the catalogue of human torments. They fly in swarms of thousands, and go for their victim "en masse" and the face, hands and neck are soon covered as if with "hay seed." They stick where they first light, and commence operations immediately. All endeavors to shake them off are fruitless, and their combined attacks are soon most painfully realized. Their bites produce great redness and swelling, and the itching is most intolerable. Happily for the woodsman, the "smudge" and pennyroyal ointment are effectual preventives against the attacks of both midgets and black flies, as well as mosquitoes; and no one who values his life or good looks should venture on a woodland excursion in the summer months without a supply of this latter commodity. In conclusion, we would remark that, to the mosquito the blood of the intemperate seems to have a special attraction, and anyone who wishes to enjoy comparative freedom from the attacks of these pests, should abstain from the use of alcoholic stimulants. It is a too prevalent idea among trappers that whiskey and rum are necessary adjuncts to a trapping campaign, and many a trapper would about as soon think of leaving his traps at home as his whisky bottle. This is all a mistake. Anyone who has not sufficient strength of constitution to withstand the hardships and exposures of a trapping life, without the especial aid of stimulants, should stay at home. We are now alluding to the habitual use of such stimulants. It is always well to be provided with a flask of whisky or brandy, in case of illness, but it should only be resorted to in such an event. For a mere chill, we recommend the use of red pepper tea. A simple swallow of this drink, (made simply by soaking a red pepper in a cup of hot water) will restore warmth much quicker than three times the amount of any alcoholic stimulant. It is not our purpose to extend into a lengthened temperance lecture, but only to discourage the wide-spread idea that stimulants are necessities in the life of the trapper. Midgets, mosquitoes and punkeys delight over a victim with alcohol in his veins, and while to a healthy subject the bites are of only brief annoyance, to the intemperate they often result in painful, obstinate sores.

In addition to the various ointments used, it is well to be provided with a head-net, such as we illustrate. Nets of this kind are specially made for sportsmen, and consist of a spiral wire framework, covered with mosquito netting, and of such a size to slip easily on the head.

They are easily made, as our engraving would indicate.
A netting attachment for the hat is also an acquisition, especially in open woods, free from overhanging branches or dense thickets. Such a netting may be secured to the edge of the hat brim, and gathered with an elastic at the lower edge. This elastic will close snugly around the neck when in use, and at other times may be drawn above the brim and allowed to rest on top of the crown.

The portable hat brim, which we illustrate, is an article of trade in common use among sportsmen, and particularly the angler. Our engraving (a) shows the article separate. It is made of cloth, and is kept in its circular shape by a steel spring band at the circumference, between the two sides. It may be attached to any hat, and will act as a most effectual shelter to the rays of a hot sun.

The netting above alluded to may be attached to such a brim, and applied to the edge of the hat when desired. This is shown at (b), which also indicates the manner of adjustment of the brim. Such a brim will often do good service, and may be obtained at almost any sporting emporium at trifling cost. It is portable in every sense of the word, being easily bent and packed away in the pocket.
BOAT BUILDING.
Where trapping is carried on along the banks of the lakes and rivers, a boat of some kind becomes almost a positive necessity.

The following examples represent those in most general use. Perhaps the most common form of the "rough and ready" order of boats, is that called the—

"DUG-OUT," OR LOG CANOE.

It's general appearance is well indicated by the accompanying illustration. With the proper tools, one of these canoes is easily made. A sharp axe, an adze, a shaving knife, a round edged adze, and a small auger, are principally necessary; and a cross-cut saw, broad-axe, sledge, and large sized chisel, will also be found useful.

In any case the log should not be much less than two feet in diameter, perfectly sound, and free from knots. If this precaution is observed, the result will be all the more satisfactory, and the canoe can be cut so thin, as to render it a light burden; being easily carried on the shoulders.

A pine log is generally chosen for a dug-out, on account of the lightness of the wood, and the ease with which it can be worked. Butternut, cottonwood and whitewood, are also excellent, and indeed almost any sound log of large size will answer the purpose.

For a dug-out of good size, the log should be ten or more feet in length. The first thing to be done is to cut a flat surface on one side of the log, from end to end. This indicates the bottom of the canoe. On the upper side the wood should be hewn away, in the curve shown on the upper outline of our illustration.

It is well to divide the log by notches into three equal lengths. In the centre division, the wood may be cut down to a straight line to a depth of about eight inches from the upper surface. The gradual curve to the bow and stern of the canoe should start from each end of this flat cut, and extend to the upper edge of the log, the guiding line being made on the sides of the log by a piece of chalk. The adze will come into good use in trimming off the wood on these curves. When this upper outline is accomplished, the log may be turned bottom side up, and the sides of the extremities rounded off. This may be done with an axe and adze, and when performed, the bottom curves should be made by chopping away the wood in the curves shown in the lower outline of our illustration. This curve should also be marked out with chalk, and should commence a little nearer the end of the log than the curve on the upper side. Shave off the wood to a blunt edge on this curve, at both bow and stern. The rough form of the canoe is now obtained, and by the aid of the draw-knife, or shaving-knife, it can be neatly and smoothly finished.

It is then ready to be "dug-out." The tools most useful for this purpose are the adze and axe, and sometimes the sledge and chisel. The digging out is of course the most tedious part; but with sharp tools it is a comparatively easy matter. When the great bulk of the wood is taken out, the interior should be finished with a howel or round adze; and the sides may be worked to one inch and a half in thickness if desired. The writer once saw one of these canoes of most exquisite workmanship, being only one inch in thickness, and so light as to be easily lifted with one hand. Of course such perfection as this is not necessary for
ordinary purposes; although where the canoe is expected to be carried any
great distance, it is well to thin it as much as possible. A gimlet or small auger
may be used to gauge the thickness of the canoe, using it in the following
manner: Supposing the required thickness of the wood is two inches, proceed to
bore the hole from the inside of the canoe, and continue until the point of the
gimlet or auger barely makes its appearance on the outside. Draw out the tool,
and if the thickness measures more than is required, insert into the hole a slender
piece of wood exactly two inches in length; push it in as far as it will go, and
you may safely work until you reach the end of it. By this method the thickness
may be gauged in different parts of the boat sufficiently to acquire a fair average
thickness, and there is no danger of cutting through. The gimlet should be
allowed to extend outside of the canoe only sufficiently to be detected, and the
holes thus made will seldom give any trouble as leaks. If, however, this should
be the case, a little putty or pitch will remedy the difficulty.

The "dug-out" may be constructed of any size, and of any desired shape, but
the above is the usual type.

When leaks or cracks occur, they may be caulked with hemp, and smeared
with pitch, which will render them thoroughly waterproof.

For lightness and portability there is no boat more desirable or more unique
than——

THE INDIAN OR BIRCH-BARK CANOE.

Where the white birch grows in perfection, and the trees attain a large size, the
chief material of the birch bark canoe is at hand; and although we ordinary
mortals could not be expected to attain to that perfection of skill which the
Indians exhibit in the manufacture of these canoes, we nevertheless can succeed
sufficiently well to answer all practical purposes. The Indian canoes are often
perfect marvels of skill and combined strength and lightness. These half-
civilized beings seem to take as naturally to the making of these commodities, as
if it were almost an hereditary habit with them; and few men, even with the most
exhaustive practice, can compete with the Indian in the combined result of
strength, lightness, durability, external beauty, and nicety of work, which are the
united characteristics of the typical bark canoe.

The average length of the "Bark," as used by trappers, is about twelve feet, but
they may be constructed of any desired dimensions, to the length of forty feet. A
canoe of this size will carry fifteen or twenty persons, and may be transported
with ease upon the shoulders of two strong men. The smaller size, above
mentioned, is capable of carrying two persons, and is a light load for a single
man.

In constructing the bark canoe the first requisite is the gunwale, or upper
framework. This should consist of four strips of cedar, ash, or other light, strong
wood; two for each side of the boat. For an ordinary sized canoe, their length
should be about twelve feet, width one inch, and thickness one-quarter of an
inch. They should be tied together in pairs at the ends, and the two pairs then
joined at the same place. The object of these pieces is to give strength and form
to the canoe, and to offer a firm security for the edges of the bark, which are
secured between them. The gunwale being prepared, we are now ready for the
birch bark. The bottom of a well made canoe should be in one large piece, as our illustration indicates, if possible. Select some large tree with the trunk free from knots or excrescences. Mark off as great a length as possible, and chop a straight cut in the bark through the whole length of the piece, after which it should be carefully peeled from the wood. It will sometimes happen, where large birches exist in perfection, that a single piece may be found of sufficient size for a whole canoe, but this is rather exceptional, and the bottom is generally pieced out, as seen in our drawing. This piecing may be accomplished with an awl and Indian twine, or by the aid of a large needle threaded with the same, sewing with an over-and-over stitch around the edge of each piece. Use as large pieces as are attainable, and continue to sew them on until the area of bark measures about four and a half feet in width by twelve feet in length, the dark colored sides of the bark all facing the same way. Next select a flat piece of ground, and mark off a distance of ten feet, or two feet less than the length of the gunwales. At each end of the space two tall stakes should be driven into the ground about three inches apart. Now turn the bark on the ground with its white side uppermost, and fold it loosely and evenly through the long centre. In this folded condition it should now be lifted by the upper edge and set between the stakes. There will then be about a foot of projecting bark beyond each pair of stakes. These ends should now be covered by folding another piece of bark over them, sewing the edges firmly to the sides of the rude form of the canoe, which now presents itself. When this is done, each end should be supported on a log or stone; this will cause the bottom line to sink downwards at about the proper curve. We are now ready for the gunwale. Lay it in the proper position, fitting the edges of the bark between the two strips on each side, and sewing around the whole with a winding stitch, exactly after the manner of the edge of an ordinary palm-leaf fan. The inside of the canoe should now be lined with long strips of cedar running through the entire length of the boat if possible, but if not, should be so cut as to neatly overlap at the ends. These pieces should be an inch or two in width, and from a quarter to half an inch-in thickness. The ribs are then to be put in. These are generally made from ash, one or two inches in width, and a quarter of an inch in thickness. Any light flexible wood will answer the purpose, and even barrel hoops when attainable will do very well. These ribs should be bent to fit the interior of the canoe crosswise, either close together, or with equal distances between them and the ends should then be firmly secured beneath the gunwales by a continuous loop-stitch through the bark. For a canoe of twelve feet in length, the width should be about two feet, and in order to keep the gunwales firm, two or more cross-pieces should be inserted, and lashed firmly at their ends as our illustration shows. The centre third of the length of the canoe should be parallel at the sides, and if two braces, two feet in length are placed at each end of this third, the shape will be about perfect. We now have a bark canoe of considerable strength and durability, and it only awaits to be made water-proof for final use. In order to accomplish this all the seams outside, and the entire interior of the canoe should, be smeared with pitch, after which its floating qualities may be tested with confidence. Should any leaks occur their whereabouts are easily detected, and an additional application of pitch will remedy the difficulty. The Indians in sewing their bark canoes use tamarack roots, fibrous plants, and grasses, in lieu of thread, and even with these inferior materials often attain to such perfection in compact sewing, as to render the use of pitch unnecessary for water-proof purposes. Such skill is rarely attained by the white man, and the art of making a water-proof canoe, even out of a single piece of bark, is by no means an easy task without the aid of tar or pitch.

For the trapper we strongly recommend the birch "bark." With the above directions we are sure no one could go astray, and we are equally sure that a
canoe made as we describe, would present advantages of lightness and portability which no other style of boat would possess. For temporary purposes, canoes can be made from basswood, hemlock, or spruce bark; but they are at best, very rude and clumsy in comparison with the birch bark. They are generally made after the principles of the above described; either sewing or nailing the edges of the bark together, and smearing every joint and seam profusely with pitch, and adding gunwales, lining, and ribs.

A LIGHT HOME-MADE BOAT.

The following gives an easy method of making a light and serviceable bateau,
which any boy, with moderate ingenuity or skill, could easily construct:—

Select two boards, about three-quarters of an inch in thickness, eighteen or twenty inches in width, and twelve feet in length, which we will consider the required length of the boat. These boards should be well seasoned, and free from knots, and at least one of the sides should be straight.

Next, with the aid of a draw-shave, proceed to shape the ends of one of the boards, as seen on our diagram, (e) representing the forward, (g) the stern. The curve of the bow should commence at about four feet from the end, and take a rounded slope upward, leaving about ten inches of width at the end of the board (e). The stern should be cut at the angle shown at (g), commencing at about two and a half feet from the extremity of the board and continuing upward to about ten inches from the upper edge. The board thus shaped should now be laid evenly on the other, and the outline of the cut portions carefully scratched upon it, after which the second board should be cut in a similar manner as the first, so as to form an exact duplicate.

This being accomplished, the two should be laid evenly, one over the other, and the exact center of their long edges ascertained. Marking off about five inches on each side of this centre on both boards.

Next procure another board about ten inches in width, three feet in length, and perfectly squared at the ends. Nail each end of this piece securely and squarely in the space marked on each of the long boards. Then turn the pieces carefully over and nail another board across the bottom, directly opposite the first. We
will now leave them and give our attention to the bow piece, which is the next requisite. This is shown at \((a)\), and consists of a solid piece of oak, or other hard wood, well seasoned, and hewn out in the arrow shape, indicated in our illustration. It should first be cut three-cornered, the inside face being about eight inches, and the other two ten inches. Its length should be about eleven inches, and its under side should be sloped off on a line with the under curve of the bows. At about five inches from the inner face, and on each side, a piece should be sawn out, one inch in thickness, thus leaving on each side a notch which will exactly receive the side-boards of the boat, as seen at \((a)\).

The piece being thus ready, the bow ends of the boards should be drawn together, fitted in the notches and securely spiked with large nails. A bow piece of this kind adds greatly to the strength of a boat, and will stand much rough usage. The board for the stem should next be prepared. This should be ten inches in width and two feet in length, and should be securely nailed between the ends of the boards at the stem, as shown at \((g)\), being afterwards overlapped on the top by a board of similar size, as our illustration shows, at \((c)\). The bottom of the boat is now easily made by nailing boards crosswise, sawing off the projecting ends close to the curve of the side-boards. After the pieces are all nailed in place, the seams and crevices should be caulked with hemp, using a blunt chisel, or hard wooden wedge, and a mallet. The seats should now be put in, as these are not only a matter of comfort, but of necessity, acting as braces to the sides of the boat. They should be two in number, one being placed three feet from the stern and the other one foot beyond the brace board originally nailed across the top of the boat. The seats should be cut at the ends in a curve corresponding to the part of the boat in which they are placed, and should be situated about a foot from the bottom of the boat, their ends resting on short boards beneath them against the sides of the boat. These are indicated by the dotted lines \((h h)\) in the diagram. When thus resting they should be securely fastened in place by strong screws,
driven through the sides of the boat into their ends \((ff)\), allowing some one to sit on the seat meanwhile to keep it in place. Small cleats should now be tacked to the bottom of the boat, beneath the seat and underneath the seat itself, in order to keep the props in place; after which the original brace board across the top of the boat may be knocked off and the bateau is complete and ready for service. A boat thus made is quite comely in shape, and may be painted to suit the fancy. Should a rudder be required, the broad board at the stern offers a good place of attachment, and oar-locks may be adjusted at the proper places. These may consist of a pair of cleats attached to the inside of the boat, as seen in the illustration. In case it may be found difficult to obtain the large single boards for the sides of the boat, two or more narrow ones will answer the purpose, although not as perfectly. In this case they should first be firmly attached together by cleats, securely screwed to the inside. When first put on the water the boat will probably leak in places, but if left to soak for a few hours the wood will generally swell sufficiently to completely close the crevices. If, however, the leak should continue, that particular part of the boat should be re-caulked and smeared with pitch. This latter substance is of great value to the trapper, not only in boat building but in the construction of his shanties and in other various ways. It will most effectually stop almost any leak in a canoe or boat, and of course should always be applied hot.

**THE SCOW.**

The bateau we have above described is built so as to allow for considerable speed in the water, either in rowing or sculling; but where this speed is not especially desired the pointed bows may be dispensed with, and the sides of the boat made perfectly straight. In this case the bottom takes equal slopes at the ends, and both bow and stern are of the same width, and an ordinary flat-bottomed boat with parallel sides is the result. In many cases a scow of this kind answers every purpose, and is certainly much more easily made.

We have thus described a few of the most common instances of boats used by trappers, and with our full description and illustrations no one can go astray. A boat of some kind is almost an indispensable requisite to the trapper, and anyone of the foregoing will be found sufficient for all ordinary purposes.

A paddle may be used, and in shallow or muddy water a pusher or mud-stick will be found useful. This should consist of a pole seven or eight feet in length, supplied at the ends with an attachment of the shape of the letter U. This may be constructed in two pieces, firmly screwed to opposite sides of the end of the pole, and so formed as to present a curved crotch. Such a stick will be found very useful for pushing through weeds and muddy places. A simple pole trimmed so as to leave a crotch at the end will also answer the purpose very well.

**SNOW-SHOES.**

These commodities are almost indispensable to the trapper where he pursues his vocation in the winter time, during the prevalence of deep snows. When properly made they permit the wearer to walk over the surface of the snow with perfect ease; where, without them, travel would be extremely difficult if not impossible.
In the regions of perpetual snow, and also in Canada and neighboring districts, snow-shoes are very commonly worn. In the latter localities the "snow-shoe race" forms one of the favorite sports of the season, and young and old alike join in its mysteries. Like riding on the velocipede, walking on snow-shoes looks "easy enough," but we notice that a few somersaults are usually a convincing argument that the art is not as simple as it appears. The first experience on snow-shoes is apt to be at least undignifying, if not discouraging, and in order to get used to the strange capers and eccentricities of an ordinarily well-behaved snow shoe, it requires considerable patience and practice. There is no telling where, in an unguarded moment, they will land you, and they seem to take especial delight in stepping on each other and turning their wearer upside down. The principal secret of success (and one may as well know it at the start, as to learn it at the expense of a pint of snow down his back) consists in taking steps sufficiently long to bring the widest portion of the stepping shoe beyond that of the other, keeping the feet rather far apart and stepping pretty high. By observing these precautions, and trusting in Providence, much embarrassment may be saved, and an hour's effort will thoroughly tame the unruly appendages, which at best do not permit of much grace or elegance of gait.

To the moose hunter snow-shoes are often an absolute necessity, and trapping in many cases would be impossible without them. They are thus brought fully within the scope of our volume, and we give a few simple directions for their manufacture. Our illustration gives the correct shape of the shoe. The framework should consist of a strip of ash, hickory or some other elastic wood, bent into the form indicated and wound around the ends with twine or strips of hide. The length of the piece should be about six feet, more or less, in proportion to the size of the individual who proposes to wear the shoe. If the bending should prove difficult it may be rendered an easy matter by the application of boiling water. Across the front part two strips of stout leather, or other tough hide, are then fastened, and these further secured to each other by three or four bands on each side of the middle, as our drawing shows.

In the original Indian snow-shoe, from which our drawing was made, the net work was constructed from strips of moose hide, which were interlaced much after the manner of an ordinary cane-seated chair. Strips of leather, deer skin, or even split cane, above alluded to, may also be used, and the lacing may be either as our illustration represents, or in the simpler rectangular woof seen in ordinary cloth.

In order to attach the interlacing to the bow the latter should be wound with wide strips of cane, if it can be procured, or otherwise with strips of tough skin. The loops thus formed offer a continuous security, and the whole interior, with the exception of the space at the front between the cross pieces, should be neatly filled with the next work. It is well to run the first lines across the shoe, from side to side, passing through the windings of the bow. Across them, in the form of the letter X, the two other cords should be interlaced, after the manner shown.
in the cut. This forms a secure and not very complicated network, and is the style usually adopted by the Indian makers.

There is another mode of attaching the lace-work to the bow which is also commonly employed, and consists in a series of holes bored at regular intervals through the wood. The winding is thus dispensed with, but the bow is sometimes weakened by the operation, and we are inclined to recommend the former method in preference. In attaching the shoe, the ball of the foot should be set on the second cross piece, and there secured by a strip of hide, which should be first adjusted as seen in the engraving, being afterward tied over the foot and then behind the ankle. Snow-shoes are made in other ways, but we believe that the typical Indian snow-shoe above described is the best.

THE TOBOGGAN OR INDIAN SLEDGE.

For winter traffic over deep snows there is no better sled in the world than the Indian toboggan. To the trapper during a winter campaign it is often an indispensable convenience, and without it the Indian hunters of the North would find great difficulty in getting their furs to market. All through the winter season the various trading posts of Canada are constantly visited by numbers of Indian trappers, many of whom have travelled hundreds of miles on their snow-shoes with their heavily laden toboggans. Arrived at their market they sell or trade their stock of furs, and likewise dispose of their toboggans, reserving only their snow-shoes to aid them in their long tramp homewards.

In Canada and northward the toboggan is in very extensive use, both for purposes of traffic and amusement. It is quite commonly met with in the streets of various Canadian cities, and is especially appreciated by the youthful population, who are fond of coasting over the crust of snow. For this purpose there is no other sled like it, and a toboggan of the size we shall describe will easily accommodate two or three boys, and will glide over a crust of snow with great ease and rapidity. To the trapper it is especially valuable for all purposes of transportation. The flat bottom rests upon the surface of the snow, and the weight being thus distributed a load of two or three hundred pounds will often make but little impression and can be drawn with marvellous ease. Our illustration gives a very clear idea of the sled, and it can be made in the following way: the first requisite is a board about eight feet in length and sixteen or more inches in width. Such a board may be procured at any saw mill. Oak is the best wood for the purpose, although hickory, basswood or ash will do excellently. It should be planed or sawed to a thickness of about a third of an inch, and should be free from knots. If a single board of the required width is not easily found, two boards may be used, and secured side by side by three cleats,
one at each end and the other in the middle, using wrought nails and clinching them deeply into the board on the under side. The single board is much to be preferred, if it can be had. The next requisites are seven or eight wooden cross-pieces of a length equivalent to the width of the board. Four old broom-sticks, cut in the required lengths, will answer this purpose perfectly, and if these are not at hand other sticks of similar dimensions should be used. Two side pieces are next needed. These should be about five feet in length, and in thickness exactly similar to the cross pieces. Next procure a few pairs of leather shoe-strings or some strips of tough calf skin. With these in readiness we may now commence the work of putting the parts together. Begin by laying the cross pieces at equal distances along the board; across these and near their ends lay the two side pieces, as seen in the illustration. By the aid of a gimlet or awl, four holes should now be made through the board, beneath the end of each cross piece, and also directly under the side piece. It is well to mark with a pencil, the various points for the holes, after which the sticks can be removed and the work much more easily performed. The four holes should be about an inch apart, or so disposed as to mark the four corners of a square inch. It is also necessary to make other holes along the length of the cross pieces, as seen in the illustration. The line on these can also be marked with the pencil across the board, and the holes made afterwards. These should also be an inch apart, and only two in number at each point, one on each side of the stick. When all the holes are made the board should be turned over, in order to complete preparations on the other side. The object of these various holes is for the passage of the leather shoe-strings for the purpose of securing the cross pieces firmly to the board. In order to prevent these loops from wearing off on the under side, small grooves should next be made connecting the holes beneath, thus allowing the leather string to sink into the wood, where it is securely protected from injury. A narrow chisel is the best tool for this purpose, the making of the grooves being much more easily and perfectly accomplished with this than with the jack-knife. When the under side is thus finished the board may be turned over and the cross pieces and sides again arranged in place as already described. Secure the pieces to the board by the leather strings through the various holes, always knotting on the upper surface, and taking care that the knots are firmly tied. The ends of all the cross pieces will require a double cross stitch through the four holes beneath, in order to secure the side pieces as well. This is plainly shown in the small diagram (a). The front end of each side piece underneath should now be sharpened to a point, to allow for the bend at the front of the toboggan. The cross piece at this end should be secured to the under side of the board, so that as it bends over it will appear on the upper edge, as our illustration shows. The board should next be bent with a graceful curve, and thus held in position by a rope or strip of leather at each extremity of the end cross piece and attached to the ends of the third cross piece, as seen in the engraving. If the bending is difficult and there is danger of breaking the board, the application of boiling water will render it pliable. The draw strings should then be attached to the ends of the second cross piece, and our toboggan is now complete.

It may now be laden with two or three hundred pounds of merchandize and will be found to draw over the surface of the snow with perfect ease. For coasting over the crust there is nothing like it. Such a toboggan as we have described will easily accommodate three boys, the one at the stern being provided with a sharp stick for steering, and the front occupant holding firmly to the draw strings. The toboggan is easily made, and will do good service either for traffic or sport.
CURING SKINS.

This department of the trapper's art is one of the most important and necessary, as affecting pecuniary profits. The value of a skin in the fur market depends entirely upon the care with which it is taken from the animal and afterward prepared, and without a knowledge on this subject the young trapper will in vain seek for high prices for his furs. Large quantities of valuable skins are sent to our markets annually by inexperienced amateur trappers, and in many cases rare and beautiful furs have been almost spoiled by want of care in skinning and curing. The rules are simple and easily followed, a little care being all that is necessary to insure most perfect success. In every case the skin should be removed shortly after death, or at least before it has become tainted with decay. Great pains should be taken in skinning. Avoid the adherence of flesh or fat to the skin, and guard against cutting through the hide, as a pierced skin is much injured in value. The parts about the eyes, legs and ears should be carefully removed. The various methods of skinning are described in our section on trapping, and in all cases the furs should be allowed to dry in a cool, airy place, free from the rays of the sun or the heat of a fire, and protected from rain.

Astringent preparations of various kinds are used by many trappers, but they are by no means necessary. The most common dressing consists of equal parts of rock salt and alum dissolved in water. Into this a sufficient amount of coarse flour or wheat bran is stirred to give the mixture the consistency of batter, after which it is spread thickly over the skin and allowed to dry.

It is afterwards scraped off, and in some cases a second application is made. This preparation is much used in dressing beaver, otter, mink and muskrat skins, but as many of our most successful and experienced trappers do without it, we fail to see the advantage of using it, as it is only an extra trouble. The simplest and surest way is to stretch the skin and to submit it to a gradual process of natural drying without any artificial heat or application of astringents to hasten the result.

A very common mode of stretching skins consists in tacking them to a board, with the fur inwards, and allowing them to dry as already described.

This method does very well for small skins, but for general purposes the "stretchers" are the only means by which a pelt may be properly cured and prepared.

STRETCHERS.

The board stretcher is the simplest form and is in most common use among trappers for the smaller animals. These stretchers are of two kinds, the plain and the wedged. The plain stretcher consists of a piece of board a quarter of an inch in thickness, about eighteen inches long and six inches in width. One end of this board is rounded off, as seen in our illustration, and the sides should also be whittled and smoothed to a blunt edge.

The board stretchers are used only for those skins which are taken off whole,
that is, as described in the chapter on the otter. The skin should be drawn tightly over the blunt end of the board, and its edges either caught in notches cut in the edges of the square end or secured by a few tacks. This stretcher is particularly adapted to the skins of muskrats, minks and animals of a like size. They are known in New England as "shingle stretchers," and are much to be recommended on account of their lightness and the ease with which they can be made and carried.

The wedge stretcher is rather more elaborate than the foregoing, and is said to be an improvement.

The first requisite is a board of about three-eighths of an inch in thickness, two feet or more in length, and three and a half inches at one end tapering to the width of two inches at the other. This end should now be rounded, and the edges of the board whittled off to a blunt edge, as already described in the foregoing, commencing near the centre of the board, and thinning to the edge, and finishing with the notches at the square end. Now, by the aid of a rip-saw, sever the board through the middle lengthwise.

The wedge is the next thing to be constructed, and should consist of a piece of wood the thickness of the centre of the board and of the same length, tapering from an inch in width at one end to half an inch at the other.

To use the stretcher the two boards are inserted into the skin, (the latter with the fur side inward). The wedge is then inserted between the large ends of the boards and driven in sufficiently to stretch the pelt to its full capacity, securing it in the notches by slight cuts in the hide, or by a tack or two at the edge. It should then be hung in a cool, airy place, and the pelt left to "season."

The bow stretcher is another contrivance very commonly used for small skins like the foregoing. When this is used the pelt should be skinned as described on page 185, the initial cut commencing at the lower jaw and extending down between the fore legs, all the feet being previously cut off. The bow may consist of a switch of any elastic wood such as hickory iron wood, elm or birch. It should be about three or more feet in length, and as large as a man's thumb at the butt end. By bending it in the shape of the letter U it may easily be inserted in the skin, the latter being fastened by catching the lip on each side into a sliver notch cut on each end of the bow, as our illustration indicates.
For large animals, such as the deer, bear, beaver, the hoop stretcher is generally employed.

THE HOOP STRETCHER.

This consists of a hoop made from one or more flexible switches tied together so as to form a circle. In order to be adapted to this mode of stretching, the skin should be flat, i.e. taken off as described on page 172, the initial cut extending from the lower jaw to the vent. The size of the hoop required depends upon the dimensions of the skin. Lay the latter upon some flat surface and so gauge the hoop as that it shall surround the pelt on all sides; after which the latter should be secured or laced to the hoop with twine at the edges. All loose parts should be drawn up, and the skin should everywhere be stretched like a drum head. When this is accomplished it is the custom with many trappers to apply the preparation described on page 273, particularly where the skin is thick and fatty. But we are rather disposed to discourage the use of any preparation whatever, in any case, as they are by no means necessary.

In using the board stretchers the fur should always be on the inside, and when the hoop or bow is used it should be placed in such a position, that the air may circulate freely on both sides of the skin, which should not be removed until thoroughly dry.

TANNING SKINS.

In case some of our readers might desire to tan fur skins for their own domestic purposes, the subjoined directions will be found to be reliable, and for all ordinary requirements, sufficiently adequate.

For tanning with the hair on, the skin should first be cleaned, every particle of loose fat or flesh, being removed, and the useless parts cut away. When this is done, it should be soaked for an hour or two in warm water. The following mixture should then be prepared: Take equal parts of borax, saltpetre, and sulphate of soda, and with them mix water sufficient to produce the consistency of thin batter.

This preparation should be painted thickly on the flesh side of the skin, after
which these sides should be doubled together and the pelt left in an airy place.

A second mixture should next be prepared. This should consist of two parts sal soda; three parts borax; four parts castile or other hard soap; all to be melted together over a slow fire. At the end of twenty-four hours, after the application of the first mixture, the second should be applied in a similar manner, and the fur again folded and left for the same length of time. Next, make a mixture equal parts of salt and alum, dissolved in warm water and thickened with coarse flour to the consistency of thin paste. Spread this thickly over the skin and allow it to dry, after which it should be scraped off with the bowl of a spoon. The skin should be tightly stretched during the operation, in order to prevent too great shrinkage. A single application of the last-named dressing, is generally sufficient for small skins; but a second or third treatment may be resorted to if required, to make the skin soft and pliable, after which it should be finished off with sandpaper and pumice stone. A skin may be thus dressed as soft as velvet, and the alum and salt will set the hair securely.

The above directions are excellent, for all general purposes, but we subjoin, in addition, a few other valuable hints and specific recipes in common use. Every trapper has his own peculiar hobby in regard to his tanning process, and the recipes are various and extensive. The above is one of the most reliable for general use. A common mode of tanning mink and muskrat skins is given in the following:

**TO TAN MINK AND MUSKRAT SKINS.**

Before tanning, the skin should always be thoroughly cleansed in warm water, and all fat and superfluous flesh removed. It should then be immersed in a solution made of the following ingredients: Five gallons of cold soft water; five quarts wheat bran; one gill of salt; and one ounce of sulphuric acid. Allow the skins to soak in the liquid for four or five hours. If the hides have been previously salted, the salt should be excluded from the mixed solution. The skins are now ready for the tanning liquor, which is made in the following way: into five gallons of warm, soft water, stir one peck of wheat bran and allow the mixture to stand in a warm room until fermentation takes place. Then add three pints of salt, and stir until it is thoroughly dissolved. A pint of sulphuric acid should then be poured in gradually, after which the liquor is ready. Immerse the skins and allow them to soak for three or four hours. The process of "fleshing" is then to be resorted to. This consists in laying the skin, fur side down, over some smooth beam, and working over the flesh side with a blunt fleshing tool. An old chopping knife, or tin candlestick, forms an excellent substitute for the ordinary fleshing knife, and the process of rubbing should be continued until the skin becomes dry, after which it will be found to be soft and pliable. The skin of the muskrat is quite tender, and the fleshing should be carefully performed.

**HOW TO TAN THE SKINS OF BEAVER, OTTER, RACCOON, AND MARTEN.**

These should be stretched on a board and smeared with a mixture composed of three ounces each, of salt and alum; three gills of water, and one drachm of sulphuric acid. This should be thickened with wheat bran or flour, and should be allowed to dry on the skin, after which it should be scraped off with a spoon. Next, take the skin from the board, roll it with the fur inside, and draw it quickly...
backward and forward, over a smooth peg, or through an iron ring. The skin should then be unfolded and rolled again the opposite way, and the operation repeated until the pelt is quite soft and flexible. This is a good way of softening all kinds of skins, and the above preparation will be found excellent for all ordinary purposes. The muskrat skin may be treated in the same manner as the above, if desired, and the process directed on the muskrat skin may also be applied to the pelts of the other animals.

To remove the fur for a simple tanned skin, the hide should be immersed in a liquid composed of—soft water, five gallons; slaked lime, four quarts; and wood ashes, four quarts. Allow the skin to soak for a couple of days, after which the fur will readily slip off.

Another method—take equal parts wood ashes and slaked lime, and add water to the consistency of batter. Spread this over the inside of the skin, roll it up, and place it in a pail, covering it with water. Here let it remain from one to five days, or until the hair will shed easily, after which it should be finished with the fleshing knife and velveted with sand paper.

**OBSERVATIONS ON THE HISTORY OF FURS AND THE FUR TRADE.**

In all cold climates, man has availed himself liberally of the warm covering with which nature has clothed the animals around him; but the wealth of the most favored nations has drawn to them the most beautiful furs, in whatever part of the world they are procured. Skins of animals were among the first materials used for clothing. Before Adam and Eve were driven from the Garden of Eden, they were furnished with coats of skins. The ancient Assyrians used the soft skins of animals to cover the couches or the ground in their tents, and the Israelites employed badger's skins and ram's skins, as ornamental hangings for the Tabernacle. The ancient heroes of the Greeks and Romans, are represented as being clothed in skins. Æneas, wearing for an outer garment, that of the lion, and Alcestes being formidable clad in that of the Libyan Bear. Herodotus speaks of those living near the Caspian Sea wearing seal skins, and Cæsar mentions that the skin of the reindeer formed in part the clothing of the Germans. In the early period, furs appear to have constituted the entire riches of the Northern countries, and they were almost the only exports. Taxes were paid on them, and they were the medium of exchange. So it was also in our own Western territories in the latter part of the last century, and is to the present day, to a great extent, among the Indians. In the eleventh century, furs had become fashionable throughout Europe, and the art of dyeing them, was practiced in the twelfth. In the history of the Crusades, frequent mention is made of the magnificent displays by the European Princes, of their dresses of costly furs, before the Court at Constantinople. But Richard I. of England, and Philip II. of France, in order to check the growing extravagance in their use, resolved that the choicer furs, ermine and sable amongst the number, should be omitted from their kingly wardrobes. Louis IX. followed their example in the next century, but not until his extravagance had grown to such a pitch, that seven hundred and forty-six ermines were required for the lining of one of his surcoats. In the times, the use of the choicer furs, as those of the sable, ermine, gris, and Hungarian squirrel, was restricted to the royal families and the nobility, to whom they served as distinctive marks and badges of rank. These privileged persons applied them lavishly to their own use, and the fashion extended to the princes of other less civilized nations. Their royal use soon extended to Tartary, and the tents of the
Khan were bedecked with the most rich and costly furs. In the following century, furs were commonly worn in England until their use was prohibited by Edward III., to all persons whose purse would not warrant a yearly expenditure of £100.

The early fur trade of Western Europe, was conducted through the merchants on the south coast of the Baltic, who received goods from the ports of Livonia. In the sixteenth century, a direct trade was opened between the English and Russians; and a company of the former, protected by the Czar, established trading posts on the White Sea, and a warehouse at Moscow, whence they sent trading parties to Persia and the countries on the Caspian Sea. The Czar sent rich presents of beautiful furs, to Queen Mary and Queen Elizabeth; but the latter prohibited the wearing of any but native furs, and the trade soon declined and was abandoned. In the 17th century, Siberia was conquered by the Russians, and its tribute was paid in furs. Large quantities were also furnished to China, but the choicest kinds—the precious ermine, the brilliant, fiery foxes, and the best sables, were taken to Moscow, for the use of the princes and nobles of Russia, Turkey, and Persia.

In our own country, the early settlers of the Northern provinces, soon learned the value of the furs of the numerous animals which peopled the extensive rivers, lakes, and forests of these vast territories. They collected the skins in abundance, and found an increasing demand for them, with every new arrival of immigrants from the mother country. Trinkets, liquors, and other articles sought for by the native tribes, were shipped to Quebec, and from thence up the St. Lawrence to Montreal, which soon became the great trading post of the country. The various tribes of Indians were stimulated by trifling compensation, to pursue their only congenial and peaceful occupation; and the French settlers, readily assimilating to the Indian habits, became themselves expert hunters, trappers, and explorers.

The business prospered, and the English soon became interested and secured a share of the valuable trade. Many wealthy and influential parties, connected with the government of Great Britain,—Prince Rupert and Lord Ashley, among the number—became deeply interested in this source of revenue; and after a successful enterprise, they obtained from Charles II., a charter of incorporation, giving to them full possession of the territory within the entrance of Hudson's Straits, not already granted to other subjects, or possessed by those of any other Christian prince or State. In this charter was included the monopoly, of all trade in these regions, and thus we see the origin of the Great Hudson's Bay Company, which is to-day, one of the largest organizations of its kind on the globe. The territory they claimed, extended from Hudson's Bay, west to the Pacific, and north to the Arctic Ocean, excepting that occupied by the French and Russians. They soon formed settlements upon the various rivers which empty into Hudson's Bay, and carried on their operations with immense vigor and success. They met with much opposition and open hostility from the French, and were subjected to vast expenses and losses, but in spite of all, they continued to prosper. Their forts or factories were extended further into the interior of British America, and their power was supreme throughout the country, and in a great measure over the Indians, whom they employed to collect their skins. In the course of time, the French Canadians organized themselves into a united band, under the name of the North West Company, and established their headquarters at Montreal. Their operations were carried on with great energy and profit, and many factories were built in the western portion of the Province. The company
thus soon became a formidable competitor with the Hudson's Bay Company
and for a period of two years, an actual state of war existed between them. This
condition of affairs finally terminated in a consolidation of the two
organizations, under the name of the Hudson's Bay Company, the privileges of
which extended over all the territory formerly occupied by both.

Thus, we have the history of the famous Hudson's Bay Company, from its
origin to its perfect organization. It is a most stupendous concern, and its annual
shipment of furs, is something amazing. Their great sales take place in the
month of March, in order to be completed before Easter; and again in
September, every year at London, and are attended by purchasers from nearly all
parts of the world. Leipsic, the famous fur mart of Germany, is also the scene of
a great annual fair, for the sale of skins.

The importance of the fur trade in this country, led to the early settlement of
the Western territories of the United States; and many a frontier city, like St.
Paul, has been built up by the enterprise of the trapper. Mackinaw and Montreal
owe much of their growth to the traffic of the fur trade; and many a kingly
fortune—John Jacob Astor's, for instance—has been founded on peltry.

Besides the above fur sales in London a moderate portion of those annually
collected in the United States are retained for use, amounting to about 150,000
mink and 750,000 muskrat skins, besides a number of other furs which are
manufactured and worn.

The annual yield of raw furs throughout the whole world is estimated at over
twenty millions of dollars in value; and when we include the manufactured
articles therefrom, the amount will swell to a hundred millions or over. This will
serve to give some idea of the immensity and value of the business.

American dealers divide our native furs into two classes, viz., home and
shipping furs; the former being chiefly utilized in our own country, while the
latter are exported to all parts of the world. New York City is the great fur mart
and depot for the shipping trade in this country, and the annual value of its
exports, in this one branch of trade is enormous.

The principal shipping furs are the silver, red and cross Fox, Wild Cat,
Raccoon, Fisher, Muskrat and Skunk.

Among the home furs are the Marten, Mink, Opossum, Wolf and Muskrat, the
latter being extensively used both here and abroad.

In the following chapter will be found more detailed notes on the leading
American furs, including their various uses and the different countries for which
they are the especial staples.

In order to give the reader some idea of the variety and magnitude of the yield
of furs from our own country, we annex a table (p. 282) showing the sales of the
Hudson's Bay Company, at London, in the year 1873.

MARKET VALUE OF FUR SKINS.

Below will be found an authentic table of the comparative values of the
various American furs at the present date of publication. The quotations are those of one of our largest fur dealers, as published in "THE HAT, CAP AND FUR TRADE REVIEW," the leading journal of the trade in America. Of course these values are constantly varying—keeping pace with the eccentricities of fashion and the demands of the fur trade; but the table will serve at least to gauge the relative values, as between the two extremes of common and scarce furs. The fur market is a great deal like the stock market. It is constantly fluctuating, and a fur which is to-day among the novelties, may next year find itself on the low priced list. The demand for furs of any kind is nearly always governed by fashion, and of course the value is estimated on the demand. If the convention of fur dealers should decide to usher in Muskrat fur as the leading and most fashionable article in that line, the fashion would create the demand, the demand would be in turn supplied by the trappers throughout the country, and in proportion as the Muskrat skins became scarce, so their value would increase. In this way a skin which may be worth fifty cents at one time may soon acquire a value of twenty times that amount. The comparative value of skins is, therefore, constantly varying more or less; but the annexed table (page 283) will be found useful for general reference, and for approximate figures, will probably answer every purpose for some time to come.

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<td></td>
<td></td>
<td></td>
<td></td>
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</table>
Notwithstanding all these advertised prices, the young trapper often experiences great difficulty in a profitable disposal of his furs. Like every other business, the fur trade runs in its regular grooves, and the average furrier will often pay an experienced professional five dollars for a skin for which he would not offer a dollar to an amateur. This certainly seems discouraging, but the knowledge of the fact is calculated to prevent greater discouragement.

We often see fancy prices advertised by fur dealers for first-class skins; but when the furs are sent, only a few are selected as "prime," the rest being rejected as worthless, or perhaps meeting with a meagre offer far below the regular rates. In this way the dealers have the opportunity of choice selection without incurring any risk. Many a young trapper has been thus disappointed, and has seen his small anticipated fortune dwindle down to very small proportions.

The fur trade is supplied through regular professional channels; and in giving our advice to the novice, we would recommend as the most satisfactory and profitable plan that he should make his sales to some local hunter or trapper, who has had experience with the fur trade, and who is satisfied to pay a fair price for the various skins with the probability of selling at an advance, and thus realizing a profit.

In nearly every trapping locality such men are to be found, and although the prices earned may be below the market rates, the amateur takes none of the speculative risks of the business, and should be willing to take lower prices on this account.

**AMERICAN FUR SKINS—THEIR USES AT HOME AND ABROAD.**

In the early history of fur apparel, its use was determined by climate; to-day, and especially in this country, it is regulated by the caprice of fashion. The mink for many years took the lead in the list of fashionable furs, but has of late been superseded by the introduction of the fur seal. The most choice and costly of our American furs at the present day is the Silver Fox. When highly dressed they are worth from 10 to 50 guineas each in the European market. They are principally

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* From the "Hat Cap and Fur Trade Review."
bought by the Russians and Chinese.

The skins of the Red Fox are purchased by the Chinese, Greeks, Persians, and other Oriental nations. They are made into linings for robes, etc., and ornamented with the black fur of the paws which is set on in spots or waves. The fur of the Beaver was formerly highly prized in the manufacture of hats, and yielded a large portion of the profits of the Fur Companies, constituting the largest item in value among furs. Cheaper materials have since been substituted in making hats, and the demand for this purpose has been greatly reduced. By a new process the skin is now prepared as a handsome fur for collars and gauntlets, and its fine silky wool has been successfully woven. The soft, white fur from the belly of the animal, is largely used in France for bonnets.

Raccoon skins are the great staple for Russia and Germany, where, on account of their durability and cheapness, they are in demand for linings for coats, etc. Among the Bear skins, those of the black and grizzly are extensively used for military caps, housings, holsters, sleigh robes, etc.

The fur of the Lynx is soft, warm and light, and is commonly dyed of a beautiful shining black. It is used for the facings and linings of cloaks, chiefly in America.

The Fisher yields a dark and full fur which is largely used in fashionable winter apparel.

The skin of the Marten, is richly dyed and utilized in choice furs and trimmings.

The Mink, like the two foregoing, belongs to the same genus as the Russian Sable, and its fur so much resembles the latter as to be sometimes mistaken for it. It is one of fashion's furs, and the hair of the tail is sometimes used in the manufacture of artist's pencils.

The Muskrat produces the fur most worn by the masses, and is largely exported into Germany, France and England. It is estimated that over six millions of muskrat skins are annually taken in America, and of that number one-half are used in Germany alone.

The skin of the Otter is at present classed among the leading fashionable furs in this country. They are dyed of a deep purplish black color, and are made into sacques, muffns, etc. It is also used by the Russians, Greeks and Chinese. It is mostly an American product, but is also procured to some extent in the British Isles from a smaller variety of the species.

The skins of the Wolf are chiefly used for sleigh robes and such purposes. The fur of the Rabbit is mainly employed in the manufacture of felt, and is also utilized for lining and trimming. The business of breeding rabbits for their fur has been introduced into the United States, and large numbers have been successfully raised in Danbury, Conn., for felting purposes connected with the manufacture of hats.

The fur of the Wolverine or Glutton, finds a market for the most part in Germany, where it is used for trimmings and cloak linings.
The Skunk furnishes the fur known as Alaska Sable, which forms one of our staple pelts, many thousands being annually exported to Poland and the adjacent provinces.

The Badger yields a valuable and fashionable fur, which is also extensively used in the manufacture of artist's brushes; a good "badger blender" forming a valuable accessory to a painter's outfit. Shaving brushes by the thousand are annually made from the variegated hair of the badger.

The Opossum yields a fur in very common use among the masses, and the skins of the domestic Cat are utilized to a considerable extent in the manufacture of robes, mats, etc. The fur of the Puma and Wild Cat are also employed in this form, and may often be seen handsomely mounted and hanging on the backs of sleighs on our fashionable thoroughfares. Among the small game the skins of Squirrels are used for linings, and the soft, velvety fur of the Mole is manufactured into light robes, and very fine hats, and in theatrical paraphernalia is sometimes employed for artificial eyebrows.

Full descriptions of the color of the various furs will be found in our lengthy illustrated chapter on our American animals.
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