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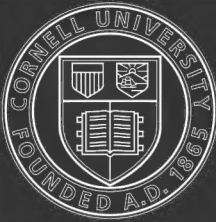
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Fur facts,



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THE AUTHOR RESPECTFULLY

DEDICATES THIS BOOK

to the

TRAPPERS *of* NORTH AMERICA

□□□

When you come to the end of the long, long trail,
And your hunting and trapping days are gone,
When your step grows weak and your sinews fail,
And its time to answer the great last call;
It isn't the size of the cabin you've built,
Nor what you have won in pelts or fame,
The thing that counts is the right to say
"I have kept the faith—I have played the game."

—*Albert M. Ahern*



The author, Albert M. Ahern, President Funsten Bros. & Co., holding a live silver fox at a silver fox ranch.

FUR FACTS

By

ALBERT M. AHERN

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Illustrated by

CHARLES LIVINGSTON BULL

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PREFACE

The object of this book is to encourage the man and boy in the country, on whom the future supply of fur depends, to take an interest in the small fur bearers that live in his district, and protect them during the summer and during the breeding season, and to *only* trap and hunt in the Fall and Winter, when the pelts are prime and the fur is valuable. Trapping in season will never deplete the supply of furs. Most of the fur bearers are very prolific and attain maturity quickly and are found in large quantities in nearly every state in the Union.

The question is often asked "is trapping cruel", and the answer from anyone who knows wild life is unhesitatingly "it is not". Agnes Laut, who is probably one of the best informed women on wild animal life in the country, has pointed out that there is less cruelty in trapping than there is in the slaughter house. Anyone need only go into the wilds to at once realize that natural wild life is more cruel by far than the most careless and thoughtless hunter. To begin with there is hardly such a thing as natural death in the wilds. The weak fall victims to the strong. The weasel hunts the rabbit and kills indiscriminately; the fox hunts the weasel and so on through the entire list; and if fur bearing animals did not multiply with such terrific rapidity they would soon exterminate one another. To give an idea of the rapidity with which wild animals multiply, a number of years ago a settler in Australia, whose home had been in England, decided to have a pair of rabbits sent over to Australia as pets for his children. Previous to this time there were no rabbits in Australia and the rabbit was not a native of the soil. The pair of rabbits which this English immigrant had sent over from the old country was the beginning of the Australian Rabbit. In due time the rabbits had a litter of young. Some of the young were given to neighbors as pets for their children. Finally some of them left the barn yard and took up their home in the wilds. This was the beginning of the wild rabbit in Australia. There was no other wild life to destroy them with the result that they multiplied so rapidly that in a comparatively short number of years they overran the country. It became necessary for the Australian Government to build hundreds of miles of rabbit-proof fences to protect farms and ranches from their depredations. Their number ran into the millions and no headway seemed to be made against them. The pest, however, turned out to be a profit for the reason that their fur is valuable, the hair being used in the making of felt, most of our felt hats being made from Australian rabbit skins. The finer grades of skins are used for furriers' purposes for making low-priced furs, and are known in the trade as dyed coney.

The carcasses are used for food, being shipped frozen by the millions in refrigerator boats to England, and constitute a very important meat supply.

So far as trapping is concerned, all the trapping that could be done in Australia would never keep pace with the increase of the rabbits. It is only extreme measures such as wholesale poisoning or immense drives that will cut them down in numbers. As before mentioned there was no other wild life to destroy the rabbit and from their small beginning in a few years they increased to countless numbers.

The man, and the farmer boy, in the country has come to realize that the small fur bearer is a valuable asset, and he should value them in much the same way that he does any other live stock. It is hoped that the suggestions in this book will help to further this thought. It is the desire of the real trapper to take only the superfluous males. A few animals, like the fox and the mink, are monogamous, but for the most part the male furbearers fight for a harem, and when these fights are on, the young are killed and torn and the females are injured, and the full grown young males are left in the majority to prey on one another. The trapper has come to realize that his source of profit is dependent on the increase in the number of the furbearers in his district. He only wants to trap when the fur is prime, when the females are not bearing young, and when the young are full grown. He plans his trapping so that the animal will be killed quickly and not injure the fur, and if he is well informed he will never use poisoned bait under any circumstances, for the reason that it kills the old and young alike and is a wasteful and profitless method.

In addition to the killing that goes constantly on between wild animals, dogs are also very destructive, and this fact will be vouched for by any sheep raiser. Dogs destroy quantities of sheep and furbearers every year.

As one authority has pointed out, it was not the fur trapper that exterminated the buffalo, it was the sport hunter and the barbed wire fence of the settler, and it was the fur trade that saved the buffalo from total extermination and brought it back, as they have done with the beaver and other fur bearers. A few years ago one of the rarest furs in the world was the silver fox. A short time ago the writer visited a silver fox farm on which there were over eight hundred young foxes that had been raised within one year. This ranch was started with three young foxes. Some of the finest silver foxes that have ever come to market have come from fox farms, which proves conclusively that fine quality furs can be raised successfully.

FUR FACTS

CHAPTER I

THE EARLY FUR TRADE IN ST. LOUIS

The history of the fur trade in St. Louis dates back to about the year 1763. It was at this time that a young Frenchman, Pierre Laclede Liguist, then of New Orleans, received news of the profits being made in the bartering of furs and lead by the white men among the Indians.

From his earliest boyhood days young Laclede, as he became known, had nourished a great ideal—that of some day forming a colony or settlement of which he would be leader. It was this more than anything else which prompted him to leave his ancestral home near Bordeaux, France, in the year 1755 and embark for the New World.

So with the news of the development of the fur trade, came the desire to move out into unexplored territory where the dreams of his youth might be realized. Partly through his friendship with Colonel Antoine Maxent, and partly through his own initiative, Laclede, with a party of men, obtained permission from the colonial authorities to undertake a trading expedition up the Mississippi River. A grant was issued them, conferring the privilege of "exclusive trade with the savages of the Missouri and with all the nations residing West of the Mississippi River for a term of eight years."

Several months passed before supplies and provisions for the journey had been procured, but on August 3rd, 1763, everything in readiness, the little fleet started on its journey.

Through three long months they toiled against the current of the river, traveling at the speed of eight miles per day. (Now the trip from New Orleans to St. Louis can be made by Rail in 20 hours.) It was November before the party finally reached St. Genevieve—at that time the only French post on the west bank of the Mississippi that could furnish shelter or the comforts of frontier life.

It was the intention of Laclede to leave his merchandise and most of his party at that post until he could find a location higher up the stream or nearer the mouth of the Missouri, but he was disappointed

to find there no accommodation for his men or sufficient shelter for his merchandise. At the invitation of the officer in charge of Fort de Chartres, Laclede ascended the river to that post and there left his goods and the most of his men, while he, in December, accompanied by Auguste Chouteau and a few other attendants, examined the country on the western shore as far as the Missouri River, at that time known as "Muddy Water."

Returning down the stream from the mouth of the Missouri River, he selected a spot where the shore rose in an abrupt wall of limestone, at places more than 40 feet high, broken here and there by ravines through which flowed streams of fresh water fed by many gushing springs.

This spot, which Laclede conceded to be ideal for his purpose, they marked by blazing the trees. Then, said Laclede to young Chouteau, his most intimate friend and associate, "You will come here as soon as the river is free from ice, and will cause a place to be cleared and form a settlement according to the plan which I shall give you." Upon his return to Fort Chartres, Laclede told Governor Neyon De Villiers that he had found a site where he was going to form a settlement which, so the story goes, might become hereafter one of the finest cities of America.

Thus was established the city that has become known as the world's greatest fur center. It was some time, however, before the fur trade in this section attained any considerable volume.

Gradually the hunting and trapping extended into the interior, and the Osage Indians, who were the nearest neighbors to the settlers, were easily induced, by the gift of beads and trinkets, to contribute to the success of the enterprise by hunting animals for their skins, which, when brought in to the post, always commanded what the Indians considered to be a good price in beads, colored cloth, red paint, powder and lead.

This trade eventually grew to be very profitable, and in 1810 the trade with the Osages was estimated to amount to \$30,000 a year.

The trading post began to have a name, not only in New Orleans and surrounding territory, but also in far away Montreal, to which place its fur packs were sometimes sent for sale, and the French Canadians who had been in the service of the Great Northwest Fur Company, began to straggle in to take their chances in the new settlement.

Occasionally a buckskin Kentucky hunter, with his rifle on his shoulder, would arrive on his way to the wonderful new hunting

grounds, whose fame had reached the land of Daniel Boone of whom we have read so much in history. In fact, Daniel Boone, himself, in search for more prolific hunting grounds, had moved to Missouri in 1804 and established himself at a point on the Missouri river about twenty-five miles distant from St. Louis.

For forty years after the founding of St. Louis, the trade with the Indians and the adjacent settlers and hunters was carried on as an individual business, the Chouteaus and Gratiots (who were among the leading men in the town) and their relatives enjoying the chief share of it and growing prosperous as a result of it. But in time came the necessity for organizing a company, and in 1794, the Missouri Trading Company was formed by the union of all the parties engaged in the business. In this the Chouteaus and a trader named Manuel Lisa were the chief partners. This arrangement continued until 1808, when Pierre Chouteau and Manuel Lisa enlarged the Missouri Fur Company, with a capital of \$50,000. With this new organization they were enabled to extend their operations over a much wider field. No business was conducted east of the Mississippi River, but the new company went as far south as the Arkansas River, as far west as the Rocky Mountains and as far north as the limits claimed by the great Northwest Fur Company and the still larger and stronger Hudson's Bay Company, for both these powerful organizations were already in the field and attempting to annex the Missouri River region and even the great plains and domains claimed and occupied by them.

It is likely that, but for the Lewis and Clark expedition in 1804, followed by the active operations of the Missouri Fur Company of St. Louis, four years later, the trade of the vast country around the headwaters of the Missouri would have been lost to us and gone to enrich the dealers in Montreal and London.

Indeed, it may be said that the enterprise and daring spirit of the St. Louis traders was a most important factor in preventing this entire domain from falling into the hands of the British Government, as the limits between the United States and the British possessions in the Northwest were vague and uncertain and both the Hudson's Bay Company and the Northwest Company of Montreal, were showing a disposition to claim a monopoly of trade in districts in that quarter by setting up the British flag and claiming the ground as British territory. The Hudson's Bay Company had already pushed its operations into what is now known as Utah, without any intervention on the part of the authority of the United States. Had this

occupation remained undisputed for a few years longer, it is not improbable that it would have been necessary to reclaim it through the force of arms.

At this time, however, came Lewis and Clark, two gallant explorers, whose expedition was a bold and final proclamation in the face of the whole world, that all the country west of the Mississippi River to the Pacific Coast, and including the entire Columbia River region, belonged to the United States, and when the Chouteau's and Lisa sent their officers and agents and employees and shortly afterward followed themselves into the upper Missouri region the great Northwest became ours in fact as it had already been by right.

The then extended operations of the St. Louis traders under the new organization were extremely gratifying. During the last 25 years of French ownership of Louisiana, including the post of St. Louis, its annual value was estimated at over \$200,000. The annual pack of beaver skins alone it is estimated was worth \$60,000; deer \$60,000; otter \$30,000; bear \$14,000; fox, raccoon and wildcat \$12,000; buffalo \$40,000 and lynx \$1,500.

The fur trade, which had so much to do with the early life of St. Louis, began with the very beginning of the city itself, and had there been no fur trade and no material for such a business, there likely would have been no St. Louis for more than half a century after the post was established.

Kentucky and Tennessee, the two oldest states west of the Alleghenies, were settled by explorers and hunters from Virginia and the Carolinas in search of adventure who were attracted by the abundant game that roamed at will in their boundless forests and, perhaps, by the danger they would encounter in hunting, from the Indians who claimed the game and the hunting grounds along with it as their ancient right.

It was only natural, that following the close of the Revolutionary War many officers and soldiers who had served in the Continental Army, and lost everything they possessed, should come over the Alleghenies, or down the Ohio, Cumberland and Tennessee to Lexington, Louisville and Nashville and to find in these new and growing settlements the opportunity for repairing their broken fortunes and of attaining eminence in the states of which these settlements were the beginnings.

And had the mouth of the Ohio been only twenty, instead of two hundred miles from the Missouri, it is highly probable that the

hunters from Virginia and Kentucky would have penetrated the region known as Upper Louisiana in time to have been numbered among the earliest settlers at St. Louis.

The two hundred miles of travel up the Mississippi, however, constituted a barrier, which for many years, separated the settlements of Kentucky and Tennessee from those of Missouri. Naturally, as might be expected, these settlements grew to differ as radically in character as the sources from which they sprung. The founders of St. Louis were Frenchmen, all the way from New Orleans, who came, not for the purpose of fighting the Indians and driving them from their ancestral hunting grounds, but to buy from them the furs and skins they had taken.

The early Kentuckians regarded the Indian as their natural born enemy, always to be approached, even when showing signs of peace and friendship, with a cocked rifle; but the French pioneers in the West had a habit of making friends with the Indians and through this spirit of friendliness and good will they saved themselves from no end of trouble.

There were many elements to be considered in the successful carrying on of the fur trade in those days. Good judgment was required in selecting articles for trade. If blankets were of a different color, or a fraction larger or smaller, or of a different shape from those to which they had been accustomed, the fastidious savages would often refuse to accept them and they would remain unsalable in the hands of the traders.

The red sons of the forest were extravagant in their offers for anything that suited their fancy, but refused to accept, even as a gift, anything which was not in line with their established customs. Trading companies soon learned that they could not depend upon the red men for supplies of furs and peltries sufficient to make the trade profitable. The savage hunted simply to supply his necessities; hence the quantity of skins and furs available from the Indian was always inadequate.

It became necessary, then, to employ a number of skillful hunters and trappers upon whose efforts the success of the business depended.

Many hunters and trappers were engaged for this work. The Missouri Fur Company having at one time as many as two hundred and fifty men, hunters, trappers, Creoles and Canadian voyagers in its service, not to mention the Indians also, who, after a little instruction, contributed to swell the company's annual pack.

The old Missouri Fur Company operated successfully until in extending their operations westward, they met the trade of John Jacob Astor, which, starting from Astoria, located about 75 miles northwest of the present city of Portland, Oregon, was pushing to the East, when a combination of interests was effected and the St. Louis traders united the Missouri Fur Company with Astor in the American Fur Company.

Astor withdrew some time after 1830, and the American Fur Company fell to Pierre Chouteau, Jr., who conducted its operations over the whole field in the West, south of the domain of the Hudson's Bay Company.

Some of the men who pioneered in developing and establishing the early fur trade in St. Louis were:

PIERRE LACLEDE LIGUEST	JOSEPH MILLER
PIERRE CHOUTEAU	ROBERT McCLELLAND
AUGUSTE CHOUTEAU	DONALD MCKENZIE
MANUEL LISA	ROBERT STUART
DANIEL BOONE	WILSON P. HUNT
JOHN JACOB ASTOR	LEWIS CLARK
WILLIAM CLARK	DAVID P. MITCHELL
RUEBEN LEWIS	JOHN A. SIRE
JOHN PIERRE CABANNE	JAMES A. HAMILTON
CHARLES GRATIOT	ALEXANDER CULBERTSON
BARNARD PRATTE	ANDREW HENRY
JOHN B. SARPY	JIM BRIDGES
BARTHOLOMEW BARTHOLD	ELIJAH B. MATTHEWS
THOMAS L. SARPY	THOMAS FITZPATRICK
PETER L. SARPY	WILLIAM H. ASHLEY
RUSSELL FARNHAM	WILLIAM L. SUBLETTE
RAMSEY CROOKES	ROBERT CAMPBELL
KENNETH MCKENZIE	MILTON SUBLETTE
DANIEL DARLING	

Fur and peltry currency in St. Louis, and, indeed, in the whole West—in transactions between St. Louis and New Orleans, Louisville and Pittsburg—was a necessity of the times, for gold and silver money was scarce and inadequate to the needs of business. Furs and skins commanded a ready sale and they further possessed the quality of being easily transferred and containing a great value in a small compass.

In 1807 Judge J. B. C. Lucas bought a house in St. Louis from Pierre Duquochette, for \$600 and paid the entire sum in furs and pelts.

At that time a coon skin, thrown on the counter in a store, would always command its fixed value for any goods in the store, and a bundle of coon skins, might be presented in payment for any commodity or service.

Plenty of furs and peltries meant plenty of currency, and this, in turn, meant increased imports of necessities and comforts up the Mississippi from New Orleans or down the Ohio from Philadelphia and Pittsburg. Furs and skins had a fairly steady value. Prime, medium beaver was always worth \$5.00 a skin; otter \$5.00; buffalo \$8.00; grizzly bear \$10.00; black bear \$4.00; lynx \$2.00; fox \$1.00; raccoon 40c and mink 40c.

The goods traded to the savages for their furs were cheap cloth, high colored red being the favorite, beads and trinkets, guns, powder and lead—and when a lot of these were disposed of, and choice beaver, otter, and lynx furs, or deer skins, bear skins and buffalo robes received in return, there was a good profit for the trader.

After a century and a half of unrivaled success, St. Louis fur traders gradually adapted themselves to new conditions. The American Fur Company wound up its business about the time of the Civil War, as there was no longer a trade with the Indians, they having gradually disappeared from the plains and valleys of the upper Missouri. The buffalo, black, cinnamon and grizzly bear moved away before the encroachments of the railroads and the increasing population and soon the fur trade settled down to a regular trade in the pelts of smaller fur-bearers.

Following the Civil War representatives of the St. Louis houses traversed the Mississippi Valley, the mountains and the coast, wherever there was fur production. Thus, St. Louis became the concentrating point and a great primary fur market.

In 1877 there were 12,386 bundles of furs and peltries received in St. Louis. Ten years later, in 1887, the receipts had increased to 22,045 bundles.

Now the bulk of all of the furs produced on the North American continent come from within a radius of 600 miles of St. Louis, and St. Louis is the center of the raw fur industry of the world. In 1877 there were 12,386 bundles of furs and peltries received in St. Louis. In 1881, Robert Emmet Funsten, William Fitzhugh Funsten and Johnson Funsten, came from Virginia and established Funsten Bros. & Co., which firm eventually became the largest fur house in the world. Through the efforts of this house and with the support of other big fur traders, St. Louis became the largest fur market in

the world, and the number of shipments of furs for the season of 1919-20 is estimated at 1,068,000 shipments, as compared with 12,386 in 1877, and totaled the gigantic sum of \$60,000,000.00. This includes fur shipped to St. Louis from all over the world. The value of fresh pelts trapped during the winter season of 1919-20 in surrounding territory and shipped to St. Louis is so much greater than the business of the early fur traders that there can hardly be any comparison. In 1810 the value of pelts marketed in St. Louis was estimated at thirty thousand dollars (\$30,000.00) a year. In the Fall of 1919 and early Winter of 1920, a little over one hundred years later, the value of the shipments of furs received in St. Louis from North American trapping grounds was estimated at thirty five million dollars (\$35,000,000.00).

CHAPTER II

AMERICAN FURS ARE POPULAR ALL OVER THE WORLD

Fur bearing animals were created by a wise Providence for the use and benefit of mankind, and there is nothing that can take the place of furs for warmth, comfort and pleasure. No woman considers herself well dressed today without a piece of fur, and no woman can be really comfortable during the winter season without fur.

It is a fact, not generally known, that out of the forty-eight states, there is in all, except the state of Florida, a record of zero weather during the winter season.

American furs are not only in demand by Americans, but Europeans also prefer the American skunk, opossum, muskrat, mink, wolf and other American furs to the furs produced in any other country.

China, while one of the oldest and most densely populated countries in the world, is still a big producer of furs. Siberia, which most of us think of as a land of ice and snow, is also a great producer of furs, the principal kind being the Russian squirrels. Siberia is a delightful country in the summer, with its ponds and lakes. It is virtually a fur paradise, and one of the richest undeveloped countries in the world. The supply of furs from Siberia will increase as the country develops and becomes more thickly populated.

Strange as it may seem, the small fur bearers, which go to make up the bulk of the fur supply of the world, follow the small farmer. New York state is one of the largest fur producing states in the union, and the supply of skunk, muskrat and fox continues year after year.

The professional trapper, the amateur trapper, the man and boy in the country has come to realize that the fur bearing animals in his district are his friends—that they are a source of profit and that they are just as valuable to him as other live stock on his farm, such as his pigs and chickens. The old raccoon may eat a little of his corn and the muskrat may gnaw his carrots and the mink kill a chicken occasionally, but the fur bearers around his farm are fully worth all they take, because their pelts are very valuable, if he takes the pelt at the right time of the year. Therefore, the farmer has come to the point where he realizes the importance of protecting his fur bearing

animals, and he uses good judgment as to the time of trapping them in order that they may increase and continue to be a constant source of profit to him, his children and his grand-children. In this he receives the co-operation of the old established fur houses who have large sums invested in the fur business and who are vitally interested in seeing the industry prosper and the supply of fur bearing animals increase. Funsten Bros. & Co., furnish the best information obtainable, encourage reading the reports prepared by the United States Department of Agriculture, furnish him with most humane traps and suggest the best time and method of taking pelts of the fur bearers.

Every boy in the country now is almost an expert in the trapping of fur bearing animals, their care, the care of the pelt, how to stretch it and how to prepare it for shipment. Information about game-laws etc. is sent free by the big fur houses and by the United States Government, who recognizes the value of the fur crop to the farmer as well as to the country at large. The total value of all of the pelts taken in the United States annually runs into millions of dollars and is a big source of revenue and a big help to the farming community.

In addition to protecting the fur bearers, that run wild, a great many enterprising farmers and stock men have undertaken the raising of fur bearing animals for profit and in many instances it has proved very successful. The silver fox farms of Prince Edward Islands being unusually so, and this particular industry has developed in the last decade to a business running into millions of dollars.

Of late years there has been considerable interest shown in fur farming and it is safe to predict that the next ten years will show wonderful strides made in this branch of industry. Muskrat, mink, skunk, opossum, raccoon, which are the staples in the fur line can all be raised successfully with profit, and no doubt great progress will be made along these lines.

CHAPTER III

THE FUTURE SUPPLY OF FUR

Fur bearing animals will be with us forever if they are given half a chance and the man and boy in the country is taught to realize that the fur bearers are his friends and not his enemies. Every man who traps furs or is in anyway interested in furs for profit should see that the fur bearers in his neighborhood are protected and should encourage his neighbors to protect them, and he should preach the gospel of saving and increasing this tremendous source of wealth. "The commercial history of America begins with furs, and from the early days down to the present this has been an important article in the domestic and foreign trade. There are few commodities in common use which distribute their benefits so widely. From the country boy who traps a few muskrats to the professional who patrols miles of country, the money received for pelts goes at once into various channels of circulation." Today the great fur centers of the world are in the United States. The amount of capital invested in the fur trade is greater than ever before and many thousands of people in the great cities derive their support from it in the different branches of dressing, dyeing, manufacturing, selling, etc. The investment on the part of dealers, manufacturers and retailers runs into hundreds of millions of dollars. This gigantic industry and this tremendous source of profit to the trapper and the man and boy in the country would of course cease the minute the supply of furs was shut off; and this industry would naturally decline in proportion as the supply of fur declines, or increase as the quantity of furs increases. Therefore it can be readily seen that the future supply of furs is a very important factor and that it is something that well deserves the attention of every boy and man in the country and that it is up to them to conserve and increase the supply of fur bearing animals. This can be comparatively easily done as has been proven in many sections. The small fur bearer is very prolific and breeds rapidly. There are millions of acres of ground in this country from New York to California and from Canada to the Gulf where the small fur bearers can roam at will and breed and multiply for generations to come. There are vast areas not only in this country but also in

Canada and Alaska where fur bearers can thrive and multiply to insure the future supply of furs for an increased population. Whenever the fur bearers have been protected, and nearly all states now have safe and sane game laws, they have increased. A few years ago a certain section of the country protected beaver. After several years the beaver became a pest and overran the community. A few years ago it was said that the black and silver fox could not be raised in captivity. Today in Prince Edward Islands and in our Northern states there are millions of dollars invested in this industry, and the farming and breeding of silver fox has come to stay. A few years ago one author went so far as to say that fur farming could not be done, yet today some people are worrying about its being overdone. There is not much danger of the wild fur supply becoming less if the boy and the man in the country will do his part by realizing that the fur bearers are his friends and protecting them, feeding them, and helping them in every way possible and only trapping in the Fall and Winter months, and not shooting them in the Spring and Summer, or at any time when he knows that they should not be molested. Nearly every man and boy who lives in the country knows when furs are at their best. This varies in different sections and a rule that might apply in Minnesota would not apply in Florida, but the man living in these states is familiar with conditions in his locality, or he can easily obtain any information he desires as to the game laws and when furs are protected by writing to the big fur houses. They send out a catalog each fall in which is printed a synopsis of the game laws for all of the states and provinces. The writer has advocated the conservation of the fur bearers for more than twenty years. Wild creatures quickly learn where they are safe from molestation and in such places the fear of man disappears in a surprisingly short time. It would seem advisable to set aside a district in every trapping section and protect the fur bearers in that section at all times. In other words it would be a game preserve in which no trapping would be done at any time, and the animals could breed and multiply in this protected area and thus a great many objections on both sides of the question would be overcome. This plan was tried out in Canada. A park was set aside; a great many trappers who were in the habit of hunting and trapping in the region in and about the park which was set aside as a preserve, found it very hard to keep out of the park after it was established as a sanctuary for fur bearing animals; but they finally got together and agreed to stay out and did stay out and later

when they held a conference and compared notes they found that they were getting three times as much fur outside of the park as they were when they were admitted to it and that all of the fur bearers were on the increase and increasing rapidly. If you are located in a good fur section, take an interest in conserving the fur bearers and interest your neighbor in agreeing to set aside a certain district of swamp land or any other land suitable for the purpose, and get your county authorities to co-operate with you in forming a game preserve. If necessary have a local game warden to protect it. If the people of the district will agree not to trap on this ground thus set aside and only trap a certain distance from it, they will be surprised at the wonderful results, and you will help insure a constant supply of furs for yourself, your children and grandchildren.

Your Children and Wild Animals

Since the time of the earliest settlers, children in the open country have been taught to look upon the wild animals as their natural enemies. Did a gray squirrel appear in the barnyard, it was stoned to death. Did a fox scamper through the wheatfield it was shot.

Did a muskrat appear near an icy pool, it was a signal for healthy boys to stop skating and give their attention to its extinction.

There were numerous reasons for this, parents handed down this theory that all wild animals were enemies to their sparse crops. They also encouraged killing them off because animals meant food when food was scarce.

But the boy of today must be taught to look on animals of the open not only as friends, but friends who will make money for him. He should be taught also to foster their growth in every way, to hunt them only when the pelt is prime, to protect their young and to take an active interest in all methods that multiply their numbers.

The United States has taken first place as a fur producer and marketer and the world looks to America for its supply of raw furs.

The skunk, long held in ill repute for such deeds as wholesale chicken snatching (which he was not guilty of) has within the last few years proved a mighty aid to the farmer in destroying pests and its beautiful pelt is one of the never-ending staples of the fur market.

Skunk, while plentiful, is not inexhaustible and must be encouraged and protected by man if man is to realize the high profits that accrue from trapping them. Boys should realize this.

Musk rats, too, once held as an irrepressible pest, have proved their worth as fur bearers and are in heavy demand and can be increased rapidly.

Your Friend, The Skunk

Among the fur-bearing animals of the United States the skunk is second in importance only to the muskrat. The animal's readiness to accept almost any climatic condition and its easily satisfied appetite has fostered its growth in every state in the Union.

Skunk should be encouraged. Protection, does not mean merely confining trapping to the open Season. This is not enough, this valuable animal must be taught that man is not his enemy but his friend.

If the supply is to be increased, friendly measures must be practised. With skunks, this is not difficult. They are never savage, cunning, nor have they the instinctive hate for man possessed by many of their larger brethren. Indeed, the skunk lends itself to domestication with great ease.

The matter of making friends is up to the farmer, the woodman and the trapper. It is no difficult task to improvise homes that will be welcome to them, allow them to rove the fields unmolested during the warmer months, feed them in case of heavy snows, and allow them to raise their young untroubled, and in the end it will pay enormously.

Contrary to the belief of a few years ago, the skunk is the farmer's friend. Investigation by scientists has shown that the animal's principal food is insects that are injurious to plant life, among them the wheat-head army worm, and the tobacco worm. Examination of the stomachs of 62 skunks showed that a majority of them were filled with grass-hoppers and predatory beetles—enemies of agriculture.

Further testimony in behalf of the skunk is contained in government reports stating that poultry killings usually attributed to skunks are in reality the work of weasels. Skunks do occasionally raid a yard killing one fowl—not half a dozen as the weasel does, and they do nibble at garden truck. But even so they should not be driven off; for the cost of their depredations is more than offset by their own destruction of dangerous pests and counterbalanced by the price their pelts will bring in the market.

Outdoor men can help the skunk and themselves by heeding a few simple suggestions. Encourage skunks to breed in the open

places. Do not molest them but make them feel "at home". Trap only in the open season and then take only furs at their best. Let the young ones go to propagate later.

The man who is in business for himself is ever watchful of any conditions that may affect that business harmfully, in other words, bring loss of capital to himself. Now the professional and amateur trapper alike may well consider that they are in business for themselves and with the real business man's foresight should take care that no harmful influence be allowed to affect it.

For selfish reasons, a few individual trappers may wish to continue trapping activity even while the fur-bearing animals are breeding, however he can be made to see that the really selfish and most profitable thing for him to do is not to trap at that time.

Trapping in the breeding season is like killing the goose that lays the golden egg. It is to the trapper's own interest to see that the fur wealth in his neighborhood on his own trapping domain—is being increased rather than diminished, for though a few more pelts may be temporarily added to his catch, the future of his trapping business is becoming more and more endangered. Two pelts taken out of season, especially of the female—may mean twenty pelts lost for the next trapping season.

You are simply stealing from yourself the fur supply on which your own trapping prosperity depends. The trapper should learn the proper seasons for trapping the many different fur-bearing animals, when the quality of the pelt is the highest and when the skins will bring the best price on the open market. The big fur houses which make it a policy to help the trapper in his work and difficulties, are always more than willing to give the best information on these subjects.

Always remember that the fur-bearing animals in your neighborhood represent the wealth on which your trapping business is profitably conducted.

*Insuring the Stability and Growth of the American
Trapping Industry.*

Trapping is a real industry and has proven itself to be such from the time the few colonial settlers went forth into the wild country of the West and began to establish the first trading relations with the Indians. From the beginning the value of pelts, skins, and furs of all kinds was recognized by the white men; and those engaged in this remunerative work gave all their time to trade and barter with the Indians—who trapped and secured the furs for them.

The old methods, of course, have long since vanished from the fur industry; but the salient point to note is that the fur industry is a big industry and that from a very small beginning it has increased to the immense proportions of today. That there is stability and a sound foundation can not be contested for the proof lies in the centuries of success it has enjoyed, that the market for furs has been continuously open, and that an even heavier demand may be looked for in the years to come.

The trapper is the real backbone of the trade, for it rests on him to supply the immense quantity of furs required by the trade.

What is Fur Conservation

Many farmers when they hear the words "conservation" or "protection" mentioned, instantly assume a defensive position, under the assumption that they and their interests are being attacked. They consider that fur conservation means restricted trapping, smaller catches, smaller profits.

It is true that trapping and game legislation can be overdone. A law which is inflexible may often do more harm than good. But conservation does not necessarily mean legislation. There are other means for effective fur conservation besides law. If the trapper himself will realize that by sane methods of conservation he is protecting his own wealth, insuring himself bigger catches each year, and helping to stabilize the trapping industry, there will be little need for protective laws. In fact, the trapper can do more than the state or county to protect the fur-bearers in his section.

Great harm is done to the fur crop by poisoning and wholesale killing and unless the trapper will assume the duty of protection considerable damage will be done to the fur supply. Most trappers know when animals in their neighborhood begin to breed.

Take care to preserve the dens, holes, water houses, etc., of the animals in your section. As far as you can, keep their haunts natural and undisturbed. Never trap females, kits and immature animals, if you can help it, either in season or out. Work together with your trapper friends in the interest of conservation. Form some kind of a mutual agreement to protect the fur-bearers.

Most important, convince yourself that conservation benefits you more than any other individual. It will help make trapping a permanent occupation, render you bigger profits each year, and will help to standardize the fur supply and the fur market.

What the Trapper Should do During the Summer

When the trapping season ends, every trapper should consider it his own duty to refrain from trapping during the mating season, and to help increase the supply of animals in every way he can.

The first thing to do is to go over your trap line carefully, and be sure that you do not leave any open sets lying around all summer. Take in your traps and wash them in strong lye water, and then hang them in a dry, shady place, where you can find them conveniently when the new trapping season opens in the fall.

It is not enough that you should cease from your own trapping once the season is over; go out among all your friends and neighbors and prevail upon them to join in the work of fur conservation. Get everyone to agree to trap only when pelts are good.

The fur crop in your section really belongs to you and is a part of your personal property. So it is wise and profitable to keep in close touch with it during the summer when there is no trapping. In this way you will protect and increase your own wealth.

Protection

Until a few years ago there was a general prejudice against muskrats among farmers whose bottom lands they inhabited. The farmer's chief complaint was that they burrowed under his fields and occasionally nibbled his crop, thus causing him losses, seldom stopping to consider that the muskrat pelts would more than pay for the trifling annoyance the animals caused. Farmers often set out to exterminate them by draining the land, poisoning, shooting and destroying them in every way possible.

For every case where it is shown that the muskrat attacked crops on lands near marshes, there is another which shows that he left crops entirely alone, even though they were near at hand.

It has taken the American farmer a number of years to realize just what a money-making asset the possession of muskrat marsh or ponds on his lands is to him. Time was when he either ignored muskrats (save for the sport of catching them) or actually drove them out while subject to the belief that they were pests.

Now the more astute American farmer looks on the presence of muskrats in his bottom lands just as he regards the cornfields of the higher slopes as a crop.

He encourages them to breed, protects them during the mating season, traps them only when the pelts are good and makes every

effort to promote their growth as a crop because muskrat conservation pays—and pays well.

It is no unusual thing for a farmer to trap 100 muskrats in an acre or two of useless marshlands and receive for their pelts an average of \$1.00 apiece and in many instances more. At this rate, his fur crop would bring him in the neighborhood of \$100—money that comes to him practically without effort on his part, since muskrat trapping is simple and requires little time.

To the man in the country who, up to this time, has been indifferent to the muskrat's existence, the animal's new status should be of interest, especially since fashion has taken up the muskrat and the market for his pelt is broader than ever.

The small fur-bearer is the best wild animal friend that the farmer has and there ought to be and can be three times as many of them as there are now; but it is up to you. Any boy or man living in the country can have two or three dozen skunks working for him all of the time. They will help the farmer by destroying mice, grass-hoppers, crickets, white grubs, etc., and will furnish from fifty to one hundred dollars worth of fur every year, and all they ask is a little kindness; Don't shoot at them every time you see one run across the yard. If they kill your poultry it is your own fault. Keep your poultry shut up out of the way in animal proof houses. As a matter of fact skunks are often more valuable to you than your poultry and will pay you bigger dividends, and the same can be said of many of the other fur-bearing animals. If you have any muskrat on your place, take care of them. You can trap all you want when the fur is prime, but do not blow up their houses, and do not hunt them day and night, Summer and Winter, give them a fair chance.

A fine dog is a nice animal to have and some one has said that the dog is man's best friend. This may be true but a lot of people will keep three or four old hungry hounds on their place and allow them to run down every fur-bearing animal that comes around and chase them and scatter them for miles and then waste money feeding the hounds valuable food. Dogs are alright where they are needed but they have killed countless sheep, and destroyed millions of fur-bearing animals, especially the young and the weak. If you have to decide between the hungry hound and the fur-bearer, decide in favor of the fur-bearer and shoot the hound. Get the thought firmly fixed in your mind that the fur-bearer is a part of your stock and belongs to you just as much as your sheep, hogs, or chickens and

is just as big a source of profit. They want you to take care of them, and they will be with you as long as your other live stock, if you will take care of them. Set aside a district on your farm for them to breed. Don't allow anyone to go near it and don't go near it yourself. Do not trap in this reserved strip. When it comes time for you to trap set your traps out away from it, and encourage your neighbors to do the same thing, and you will be surprised at the wonderful results obtained. Directly and indirectly the small fur-bearers of this country contribute to the support and comfort of a large proportion of our population. The greater part of the furs trapped in this country are trapped on privately owned land, and any farmer who wants to do it, can improve the fur supply by following the suggestions given. The most logical step to be taken to assure a big increase in the future fur supply is to set aside a preserve for fur-bearing animals, a big preserve if possible, but at least a small one, and stock it with the best animals that can be found, supply them with dens, and allow them full liberty, and it will prove a continuous source of profit, and a joy and pleasure to the owner.

CHAPTER IV

IS FUR TRAPPING CRUEL

Ever so often some one will start a campaign against trapping on account of the cruelty to the animal. Every trapper knows that there is more cruelty among wild animals themselves, than there is on the part of man. It is the trapper's desire to kill the animal, and not merely to catch it. If an animal caught in a trap remains there too long, its pelt is liable to be damaged to such an extent that he is not paid for his trouble. All argument to the contrary, trapping is very hard work. The modern trapper uses traps or tries to set his traps in such a manner that they kill instantly. As one authority has pointed out there is hardly such a thing as natural death in wild life. It is a constant battle and the weak and the old fall victims to the strong. One kind will prey upon another. Man is the most merciful of any of the creatures and has no desire to see any wild thing suffer. As a matter of fact he makes his plans and sets his traps in such a manner as to cause little suffering on the part of the animal caught. But not so with the animal's natural enemies. The hawk will pounce upon the young rabbit, snatch it up in its claws and fly away with it for miles to feast upon it in some tree top. The weasel will attack and kill for the love of killing and will oftentimes leave its victim crippled and bleeding and go on in search of another. The professional trapper and the boy in the country who lives outdoors studies animal life, he knows their habits, when they come and go; he knows their dens, he knows what they feed on, and how they get their food, he does not kill the young, and he does not knowingly destroy the females. Most men who follow the trap line are big hearted, wholesome, out-of-doors kind of people who have a real love and affection for animals such as raccoon and opossum and despise the wolf only because it is deadly cruel to the weaker animals. There is constant warfare going on in wild animal life at all times.

If the theory of some over sensitive people was carried out we would have no slaughter houses and we would probably all become vegetarians. It is hardly fair to say that it is more cruel to trap a mink and kill it than to lead the innocent lamb to

the slaughter and crack its skull with the blow of a hammer, or to load live stock into a crowded box car and transport them for days at a time, often without food or water, and crowded in such a manner that if one gets down it can not get up. It must be remembered that wild animals have not the same delicate nervous system as the human being and consequently does not suffer in a like manner. On the whole taking it by and large the trapper is humane, the very nature of his calling makes him so. Fur bearing animals were created for the use and benefit of mankind and should be so considered.

CHAPTER V

HINTS ON HOW TO JUDGE FURS

The wearing of fur garments dates back to the time of Adam and Eve. We read in the Book of Genesis Chapter Three, Verse Twenty-One, "And the Lord made for Adam and his wife, garments of skins, and clothed them."

The American woman is the best judge of values in the world. She knows silks, linens, cotton goods, shoes, stockings, hats and furs. She instinctively knows quality, and the enterprising wide-awake retail merchant has come to a realization of this fact, and consequently the reliable retailer does not try to pass skunk as black marten, or muskrat as river mink. As a matter of fact the leading retail furriers take pride in calling furs by their right names and there is hardly a woman shopper in any of the big cities today but knows a genuine silver fox when she sees it, and that can judge fine mink almost as well as the furrier himself. She knows that fine muskrat sheared will take the dye and make as fine a coat as Alaska seal, with the advantage that the muskrat is lighter in weight and lends itself to nearly any style of garment and on this account she does not hesitate to pay almost as much for a fine muskrat coat dyed seal color as she does for dyed Alaska seal.

Some furs are made up into garments in their natural color, others are dyed, and some are merely blended, that is the top hairs are tinted by barely touching the hair with a feather dipped in dye; other furs are plucked and still others are both plucked and dyed.

Plucking

Beaver is one of the staple articles of the fur trade and thousands of them are used every year for trimming, but very few if any are ever used dyed, the furrier using the beaver fur in the natural color. Beaver is used to trim coats, capes, etc., and has a soft, thick, dense fur, as smooth as velvet with a light brownish cast which shades off from the light into the dark, the plucked skin being darker along the back of the animal than it is on the sides. But the change in shade is very gradual, so that any way it is looked at it is a beautiful rich soft color and one of the best wearing and most dependable furs

that money can buy. The fur is about three fourths of an inch in depth and is very thick and compact. The nutria which is found in South America is very similar to the North American beaver and is very much the same color, but the fur is shorter and looser, the nutria fur being about one fourth to one half of an inch in depth. Both of these furs are plucked before they are used by the furrier. The beaver pelt, as well as the nutria, when it is taken off of the carcass of the animal, has long coarse guard hair which covers the entire pelt, this long hair is from one half to three quarters of an inch longer than the underfur. This top hair, or guard hair, is coarse and wiry, and the uninitiated seeing a beaver skin before it is plucked would hardly recognize it as beaver fur. Before the manufacturer cuts the skins up into garments they are sent to the dresser and plucker and all of these long coarse guard hairs are pulled out. This work is done by experts who use a large dull knife. The skins are laid over a circular beam and the guard hairs are literally plucked out, leaving the soft velvety underfur. The same thing is done with the otter, the nutria and also with the Alaska seal. One difference between the beaver and the seal is that the beaver is very rarely dyed. They are so beautiful in their natural color and shade that the furrier rarely if ever dyes them. The beaver and otter are furs that cannot be imitated successfully, and the nearest approach to it is the nutria, and nutria in itself is a very fine and dependable fur. The seal skin, however, is dyed after it is plucked. The natural color of the seal after it is plucked is somewhat similar to the beaver, being of a light brownish cast, but after it is dyed it is black with a brownish sheen.

How it was Discovered that Seal Skins Could be Plucked

One of the greatest authorities on plucking and dressing Alaska seal that ever lived told the writer the following story. It seems that the art of dressing and dyeing Alaska seal is only of comparatively recent origin. Less than one hundred years ago seal skins were used very little by furriers for garments. The pelts were taken in very large quantities but they had little or no value for fur purposes; and in England their principal use was for trunk lining. The pelt side was softened and tanned until the leather was pliable and they were then used as lining for cases, trunks, traveling bags, etc. It seems that the trunk makers were brick layers in the Summer and trunk makers in the Winter, in other words they had two trades. It is also said the bricklayer-trunk maker prided himself on being able to drink

more beer and not show it than any other tradesman with the possible exception of the printer. They were always ready to show their prowess if the time was ripe and funds were available.

It so happened that the proprietor of a trunk making establishment was called away from his place of business for a day to another city and the night before he left he appointed one of the workmen to take charge of the shop the following day, and gave him very explicit instructions about a certain order that was to be filled. Everything went along well the next day until one of the men suggested getting a pot of ale which was forbidden during working hours when the proprietor was around. A vote was taken and it was decided that a pot of ale would not be out of order, and one pot called for another, until after a short time there was more thought of ale than there was of work. A dispute arose and a scuffle followed with the result that a large barrel of water was knocked over and drenched a pile of seal skins that were lying on the floor. This accident tended to sober some of the more serious minded of the workmen, and they were at a loss to know what to do with the wet seal skins. If the boss came back and found the skins wet they would probably all lose their jobs, and so they decided the best thing to do was to dry them quickly before anyone could discover the accident. They built a roaring fire in the stove and draped the wet seal skins around it and waited for them to dry. In due time they dried out alright, but when the workmen came to handle them they found that the hair came out and this put them in a worse plight than before. They made another discovery, however, that it was only the top hair that came out, and that after the top hair was loosened and pulled out, there was a soft velvety underfur strong and beautiful and much better looking than the seal skin had been before. One genius in the crowd suggested that they pull out all of the top hairs and line the trunks with the skins having only the underfur, and as there was hardly anything else to do under the circumstances, they went ahead with the balance of the skins, wetting them and hanging them by the hot stove, pulling out the top hair, and lining the trunks. The trunks were finished in time and were sent off to the customer. When the proprietor returned he congratulated the men, not knowing of course anything about the accident and the fact that the cases had been sent to the customer lined with plucked seal.

Some time afterwards the customer who had received the trunks placed another order and this order was lined with the old fashioned seal. The customer sent them back and refused to take them and

said that he wanted trunks lined like the last order. The manufacturer quite naturally was very much bewildered and set out to investigate. He called on the merchant to whom he had sold the trunks and for the first time he saw one of his own cases lined with the plucked seal. He hurried back to his shop and finally after a lot of scolding and threatening he managed to get the story bit by bit from the workmen as to how the accident had occurred, they of course feeling that something terrible would happen to them on account of the mistake. After hearing the story the manufacturer tried the same method of wetting the skins and heating them. The result was amazing; the top hair pulled out easily leaving the soft beautiful under fur; and this, so it is said, was the beginning of the plucking process. This trunk manufacturer had a great rush of business and he had practically a monopoly, until the story got out and every trunk maker began dumping barrels of water on the seal skins and plucking them after they were dried before a hot fire.

Later on, more careful study was given to the matter and a more scientific method evolved for the plucking of seal; but today seal skins are plucked in much the same manner, they are placed in a room with a very high degree of heat for a certain length of time and then taken out and a man with a long dull knife, known as an unhairer, plucks out the guard hairs.

The reason that the top fur will pull out and the soft underfur remains in, is that the guard hair is deeper seated than the soft underfur, the bulb of the guard hair being closer to the surface of the pelt side. The pelt side is scraped down until the bulb of the guard hair is almost exposed. The bulb of the guard hair is a little sack or pocket similar to the root of any other hair; and when it is exposed to a strong heat this bulb explodes by the steam that is formed in it and then it is very easily extracted or plucked out.

After the discovery that seal could be plucked and that they were more beautiful and soft in their plucked state than in their natural state, they were made into fur garments. Some time later an enterprising dyer conceived the idea of dyeing them a rich brown, and for many years seals were brown in color, in fact it created a new color known as "seal brown". Later on they were dyed a color almost black but still retaining a brown glaze and the rich brown underground.

The muskrat is treated in a similar manner to the Alaska seal except that the muskrat fur is not plucked but is sheared, that is the

muskrat fur is cut down to almost the same length as the Alaska seal and is dyed by much the same process and produces much the same effect, except that seal made from muskrat is lighter in weight than the Alaska seal.

Plucked Fur

The plucked furs are the beaver, the otter, and the Alaska seal. The Alaska seal is always dyed after it is plucked. The otter is sometimes dyed, but it is more often used in its natural state as it resembles the beaver but is a little shorter in nap and finer in quality. The beaver is rarely, if ever, dyed, but it is always plucked before it is made into fur garments.

In judging a seal coat, whether it be made of Alaska seal or muskrat, the lustre, quality and thickness of the fur must tell their own story. It is difficult to distinguish between the Alaska seal garment and one made from the muskrat, there is little difference in price and no reliable store would attempt to sell one for the other. There are many discriminating women who prefer seal made from the muskrat to the Alaska seal. There is a seal, however, made from the Australian rabbit which is sheared down and made to imitate the finer seal, but it is poor in quality, will not wear, and is not desirable. This is readily distinguished however, from the muskrat or Alaska seal, as it has a longer soft nap, does not stand up, and looks like what it is, namely rabbit skin. No large department store or reliable retail furrier, would attempt to sell sheared and dyed coney, which is known as French seal and electric seal, as muskrat seal or Alaska seal. The great popularity of muskrat and the fact that muskrat are bringing high prices is due to the fact that it makes such a wonderful seal fur, known as Hudson Bay seal. Firms specializing in the dressing and dyeing of muskrat have developed this art until the finished product is a thing of beauty and a joy to most women who like a light weight, stylish, and beautiful coat.

Silver Fox

The highest priced pelt in the world is the American silver fox. It is found in some of our northern states, throughout all of Canada, and in Alaska, and is raised on a very extensive scale in Prince Edward Island, and in other parts of Canada as well as in the United States. Silver foxes are judged by their lustre, quality, and the beauty of the fur. The finest skins are a rich, deep, bluish black color, about three quarters of the length of the body, and the balance of the skin down to the root of the tail is sprinkled with white silvery hairs. The

brush should be full and of the same rich black color as the mane, with a white tip on the point of the tail. The skins that bring the highest prices are full-furred, with the guard fur intact, (no rubbed or damaged spots), with the long hair standing straight up and full of life. Skins that are a shade off, that is skins that are called "rusty" are not so valuable. They may come from the same section, but when the animal wanders around in the sun the fur is liable to lose its gloss and its rich black color. Some silver foxes are gray in color all over and these skins are also very popular and high priced. Silver foxes range in price up to one thousand dollars per skin, and even more for exceptional specimens. The average price in the Retail store for good skins is about five hundred dollars. Some manufacturers have attempted to imitate silver fox and sell what is known as "pointed fox"; but American women do not care much for imitations, and the "pointed fox" has about played out. However, it is rather interesting to know how the silver fox is imitated. This is done by taking the ordinary red fox and dyeing it black, and then using the white badger hairs, taking a single hair at a time, dipping one end of it in glue and then inserting it among the hairs of the dyed fox. Enough of the badger hair is added to the dyed fox to give it the appearance of silver fox, in that it is sprinkled with white hairs. But this imitation is readily perceived, except by the most inexperienced women shoppers, and no reliable retailer would attempt to sell "pointed fox" as genuine silver fox. They are very attractive, but it shows plainly that it is the imitated and not the genuine article.

Strange it may seem, many people believe that "taupe foxes", "platinum foxes", "sitka foxes", etc., are natural colored skins. As a matter of fact there are only seven kind of foxes: silver fox, which has been described heretofore, the red fox, which is a bright lemon colored red, the white fox, which is snow white, the gray fox, which as the name indicates, is gray in color, the tip of the hair being white and the lower part of a bluish cast, the swift fox, which is very similar in color to the gray, the blue fox which has a brownish cast, and the cross fox, which is a reddish brown in color with a distinct and darker cross down the top of the back and across the shoulders. All other foxes such as "sitka fox", "isabella fox", "taupe fox", "platinum fox", etc., are dyed, the red fox and white fox being used for this purpose.

A splendid rule in judging fox fur as to whether it is dyed or not is to look at the pelt. If the fur has not been dyed the pelt will be

a clean white color like the inside of a white kid glove. If the fox has been dyed the pelt will be like the inside of a brown kid glove; the leather will be the same color as the dye. This test applies to nearly every fur with the exception of Alaska seal, and the pelt of the Alaska seal is so thick that after it is dyed it is sand papered down until the color on the pelt side is sand papered off, leaving the white leather exposed. This can not be done successfully with thin pelted furs so that if there is a question about judging the skin as to whether it is dyed or not, the color of the pelt test will usually settle all argument. This does not apply, however, to blended furs, that is, furs that are tinted by the feather dye process described in another chapter.

CHAPTER VI

THE NATURAL COLOR OF FURS

Gray Furs

The Russian squirrel is probably the most popular of all of the gray furs, especially for coats. It varies in shade from a light silvery gray to a dark bluish gray; and there are some that have a reddish tinge. There are others that have almost a pronounced red stripe down the back, the sides of the skin, however, being gray. This reddish tinge is caused by the animal lying out in the sun on bright sunny days. The sun will soon draw out the natural color and tinge the top hairs along the back. They may be just as fine in thickness of fur and quality as the perfect gray skins, and usually are, but they are not as valuable on account of being off color. The expert dyers and dressers take these skins and blend them. This is done by just tipping the top of the hair with dye the tone of which is about the same as the sides of the fur. This tipping gives the skin an even color all over and they are very hard to distinguish from the natural clear colored Russian squirrel. The clear colored skins are preferable, but the wearing qualities of the blended skins are probably just as good. We have millions of squirrels in this country, but they are not suitable for furriers purposes, as the pelt is too thick and the fur too thin and coarse. Therefore, the supply of squirrel pelts for furriers comes from Siberia, and from the Northern part of Manchuria. They are in great demand in this country as well as in Europe, and it is one of the most beautiful furs that we have and is reasonable in price.

Chinchilla

Chinchilla is the most beautiful of all the gray furs as well as the highest priced. It is found in a limited area in South America. The pelt is very light and thin, and the fur from one half to three quarters of an inch in depth, very silky, soft, and beautiful. The color might be described as a delicate French gray, darker and mottled on the surface with a bluish slate tint beneath. In recent years the Chilean government has enacted laws for the protection of chinchilla. They are not allowed to be trapped or taken in any

manner and cannot be exported for a number of years. These measures will allow the chinchilla to increase in number, and no doubt we will have a large quantity of them in the future, but for the present the skins are very scarce, and hardly any of them find their way to market.

Viscacha

Viscacha is similar to chinchilla in color and it also is found in South America. It is a much larger animal, but the fur does not compare with the chinchilla, and there is only a small percentage of the pelts that are fine enough to be used for fur purposes.

Caracul

Most caracul in its natural color is gray. The caracul fur comes from India and is really the pelt of a young lamb. Caracul has been dyed in various colors in recent years and has been very popular for evening coats, as it lends itself to a variety of shades, and is dyed gray, tan, platinum, and various colors.

Krimmer

Krimmer is one of the natural colored gray furs and comes from the Far East. It was formerly used almost exclusively for children's sets, but is now in vogue as trimming on coats, capes, etc. It is a light gray with a small loose curl.

American Opossum

The American Opossum is a very light gray in color. The top of the guard hair, which is the long over hair, is almost black in color, the underground being almost white. The fur is about one inch deep, the long guard hairs being about one and one half to two inches long. The finest skins make up very beautifully in their natural color and in recent years have been used very largely for trimming. It lends itself to dye beautifully and can be dyed almost any color, but it is principally dyed black. When dyed black skunk color it is very similar to the skunk; in fact it would require an expert to tell the difference. However the skunk is a natural black color, and the opossum is of course dyed, and the dyed fur never has the real lustre and gloss of the natural. The American opossum is in big demand in Europe and large quantities are shipped to London, Paris and Liepsic.

Lynx

The lynx is usually sold in retail stores after it has been dyed black, although occassionally the furrier makes it up natural. The natural color of the lynx is gray with a slight brownish tint. The

fur is very thick and soft and from one to two inches in depth, the fur on the sides of the skin being longer than on the back. The Liepsic dyers perfected the art of dyeing the lynx, and before the war Liepsic dyed lynx was one of the most popular black furs on the market. The American lynx was sent to Liepsic where they were dressed and dyed black and shipped back to this country to be made up into garments. The Liepsic dyers dyed them a beautiful shade of black with a very high gloss. During the War, the American dyers, such as Hollander and Chapal, succeeded in dyeing the lynx equally as well as the Liepsic dyers, and if the black lynx comes back into popularity as it was a few years ago, the demand no doubt will be for the American dyes. The lynx is found throughout Canada and Alaska and as far South as Minnesota. The lynx cat which is found in the western states, Colorado, Idaho and Montana, is similar to the lynx and belongs to the same family, but is very much shorter in fur and not as valuable for fur purposes as the Alaska and Canadian lynx.

Alaska Seal

The Alaska seal skin as it is taken from the carcass of the animal is gray in color, the top hairs being a yellowish white with dark tips, which gives the skin a decidedly dark grayish appearance. These top hairs are plucked out as described in another chapter, leaving the soft brown underfur, and this is dyed seal color. Strange as it may seem, some people think the dyed color is the natural color of the seal skin.

Australian Opossum

The finest skins are a beautiful bluish gray. The fur is very thick and close and is about one to one and a half inches in depth. The Australian opossum is made up by the furriers in its natural color, that is it is seldom, if ever dyed, and then only the poorer quality skins are dyed. The Australian opossum is very popular in America and large quantities of them are imported each year for trimming on coats, capes, etc. The finer skins are a clear bluish gray. Some of the inferior skins have a slightly yellowish or brownish tinge.

Wolf

The finest wolf come from Canada and the north western part of the United States and are very popular with furriers for trimming. These wolf are a light white gray. The fur is very soft and deep, especially on the sides and under part of the pelt. There is a coarse wire like mane across the shoulders and part of the way down the

back, which the furriers cut out and do not use for trimming on fine garments. The fur is from two to three inches in depth, the guard hair being even longer. There are some few wolf used in their natural color, but most of them are dyed. The wolf on account of its soft, silky texture and light gray color can be dyed very satisfactorily in almost any shade, which is one of the reasons for its great popularity, and the price of wolf for the last few years has advanced very materially on this account. The wolf is found in nearly every state in the Union, but only those from the more northern sections are valuable for garment purposes. The southern coyote from Texas and Arizona is a reddish gray in color, and the fur is coarse and short. The pelts are used for robes, and purposes of that sort.

Gray Fox

The gray fox is used by furriers for trimming and is made up into sets for children. It is the lowest priced of any of the foxes, the average price being about three or four dollars per skin in the raw state as compared with the silver gray fox which is worth up to four to five hundred dollars per skin in the raw. The gray fox is found generally throughout the United States, the largest quantity coming from the central and southern states. The tip of the hair is white in color with a reddish cast, and the lower part is a bluish slate color, the general appearance being a bluish gray. They are used in very large quantities and it is good wearing fur and very reasonable in price.

Ringtail

The ringtail gets its name from the fact that it has a long tail about the same length of the body. This tail is striped very similar to the raccoon with black and white rings. The body of the ringtail is about 12 to 14 inches long, and the fur yellowish gray in color. The fur is about one half inch deep and of about the same softness and texture as the mink. Ringtail is principally found in Texas, but some come from Oregon, Washington and California. The ringtails are almost invariably dyed before being made into garments. After they are dyed they resemble Kolinsky and usually sell at about the same price.

Badger

Badger is found in the far western states. The fur is yellowish gray with black tips, and on the finer skins the fur is very long and soft. It is sometimes used in the natural color for trimming. The majority of the badger, however, are not suited for fur purposes, as

the hair is too coarse; and these skins are sold to the brush manufacturers who make the hairs up into shaving brushes, etc.

Mole

In recent years the mole has come into great vogue. It is said that Queen Alexandria on a visit to Scotland was very much impressed by the stories told her of the ravages of the moles in certain farming districts. In fact the mole had become such a pest that it was hard for the farmers to make any headway against them. Some one suggested that the Queen have a coat made of mole skins, which would create a market for the pelts, and thus a loss might be turned into a profit. This she readily consented to do, and one of the leading London furriers designed a beautiful mole coat for her, and since that time mole has been one of the fashionable furs.

The fur is a bluish slate color. It is about one fourth of an inch or less in depth, very smooth and even, and resembles heavy velvet. Due to the fact that part of the fur slopes one way and part another, when it is made into a garment, gives an effect similar to watered silk. As the color of the moles in their natural state vary in shade, they are blended, that is the very tops of the fur are lightly touched with dye in order to give the fur an even color. It is very light in weight.

BROWN FURS

Russian Sable

The Russian sable is found only in Siberia, and it is one of the most beautiful of all furs. Valued per square inch fine Russian sables are the highest priced furs in the world. The finest Russian sable come from that part of Siberia known as the Barguzin district. This is a heavily timbered part of Siberia and the sable found here are rarely exposed to the sunlight. The result is that their fur is a rich deep dark brown color that glistens with life and lustre. These fine skins have a few white hairs scattered through them which really heightens the effect of their beautiful gloss. In the old days of the Czar's regime these skins were known as Imperial Sables and belonged to the Czar and most of them were used by the Imperial Family. Of late years these skins have been coming to America, and they are prized very highly by the woman who wants the finest fur garment that money can buy. These skins have sold as high as two thousand dollars per skin. The writer was told by a leading Fifth Avenue furrier that he once sold a neck piece consisting of twelve Russian sables for thirty five thousand dollars, or a little over an average

of twenty nine hundred dollars per skin. These of course were the choicest selected Imperial Barguzin sables. The average Russian sable is about fourteen inches long and when cut open and spread out would average five inches in width so that it would contain about seventy square inches of fur. The average Russian sable skin raw sells for two to three hundred dollars per skin. The exceptionally fine skins are very much higher, and the poorer skins somewhat less. The very finest Russian sables as described above are a rich deep dark brown in color, appearing almost black, with a few white hairs sprinkled along the back of the pelt. The average Russian sable is a rich brown, and the sables coming from the Kamchatka district are the largest and most heavily furred. The fur is from three-fourths to one and a half inches in depth and very dense, and a little lighter in color down near the pelt than it is at the top. Some few Russian sables are blended, that is just the tip of the hairs that have been singed by the sun, are blended by tipping them with dye. This is very hard for the inexperienced to detect, and while it does not decrease the value of the skin, skins treated in this way are not as valuable as those that are naturally perfect in color. The Amur sable which comes from the Amur river, vary considerably in color, some of them being a light mouse color. They are very beautiful in fur, and the quality of the fur is splendid, but they are not as valuable as the Barguzin or the Kamchatka sables, on account of their color being very much lighter. Some of them are very heavily sprinkled with white hairs, giving them a silvery gray effect, and while they make up very beautifully in their natural color they are not as valuable as the finer sables.

Hudson Bay Sable

Hudson Bay sable belong to the same family as the Russian sable and it is similar in its habits and color. They are found in the forests of North America, the finest and largest skins coming from Yukon Territory in the Stewart and Pelly River district. There are large quantities found in the Hudson's Bay Country, and it is due to this fact that they are called Hudson Bay sable. In the raw fur trade, however, they are known and sold as marten and they are thus distinguished from the Russian sable. Some of the finer skins are very beautiful and compare favorably with some classes of Russian sable, but as a general rule they are not as deep in fur or as fine in quality, nor have they the wonderful color and richness of the fine Russian sable. They vary in color from a rich dark brown to a very light yellow, the light yellow skins coming from along the

Yukon River in Alaska. These light skins are large in size and very deep and heavy in fur. These skins are all blended, and when this is done by an expert dyer the effect is wonderful and they compare very favorably with the natural dark brown skins. The fine dark skins come from the Stewart and Pelly River districts in the Yukon. Labrador also produces some very fine skins. Martens are found as far south as California.

Mink

The finest mink are found in America. They are a rich dark brown color, but coarser than the marten and shorter in fur. The mink from China and Japan are very light brown, almost yellow. The China and Jap mink are all dyed; the American mink is made up natural. The fur is about one half inch deep. When mink are made up into coats they are often cut up in small narrow strips and sewed together in order to heighten the effect of the dark stripe down the back. In fact all of the finer garments are made up in this way. So that in examining the inside lining of a mink coat if it should appear to be made up of small pieces of fur sewed together, it does not indicate that it is made from scraps of fur. On the contrary it would mean that it was made by the most approved process. Mink fur is one of the most satisfactory furs that money can buy. It holds its color well and lasts for years and is always in style for coats and trimming. For a while there was a prejudice against mink, because people often connected mink with the old fashioned fur coats of our grandmothers. Mink like any other article will lose its original color in time and will fade out and become yellow, especially the poorer quality of skins, but this takes a long time. Fresh new mink have life and lustre, are a decided brown in color and make very beautiful fur garments.

Kolinsky

The kolinsky, or Siberian mink, is found in the district east of the Yemesie River and in its natural color it is a very light brown, or yellow. All kolinsky are dyed before they are made up into garments for the retail trade. In recent years the art of dyeing kolinsky has been developed in America to a very high state of perfection, and kolinsky wraps on this account are very popular. The kolinsky is about the same texture and length of fur as the American mink, but as they are all dyed, in judging kolinsky it is well to keep this fact in mind and buy them according to the lustre and quality of the dye.

Muskrat

The muskrat is brown in color and while a great quantity of them are sheared and dyed seal color, a large number are used in their natural color which is a dark rich brown. In some sections of the country, notably Maryland, the muskrat is black, and this black muskrat makes up very beautifully. The dyed muskrat is first sheared, that is about one half of the top fur is cut, leaving the underfur about one half of an inch long. This is dyed black, and is sold as Hudson Bay seal.

Beaver

The beaver is another of the brown furs. It varies in color from a light rich brown to a deep chestnut brown, and is one of the most beautiful natural brown furs that we have.

Otter

The otter is very similar to the beaver in both color and texture of fur, but the otter is a little shorter in nap and more compact, and will not curl after it is wet as quickly as the beaver.

Wolverine

The wolverine has a long brown coarse fur and is used very little by furriers. The biggest demand for this fur comes from the Esquimaux of Alaska who use it to line the inside of their parkes. They claim that it is the only fur on which the breath does not congeal and and form into ice. This may or may not be true, but it is a fact that the esquimaux prefer the wolverine fur to any other for trimming.

Fisher

The fisher is one of the most satisfactory and durable furs that money can buy. It is very popular for chokers and other small neck pieces. It varies in color from a light brown around the neck and shoulders down to a deep dark brown at the rump and tail. The medium sized small skins are the finest, the larger skins being coarser in fur and heavier in pelt. The small silky dark skins are in big demand.

Stone Marten

Stone marten have been very popular in recent years for chokers. They come from Russia and parts of India and Germany. The top guard hair is light brown in color and the underground is a gray stone color, from which it gets its name.

Blue Fox

Blue fox is really not blue in color, but brown. There is a bluish cast to the underfur, but the top fur is brown. Most well dressed

women are very fond of Blue fox and they make up into very beautiful neck pieces. There are several shades of blue fox varying from the darker blue brown skins commanding the highest prices, the finest colors coming from Alaska. They are found also in Siberia and Greenland and have been very successfully raised by the United States Government on the Pribiloff Islands.

Marmot

The marmot is usually dyed by furriers and is found in Northern Manchuria. It is classified in the fur trade as blue marmot and yellow marmot, the finer qualities coming under the heading of blue marmot. The blue marmot are bluish brown in color, and the yellow marmot are yellowish brown. However, the marmot are usually dyed and seldom made up in their natural state. It is a coarse wiry sort of fur and is used principally for coats.

Nutria

The nutria is brown in color and closely resembles the beaver, except that it is shorter in fur.

WHITE FURS

White Fox

The white fox is found in Alaska and Siberia and other far northern regions. The white fox is pure snow white. The finer skins are used in their natural color, but the poorer and stained skins are dyed platinum color, taupe color, blue fox color, etc. The white fox lends itself to dye better than any other fur on account of its pure white color.

The Arctic Hare

The Arctic hare is snow white in color and its fur is very similar in density and thickness to the white fox, except that it is not so long, being about one half the depth and not nearly so good in quality. In fact the fur is very brittle and will break off. The difference between white fox and Arctic hare can be readily detected by simply brushing the fur the wrong way. If the small tips of the hairs break off, you can be reasonably sure that it is Arctic hare and not white fox. The Arctic hare are found principally in Russia and are dyed into different colors and used as cheap imitations of other fine furs, but it is easy to distinguish this class of stuff from furs of fine quality. An infallible test is the one given above, as the Arctic hare will always break off and the white fox never will.

Ermine or White Weasel

Ermine, the fur of royalty, is snow white. Some of the skins have a yellow stain, but these are not as valuable as the clear pure white skins. The Russian ermine is a little larger in size and a little deeper in fur than the American ermine, and consequently a little more valuable; otherwise there is no difference. Both the Russian ermine and the American ermine have a small black tip at the end of the tail. Because ermine has been connected with the robes of royalty, there are some people who class ermine with the more valuable furs such as sable and silver fox, but it does not compare in price with these furs. The ermine is a very small animal and it takes a large number of them to make up a garment, but they are less in price than mink and usually bring about the same price as an average size muskrat.

Polar Bear

The Polar bear is also white, but is never used in the manufacture of fur garments, being used solely for rugs, robes, etc.

BLACK FURS

Skunk

The skunk is coal black in color and is really the only natural coal black fur that we have with the possible exception of black fox, and most specimens of the silver black fox are sprinkled with white hairs. The skunk pelt as it is taken from the animal is not really all black. It is black and white; that is there is usually two white spots or white stripes down the back of the skin that look as though some one might have painted a white stripe on a black surface. The black fur of the skunk is coal black and the white fur is snow white. The hairs do not mix as in the case of the silver fox where the white is sprinkled through the black. There is no black fur that has the richness and lustre of the natural black skunk when it is made into a fur garment. The top hairs are a rich lustrous black, and the underfur is a bluish black. The American skunk fur is prized very highly in Europe where its beautiful black color and its wonderful wearing qualities have been long known. In recent years it has become very popular in America, and the word "skunk" no longer frightens a woman from buying a skunk fur garment. They are dressed and deodorized and make a beautiful fur that is a delight to furriers and a joy to the wearer.

Black Bear

Some bears have a natural black color. The young yearling black bear skins from Alaska and Canada are used in some cases for

fur trimming, but as a rule bear skins are not used in the manufacture of fur garments, but are used solely for rugs, robes, etc.

Black Fox

The highest priced of all the black furs is black fox or silver fox. There are some specimens that are entirely black without a white hair on the pelt, although all of the black silver foxes have a white tip on the end of the tail.

Raccoon

The raccoon might be also called a black fur in that there are some specimens that are solid black, but as a rule they are brownish black. The raccoon is a splendid fur and is very much in vogue for trimming. The best skins are very dark in color and thick in fur, the fur being from one and a half to two inches deep. The yellowish light brown raccoon are usually blended or dyed brown, and in some instances dyed black, and when dyed black they resemble skunk as they are very similar in thickness and quality of fur.

Civet Cat

Civet cat is one of the naturally black furs. It belongs to the same family as the skunk and has the same habits. Unlike the skunk, however, it does not have two white stripes down the back, but has white spots sprinkled over the body. It is smaller than the skunk and its fur is not so thick or fine in quality. Civet cat are usually used by furriers in their natural color.

YELLOW FURS

Jap marten, Jap mink, China mink, kolinsky and some marten found in Alaska and Canada are all quite yellowish in color and are rather coarse in fur. They are usually dyed brown to imitate Hudson Bay sable and American mink.

RED FURS

Red Fox

The richest finest red fox come from Kamchatka, and this fox surpasses all other varieties in the quality of its fur and the depth and richness of the red color, which is a dark rich almost mahogany red, and the skins are very large. The next best red fox come from Alaska. The Eastern Canadian red fox is also dark red in color. The foxes from the Western part of Canada and the Northern part of the United States are a yellowish red. Large quantities of red fox are trapped in the Central and New England States, but the fur is a little shorter and little more mottled, that is there are yellow

hairs scattered among the red. The finer shades of red fox are made up natural, but all others are dyed, taupe color, Isabella color, etc. The cross fox is also reddish in color.

In buying furs it is well to remember the natural color of the different pelts and the following table will serve as a guide to the natural color of the different fur-bearing animals grouped under several general heads.

GRAY FURS

Russian Squirrel (used natural, though sometimes blended).

Chinchilla (seldom, if ever dyed).

Viscacha (used natural, though sometimes dyed and blended, very few of them suitable for furriers' purposes).

American opossum (almost always dyed, though the finest skins are used natural).

Lynx (almost always dyed, though some are used natural).

Alaska seal (always dyed).

Australian opossum (used in the natural state, only the poorer skins being dyed).

Wolf (usually dyed, though a few fine skins are used natural).

Gray fox (used natural).

Ringtail (almost invariably dyed).

Badger (used in the natural color).

Krimmer (used in the natural color).

Caracul (invariably dyed).

Mole (usually blended).

BROWN FURS

Russian sable (never dyed, but sometimes blended).

Hudson Bay sable or marten (seldom dyed, but often blended).

Mink (American mink used natural; Jap mink and China mink always dyed).

Kolinsky (always dyed).

Muskrat (used both natural and sheared and dyed into Hudson Bay seal).

Beaver (always plucked, but never dyed).

Otter (always plucked, but never dyed).

Wolverine (used in the natural color).

Fisher (used in the natural color).

Stone marten (used in the natural color).

Blue fox (used in the natural color).

Marmot (usually dyed).

Nutria (always plucked, seldom dyed).

WHITE FURS

White fox (usually dyed, the fine skins are used in the natural color).

Arctic hare (always used to imitate other furs).

Ermine (used in the natural color).

Polar bear (used in the natural color, but always for rugs, robes, etc., and not for fur puposes).

BLACK FURS

Skunk (never dyed, though sometimes blended).

Black bear (never dyed, seldom used for fur purposes).

Black fox (never dyed).

Broadtail persian lamb (dyed).

Raccoon (mostly used in the natural color, but sometimes blended, and sometimes dyed black to imitate skunk).

YELLOW FURS

Jap marten (usually dyed).

Jap mink (usually dyed).

China mink (usually dyed).

China kolinsky (always dyed).

Certain sections of Yukon marten (usually dyed).

RED FURS

Red fox (usually dyed).

Cross fox (used natural).

CHAPTER VII

TAKING CARE OF FURS

The buyer of raw furs judges the value and the quality of the skin by the pelt side. Most skins are taken from the carcass of the animal cased with the pelt side out. This is done by splitting the skin around the hind legs and peeling the skin off over the body like drawing off a stocking. The pelt is then stretched with the fur on the inside and the pelt or leather on the outside. A prime pelt means prime fur. The fur of a prime-pelted skin when it is dressed and made up into a garment will stand up straight, while the fur of an unprime pelt will lay flat and slope to the tail. In buying a fur garment it is well to take these points into consideration. Furs of the best quality have lots of life, the fur bristles and stands up and has a natural lustre and gloss. The poorer furs are dead looking and flat, the hair drooping over and there is a lack of life and lustre. In buying furs one should consider the purpose for which the garment is to be used. The raccoon coat will outwear almost any other fur garment for hard usage and automobile wear. The moleskin garment will not last long if subjected to hard wear. The pelt is very thin and the fur is light and there is not much to hold it together. The woman who buys a fine Russian sable neck piece or a silver fox and wears it out in the hot sun light can expect to have the color fade and the fur become brittle and lose its natural lustre as the pigment of the hairs dry up. The life of fur can be doubled and trebled with a little care. Avoid sitting on the coat, whenever possible. Do not wear fine furs in the strong sunlight any more than is absolutely necessary. Keep them clean. It is cheaper to send a fine fur coat to the furrier and have it cleaned occasionally, than to buy a new coat. Fine furs should be cleaned as often as any other similar garments and if they are kept clean and hung in a place where air and light (not sunlight) can get to them, there will be little or no danger from moths. The moths will never bother any garment that is clean and shaken out in the air and used. It is only when they are stored away full of dust and dirt in a dark closet that the moths have a feast. Do not pack furs away in moth balls; send them to cold storage; but most important of all, keep them clean.

Remember that dyed furs are not as valuable as the natural colored furs, to the extent that the furrier would not think of dyeing a fine mink, but he would dye an off colored mink. Therefore, relatively speaking natural colored furs are worth more than dyed furs. In buying a fur garment find out whether it is dyed or not, and if there is any doubt about it, examine the pelt side of the fur as heretofore described. Some furs are bought for comfort and warmth. Some furs are bought to set off the woman's natural grace and charm, and the purpose for which the furs are to be used should be taken into consideration, and the kind of fur purchased that will best answer the particular purpose. Softness, quality, and color are the things that go to make up the high priced furs, and the more beautiful the skins the more valuable; therefore, in buying fine furs like Russian sable and fine silver fox one pays for beauty rather than wear for the reason that a fur like raccoon will outwear any sable or silver fox two to one.

CHAPTER VIII

FUR FARMING

Raising fur bearing animals for profit, the Mississippi Valley is the greatest fur producing section in the world. The states of Minnesota, Wisconsin, Illinois, Iowa, North and South Dakota, Nebraska, Kansas, Missouri, Kentucky, Tennessee, Arkansas, Oklahoma, Texas and Louisiana are the natural habitat of coon, mink, skunk, muskrat, otter, civet cat and weasel. In all the central southern states including Virginia, West Virginia, North and South Carolina, Alabama, Georgia and Florida, all of the above furs are found, including opossum, which is one of the staple articles of the fur trade and one of the most important. Indiana, Ohio, Michigan, Pennsylvania and all the New England states are large producers of furs—skunk and muskrat being the leaders. The western states, Washington, Oregon, Montana, Wyoming, California, Nevada, Utah, Colorado, Arizona and New Mexico are also large producers of furs, but do not have the opossum and very few raccoon, the principal kinds being muskrat, skunk, wolf, mink, civet cat and weasel. In addition to these are also found otter, beaver, ringtail, fisher, lynx, wild cat and lynx cat.

Muskrat and skunk are found in every state in the union and these two lend themselves readily to domestication and have been raised successfully.

Muskrat farming especially in Maryland, in the marshes, has been very profitable, and each year there are large quantities of muskrats taken for the market. In addition to the value of the pelt of the muskrat, the flesh is also valuable as food, the meat is said to be delicious, and if it were called by any other name it could be made a delicacy in the market, and no doubt there would be a big demand for it. The English call it the musquash.

The muskrat or musquash pelt is in great demand and is one of the most popular furs. It is sheared and dyed and sold under the name of Hudson seal. Many women prefer it to the Alaska seal on account of its lightness and its beauty. The muskrat will always be a popular fur and in big demand. Any one having a lake or pond that can be utilized for the purpose of raising muskrat will do well to

start a muskrat farm, even if on a small scale, and if given the proper care will prove to be a very profitable undertaking.

Muskrat farming is already a prosperous business. On a marsh at the mouth of the Maumee River, near Lake Erie the muskrats were allowed to breed undisturbed for a period of two years. At the end of that time 5000 were taken in one month. The pelts brought a high price and the carcasses were also sold in the market at \$1.00 a dozen.

Muskrat farming has probably reached its highest development on the eastern shore of Maryland, where there are extensive marshes. This land, a few years ago, was considered almost worthless, but now owing to the fact that the muskrat thrives in these marshes and have been allowed to develop, it has become a source of profit to the owners as well as the trappers, who take the muskrat, the trappers being allowed one half of the proceeds from the skins for their work. As an example, the owner of one tract stated that he bought it several years ago for \$2700.00. He leased it for half the fur that would be produced and in one year his income was \$1000.00. Another example is that of a man who bought a small piece of swampy ground for \$150.00, leased it for the trapping rights and the owner has received \$100.00 a year on his investment of \$150.00.

With the prices of muskrat as high as they are to-day these incomes would be considerably more. Another owner of a 100 acre tract of marsh, who does his own trapping, with the aid of his sons, secured in one season over 12,000 muskrats. At the present market value these skins would be worth about \$18,000.00, and this is probably all net profit.

In addition to this, muskrat meat is an additional source of income and will no doubt be used in larger quantities as people become familiar with it. In Dorchester County, Maryland, it is estimated that the income to the community from muskrat farming is fully \$100,000.00 a year.

Trapping is done only in the winter and there is a closed season the balance of the time. In spite of all the trapping that can be done, the muskrats in this section are on the increase for the reason that where they are only taken by trapping methods they can never be exterminated—in fact, will always show an increase.

CHAPTER IX

THE MUSKRAT

Musk rats require little feeding. The plant life of the ponds and marshes usually furnish an abundance of food. It is a very easy matter to plant the right sort of vegetation in the ponds and marshes, which will develop and grow very rapidly. In many sections the area adapted to the successful raising of muskrat is extensive, and there are no doubt numerous places that are now considered valueless that could be turned to profit by turning loose a few muskrat, and protecting them until they get started. They require no attention, will take care of themselves if left undisturbed and breed very rapidly. As the taking of the pelts is done in the winter time, it lends itself very nicely to the farmer, who has more time in the winter, and can easily find time to trap the muskrats on his place during the winter months.

There is no state in the union where muskrat will not thrive and do well, and there is not a state in the union where they are not trapped. If you have a lake or a pond that is quite a distance from any stream, it would hardly be necessary to fence it in. If you will place a couple of live muskrat in the pond and leave them undisturbed they will go ahead and breed, and probably will not migrate or leave until they become crowded.

Muskrat seldom leave the water for a distance of more than a rod or two, so that there is not much danger of losing them, if there is not any other water close. However, if a lake, or pond, or marsh is near a large body of water, it would be well to fence it in until they have built their dens and have gotten a start. After this, they will be very little trouble.

Musk rats seldom migrate except where they become over crowded and food becomes short. If you have a swamp, or a pond or lake that is already inhabited by muskrats, encourage them, and do not allow any one to hunt and trap them out of season. Give them a chance to breed and they will be a constant source of profit to you, your children and your grand children. Muskrat fur will always be one of the most popular furs and bring high prices.

Where there is an ideal body of water attaching land belonging

to several different people, it is possible to stock it with muskrat and co-operate in raising them and dividing the proceeds when the pelts are taken, and after they are sold.

If you have a piece of swampy land, do not let it go to waste, and do not be too anxious to have it drained, for the reason that it may be more valuable for the raising of muskrat than for any other purpose for which you could adapt it. Muskrat will thrive and breed tremendously if given protection.

The muskrat has several natural enemies, such as the fox, mink, wolf, hawks and owls, but all of these together including the trapper do not greatly affect them, if any care is taken of them.

Musk rats multiply very rapidly, more so than most fur bearing animals.

HABITS

The muskrat does most of its work at night, but they are also much more active by day than many persons suppose. Where seldom disturbed, they often work in the bright sun light, especially at the season when they are building their winter houses.

Muskrat houses are composed of grasses, rushes, roots and stems of aquatic plants. The structure rests on the bottom of a shallow pond, and is built mainly of the kind of plants on which the animals feed. These are heaped up without orderly arrangement until the domelike top rises to two or three feet above the water. The mud on the outside and in the walls of muskrat houses seems to be collected accidentally with the roots. Within the part of the structure above the water a chamber is excavated, from which two or three passages lead downward through the mass into the water, reaching it at points well below the frost line. Where the water is shallow, the animals excavate deeper channels from the house to various parts of the pond or lake.

The muskrat houses are mostly for winter shelter and food and are seldom used as receptacles for the young. Occasionally, when they are driven from their houses or when excluded from underground burrows by barriers of ice or frozen ground, more than one family may occupy a single house temporarily.

When the banks of streams or ponds are high enough for the purpose, muskrats often burrow into them. Entrances to the tunnels are almost always under water, and the approach to them is, if possible, by channels of sufficient depth to prevent ice from closing the passage. The tunnels extend upward into the bank above the

level of the water. They often rise to within a few inches of the surface of the ground and are frequently protected above by roots, trees and shrubs, or by thickly matted turf. These tunnels extend 10 to 50 feet into the bank and terminate in a roomy chamber which sometimes contains a bulky nest composed of dried vegetation. Usually two tunnels lead from the nest to the water, and often a tunnel has two branches or outlets.

When burrows can be made, muskrats occupy them in winter and summer; but in shallow ponds and marshes, and especially in northern latitudes, the entrances are often closed by ice in winter. In such situations and when banks are not suitable for burrows, houses become a necessity, but they are seldom seen along the borders of deep ponds and canals.

As cold weather approaches, the animals become very active, adding to their old winter houses, building new ones, and deepening channels that lead to houses and burrows. They do not hibernate, and, aside from the vegetation of which their houses are made, seem to make little provision for the winter. However, some of the surplus food collected may be found in their burrows at almost any time.

BREEDING

The Honorable David E. Lantz in his comments on muskrat breeding says "It is now well established that muskrats breed from three to five times in a year and that the litters average from 6 to 8 young. The early spring litters are usually less in number, and those of midsummer are somewhat above the average. The muskrat in their breeding habits are very much like field mice. Where they are depleted by vigorous winter trapping, they are replenished before the opening of another season, and it can be seen from a glance that they breed very fast and multiply quickly. Normally the animals mate in March and the first litter is born in April; the second litter is due in June or early in July; and a third in August or September. In favorable seasons a fourth or even a fifth litter may be produced."

MIGRATIONS

Muskrats sometimes wander over fields and along highways quite a distance from water. This occurs late in fall, early in spring, or during severe droughts late in summer. The causes are not understood, although the spring movement has generally been attributed to the beginning of the mating season. When met away from water, the animals sometimes show considerable ferocity and have been known to attack persons savagely without apparent provocation.

FOOD

Musk rats live on roots, etc. as a general rule and seldom indulge in animal food, it's principal food being pond lillies, arums, sedges and the like—but in some localities it feeds on mussels and also on carp and other sluggish fish that bury themselves in mud. When ponds are frozen over, muskrats are restricted almost wholly to food accessible under the ice. In rare cases they leave the water and burrow under the snow in search of grasses and sedges.

The summer food of the muskrat is far more extensive, being made up of many aquatic plants, roots, stems, leaves and fruit, and in addition to supplies from near by fields or woods. Muskrats are fond of nearly all garden vegetables—cabbage, onions, carrots, parsnips, beets, peas, beans, corn, celery and the like—and some times do damage to unprotected gardens close to their haunts.

In Louisiana the muskrat is something of a pest to the rice planter, as it burrows in the enbankments in the low lands, causing the flooding or draining of fields at the wrong time, and often feeds on the growing crop and breaks down the plants. In irrigated sections of the far West, ditches and reservoirs are sometimes injured by muskrats, requiring costly repairs, etc., and it is well to take this into consideration when starting a muskrat farm, but as a general proposition they can be raised in most sections without fear of damage, except where dams and irrigated ditches are necessary. Muskrats sometimes eat fish, but they capture the sluggish kinds and very seldom, if ever, harm game fish.

MUSKRAT AS FOOD

The flesh of the muskrat is on sale in the Baltimore market all during the winter season. They are received by the commission houses from the lower Chesapeake Bay, and sell at from 10c to 20c each. The flesh of the muskrat is dark red in color, but fine grained and tender. If care is used in the method of skinning, and the hair side of the pelt does not come in contact with the flesh, the musk glands come off with the skin and do not effect the meat at all. Where the skinning is done by the proper method the flesh of the muskrat is delicious. The flavor is somewhat like the wild duck that has been caught in the same marshes, as it lives principally on the same food, and in the Chesapeake Bay district it is compared to the flavor of the famous terrapin. To remove the musky odor the muskrat can be soaked in salt water over night, and when fried,

roasted or stewed is found to be very palatable. The following suggestions for cooking muskrat may be found useful.

Fried Muskrat—Wash the muskrat thoroughly and cut in quarters. Let it lie in salt water for an hour or more, then wash, dry with a cloth, and season. Dip the pieces in a prepared egg batter and dust them with flour or meal. Place the lard in a frying pan and let it get hot. Then put in the muskrat and fry very slowly for an hour. Prepare a gravy of milk, butter, flour and parsley and season to taste. After it thickens pour it over the cooked muskrat.

Roast Muskrat—Wash the meat thoroughly, cut it in pieces, and let it lie in salt water for an hour, then wash again. Put it in a pan with water, salt, pepper, butter and a little onion; sprinkle flour over it and baste it until it is thoroughly done.

Stewed Muskrat—Wash the meat thoroughly, cut it in pieces, and let it lie in salt water for an hour. Then wash again, put it in a saucepan, and season with butter, salt and pepper to taste. Let it simmer slowly, and when nearly done put parsley and a little chopped onion into it. When entirely done thicken with a gravy of flour and water, as for stewed chicken.

HOW TO TRAP THE MUSKRAT

Most trappers use the ordinary steel traps—size No. 1 for taking the muskrat. The muskrat is comparatively easy to trap, but hard to hold. They twist out and pull out, and for this reason most trappers prefer to use an extra jaw attachment that fits on the jaw of the trap and catches the muskrat higher up on the leg and prevents his gnawing or wiggling off. The hold fast jaw and the triple grip jaw are used for this purpose. The trap is then arranged so that the animal, when he dives for deep water, will be held there and soon drowned. It is therefore advisable to stake the trap chain down in deep water, as the weight of the trap on the animal's foot will soon drown it.

The manner of setting the trap depends on the situation, and it is picking the right spot to set the trap that spells success. Muskrat trails can be found along the banks of all streams or ponds which they inhabit.

When you have found the tracks and selected your spot for setting the trap, sink the trap in the trail and force it down a little in the mud or sand where the water is 2 or 3 inches deep. Fasten the trap down to a stake or to a long pole. If you use a pole, arrange the ring of the chain so as to slide along the pole, having a fork on the

outer end, preventing the ring from slipping off. Secure the pole firmly to the bank, and when the muskrat is caught, he will strike out for deep water and will soon drown.



MUSKRAT

Most successful trappers use scent in trapping for muskrat, especially when they cannot secure carrots, apples, parsnips, turnips, or other vegetables to bait traps. A little of the scent arouses the animal's curiosity, and the vegetable bait will take him directly to the spot you want him to cover. If you have no fresh vegetables it is almost absolutely necessary to have Funsten Animal Bait, which has been in successful use for over 20 years.

Place a few drops of the animal bait on a stake and set it in the mud, and arrange it in such a manner that it will be about a foot above the pan. The animal in reaching for the bait sets his hind foot upon the pan and in this manner is securely caught. As soon as the jaws close, the muskrat will dive for deep water, and if the chain is properly fastened to the stake, the animal is drowned instantly.

An old log or a wide plank can be used to advantage as a support for traps. The log is moored to the shore by fastening it with a piece of wire or rope and anchoring the end with stakes out into the water by attaching a heavy string and a wire. Nail some light cleats at the upper side with space enough between to hold the trap when set. Notches can be cut in the log and the trap set a little low and then covered with fine leaves or grass. Secure the end of the trap chain in such a manner that the animal can reach deep water. A few drops of animal bait sprinkled along the log will attract the muskrat and you are sure to get them.

The box trap is also used. This consists of a wooden box with a gate at each end. The gate is all wire and arranged to swing inward, but not outward. The box is set just under the water, with one end at the entrance to the muskrat burrow. The animal lifts the gate on leaving the burrow and is imprisoned and drowned. Others follow and a considerable number of muskrat can be taken in this manner.

A similar trap may be made entirely of heavy wire netting of half inch mesh. Muskrat may be taken alive in this manner and used to stock other ponds and streams.

Another plan is to use an open barrel sunk in the soil close to the bank of the stream or pond. The top of the barrel should be level with the surface of the ground. The barrel is half full of water, in which place pieces of carrots or apples. A piece of board about 8 inches square and a few floating chips will delude the animal into jumping into the barrel to secure the food. Once in the barrel, it cannot climb out, and this is a good method to take them alive.

A floating barrel is also used. A hole 8 by 12 inches square is sawed in the side of the barrel having both ends intact. A strong cleat is nailed across each end, projecting 6 or 8 inches on the sides. Enough water is placed inside the barrel to make it float with the platform level of the pond. Carrots and apples are placed inside of the barrel so that they can be secured, or sprinkle a little animal bait on top of the barrel. The muskrat will dive into the barrel for the bait and are thus caught.

Another way is to build up a mound of mud and stone in shallow water. On the top of the mound, just above the water line, sprinkle a few drops of animal bait and set the trap just under the waters edge. Leave very little of the mound above the water, just enough to place the bait upon. The muskrat, in climbing to the top of the mound, will catch its hind leg in the trap if properly placed.

Another method is to set the trap at the foot of the slides or runs. Place the trap in shallow water, and on an overhanging weed or branch, close to the trap, place a little animal bait.

If muskrats are taken alive and are to be killed, a sharp blow on the back of the head is the most humane method. Trappers usually carry a short, stout club for this purpose.

Several years ago Funsten Bros. & Co., St. Louis, offered \$500.00 in prizes for the best trapping methods, and the First, Second and Third prize winners are published herewith. These methods were selected from the thousands submitted and are ideas of practical men who have made trapping a business, and have devoted their lives to the work.

First Prize winner for Muskrat, by Willie M. Pasley.

“The first thing to consider in setting a trap of any kind is that the trap should be set in such a manner that the animal will be likely to go to it. Second, that it will catch him when he comes; and last, that he will not be able to get away when once caught. It is always adviseable to smoke the traps in burning hemlock, cedar, or juniper boughs, or dip the traps in the blood of pigs that have just been killed, if it can be procured. Now, having arranged this, your next business will be to induce your animal not to be shy. If trapping in the wild woods, the surrounding scenery will generally appear wild enough, but near at home, or on the farm, care must be taken to take away the appearance of preparation, yet preparation must be made.

Place the trap, size No. 1, equipped with triple grip jaws, in the water where the animal's tracks indicate its recent presence. The most successful trapping can be done where the bank of the stream is twelve inches or upwards in height. If possible, find a place of this kind, where the Muskrat has been climbing to feed. Set the trap in the water one and one-half or two inches below the surface, and in such a position that the Muskrat's hind feet will become caught in the trap when he starts to climb the bank. It is best to try to trap him by the hind feet. If the trap is fastened to a small bush, which may be set against the bank about eighteen inches to either side, the Muskrat will start for deep water, and while fighting the trap will drown shortly after leaving the shore. He will be readily located in the water, and can in most cases be gotten from the bank without the use of a boat, but I recommend the use of a boat when trapping for any water animal.

Muskrats can also be trapped very successfully at the mouth of their holes, where they enter the bank above or partly below the surface of the water. But the first plan I consider the best for taking the Muskrat. I have caught seven rats in one trap by this method in eight nights. There is no method of trapping for Muskrats equal to a good steel trap, set according to your best knowledge and acquaintance with the animal.

A trapper can't tell all he knows in a way to be understood, unless he is talking or writing to a trapper. In order to be successful, he must possess a knowledge of the habits and ways of the animal he is after, and set his traps according to his best judgment.

The most successful bait for fall and winter trapping for the Muskrat is good, mellow apples or the Funsten Animal Bait for Muskrats. I think the latter best for spring work."

Second Prize Winner for Muskrat, by Perry Ward.

"I give below my plan for trapping Muskrats:

Now every one who knows the habits of the Muskrat knows that they enter their burrows from underneath the edge of the water. My way to trap them is to find where their burrows are, and set the trap in the mouth of burrow, under the water, and fasten the chain out in the water as far as the chain will allow. When this is done they will drown themselves and so avoid driving other Muskrats away. If you can not find their burrows, set your trap about six inches out in the water and three under water, set a stick up by the trap, let it protrude about six inches above the water, put a piece of an ear of corn or apple on the stick, and put on a plentiful supply of Funsten's Animal Bait. They will be attracted by the scent of the animal bait and go right into the trap. It catches them by the hind feet every time."

Third Prize Winner for Muskrat, by Byrt Blackburn.

"I have trapped muskrats in the following way with great success: Find a place where they run; take a piece of carrot and put a little of Funsten's Bait on it; then get a stick about two feet long, put your carrot on one end, stick the other end in the bank, so that the bait will be about eighteen inches above the water, where it is about four inches deep. Then take a No. 1 trap, set it under the bait and stake it out in the water the full length of the chain. This will keep Mr. Rat off the bank, for if he gets out of the water he is apt to get away."

MUSKRATS SHOULD ALWAYS BE TRAPPED AND NOT SHOT OR SPEARED

How to Prepare for Market

Muskrat should be cased, pelt side out, and never stretched open. In order to take the pelt off cased, it is necessary to begin skinning at the heel. Slit up the middle of the hind leg to the tail, around it, and then down the other leg to the heel in the same way. No other cuts are needed. (Never cut open along the belly.) After you have made the cut described, the skin will peel off easily to the front feet. Cut closely around nose, eyes and lips so as not to tear the pelt. If bits of flesh adhere to the skin about the head, they may be scraped off. Remove all superfluous meat and fat and cut off the tail, as the tail of the muskrat has no market value. After this is done the skin is spread over a thin board or shingle of proper shape (see illustration), or, better still, stretch the skin over one of the Funsten Muskrat Stretchers specially made for this purpose, with the fur on the inside and the pelt outside. The Funsten Stretcher allows the air to get inside and prevents tainting or spoiling.

After the skins have been properly placed on the stretcher, stand them or hang them in a cool, dry place. Never dry skins near a fire or in the sun. It is only necessary to dry muskrat pelts long enough to hold their shape in order to ship them.

Kind of Traps to Use

Any of the following traps can be used for taking muskrats: Newhouse, Victor or Jump traps, size No. 1; Victor No. 1 Giant; Funsten Two Trigger trap, Kompact or Coil Spring. The efficiency of any of these traps is greatly increased by the use of the Funsten Triple Grip Jaw attachment.

How to Dress Muskrat Skins for Home Use

Formerly many muskrat skins were home tanned and made into caps, collars and other articles of wearing apparel. At present, however, the farmer and trapper is anxious to turn his muskrats into cash, and comparatively few of them are used by the man who traps them. However, it is desirable to be familiar with a good method for tanning skins and the following directions, if carefully followed, will give better results than the use of alum, which most amateurs are inclined to use.

Directions for Dressing

Prepare a tanning liquid composed of a quart of salt and one-half ounce of sulphuric acid to each gallon of water. This mixture

should not be kept in a metal container. Allow the muskrats to stand in the liquor twenty-four to forty-eight hours, until they are thoroughly saturated and the pelt is soft. Then remove them from the liquor. Wash several times in soapy water, wring them out as dry as possible and then rub the flesh side with a cake of hard soap. After this is done, fold them in the middle, lengthwise, over a line, hair side out, and leave them to dry. When both surfaces are barely dry, and the interior is still moist, lay them over a smooth, rounded board and scrape on the flesh side with the edge of a worn flat file or a similar blunt-edged tool. In this way an inner layer of flesh is removed and the skin becomes nearly white in color. They are then stretched, rubbed and twisted until quite dry. If parts of the skin are still hard or stiff, the soaping, drying and stretching process should be repeated until the entire skin is soft. Fresh butter, or other animal fat, worked into skins while they are warm and then worked out again in dry hardwood sawdust, or extracted by quickly dipping them in gasoline, will increase their softness.

By following out this method a fairly good result can be obtained and the skins can be used for home purposes. For the best results, the skins should be sent to a regular fur dresser and the pelts will then come back in a soft, pliable, splendid condition. As stated before, the man in the country is interested in turning his furs into cash, especially muskrats, as they have advanced so in price in the last few years that the farmer can buy woolen garments at much less than his muskrats would cost.

Size of the Muskrat Pelt

The largest muskrats are found in the Central states and more especially in Illinois and Ohio. The large size muskrat pelt, after it is taken off and stretched and made ready for shipment, measures about sixteen inches long by an average width of six and one-half inches, and would contain about one hundred and twenty square inches of fur. The Central muskrat, ready for shipment, taking the average size as they run, would be about five skins to the pound. The muskrat from the Western and Northern states ranges a little smaller in size and the large Northern muskrat is about fifteen by five inches. The average weight of the Northern muskrat pelt is about two and one-half to three ounces, or about five or six to the pound. The Northern and Western muskrat is very thin in pelt and for this reason is lighter than the Central muskrat, which is heavier pelted.

Large quantities of muskrats are found in Louisiana but they are not as valuable as the Central or Northern muskrat, for the reason that they do not lend themselves to shearing and dyeing for Hudson Seal purposes. They are usually made up in the natural state, that is, not dyed, and are very much sought after by the European markets. They are a rich dark brown in color and make very attractive coats.

The muskrat is one of the staple articles of the fur trade and there are more muskrat skins used than any other fur-bearing animal procured in North America. All of the states have well established game laws protecting muskrat during the breeding season and the supply of this fur will last for generations and will increase if they continue to be protected, and the raising of muskrats is taken up by the small farmer in the districts where they thrive.

CHAPTER X

SKUNK

The skunk is found throughout the United States and is one of the leading American furs, and is considered by the fur trade, as well as by the women who wear them, as one of the best wearing and most substantial furs that money can buy. When made up into trimming, it is a beautiful rich black in color and adds style and character to any coat or garment.

The increased demand for skunk fur and its consequent high price has led a great many farmers to become interested in raising skunks for profit, and quite a few have been very successful with Skunk Farms and no doubt this industry will grow much larger.



SKUNK

The wild skunk is comparatively easy to trap and is taken in large quantities each winter. Nearly every state in the Union has strict game laws protecting skunk by closed season, and the farmer himself is very anxious to protect the skunk and allow them to in-

crease, as he has come to realize that the skunk is not only a big source of profit in its pelt, but is useful in destroying noxious insects, and a fuller understanding of the economic value of skunk will no doubt result in greater protective measures by the farmer in order that the supply of skunk will increase from year to year.

Any farmer boy can start a skunk farm, and as they are abundant in nearly every state in the United States, it is not a difficult problem to get a start if one really wants to begin.

The skunk lives in dens, and they prefer to use natural cavities in rocks or burrows dug by other animals such as fox, badger or the woodchuck, but they will also often dig their own dens in ordinary soil. They are said sometimes to attack and kill woodchucks before taking their burrow. Fallen logs, recesses under stone walls or fences and cavities under tree roots furnish the skunk convenient retreats. If the floor of a building is near the ground, the space below is often used by a family of skunks. Also they nest under well covers, board walks, hay scales and stacks, as well as in culverts, covered drains, abandoned cellars and caves for storing vegetables. In winter the warmth of the floors of occupied dwellings or country schoolhouses seems to be especially attractive to them; and the animals often take up their abode in carelessly filled trenches conveying steam pipes from boilers to distant buildings, no doubt attracted by the warmth.

When skunks dig their own dens the burrows are seldom very long or deep. They go down below the ordinary frost line, and after they dig a short way, end in a rounded chamber where they make a nest, a bed of leaves or dried grasses. Occasionally there are two entrances to a den.

In Northern latitudes skunks lie housed in their dens during the coldest part of winter, but in mild weather they move about freely in search of food. Usually a considerable number occupy the same den, possibly members of a single family of a preceding summer, but sometimes the number seems too great to be only one family. As many as fifteen to twenty-five have been captured at one time from a single den in the winter. When thus disturbed skunks are found lively enough to prove that hibernation is not complete. As spring approaches the animals mate, and the pairs betake themselves to separate establishments. In the South this gregarious habit is not so marked, although the young usually remain with the mother until mating time in the late winter.

Skunk are mainly nocturnal, but when not harassed by enemies they often hunt in broad daylight. They usually come out about sunset and spend the summer twilight in catching grasshoppers and beetles by springing upon them with the fore feet as the insects rise from the ground in flight. After dark the skunk depends upon its sense of smell and hearing to locate its prey. It digs many beetles and their larvae from the ground, leaving the surface thickly pitted with small conical holes where the insects were obtained.

It would seem to be advisable in raising skunk to start on a small scale and not attempt a big skunk farm.

As a rule the most successful stock breeders are those who make a special study of the stock they have in hand and give their animals special attention. Too much attention, however, to the skunk will cause it to become domesticated, and if petted and over fed their fur deteriorates and is of little value, but if allowed to live in as near a wild and natural state as possible they will breed rapidly and produce good fur. They will become tame and lose their fear of man if not frightened or disturbed. Two or three pair is enough to make a start, and forty or fifty is the maximum amount recommended* for a successful skunk farm. With full furred skunk bringing the high prices of today, this will show a very nice return for the investment, which is very little.

Almost any piece of ground can be used for the purpose. After you have selected your location it is well to build a suitable enclosure, Pick a piece of ground on which there is a small stream or spring, but not a wet, swampy place; in fact, a side hill with a spring or stream at the bottom is preferable. A piece of rocky bluff makes an ideal location for a skunk farm. The skunk is not a water animal although they like plenty of water.

Make the enclosure as large as you can, depending, of course, upon the number of skunks you expect to start out with. In other words, the secret of a successful skunk layout is to have the conditions as nearly natural as possible. Do not attempt skunk raising in a small pen or yard, as the animals will not do well.

Galvanized wire netting, about one inch mesh, makes a very good fence. If there is any heavy drift snow it would be advisable to have the fence about seven feet high. Ordinarily a four foot fence is high enough. It is advisable to turn the wire at the top or place a sheet of tin or something along the edge to prevent the animals from climbing out. In erecting the fence it is advisable to sink the

netting into the ground or lay a piece of the wire netting flat on the ground at the foot of the fence, inside, of course, or protect it in the best way possible, depending upon conditions, so that the skunk will not dig under the fence and escape.

Compartments should be made to separate the males or females and the young. If each family can be separated it is advisable to do so. An old wooden box will answer for a nest if nothing better can be obtained. Dig a trench and cover it over, fix a few dens such as the animals would use in their wild state, and leave the families to themselves and they will prosper and get along very nicely. Build the dens in such a way that there will be no danger of their getting damp; in other words, build them on an incline so that they can easily drain. There will be no unusual scent or odor about a skunk ranch, as skunk themselves are very clean.

Food for Skunks

Skunks eat a great variety of food, including meat, fish, insects, scraps of bread, raw vegetables, cooked vegetables, fruits, and scraps from the table. Only fresh meat should be fed. It is not advisable to overfeed skunks as they become fat and the fur deteriorates, and as the object of raising them is to develop the heaviest and most desirable coat of fur, the diet should be watched closely and only such food should be given as is calculated to produce the best fur. Foods that cause the animal to run to fat are not desirable. Some farmers feed corn meal mush and cakes made from corn meal and sometimes they feed fresh milk. Only feed enough food at a time to last them one day and do not dump in a large supply of offal and expect skunks to thrive on it and produce fine fur. In raising skunks it must always be kept in mind that the object in view is to produce a fine pelt and the best way to bring this result is to let the animal lead as natural an existence as possible. Supply them with food that will keep them in good health, but not overfed. Females with young should be fed twice a day and given plenty of good fresh drinking water. The vessels used to furnish them with water should be kept clean. Do not catch and handle the skunks at the time of feeding and do not disturb them while they are eating, or as a matter of fact at any time unnecessarily.

Breeding

Skunks in captivity breed once a year, but occasionally a second litter is produced. One male should be kept for three to five females.

The mating season is usually in March and most raisers recommend keeping a few females and a single male in one run together. If two males are kept in a single pen they are likely to fight. The period of gestation is about nine weeks and the young come usually in May. Before the young are born the females should be placed in separate breeding pens containing a den or nesting box supplied with straw or similar material. As soon as the young skunks are about two months old they should be placed in a run set apart for them. The young skunks are full grown and their fur will begin to turn prime in December. In many cases skunks that are raised in captivity have poor fur as compared with the pelt of the wild animal and this is the result of keeping the animals in small pens and over-feeding them. They do not get sufficient exercise and they run to fat. The pelt becomes heavy and there is no under fur, consequently the fur has little or no value for fur purposes. The male skunks that are to be raised for the fur should be turned into a large enclosure in September, when they are three or four months old, and kept there in order that they may have ample exercise and can find their natural food such as insects, etc. If they are allowed to lead a natural wild life they will develop as fine a coat of fur as the wild skunk in the same locality. If they are penned up in small enclosures the fur is likely to be poor and the farmer will have all of his trouble for nothing; so that you can see that this is a very important point and should be watched closely. Select the largest and finest skunks as you go along for breeding stock and breed to the all black kind. The broad striped and rusty colored skunks should be taken at the time when the fur is at its best which is usually in December and January. Careful selection of the breeding stock will result in better skunks year after year and if the blacks are selected in a few years they will produce all black skunks, or what is known to the trade as black, and will have very little white on them.

Removing the Scent Sack

If skunks are not disturbed they will never prove a source of annoyance to the owner or the neighbors. Skunks become tame very readily and the keeper can handle them without danger, but it is not advisable to pet them and disturb them too much. When it is necessary to transfer them from one place to another they may be lifted by the tail, or they may be driven from place to place without any trouble. For these reasons it is not absolutely necessary to remove the scent sacks. Some owners prefer to remove the sacks and

this is comparatively a simple operation with young skunks, but rather a dangerous thing with the older ones. The best time to perform the operation is when the skunk is from four to five weeks old, and even then it is advisable to have some one who is fairly expert to do this work. To remove the gland make a sharp incision on each side through the skin and enveloping muscles. This exposes the round hard gland and duct. Care must be taken not to cut the duct. When the round hard gland is exposed a clamp-forceps should be placed over the duct close up to the gland. The gland is then cut and the duct severed just beyond the clamp. The gland with the clamp attached is then lifted out. It is not necessary to use an anesthetic for this operation on young skunks, and we do not recommend it for the older animals unless it is found absolutely necessary and then it should be performed only by one who is really expert at this kind of work. Two men are needed to perform the operation on the young skunk. After the operation the wound should be dressed with a weak solution of carbolic acid. One prominent raiser recommends that the scent sack be left in and not taken out of the skunks that are to be killed for their fur, and this is sound advice. For skunks that are to be sold as pets or for advertising purposes it may be advisable to remove the scent sacks, but unless there is some good reason for it, the sack should be left in and the skunk allowed to lead as natural an existence as possible. Some owners advise the method of cutting so as to expose the duct leading from the gland and snipping out a short piece of it. In healing, the duct is permanently closed and the animals are prevented from using its musk. If the amateur is to perform the operation he should wear old clothes and goggles. An old plank makes a good operating table. The tools needed are a scalpel, a tennaculum (hook), probe, clamp, extra forceps, and some white linen. See that the instruments are thoroughly cleaned by being boiled in water. It requires two to perform the operation successfully; one to hold the skunk by the neck and keep its head down. Lay the skunk down on its belly with its head towards the operator. The operator will wrap the skunk in a sack or cloth and after this his assistant can release his hold on the neck of the skunk.

The skunk does most of his prowling at night and searches out litters of baby rabbits, keeps a constant look out for beetles and bugs, and is always on the alert. In real bitter cold weather he will curl up and sleep in his den, but will come out at the first moderate day and will waddle over the snow in search of something to eat. Early

in the Spring he is up and out all of the time and has an appetite that is never satisfied. He looks for big black beetles, insects, field mice, moles, lizzards, etc. In the grasshopper season he devours these insects in large quantities as he is very fond of them. The skunk is really the farmer's friend and will catch more rats and mice, bugs, beetles, etc., that damage the farmer's stock of grain and his crops, than any domestic animal on the place; and while occassionally he may kill a chicken it is not very often, especially with the careful farmer, who takes the proper care of his poultry and puts them up at night out of the reach of prowling varmints. The skunk is a very interesting little animal and has been and will continue to be a source of unusual revenue to the boy and man in the country and a delight to the woman who wears furs for protection against the winter blasts.

The skunk is not particular about his residence, but can be found in hollow logs, woodchuck burrows, caves in the rocks, and any opening that will suit its purposes. The full grown skunk is about the size of the house cat and the tail of the skunk is broad and plume like. The skunk is one of the most valuable fur bearers that we have in America and is being properly taken care of and conserved in nearly every state in the Union. The big fur houses of the country have contributed a great deal to this conservation by calling the attention of the farmer and trapper to this fact and urging him to take the same care of the skunks and other fur bearers in his section as he would of his own live stock, and to trap them only during certain months of the year, when the fur is prime, and at a time that will not interfere with the breeding season. The skunk is not at all suspicious and for this reason can be trapped comparatively easy. One method of taking skunks that has come into vogue in recent years, and which has many advantages if it is done properly, is that of smoking the skunks out of their hiding places and then killing the large prime male skunks, letting the others escape to be taken at a more opportune time. For this purpose there has been developed several devices for scaring the animals out of their dens. The majority of the skunks are taken in the steel trap, and this, after all, is the simplest and safest way. Traps are now made that not only catch the animal but also kill it. We recommend this style of trap which is known as the Two Trigger Trap. Most trappers use Funsten Animal Bait in connection with their food bait, and as the Funsten Animal Bait is designed to attract the large male to the

trap, for this reason if for nothing else, it is very desirable to use it. The bait is made from odors that arouse the passion of the particular animal for which it is made. As soon as the male skunk smells the odor of the Funsten Animal Bait he will make an effort to get to it and even fight frantically for it. The three prize winning methods of trapping skunk in the \$500.00 contest of Funsten Bros. & Co., are given herewith. All of these men are experienced in their line and have been successful trappers for many years.

Winner of First Prize for the best method of trapping skunk.

“My plan for trapping skunks is as follows: As I have had twenty-three years’ experience in trapping skunks, and as I have lived and trapped in twenty-two different States, I will try and give you some pointers in regard to catching these animals.

The first thing to do is to buy the best steel traps, then oil your traps good in the joints. See that they all work to perfection before you start to set them. Then purchase some of Funsten’s Animal Bait for Skunk, search the country over and where you can find their holes, or around old vacant houses, or hay stacks, or under barns or any out-building, where you can find their runs, set your traps. First carry some old rotten grass, or leaves, or hay chaff, that is perfectly dry, then take a hatchet and dig out a bed for your trap, then put in some of your dry grass or chaff, and set your trap on it. This keeps your trap from freezing tight to the ground in cold weather. Then if there is any trash where you set your trap, spread it back over the trap, so as to leave it to all appearances just as near like you found it as possible. And at cross-fences or cross-hedges is a good place, any place where you find they run along. Set your trap as I have directed you, then take a piece of rabbit or a part of a mouse or bird, put it on a small forked stick, and stick it within five or six inches of your trap, and then put about six drops of Funsten Skunk Bait on it, and if any skunks come close you will get them. Place the covering as thinly over the top as possible, just so you hide the trap from view. Make a round of your traps every day, if possible—every other day at least. I have been using Funsten skunk Bait, and I have caught many skunks.”

J. R. POYNTER

Winner of Second Prize

“Having had considerable experience in trapping, I will give you my idea about catching them.

A skunk is not a very cunning animal and is not hard to catch. In order to trap skunk you must be very careful about setting the trap. Find the hole where the skunks have dened up for the winter. You will find that the ground at the mouth of the hole is worn smooth. Dig a small hole just big enough to set the trap in, then cover it with a little dry dirt or short grass, but be sure not to get any dirt under the pan of the trap. Skunks will den up sometimes fifteen or twenty in one hole. It is best to use Funsten Skunk Bait, for it will make a trap in some old hole just as profitable as a trap without it in a den."

C. D. JOHNSON

Winner of Third Prize

"Please accept this in your Contest as the best way to trap for skunk that I have found yet.

First, find the den, path or place where they live. Set your trap in the center of hole or path, lower it down until it is level with the soil, put a few drops of some good animal bait—Funsten's is the best—then just cover the trap over with dust to hide it, and you are safe in getting Mr. Skunk."

H. W. WALTERS

How to Prepare Skunk for Market

Skunk skins should be cased pelt side out for market. In order to take the skin off cased begin by cutting the skin loose around the hind feet and rip the skin down the middle of the back of the hind legs, peel the skin carefully from the hind legs, skin the tail and remove the tail bone. Care should be taken not to cut into the scent gland. No other cuts in the carcass are necessary. Turn the skin back from the body, using the knife only when necessary to cut the ligaments. Care should always be taken in cutting around the eyes and nose to avoid tearing the skin. Keep the skin as clean of meat and fat as possible. It is well to suspend the carcass from the limb of a tree, using the Funsten Gambrel-Stretcher for this purpose. This consists of a regular fur stretcher with two hooks on it to which the hind legs of the carcass may be fastened, and this enables the trapper to peel the skin off very easily. After the skin has been removed it will be in the form of a long pocket with the fur in. In order to dry the skin to the proper shape, dry it on the Funsten Perfect Stretcher, but if this is not available a board cut to the proper size and shape may be used. Stretch the skunk skin out smooth with the hair side in and allow it to dry in a shady cool place. Never dry skunk by the fire or in the sun. Scrape the skin off clean,

but do not scrape the pelt too close as that will injure the roots of the fur. Never use any preparations of any kind in curing skunk skins. Always remove the tail bone.

Any of the following traps may be used in trapping Skunk, Victor No. 1, No. 1 Giant, No. 1½, No. 91, No. 91½, Jump Traps No. 1, No. 1½, No. 91 and No. 91½, Newhouse No. 1, No. 81 and No. 91, and the Funsten Two Trigger Trap Coil Spring No. 1. We also recommend the use of the Funsten Perfect Smoker for smoking skunks out of hollow logs, but do not use it in bitter cold weather when the skunk are hibernating. The finest device yet invented for scaring skunks out of the den is the Funsten Spitz-Devil. Unlike muskrat there are very few skunk skins dressed for home use; however, if it is desired to dress them the same methods may be used as described for dressing muskrat.

The largest skins are found in Minnesota and North Dakota and are nearly all of the narrow striped variety. The smallest skins are found in Arizona and New Mexico and are nearly all of the striped variety. The medium sized skins come from the Central States.

Size of Skunk Pelts

Large Northern skunk pelts measure about twenty four inches long, not including the tail and about eight inches wide. The average weight of the raw skin dry and ready for shipment is one pound. The small skunk pelt from the same section would be about eighteen inches long and six inches wide. The large size skunk pelt from the central sections would be about twenty two inches long and seven inches wide.

CHAPTER XI

MINK

Mink is one of the most valuable and one of the most sought after of American furs. They are found in nearly every state in the Union, the finer skins coming from Maine and the northern part of New York. The mink found in these sections are small in size but are very fine in quality, the fur being rich and silky, and very dark, with a pronounced black stripe down the center of the back. The largest mink are found in Minnesota and the Dakotas, the Minnesota mink being especially fine in quality. Louisiana is probably the largest mink producing state in the Union, and the mink from this state known as "French Settlement Mink" are very good for color and quality, considering the fact that they are found in an extreme Southern climate. Mink is not only beautiful, but it is also a fine wearing fur, and a fine mink coat is second only to Russian or Hudson Bay Sable. The mink is very quick and active and is difficult to trap; and trappers are indeed proud when they successfully trap a fine mink pelt. Mink follow the streams, and feed along the banks of creeks, lakes, and ponds. They are killers and it is believed that they often kill just for the pleasure of it. They are more difficult to raise than the skunk, but they can be made very profitable and it is to be hoped that many more will take up the raising of mink for profit and try to make it a successful industry. There is not much practical information at hand on the subject for the reason that it is an undeveloped industry and has been attempted by comparatively few men. Some of these have been very successful, others have become discouraged and quit. Those who have become successful are reticent and not inclined to give information on the subject, others are only too glad to help in any way in order that others may start that they will have more customers for their live stock. There is a demand for live mink for breeding purposes and there will no doubt be more money in raising mink for this purpose than for their pelts, as good prices can be obtained for live pairs. Live mink sell as high as fifty dollars per pair, and it is claimed by some men that the business of mink farming is more profitable than any other kind of fur farming, with the possible exception of Silver

Fox. The raising of Silver Fox is beyond the reach of most people as it requires considerable capital to embark in this business, but mink raising may be started with a small capital if the man or boy can trap or buy a pair of live mink.

Almost any sort of enclosure will do. Fromm Brothers, who have successfully raised mink, prefer running water on the place selected so that a small portion of it will run through the enclosure for the mink, which can be done by building a cement trough at one end of it. The place should be enclosed with galvanized iron wire set well into the ground and with the top turned in so that the mink can not climb or jump out. If you cannot buy a pair of live mink for breeding purposes, it is well to try to trap them yourself using a box trap for this purpose. Most mink raisers feed their mink fresh meat daily. Wild rabbits are splendid food, or anything of this nature. Fish may also be used, and some raisers give the mother mink milk. See that they are supplied with fresh water every day and keep the pens clean, and also the nesting boxes. Allow as big a run as possible and construct it in such way that the mink cannot dig out or climb out. For the nest use wooden boxes divided into three compartments with a small hole bored at one end for the mink to crawl in and out, and two similar holes bored in the partitioning boards. This will admit very little light into the pen and none at all into the back compartment, which is just what the mink wants. The darker it is the better they like it. Bore the entrance hole small and near the ground so that it will let in as little light as possible. After the young are born place a fresh nesting box close to the old one and the old mink will make the change if she thinks it desirable. When the young mink are about two months old and are able to take care of themselves, it is advisable to take the mother away from them. Keep the males and females separate, keeping the males in a pen by themselves and the females by themselves. Mink are rather vicious and will sometimes put up a fight, but if you will wear heavy leather gloves they cannot do any harm. Some breeders recommend leaving one kitten with the mother to take care of whatever milk the mother may have left. The man starting in the raising of mink will have to study out things for himself, using common sense and good judgment. Do not bother or disturb the animals too much. They know how to provide for themselves. Just give them a chance and they will breed very rapidly under the right conditions. They begin breeding usually

in March and April and when raising them it is advisable at this time to pen them up in pairs. Never put two males in the same pen at the breeding season, or two or more females in with one male, as they are terrible fighters and are liable to injure one another. It takes about forty two days from mating time for the young mink to appear. After the young mink arrive do not bother them by opening the boxes or going near them. Do not forget to feed the old mink, and give the mother mink milk and plenty of fresh water. If she will not take the milk give her plenty of fresh meat. If you bother the mink in any way at this time you are very apt to lose them, so that the best plan is to keep strictly away until the young mink are ready to wean. In order to secure young mink for breeding purposes they should be taken in May and June. No one would think of trapping mink at this time of the year for their pelts and it is against the law in most states. However, if they are to be taken for breeding purposes it is possible to get a permit from your local game warden to trap them. Watch the stream for mink tracks where the old ones leave their holes and the young mink may be secured by digging them out, or by setting a box trap for them. There are some raisers that build the pen in four divisions, one division for the females, one for the males, and two for the young mink. In selecting a piece of ground choose a piece that is located on a little hillside with good drainage, that will take in a bluff of rocks, so that the mink can find their natural hiding places. Put in nesting boxes and some straw so that they can build their own nests at the proper time. Feed them carefully, and regularly, and with fresh food. They are very fond of fish, but do not give them tainted or spoiled stuff. They are also very fond of muskrat meat. Their natural building place is in old logs, in caves, or in drift piles, but always near the water, the nest where the young are born being usually in the ground. Try to arrange the enclosure in as natural a manner as possible, putting in a few old hollow logs and digging a few holes and making them look as natural as possible. Funsten Bros. & Co. will welcome any letters from professional mink raisers that may be published on the subject, for the benefit of the beginner. This is a new industry and help can only come from the man who is making a successful business of raising mink. The best pen is one five or six feet square, with the sides made of smooth white boards, placed side to side on a raised footing of stone, or concrete, sunk eighteen inches into the ground. The floor of the pen should be the bare ground. Heavy wire netting

may be used instead of boards, but in this case the top should be turned in so as to prevent the minks from climbing out. Boxes should be provided for the nests as described heretofore. It is best to furnish the boxes with a hinged lid, so that they may be opened and examined, but this should not be done too often, in fact not at all unless it is absolutely necessary, as the mink should be left absolutely alone. If a little water can flow naturally through the pen, it will be a big help. There is a big demand for live mink, so that the time to start raising them is now, and we advise that every effort be made to catch a pair of live mink and start in a small way. Every boy can get a lot of pleasure and satisfaction out of raising mink and you can make a big profit besides.

Mink are found throughout the United States and a greater part of Canada and Alaska. The finest mink come from Maine and the Northern part of New York. The largest mink come from Minnesota and the Dakotas. The State of Louisiana is probably the largest producer of mink, and the quality of the fur is good considering that they are produced in an extreme southern climate. It is a small carnivorous animal, belonging to the weasel family. A distinct species is also found in Europe and Asia. The mink has a small head, a long slender body, rather short legs and bushy tail. It is very graceful in its movements. They are very fond of water and get much of their food from it. They usually follow their same tracks back and forth, sometimes traveling in water and sometimes on land. If you can locate their tracks and make your sets accordingly, you should have good results. They are flesh eating and are fond of trout, muskrat flesh, frogs and rabbits. Any of these baits used in connection with Funsten Mink bait are almost sure to produce results. Mink is one of the staple articles of the fur trade. The color varies from a light brown to a very rich dark brown, almost black. The darker skins are more valuable. The finest, silkiest skins come from Maine and the Northern part of the United States. Mating season commences about the first of March and ends about the middle of March. The young are usually born in April, there being from four to six in a litter. The fur of the mink is best during the latter part of November, December and January. Mink trapped out of season are, as a rule, poor in quality and of little value.

Trapping Mink

Most experienced trappers recommend the setting of traps along small streams. They are more winding and crooked and more drift

is lodged along the way, affording hiding places for the animals and therefore good places for setting traps, both in and out of the water. If there is a bluff on one side of the stream and it is low on the other, the low side is recommended as the best for setting mink traps. Wherever there are plenty of fish is usually a good trapping range for mink. Whenever it is possible, sets should be made in water. Select a place where the indications for mink are favorable. If possible, place some old drift or logs so as to make a guideway. Place the trap about the middle of the guideway and on the far side of the trap drop a half dozen drops of Funsten Mink Bait. The bait should be placed so as to make the animal cross the trap to get to the bait. Never put the bait on the trap itself.



MINK

Find a hollow log along the edge of a stream. Use some muskrat flesh or trout well scented with Funsten Mink Bait, then put the bait well into the log. Set a trap at each end of the log.

Another method is to secure a medium size tile and wedge a stick into it crosswise. On the stick place a few drops of Funsten Mink Bait. Place the tile in shallow water so that the water just covers

the bottom of it, and place a trap at either end of the tile under the water.

Another way is to place the trap close to the bank in shallow water underneath some overhanging grass or weeds, and drop a few drops of Funsten Mink Bait on the weeds just above the trap.

In extremely cold weather when streams are frozen over, find a place where there are ripples and thin ice, where it will be possible for the mink to come out. There are any number of ways and places that might be suggested, but the trappers' own individual judgment will guide him best as to the exact spot to place his traps. For trapping mink we recommend the use of Funsten Animal Bait and Newhouse or Victor Traps No. 1, or No. 1 Giant, or Jump Traps, No. 1 or 1½, Coil Spring No. 1, or the Funsten Two Trigger Trap.

Mink never den up during the severely cold weather and will go out every night in the coldest climate. Their favorite haunts are along the banks of creeks, ponds, and lakes. Mink will go off on long tramps and will be away from his headquarters for a week at a time, stopping wherever he can and finding little hiding places during the day. The mink is suspicious, and has a keen sense, and is therefore very hard to trap. For this reason it is advisable to use a good scent, and Funsten Animal Bait is best for this purpose, as it has been successfully used for twenty years by experienced trappers all over the world.

Successful mink trappers run from twenty five to one hundred traps and where they can afford it they buy the Funsten Two Trigger Trap, as it is sure death to the mink. A fine prime mink pelt is so valuable that care must be taken that they are not damaged in the trap. The Funsten Two Trigger Trap is recommended for this purpose, as it does not injure the fur in any way and is humane as it means instant death to the mink.

All of the great mink trappers of recent years have recommended the Funsten Animal Bait for the successful trapping of mink, and we herewith publish the three prize winning methods in the Funsten trapping contest. These methods are written by men who know their business and who rank with the great trappers of the world. R. E. Orr of Paris, Texas, has probably trapped as many mink in his time as any other one man in this country.

Winner of the First Prize for the Best Method of Trapping Mink

The trapper, like the fiddler, the singer, the orator, is born to his calling. Born with the inclination, tact and genius in him,

it does not follow that many others may not become good trappers by training and experience. The trait of the trapper is seen in the boy while quite young, and all opposition will not stop his tendencies. The trapper should be a good walker, and one who is fond of rambling walks, for much walking is required by the trapper. He need not necessarily be a fast walker, except at times. Indeed, most of his walking should be done slowly, in order to give him opportunity for making inspection of tracks and signs in his territory—inspection of all that pertains to his information. The trapper should be an early riser, and should visit his traps frequently.

It is important that the trapper should be fully acquainted with the habits of the animal he attempts to trap, and this can be acquired only by long and close attention to the places it frequents, its ramblings, the peculiar place where it stops and slides or wallows; its ins and outs, its ups and downs, from and to the water. All this can be best learned in time of snow, but the old trapper does not necessarily need the snow. The trapper must learn his art, for nothing but the outlines can be put on paper. The trapper must make himself familiar with his territory. He must learn to know the main stream and tributaries, or branches, the hills and hollows. He should note everything pertaining to signs of the animal, its place of passage; in short, tracks, holes, hollows, hollow logs, hollow stumps, and such holes, for in so doing he will often find them burrowed up in places not suspected.

The small streams and branches tributary to larger ones, are much better for the trapper than the large ones. The large streams clear themselves of passing drift, and they wash out the holes and hiding places of the animals. The small streams are more winding and crooked, and much drift is lodged along the way. They afford more eddies and ripples and rocky places, which afford hiding places for animals, and, therefore, good places for setting traps, both in and out of the water. The small ones have more thicket and willow on their margins. Now, if there is a bluff on one side and low on the other, the low side is best for setting traps. Quantities of muskrat and fish are signs of good trapping range. The muskrats make holes and hiding places for the mink, also good setting places for the trapper especially those not in use by the rat.

The Habits of the animals—This is doubtless the most important subdivision of the guide to the trapper. The trapper should know, from his own personal knowledge, the habits of the animal he attempts

to trap. He must know the kind of places they frequent most, and learn their motives for going there, and this can be done only by the closest inspection (what they do there is mink or coonology, and can only be guessed at) but it will be sufficient for trappers to note their signs with care, and be careful not to tramp around much or disturb their haunts, for sure as you do they will quit the place. In fact, tramping much about their holes, dens and frequented places will drive them away. (Note—never take your dogs with you when you go to set your traps. The mink can scent a dog for days. Never set a trap where dogs frequent.)

It requires much care and ingenuity to trap the mink. The trapper must know his habits well in order to be successful, for he is certainly the most cautious of all the wild animals in the woods, except, perhaps, the fox and the wolf. At times the mink seems bold, but he is always prepared for retreat. He is sometimes seen in open daylight, but never without nearby retreat.

The mink that visits your chicken roost has his advance and his retreat all planned before he makes his venture. He always comes in the rear along some fence through weeds or through any sort of hiding. In fact, he always has his eye on some way of retreat. If you track him you find him under cover in every way possible, traveling in the most secluded places; through thickets, along the hedges, under shelving banks, under logs, drift, rock fences, and rock piles. When he puts up for the day he seeks, generally, some inaccessible place, but he is found sometimes in temporary places, and I regard that as more a matter of strategy than security.

If you track him you will find him crossing and doubling on his trail, making many crooks and turns, going in and out of holes; and you may believe that you have located him, when at the same time, he may be a mile away. The only certain test is to make a circle and count the ins and outs. If there are more ins than outs, you can say he is here, and if you think best to trap him, find his retreats and select the best one for a trap. If this one does not leave room or place for the trap, make room, then place the trap, leaving a peep-hole, but not enough for him to get out. That is, stop all but the peep-hole. Do the same at the main entrance in the same way. then see that the retreats are well stopped up. Go early next morning, and you are very sure to get him. The writer seldom or never failed. I counted him as caught, unless he had some retreat I failed to find.

The habits of the male and female are quite different. The female confines itself to a given locality, the limit of which does not extend more than a mile from a common center, and within this area she has from two to three places of frequent habit, and it is of much importance to the trapper to locate them, for the male mink visits them from two to three times a week. (Note—Such places, when found, should not be in any way disturbed, for they are a common attraction to all male mink.) Any suitable place in this territory is the best place to set your traps.

Female mink are found from half a mile to a mile apart, up and down the main stream, or not far up some branch of it. The line of travel of the male is from three to four miles up or down stream, including its branches, with their adjacent territory, and the whole line of this territory is visited from two to three times a week by the male mink.

The female mink is really local, her travel being about a mile up and down the main stream, and also its nearby tributaries. She has certain places where she frequents, hunts for food, and bathes, leaving her signs. She has from two to three places where she burrows up for the day. The places range from a quarter to a half-mile distant from a common center. Caution! When you find these places never disturb them, for sure as you do she will leave. The male has a line two miles up and down from a given point, which makes a distance of about four miles' travel. You can trap around and near by her domicile—any suitable place near by is advisable.

Never set your trap in a hole you suspect as being a den or living place for the mink, for they will surely leave that point. You should find a stump, or tree-root, shelving bank or drift near by, and leaving as few signs as possible, set your trap. The mink, like all other animals, wants to capture his prey, or find it hidden as though some other animal had placed it there, so you should dig back carefully and hide your bait in such a way that the mink will be forced to go over your traps to get it. The bait should be made secure by means of a stick stuck through the bait, and stuck firmly in the back part of the pen made for the purpose. Then set and place your trap in front of it, pushing the end of the spring just under your bait. See that no sticks or brush will interfere with your trap, then get some old leaves and cover lightly. Don't use the staple for fastening, but get some pieces of light, soft wire, say about twenty-four to thirty inches long and attach them to the chain. You can fasten to any-

thing near by, such as a dead limb, for what you tie to need not be very heavy. Then it is best for you to throw water where you have been tramping around.

Many animals slightly caught get away, and to avoid this most of the sets can be placed by the water, and by using a wire attached to the chain, you give the animal a chance to go into the water. The impulse of the animal is that the water is his protection. He lunges at once for the water, and is soon drowned, for a No. 1 Trap will drown a mink or rat in a foot of water.

I have had good luck with water-sets, and with Funsten Animal Bait. I regard a spring coming out from the banks as sure places for a catch. When I find such a place I keep my trap there; in fact, it is a bad habit to move traps often. Be sure you make a good set.

In selecting the water-set, you will see, by close attention, where the mink comes up out of the water. With your stick reach down and punch out a cavity large enough to settle the trap so it will be three or four inches under water. Put trap down with spring up; bear down a little to settle the trap. Then find some water-soaked leaves to cover the trap; fasten trap to a drag, say a dead limb; for, if caught the trap will drown him, and the stick is only a means of keeping trace of your game. Again you will notice bluff rocks—any large rock at either end of which there is a gradual slope from the water up to the land, furnishing good water-sets. A mink is almost sure to pass around these rocks, so such places form good water-sets. The trapper ought to carry with him a cup or can so that he can dash water all about where he puts his hands, or does much tramping about.

The trapper should take his time in selecting a place to set, and in making the set he should do the same; first, feeling confident that he has made a good selection, then taking pains and making a careful set, then he will go to his traps with confidence. (Note—Where you catch one is the place to catch another, provided you do not tramp around and make too much sign.) In going to your traps you should go cautiously, and when near enough to see that they are not disturbed, go away, if possible, without making a path to them. Don't leave any whittling or fresh cutting. Such things give signs to other trappers, and hunters can trace you to your traps. If you are cautious, you can set a trap, and if no one sees you, no one can find your trap.

At times during the winter the creeks and large branches are generally frozen over, but the water soon runs down leaving what

may be called "hollow ice", but on ripples, about rocks and around roots of trees, also small inlets on sides of the streams and springs, the water is open, and here I suggest that at such times and places is the trapper's opportunity. At such times the mink is under the ice, both day and night, fishing for minnows, crawfish and mussels. Go to the open ripples, rocky places about tree roots, logs, inlets and springs where they go under or come up, and if the water is not too deep, say enough to cover your trap to a depth of five inches (I mean that five inches is not too deep), place your trap in the direction that it appears they jump from the opening. The best fastening for your trap is a rock to which you wire the trap. Slip the rock under to one side, dash water and leave the place carefully.

The trapper can use bait under the ice at such times to great advantage; indeed, I regard sets under ice more successful than on land, for they can be made with less trouble and less exposure to animal attention than upon land. The trapper can use almost any place where the water is not too deep, and the opening suitable to put traps and bait under. The bait should be tied to a stick of such a length as the place seems to require; then fasten or fix the bait by pushing the stick down, then bending it so as to press the upper end against the ice above; then put whatever you tie to underneath. Next, place trap at, or about a foot from the stick, if the stick stands straight; if not, place the trap under the bait. A rock is the best fastening; You can often pick up a rock so shaped that you can wire trap to it. I prefer to use a rock to fasten to, for you make less sign than with any other means. (Note—If it can be done, dash water about where you have been setting.)

There are many devices which are good, but in any thickly settled community they are not practical, on account of hunters and dogs. The steel trap is the best adapted to the trapper, for they can be secreted in such a way as to be inaccessible to dogs and out of sight of fishers and hunters. The best is the cheapest, for cheap traps get out of order soon, and more is lost in catches than is gained in cheapness. Among the best is the Newhouse, Victor and Jump. The trapper should provide himself with pieces of wire thirty inches long with which to fasten his traps. (I never use the staple.) More length is needed to let the animal into the water. A No. 1 trap will drown a mink or rat in ten inches of water. I have a device called the "Farmer's Chicken-House Guard". Get a joint of sewer tile three inches in diameter, insert it under the chicken-house at rear, leaving bell on the outside. Connect it with a box on inside; set

trap in box. Cover box with wire net; put trap in; leave it in all season; cover with leaves; put wire on so it can be moved.

Among fresh baits, the rabbit, partridge, jaybird, redbird; in short, any large bird, is good; fish of any kind; that is, fresh fish. A rabbit will make six baits, if rightly cut. The hams make two, cut two more between hams and shoulders, make one of the head and neck together. No bird will make more than one bait. The bird bait should be tied. Tie head and feet to the stick used in staking your bait down. In sticking the rabbit bait, run a sharp stick through both legs to keep them from being dragged over your trap before the animal is caught. Always fix your bait in such a way that the animal must go over the trap to get it. (If I am not seen carrying a trap, no one will find it.) I suggest you carry a trap sack. Traps in pocket render the trapper clumsy. He can not get under in places when loaded with traps. Every trap should be done up in such a manner as to make it handy. Much time is lost in untangling traps.

The value of a fine scent or trail bait is appreciated by the trapper of experience. During the past fifty years the writer has used many kinds of scent and trail baits, and can, after this long experience, say that he knows no equal to the Funsten Baits.

The writer of this essay is now past seventy-four years old; does no longer go to the frontier to trap, but confines his trapping to the small streams and tributaries of the Meramec and Big rivers, wherever he can get a comfortable boarding place, his object being to amuse himself and spend the winter season.

In closing this essay the writer will say that in this busy age of progress trapping can hardly be regarded as business, but there may be some whose situation in life and condition of health is such that they can afford to spend the trapping season to advantage, both in regard to their pecuniary welfare and their health. I am satisfied that the labor or business-worn man had better go to the trapping range than any springs, hot springs, or cold springs. As a rule it is not medicine that worn-down men need, but cheerful recreation. The mind or condition of the mind, needs more rest than the body. Nature's true medicine and restoration of health are found in the forest among the hills, dells and brooks.

The writer of this essay believes that he owes his good health and activity of body and mind to his outdoor life. He is nearly seventy-five years old; no pains of any kind; good sleep and good appetite.

G. M. HORENE.

Winner of Second Prize

“The greatest trouble is to find a place to set the traps. I find, after fifteen years’ experience, that fall trapping must be done in water, and I must make places for my sets beforehand in the following manner.

Follow the streams you intend trapping along, dig pockets in bank at water level; dig back two feet; have them eight inches wide; dig under bank so nothing can get the bait except from the front; place clam shells in back of pocket; stick brush slanting out over pocket to hide from view; get short pieces of small, hollow logs, bed them in mud at the edge of stream so water will run through; cut small hole in top of log to drop bait through; settle stone or short log in mud at edge of stream; cut a small trench to turn water around stone. In this way you have your fall trapping grounds ready, and the game finds them in hunting for frogs and crawfish, and they can be baited beforehand.

Use a piece of wire to reach deep water, fasten stone to outer end; bend long loop in wire near stone; set trap at front of pocket in two inches of water, and cover with wet leaves; drive stake out in water the length of the chain; slip trap ring over wire and fasten wire to stake. Use live frogs or crawfish for bait, and Funsten Animal Bait. Set trap at each end of all hollow logs you have fixed; fasten cord to live bait, and drop through hole in log and fasten. Set trap in channel where you have turned water around stone and logs, and cover with wet leaves, staking with wire and stone.

Cover up all dens you find carefully with brush for spring trapping. Make nice water-sets near all dens found. If trapping on open prairie or ponds and sloughs find all tile outlets; set in water at mouth of tile, and cover carefully, also all small bridges. Make place to set by staking across with small sticks, leaving an opening for trap. If too much water, build up with trash. If on dry ditch, set small stakes across, leaving an opening for trap; lay four or five tile in ditch with live bait in center; trap at each end. Look out for runs in banks or ponds dug back by rats, which mink cut through. To set here, cut a hole in runway near the water; set trap in hole, and stop up tight. Also all small branches where water runs.

Winter trapping—This is the best and easiest time to catch them, as they are forced to the streams to find food. Many trappers know they disappear all at once, but are at a loss to know where. They find their way to streams and live under the ice during cold weather.

You must make your places to trap them before it freezes up. Go along the stream, and at all bluff banks set a row of stakes out in the water several feet. Just under water, square down the bank with a hatchet, leaving six inches between the bank and the stakes, cut some brush and stick in the bank, letting the tops lay over the stakes for mark. In this way you can have several hundred sets ready on different streams for winter trapping. After streams are frozen up solid you will find the water has fallen, and leaves a space under the ice at shore. Here the mink lives through the cold weather. As they work up and down the edge of the water they must go between the stakes and the bank. To set traps, cut a hole in the ice one foot from shore and one foot below the stakes. Set traps between the stakes and the bank. If the water is too deep, fill up; if too shallow, dig down. If the traps are likely to freeze up put a hand full of salt around them. You can pick your set to have them in running water. Stake in the hole you have cut and cover with ice and snow. If trapping on swamp, where rats build their houses, mark all runs in banks made by rats. To set here, cut a hole through to run, and set trap, as they live here through cold weather. Set at all holes where they have cut through the house, cut a hole in side of house and set trap. Drop a rat carcass down the hole so the mink will have to pass over the trap to reach the bait. Another set—Cut out a strip six inches deep across the top of house and set trap here, covering all traps smoothly.

Spring Trapping—This is the time to catch them in holes, as they dodge into every one they come to. Locate all the dens you can through summer and fall. Make holes by driving a sharpened stick slanting into the bank. Cut away the dirt at mouth of the hole so the trap will set level with surface of the ground. Cover the trap nice and smooth with dry grass or leaves; make the same set at all dens and holes. At this time of the year use no bait. All you want is the musk from another mink. Put some of this scent on a small stick; drop in hole in front of the trap, and you are sure of every mink that comes along. It will also draw them, as they can smell it a long distance. Set at all bridges and tiles and holes in rat runs around swamp, using the same scent. I also recommend the Funsten Animal Baits; they are good and reliable."

Winner of Third Prize

"The following is the way I caught a number of mink, from the 1st of November until February 27th. In the early part of the fall, I ordered from Funsten Bros. & Co., two gross of traps. They came and were all "O. K." I sold one gross to some prospecting trappers. On or about the 1st of November I began setting the balance of them for mink. Thinking I did not have enough traps, a little later on I ordered a few dozen more, also a pair of rubber boots. Having about two hundred traps, I felt that I was ready for mink trapping right.

I have been trapping for the past fifteen years. In 1901 I began paying special attention to these little animals. Since that time I have studied every crook and turn in their nature. I have tamed them, experimented with various kinds of baits and scents to attract their attention. Mink will eat almost any kind of food in the way of meat, fowl or fish, but he prefers to kill his own game. But if he is real hungry, he can be taken in trap with an ordinary piece of meat of some kind. Cheese is about the most effective bait of this kind that can be used in this way.

The mink is more suspicious than most small animals, but one of the easiest attracted if properly managed. This must be done by knowing just where and how to put your trap. My method of taking mink is to go early in the fall before trapping time to look over the territory I want to work. If I find it satisfactory, I begin to prepare as follows: Look along bluff near the water's edge, dig holes about eight inches in diameter, and about three feet back in the bluff; throw a lot of driftwood about the hole to make it look as near natural as possible, leave the place for about ten days or two weeks, then take your traps and go over the territory. You will find at almost nine out of every ten holes you dug that mink have made regular pathways in and out of the holes. Then with a boat, or a pair of rubber boots, I go into the water and set the traps. Mink can be taken in runways, but the holes are much better, as they often are attracted, and they are most sure to go in and out of them. If there is no suitable place to make holes in bluff, a mound of dirt may be thrown up about two feet high, extending up the bluff or down near the water's edge; then make a hole at the bottom, near the water, throw a lot of old leaves and trash over, to hide signs of digging, leave the place for about two weeks. You will find that almost every mink that comes along during the winter will go through

the hole. If you have large lots of traps and can not make hole sets for them all, the balance may be set in runways under roots and bluffs, where mink travel most.

I always fasten chain in water where mink are caught. They go directly into the water and soon drown in their struggles and you have him safe. One would think it would take lots of work to make sets of this kind, but if you live in a country where mink are plentiful, you will find you will be more than rewarded for your work. I have taken as many as nine mink from one set of this kind during a season.

In regard to baits and scents, I have trapped for the past fifteen years; have experimented a great deal with scents and baits, and I have no argument to make with brother trappers. I know there are hundreds of worthless and nonsensical ideas about baits for different animals. A scent of the right kind about traps will largely do away with the human scent, and often keep animals from detecting or being shy of places where traps are set.

The following is a fair and impartial test: Some time during January (do not remember the date) I ordered a bottle of Funsten Animal Bait for mink. On the 27th of January I set thirty mink traps—as many in prepared places or holes as I had. The balance were set in runways. I baited every other trap with Funsten Animal Bait, placing a little back in the hole or about the trap, so I had fifteen with bait and fifteen with no bait. The traps set for three nights. From the fifteen baited with Funsten Animal Bait I took six mink and one coon. From the other fifteen, not baited, I took three mink, one coon, and one opossum.

My method of setting traps for mink is as follows: Divide 200 traps into six parts. Set six lines of them in different parts of the country. If weather is cold I have one man to help, visiting each line once every day. I usually have my trap lines from two to ten miles apart. Some times much further on, according to the conditions. I travel from one to the other on horse back, or sometimes from one station to the other on trains, when convenient. I work every day and work hard. It is no lazy man's job to be a successful trapper."

R. E. ORR.

How to Prepare Mink for Market

Mink should always be taken off cased pelt side out. Some trappers when they get a dark mink think that the proper way to stretch

it is to case it fur side out so as to show the color, but this is not the case. Always case the mink pelt side out. Experienced men in that line are fully able to judge the value of the skin just as well pelt side out as they are fur side out, and it is a big advantage if the mink is cased pelt side out because the skin can be dressed and tanned much more easily and it protects the fur. To take the skin off cased, begin by cutting it loose from the hind feet, split down the back of the hind legs and peel the skin from the hind legs. Take out the tail bone, but do not split the tail unless it is absolutely necessary. After this is done draw the skin backwards and downwards from the body, keeping it as free from meat and fat as possible. Suspend the carcass from a tree when skinning, and for this purpose we recommend the use of the Funsten Gambrel-stretcher which is the regular fur stretcher with two hooks on each end from which the hind legs of the animal may be hung and with this the skin can be pulled off easily. Care should be taken when the head is reached. Cut the skin carefully from the eyes and nose taking great care not to tear the skin. When the skin is taken off in this manner it will be in the form of a long pocket with the fur in. Stretch the skin on a stretcher of the proper size. For this purpose we recommend the use of the Funsten Universal Fur Stretcher, but if this is not available a board may be cut to the proper size and shape of the skin. Hang the skin in a cool shady place. Never dry it in the sun or near a fire. Fine mink are valuable and great care should be taken with them.

Size of Mink Pelts

Average large mink after the skin is stretched and dried for shipment will be about twenty inches long from the tip of the nose to to the root of the tail, about four inches wide and will weigh from three and one half to four ounces.

CHAPTER XII

RACCOON

Raccoon is plentiful in the Southern States. They are found as far north as Ontario and as far south as Florida, and a very large number of them are trapped each year in Oregon, Washington, and California, but practically none are found in the Rocky Mountain region.



RACCOON

The raccoon skin is one of the most practical and serviceable furs, and is used in the manufacture of coats for both men and women, and in recent years has been in great vogue for trimming of sport coats and other garments for hard outdoor usage. It is a splendid wearing fur and very warm and comfortable. The best dark skins are a beautiful rich color. For many years the finest raccoon came from what is known as the New Madrid section of Missouri and were trapped there in large quantities. But the reclaiming of these

swamp lands scattered the coon and they have migrated to other parts of the state, down into Arkansas, and more especially to the Louisiana swamps, with the result that Louisiana is now one of the largest coon producing states in the Union.

The raccoon is one of our most staple furs, and is used year in and year out by the coat manufacturers as well as the cloak and suit trade, who use large quantities for trimming. The raccoon is a fur that is very popular in the United States, also in Canada, but comparatively few are exported to Europe, the American and Canadian furrier wanting them and paying much better prices than the Europeans.

Raccoon are more easily trapped than mink and are not nearly so prolific as muskrat or opossum. Therefore there should be more attention paid to raising them and especially to conserving them. If you have any raccoon on your farm or in the swamps or timber land surrounding, lay off a district, do not trap in this district, and encourage the coon to use this preserve for breeding purposes and as a haven of refuge. Confine your trapping to the districts outside of this preserve. This is equivalent to having a fur farm and the raccoon will soon find out that the district you have set aside is a safe place for them and they will live there as long as they are unmolested.

Raising Raccoon

Raising the raccoon is comparatively simple, and if you can catch a pair alive they will make great pets, and after you have them thoroughly gentle you can turn them loose in a runway enclosed with wire netting of fourteen to sixteen gauge and about two inch mesh. Set the netting at least two feet in the ground so that the raccoon cannot dig under, and run a plank or piece of sheet tin around the top of the posts, with the plank or sheet tin extending far enough on the inside so that the raccoon can not climb out. Fence in a piece of land that is well shaded and with some running water, with some natural openings or bluffs, if you can find such a spot, and you will find that the raccoon will get along very well. Pure drinking water is very important, so fence in a piece of ground that has a good spring or plenty of piped well water, We do not recommend trying to raise more than one kind of fur bearing animal in the same runway. Give the raccoon plenty of room and two or three old trees at least to hide and play in, and they will get along splendidly.

How large and where to build your enclosure must be decided by yourself and will depend entirely on your particular conditions. A wooded bluff is an ideal place, and if you can, have it within sight of your house so that you can guard against poachers.

The mating season is usually in the early part of March and the young are born in the latter part of April or the beginning of May. Raccoon will eat almost anything, is fond of vegetables, likes fish, frogs, turtles, oysters, nuts, acorns, grapes, sweet corn, honey, will eat poultry if he can get it, and destroys all the bugs and insects he can find. They usually sleep during the day and prowl around at night. They are very clean in their habits. Some authorities believe that raccoon can be raised more successfully than most of the other fur bearers. They are very hardy, and where they are kept in the zoos or public parks, they live for many years and seem to thrive under conditions that are far from being ideal for any wild animal. A few acres of timbered land well fenced and with plenty of good fresh water, stocked with a few pair of raccoon will prove a profitable investment. Raccoon fur is advancing in price from year to year and will always be in demand. Its fur will always have a market value, and in some sections of the South its meat is prized highly as food. Therefore with the high price of the skin and with the carcass also having a food value, there is no reason why the raccoon should not be one of the most profitable farm animals that the farmer could raise, and is well worth the careful attention of every farmer that has a piece of land suitable for the purpose.

But whether you go in for fur farming or not, champion the cause of setting aside a district in your county as a game preserve and have that district protected by a game warden in order that no trapping will be done on this ground. Allow trapping only in the districts surrounding the game preserve, and this will insure big catches and profitable catches and a large and constant supply.

Trapping Raccoon

The raccoon likes to have his den in hollow trees, and in the openings and rocky bluffs, and sleeps during the day and prowls around at night. The raccoon is very curious and will go to a great deal of trouble to investigate anything that arouses his curiosity. He likes to investigate bright shiny objects and often gets caught by reason of this fact. Many trappers use the Funsten Radiolite Fish for trapping raccoon. This is a piece of tin stamped out in the

shape of a fish and covered with radiolite. This is fastened to the pan of the trap and the trap set in shallow water close to the bank. It radiates a yellow light at night and any coon passing along will stop to investigate and almost always gets caught. The raccoon, unlike most other animals after being caught, is philosophical and does not make much of a fuss over it, so he can be taken alive with little trouble. The raccoon also has a great habit of running his paw into small openings looking for grubs, and other delicacies, and the wise trapper takes advantage of this peculiarity by using the Funsten Surehold Trap, which consists of a piece of hard wood about as big around as a baseball bat, and about eight inches long. This is hollowed out and three or four sharp screws set at an angle around the edge so that the points almost meet on the inside. This is placed in the ground and a few drops of Funsten Animal Bait dropped in the opening. When the raccoon comes along he stops to investigate and jams his paw down into the opening and comes up with the wooden trap enveloping his paw. He finds that it is a hard thing to shake off, and if he pulls one way it hurts, so he simply tries to gnaw it off, but as it is seasoned hard wood he has a difficult job and does not make much headway. This trap takes the place of the old time method of finding a log that had fallen across the stream and boring a hole in the top of it about eight inches deep and setting small sharp horseshoe nails around the edge. The Surehold Trap has many advantages over this method. It is more humane as the sharp screws can be set to a nicety that is impossible with the horseshoe nails, and you can set the Surehold trap where you please. As the Surehold trap costs only 20c, it is in big demand.

In some sections of the South the raccoon gets trapped without the trapper having anything to do with it. It is said that he is very fond of oysters and will wade along the water's edge and follow the tide out in hope of slipping up on some unsuspecting oyster that is lying on the beach with its shell open feeding. The raccoon will stick its paw down into the shell to extract the oyster and often times is successful before the oyster can close its shell. But every once in a while the oyster shell closes on the raccoon's foot and Mr. Oyster refuses to let go, with the result that the raccoon finds himself a prisoner. These oysters attach themselves very strongly to the rocks so that the coon finds it impossible to pull the shells off; and there have been cases on record where they would find the coon dead from exhaustion, a prisoner to his friend the oyster.

The following are the three prize winning methods in the Funsten Trapping Contest. As all three of these men are extremely successful trappers with a long number of years of experience, these methods will be of value to those interested in the trapping of coon.

Winner of the First Prize for Best Method of Trapping Raccoon

"This is my method for trapping coon. First, get the best traps made—Newhouse No. 1½—then go to the lakes, swamps, or small streams and find where the coons are running, which you can tell by the tracks made along the banks. Set your trap out in the water far enough for the water to cover the trap, then cut a brush and lay it in the water beyond your trap, also one on the bank. Bring the two near enough together to leave a space of about eight inches where your trap is set, then lay a small stick across the opening about six inches from your trap, so when the coon passes through the opening he will step over the stick into the trap.

If brush extends entirely across a shallow stream, make an opening in the center of stream; and set your trap in this opening, and you will get nearly every one that passes along that stream, as the brush will force him to go over your trap. He will never go through the brush, if he can find an opening.

As to bait, I find Funsten's bait for coon the best. In using the bait I always make a small enclosure out of twigs, leaving an opening for the coon to go in; put a few drops of the bait on the leaves inside of the enclosure, then place trap in opening so he will have to pass over the trap to get the bait."

R. L. SMITH

Winner of Second Prize

"(1) Select a place for your trap near a creek or ditch that is the natural runway for your animal. No. 1½ or No. 2 Newhouse trap is the size I use. I do not cover the trap, but place the bait about twelve to eighteen inches over the trap or under the pan. (2) Saw a place in a log over the creek just to fit the trap, bore a one-inch hole under the pan for bait; put trap in notch and secure the chain to a pole or anything. I arrange for coon (or any animal) to fall into the water and drown. (3) Deadfalls are my surest way. I use "figure 4" triggers, with bait tied to the trigger. (4) Blocks sawed from anything; I use persimmon or hickory saplings, two by four, with one-inch hole through the block, and put spikes in one end, so that the coon can not pull its foot out. Fasten with wire or chain to a "swinging limb," or to a drag pole. Set your block in or near the

trail. I use false bottoms, in order to get the foot out, as it has to be cut. Put bait in block.

I often use Honey. I always know of a tree of bees. In my traps I tie the comb on the pan. On the deadfalls I use tobacco sacks full of honey. When using the blocks I smear the honey all over them and pour some inside. Crawfish are good, eggs (fresh) broken on a trap or in the blocks, fish and frogs. Tin fish are used to advantage, as a coon has a great deal of curiosity. I set traps in the water and on logs and at holes under fences. I use judgment, and I also study the nature and habits of the animal I am after—the coon—and simply outwit him. I use Funsten's bait or scent with my traps, deadfalls and blocks, and I think I am safe in saying it increased my catch over 25 per cent."

W. F. HOYE

Winner of Third Prize

"I will try to give, in as few words as possible, my experience and success in trapping for coon. I will say right at the start that the first thing to do is to start right, and that means a good deal in the art of trapping.

Now the next thing is to find where the most coons are, and locate yourself near where they are, but not too close, as your presence will cause them to move. Now after you are located, take your traps (size No. 1½ or 2, if the spring is not too stout), set them in the trail of the coon, which may be in the water or on land. If in the water, place the traps where the water is about three to six inches deep. If there is no trail to be found, and you see tracks or other signs, then the best way is to set on logs or by the end of a log or hollow tree, and be sure to cover your traps up with bug dust or loose earth, and sprinkle a few drops of Funsten's Animal Bait for coon around your traps, and the work is done. I have doubled my catch by using the Funsten Animal Baits. The coon is cunning and you must study him to become perfect in catching him."

JAMES H. PACE

How to Prepare Raccoon for Market

Raccoon should always be stretched square and never cased like skunk, mink, and opossum. Trappers in different sections have their own methods of stretching the skin square. It does not make any particular difference what method is used so long as the result is right. Raccoon skins are valuable and for this reason it will pay you

to take the proper care in skinning them after the animal is trapped and stretch them so as to bring the highest price in the market. Some trappers tack the skins out so as to form a square. Others use four stout green sticks about twenty four inches long and one half inch in diameter to get the desired result. To take the skin from the animal rip the skin down the belly, down the back of the hind legs, and on the inside of the front legs. Care should be used in skinning the head. Remove the tail bone and see that the scalp and pelt is free from superfluous meat and fat. Then split the head from a point behind the ears down to the nose. Cut small holes around the entire edge of the skin, and then insert the sticks through the holes and stretch the skin its full length and as square as possible. Skins that are well handled are much more valuable than those that are poorly handled. Cut off the feet and part of the legs to get the desired effect, as the legs and feet have no value. When you hang the skins up, or tack them up, select a place where they are not exposed to the sun. Never dry skins near a fire as the pelts become brittle and grease-burnt which spoils the value of the pelt entirely. Never use any chemicals or solutions on raw furs. After they are dried long enough to hold their shape they are ready for shipment.

The average large raccoon skin after it is stretched is about twenty four inches long from the top of the skin to the root of the tail, and about seventeen inches wide, and will weigh about ten ounces. This is for average coon from the central and southern section. The heavy large coon from Minnesota and some of the more northern sections will average larger in size and heavier in weight.

CHAPTER XIII

OPOSSUM

The American Opossum is found in the central and southern states, as far north as Iowa and as far west as Kansas. In the states of Missouri, Illinois, Arkansas, Oklahoma, Texas, Tennessee, Kentucky, Indiana, Ohio, Georgia, Alabama, Mississippi, Virginia, West Virginia, North Carolina, South Carolina, and Louisiana, opossum are found in great numbers. Opossum fur is very popular with American furriers and large quantities are also exported to Europe. It takes most any shade of dye on account of its light grey color, and the opossum is valuable not only for its fur, but it is also valuable as a food. The flesh of the opossum is highly prized in some sections of the South, especially by the colored people who are very fond of it. In fact, fat, well-baked opossum with sweet potatoes is said to be a dish fit for a king.

In the Fall of the year the opossum feeds on corn, berries, paw-paws, persimmons and mice. The opossum is a splendid climber and is able to hold his weight by encircling a limb of a tree with its tail, thus leaving both fore feet free. According to the fruit growers he is a big eater. The opossum is able to support itself by means of this tail for hours at a time, and it is often said that they sleep in this position. The opossum are hunted at night and when one or more are found in a small tree they are shaken out or knocked out with a long stick. As soon as they hit the ground they will feign death or what is known among trappers as "Playing 'Possum". They will remain in this state as long as any one is around where they are. Some hunters take advantage of this fact by encircling their tail around a stick, thus carrying them with little or no trouble.

The opossum is a great climber, but rather awkward on the ground, his running gait being a series of awkward leaps. They do most of their prowling at night and prefer darkness to light. They usually sleep throughout the day in hollow trees, brush piles, or holes in the sides of the hills or bluffs. The opossum lives with its mate only during the pairing time, usually roaming around in solitary fashion during the rest of the year. Some trappers claim that the

opossum has no fixed habitation, but uses any cranny or convenient hollow that it may chance upon after completing its nocturnal wanderings.



OPOSSUM

The body is about twenty inches in length, and the average opossum skin after it is stretched and dried will measure about twenty four inches long by about seven inches wide. The opossum skins are useless for fur purposes until the undercoat of fur is fully developed, which usually does not take place until late in the Fall or early Winter. At this time the opossum is usually fat, especially if the harvest is good. The opossum is very prolific, and the female is furnished with a pouch and belongs to the Marsupial Family with the kangaroo. The females produce from nine to thirteen young and have three and even four litters in a year. They carry the young in the pouch thus protecting them while they are small and helpless. In five or six weeks the young opossum have attained the size of small mice and in about two months they are usually developed sufficiently to leave the pouch.

When the fur coat of the opossum is fully developed it consists of a fine close wooly underfur of whitish color, from which protrudes a less dense series of long and rather coarse hairs. This latter guard fur or hair is usually a few shades darker than the underfur and is sometimes black-tipped. In some sections the tips show a brownish or reddish cast. The color of the opossum fur does not enter into its value like the mink or the marten and other furs, for the reason that most opossum are dyed, and the value of the pelt depends entirely on the quality and depth of the under fur. All of this under-fur is shed during the Summer months, and for this reason opossum skins that are taken in the off season have little or no value for furriers' purposes.

In recent years the finer qualities of opossum have been used very largely in their natural color for trimming, and it is found to be a servicable and dependable fur, and as stated before is one of the staple articles of the fur trade.

Raising Opossum

On account of the large number of opossum found throughout the central and southern states, very little attention has been given to raising them for their food and fur, but it has been done with considerable success. However, it should be undertaken only by those who are familiar with the habits of the animal, and a location should be selected that is quite natural and in a locality where the wild opossum are plentiful. The ideal place should have running water and plenty of trees. On account of the opossum being such a splendid climber it is necessary to build a strong fence of galvanized wire fencing, with the top constructed in such a way that the opossum can not climb out. This is done by having a protruding edge built of smooth boards or galvanized iron sheeting, preferably the latter, at the top of the fence, so that the opossum can not get any hold on the smooth surface with his sharp claws. The opossum will eat almost any kind of fruit or vegetables, or fish and frogs, and will also eat nearly any kind of meat. In captivity he is fed with scraps from the table, melons, and fruit, and will eat bread and milk. A good supply of fresh running water is very necessary. They should not be overfed, and their condition should be as nearly like that of the wild opossum as possible. Most authorities recommend that the males be kept separate, although the females may be allowed to run together. However, it is quite essential that the females be kept separate while with young and placed in a small enclosure by

themselves. The females should be given plenty of food and fresh water from the time the young are a few days old until they are able to shift for themselves. The females usually have such large families that they need a great deal of food in order to properly nurse their young. It is therefore well to provide a separate pen for each female with young, although this pen does not necessarily have to be a large one. An old hollow log, a wooden box covered over with earth and a quantity of brush, or a barrel, makes a very good enclosure of course being inside of the wire fence. A little study of their habits and peculiarities is necessary to get the best results. The opossum is a strong and hardy animal and is a very prolific breeder, and well-furred opossum skins are always in demand at good prices. This together with the fact the carcass of the animal has a food value will no doubt result in many undertaking the raising of this valuable animal for its food and fur. A pair of live opossum could be very easily obtained in any section where wild opossum are plentiful, as they probably can be taken alive easier than any other fur-bearing animal. A small enclosure could be made at very little expense and the size of the enclosure could be increased as conditions justified it. There will no doubt be a ready market for all live stock that one would care to offer for sale.

How to Trap Opossum

Opossum are probably the easiest of all the fur-bearing animals to trap, as they show little cunning, and do not seem to have the intense fear of man that characterizes most other wild animals. However, it must not be supposed that they can be successfully trapped unless a certain degree of care is taken in making the set, and of course the greater skill shown by the trapper, regardless of whether the animal is easy to trap or not, the greater will be the number of skins taken. We give you here the methods followed by three experienced trappers who have been very successful in the trapping of opossum.

Winner of First Prize for Best Method of Trapping Opossum

“The Opossum is a night prowler, but usually hides in the thick foliage of the trees in the day time. The Opossum is not at all cunning, and will eat most any kind of meat. Use steel trap No. 1½. Set the trap at his den or in his haunts. Take a piece of meat or fish, and drop some Funsten Animal Bait over the meat or fish bait. Hang the bait in a tree, so he can just reach it, or find some brush or limb of a fallen tree, or drive a stake in the ground if necessary to

hang the bait from. Cover the trap with grass or rotten wood, making sure the trap is directly under the bait, so when Mr. 'Possum reaches for the bait he will come down in the trap, and you will be sure to get him."

C. B. DAKAN

Winner of Second Prize for Best Method of Trapping Opossum

"The following is our method of trapping Opossum. First, take fish and cut in small pieces and put in a jar or bottle, and let stand until rotten; then set your traps on logs or in holes, and use the rotten fish and oil for bait. Put your bait on or close to trap, so as to make the Opossum step on pedal of trap for bait.

We have always found Funsten Animal Baits reliable and satisfactory.

Cover your trap good with rotten wood and you will get old Mr. Opossum. We have caught 197 Opossum in one season with this method.

If a den or hole can be found, set your trap at entrance of hole and put bait beyond your trap. Conceal your trap good.

The above is our method of trapping Opossum. We have caught hundreds of Opossum in the last three seasons with this method. Ask Funsten Bros. & Co., they have our account sales."

J. M. & A. M. RODGERS

Winner of Third Prize for Best Method of Trapping Opossum

"I will give you my method of trapping the Opossum. I take a dead chicken or a rabbit, and hang it on the limb of some fallen tree, if there are any limbs on it, and if not, I drive a stake in the ground and fasten the bait to it about twelve inches from the ground; then I set my trap right underneath it, and if there are any Opossums around they will be sure to get caught. Be sure to look at your traps every morning, for the Opossum will get away."

WILLIAM KNORPP

How to Prepare Opossum for Market

Opossum should always be taken off cased and stretched with the pelt side out. Never take opossum off open. Cut off the feet and tail as these are of no value and only take away from the appearance of the skin when it is ready for market. As the opossum is very fat in the fall and winter season care should be taken to remove all superfluous meat and fat from the pelt before it is packed for shipment.

CHAPTER XIV

THE OTTER

The otter is found in nearly every part of the North American Continent, a larger number of them being trapped in Florida than any other state at the present time. This is one animal that is in need of protection probably more than any other furbearer, and some states have established closed seasons protecting otter all the year round, and they are not allowed to be trapped or killed at any time. This is a wise measure, and the writer advocates careful conservation and protection of the otter in all states. On account of the high price of the otter pelt and its large size it is hunted ruthlessly. This in addition to the fact that many streams have been polluted has tended to drive the otter out of many sections where they would do well, especially in some of the older and more thickly populated states. It would be highly commendable if the game wardens in some of the older states would arrange with the game wardens in states where otter are plentiful to secure pairs of these valuable furbearers and restore them in sections where they have disappeared. Everyone interested in trapping would be glad to lend his support to such an effort, and the time to make a start in this direction is now. The otter is a magnificent animal and its pelt is one of the finest furs produced. They will thrive in almost any section of the United States where there is plenty of fresh running water. It lives largely on fish, but will also kill muskrat. In confinement it will even feed upon beef which they prefer boiled. They are known to kill wild ducks, but seem to have a special fondness for trout and prefer rapid flowing clear deep streams as their place to live. They will migrate from one river to another or from one lake to another and have been known to travel long distances on land in their migrations. When closely pursued they will turn and defend themselves and put up a game fight. The otter loves to play and enjoys nothing more than a side hill running down into the water, on which it will form a slide, climbing up to the very top of the hill, and then sliding down into the water with a splash.

The otter is a very swift and powerful swimmer and has a long tail that enables it to glide through the water at remarkable speed.

It is able to catch fish with great ease and is said to wantonly kill them for the sheer pleasure of killing.

The fur of the otter is very similar to the beaver in color, but the under fur more closely resembles the seal than it does that of the beaver. The otter, like both the beaver and the seal, is also plucked, that is the top guard hairs are pulled out, leaving the soft thick under fur. The otter is often dyed by the same process as that used in dyeing the seal. However, the otter is also largely used in its natural state, and is valued highly as trimming on coats for both men and women, but more especially for men's coats. It will stand hard service and is a beautiful fur.



OTTER

The otter is an animal that deserves the attention of every trapper, fur man, and game warden. In states and sections where they are getting scarce, they should be carefully conserved and protected, and every effort should be made to allow them to increase and again become plentiful.

The decline in the supply of otter is not due to the numbers trapped by fur trappers. Many more of them have been destroyed by

unsportsmanlike fisherman, who apparently take a great delight in shooting them on any and all occasions without any thought or desire to take their pelt for its fur value, but simply for the pleasure, if it can be called a pleasure, of killing them. No trapper or fur gatherer would ever think of shooting an otter, for he would know that the otter would dive and hide in deep water there to die, and the probabilities are that the pelt would never do the trapper any good but would simply be a waste; and trappers value fine pelts too highly to waste them. They will plot and plan and match their wits against the cunning of the animal in order to get the pelt, but will never kill just to destroy.

The female otter raises a litter of from three to five pups every year. If given a chance they will come back very quickly in sections where they have been driven out.

How to Trap Otter
Winner of First Prize

“Before you begin to trap otter become entirely familiar with the game laws of your section. In many states the otter is protected the year round and can not be trapped at any time. In other states there is a closed season on otter for a portion of the year, and they can be taken only at certain times. The larger fur houses will not handle otter that have been unlawfully taken, and there is no legitimate way in which the pelts may be disposed of. If otter is getting scarce in your section, it would be well to get all trappers in your neighborhood to stop trapping them for awhile, regardless of whether the game laws protect them all the year or not. If given anything like a chance otter will increase and again become plentiful. If the animals are still fairly plentiful in your section, and there is an open season for trapping them, we give the following methods, which will be found successful, as they have been successfully used by trappers with long experience in the trapping of this particular animal.

First set for fall trapping.—Find as many of their slides as possible, and where they go from water to bank. This is the place for you to trap, as they always go out at the same place. Fix bottom so trap will set level and about four inches under water. Use heavy trap, as the greatest trouble is to hold them, and stake in this way. Use a piece of No. 9 wire, long enough to reach deep water; fasten heavy stone to outer end, make long, narrow loop in wire, out several feet from shore. Drive stake down under water, full length of chain from shore; slip trap ring over wire and fasten wire to stake.

Set small prop under wire to hold up out of mud. When game is caught they make a dive for deep water, trap ring runs down wire into loop, and all his pulling only holds the trap ring tighter in loop and he soon drowns.

The next set is to dig a pocket back in bank four feet, or a little below water level, to form a small pond for them to fish in. Throw several clam shells to back part of pocket. Do this early in the fall. To set trap here, dig down so you have three or four inches of water. Dam up pocket at edge of stream to hold water. Put a number of live minnows in water in pocket. Stake live frog to back of pocket with thread. Break shell off one side of several clams and lay in back of pocket. Set trap just inside of dam in three inches of water, and cover with wet leaves. Stake as at first; set with wire loop and stone to drown. In this way you can make a great number of good sets. In narrow places in streams you can make good sets by placing obstructions, leaving room for them to pass through.

In winter they live under the ice almost entirely, and have their burrows in banks, with entrances under water. Locate as many of those as possible before it freezes up. Drive row of stakes out into stream several feet above and below dens, leaving room for them to pass between first stake and bank. Drive stakes down under water. After it freezes up solid, the water falls leaving plenty of space along banks for them to fish, and as they work up and down they are forced to pass between stake and bank, and are easily caught. Cut hole in ice one foot from shore and one foot below stake. Set trap between bank and first stake. You should have your wire, with stone attached, already laid. Slip ring over wire, drive stake down in hole you have cut, fasten wire to stake, cover hole with ice and snow. If danger of freezing up, use salt to keep the water open."

C. S. BREWER

Winner of Second Prize

"Set your trap at foot of slide, about four inches under water. Set the trap on a level with the top of water, so the otter can hit the pedal with his foot and spring the trap. You understand what I mean—not to let your trap lie flat on the bank as it slopes down. Turn it up on its edge, and as the otter slides into the water you will hang him. Use bait in setting your traps. Fish are good, with Funsten Otter Bait dropped on the fish.

To drown the otter, we use a small iron rod to stick in bottom of river or lake. Tie an old ax or a piece of iron to your trap, so as to

weight the otter down to drown him. You can conceal an old ax best. Try it.

Find where otter come out on the bank. Set a No. 2½ Newhouse trap, with teeth, about two or three inches under water, and drop a few drops of Funsten's Animal Bait for otter. Stake your trap back in river, and when the otter swims out to the bank he will spring the trap with his breast, as the trap pedal has a breast pan on it that sticks up. The sharp teeth on the trap will clamp him, and he is your otter. We recommend this method, and by all means use a Newhouse Special Otter Trap, No. 2½, with breast plate."

J. M. & A. M. RODGERS

Winner of Third Prize

"Find where the otter comes ashore to play in the sand and leaves. Look close, and you will see where his feet strike the bottom. Set a No. 3 or 4 trap in about two or three inches of water, and cover carefully. Get a rock of about fifteen pounds in weight and wrap wire around it, or put it in a sack and wire trap to it. Place stone under water and cover with sand or mud. Fasten small rope to trap, to pull up with. Fasten one end to bush or tree on bank. Put a few drops of scent a few feet from trap. The musk taken from the otter is good. I have good success with Funsten's Animal Bait for otter, and catch all that come around here.

A good way to catch otter is to find where they go up some small ditch or muddy stream. Set trap in about four inches of water, and stick brush in the stream in such a way that it will be impossible for him to go up without going over trap. Also on bank of stream put brush or willow. Do this in summer, so the brush will grow. Leave about two feet passage in stream, and set three or four traps, staked solid."

WM. HILLIGER

How to Prepare Otter for Market

In preparing otter for market the skin should be taken off with the pelt side out, however, in some of the finer specimens it is best to case the skin with the fur side out. In no case should the skin be taken off open. Care should be taken to split the tail and take out the tail bone. The feet should be cut off, but the tail should always be left on. See that all superfluous meat and fat is removed from the pelt. In drying the skin, do not dry in the sun as this will damage

the color of the fur. The long guard hairs will become sun burnt, thus taking a great deal from the value of the skin. Do not dry by a fire, as the pelt will become grease burnt and brittle and the fur is liable to singe and curl up. Hang the pelt in a cool dry place and allow it to dry in a perfectly natural manner. In shipping the pelt do not bend or fold it, but ship it as flat as possible.

CHAPTER XV

SILVER FOX

The silver fox is the most valuable and by most people considered the most beautiful of all furs. The finest specimens are glossy black to a point just below the shoulders and from there down to the root of the tail the long guard hairs, or outer fur, is white tipped which gives it a silvery color. The tail is very large, the color jet black but always has a solid white tip at the end. Its native home is in Alaska where the largest specimens come from, it is also found throughout Canada and is especially adapted to the climate of Prince Edward Islands.

The silver fox that come from the islands off the coast of Alaska, while they are very large for size, are coarse in fur, and are not nearly as valuable as the interior Alaskan Fox and the Canadian Silver Fox.

Silver Fox farms have sprung up all over the country and in many cases they have been very successful. The home of the silver fox farms is on Prince Edward Islands and here the industry is carried on in a big way, some ranches representing an investment of a hundred thousand dollars and more. The pioneers in the raising of silver fox, like the pioneers in most other lines, met with a great deal of discouragement, and even now there are some authorities who are inclined to disparage the effort made; but the facts are that silver fox farming has passed the experimental stage and is now firmly established and a proven fact. There are no doubt many things to be learned about this industry in the school of practical experience, and there will be just as many failures, probably more, than there are in other lines of industry. It should be remembered that there are many businesses that do not make a success, and this is equally true of fur farming; but because there are some failures is no reason why it is not fundamentally sound and can not be made successful and profitable if carried on with intelligence and patience. It requires plenty of hard work and study of the business in hand. There were some who thought when silver fox farms started that the market would be overstocked and that the price of silver fox pelts would decline rapidly; but this is not true. Silver foxes are in

greater demand to-day than ever before, and the woman who can afford it, does not consider her wardrobe complete without at least one silver fox neck piece, and as a rule the woman who buys silver fox wants the best. There is no doubt that some very poor silver fox have been raised on silver fox ranches, but it is equally true that there have been some very fine pelts raised. In fact some of the finest pelts that ever came to market have been received from silver fox ranches.

You can not expect to take a pair of silver foxes, pen them up in narrow quarters, feed them heavy and rich food, pet them, and then expect them to have a dense, rich glossy coat of fur equal to or better than the wild animal. The same thing applies to skunk, coon, mink,



or any other furbearer. It should be remembered that this class of live stock is different from the raising of hogs and cattle where feeding them for weight is the all important item. In other words one is raised for its food value and the other is raised for its fur value. The animal that becomes sleek and fat seldom produces a fine coat of fur. As a general proposition no one should engage in the business of raising silver fox or other fur bearing animals, unless he enjoys the work and is familiar with the habits, characteristics, and climatic requirements of the animals he intends to raise. The choice of lo-

cality is of prime importance. Silver fox do not thrive at all in the middle and southern states. The silver fox belongs to a northern climate and thrives best in a cold severe winter; and it is the extreme cold weather that brings out the heavy coat of fur and thins the pelt. One of the characteristics of animals trapped in the north is that the fur is very thick and heavy and the pelt thin, while in the south the same animal develops a thin coat of fur and a thick pelt. In planning a silver fox farm therefore, it would be advisable to keep in mind that to raise silver fox for their fur it should be done in a northern climate, in such States as Minnesota, Northern Michigan, Wisconsin, Northern New York, Montana, Idaho, etc. These states are especially favorable for this purpose. While it is a comparatively simple matter to start a fur farm for the raising of small furbearers, which may be done in almost any of the states, it is a somewhat different and considerably more expensive business to start a silver fox ranch. There need be little worry about the price of silver fox being forced down. It will be many years before enough fine silver fox pelts are raised to cause any serious declines in price; in fact it will probably never occur. The price of silver fox, of course, like the price of most other articles, is dependent on general conditions and general prosperity. If times are good and money free, there will naturally be more buyers for expensive furs than there are when times are bad and money is scarce; but there has hardly been a time, whether good or bad, when silver fox pelts have not found a ready market.

The name silver fox includes what are variously called silver, silver grey, silver black, and black. The silver fox should not be confused with the common grey fox, which is found in most parts of the United States, and has comparatively little value.

The breeding of silver fox in captivity, it is claimed was first successfully carried on by Robert T. Oulton and Charles Dalton of Prince Edward Islands, a Canadian Province in the Gulf of St. Lawrence, and was started in 1894. These men had devoted considerable time to the trapping and hunting of these rare animals and from long experience were well versed in their habits and familiar with their haunts. They had been very successful in trapping silver fox and had realized very high prices for their catches. After a study of the situation these men were impressed with the possibilities of capturing a pair of silver foxes alive and raising them in captivity, and after exhaustive trials were finally successful in doing so. After several years work these two men formed a partnership and in 1894 built

their first ranch on Prince Edward Islands and stocked it with two pairs of silver foxes. They were successful from the first and this ranch was the forerunner of a remarkable industry which in a few years mounted into millions of dollars. At the time these men started the pelt of the black fox was considerably more rare and more valuable than the silver fox. As a matter of fact the black fox were very scarce and on this account brought enormous prices. In later years the highest priced fox have been the silver fox as women prefer the fox having a few silver hairs to those that are solid black. By 1910 these men had raised some of the finest silver fox pelts that had ever been offered on the market; one pelt from their ranch bringing over two thousand dollars raw. It was not long until others heard of the wonderful success of these two men and other ranches were started in the maritime provinces, Newfoundland, Ontario, also Maine, Michigan, Wisconsin, Minnesota, parts of western Canada, and Alaska.

Another successful ranch of silver fox is owned by the Fromm Brothers, of Hamburg, Wisc., who started in a small way and now have an investment of several hundred thousand dollars in their silver fox ranch. They started in this industry in a rather interesting way. Funsten Bros. & Co., offered a prize of one hundred dollars for the best photograph of a catch of furs caught with Funsten Animal Bait. The Fromm Brothers sent in their picture showing a catch of red fox and won the first prize. With this prize money of one hundred dollars they bought a litter of Red Fox pups and some wire fencing and built one of the first fox ranches in this country, and from this small beginning with a few red fox they increased their ranch until they are now raising some of the finest silver fox pelts to be had anywhere, and as stated have several hundred thousand dollars invested in their enterprise, and made it themselves out of fox farming. This shows the possibility of this industry, and should be an encouragement to other enterprising young men to give fur farming serious thought and get started in a small way.

Oulton and Dalton, in order to keep their secret to themselves for several years, shipped their pelts in small parcels from distant post offices from their own in order that the source of the foxes could not be traced to their ranch. However, notwithstanding this secrecy, the evident improvement in their financial condition was noticed by their neighbors, who thereupon decided to embark in the same industry, and it was not long before the story was out and the wonderful success that had been met with by these pioneers in silver fox

farming was soon broadcasted all over the world. The price of breeding stock went sky high. As an example of how rapidly the price for breeding stock advanced, one ranchman sold his first pair of cubs for \$700.00, and other pairs successively for \$3,000.00, \$12,000.00, \$13,000.00, and \$14,000.00. In the Fall of 1913 good ranch bred cubs six months old sold for ten thousand to fifteen thousand dollars per pair. Some pairs of cubs it is said sold as high as twenty five thousand dollars, and full grown foxes that had large litters were valued as high as thirty thousand dollars per pair. Numerous companies were formed and some concerns were of course formed to take advantage of this unusual condition in order to float stock. There is no doubt but what a lot of wildcatting crept into it, but the sale of silver fox for breeding purposes kept steadily on. There is no telling where the price of prize winning pairs would have been pushed to, if the War had not come along in 1914, which put a damper on the speculative operations for the time being. During the war period ranch bred silver fox could be bought for about \$2,000.00 per pair. Fox ranches are now established in nearly all of the northern states and all of the Canadian Provinces, and there are probably three hundred alone in Prince Edward Islands. This industry has now passed the experimental state, and each year hundreds of fine pelts are sent to market from silver fox ranches.

As stated before it is not advisable to attempt to raise silver fox in a central or southern climate, as the fur growth is intimately related to climate and the silver fox pelt to be valuable must be well furred, of good color, and fine and silky in quality. It is, therefore, advisable to start your ranch where there is a reasonably long cold season with at least a moderate rainfall, and the fitness of the locality for fox raising can best be judged from the quality of fur produced by the natural wild foxes in that locality.

The government has taken a great deal of interest in the subject of fox ranches and encourages fur farming. Ned Dearborn, who is one of the best posted authorities in this country on the subject says that one of the most important considerations is the choice of a site, and that an ideal site for a fox ranch should have security from unusual noises and occurrences. The fox is naturally timid and nervous. It can be tamed to a degree, but its excitable temperament can be completely overcome only by a long process of careful breeding and selection. It is especially shy and irritable during the breeding season.

Foxes like to be screened from observation, and by day in the wild state are rarely found far from cover. During the heat of summer, especially, they enjoy dense shade. Furthermore, sunshine injures the color and character of fur. It is advisable, therefore, to locate a ranch among a growth of young trees thick enough to shade about half the ground. Deciduous trees are preferable to evergreens, as they allow the sun to make the yards more comfortable in winter and to clear the ground of snow earlier in spring. Old trees are likely to be broken by storms, and in falling to demolish fences.

A good site is on a slope with a southern exposure, as the snow will be gone and the ground warm when the cubs are ready to leave the dens. A clay surface is to be avoided, but a subsoil of clay or hardpan is an advantage, as the foxes will not dig ground hard enough to require a pick to break it up. Gravel affords excellent drainage, but foxes burrow deeply in it and thus are difficult to manage, even though they may not escape.

A Modern Silver Fox Ranch

The writer has recently visited and spent some time at one of the largest and most successful silver fox farms in the world. The men responsible for this farm started out as boy trappers and have made a careful study of fox ranching for the past fifteen years. After experimenting with numerous styles of fox houses they decided on what is known as the barrel den. This is made by taking an ordinary new vinegar barrel, and cutting a hole in one end of it about eight inches in diameter. The barrel should be fresh and clean, however, and old, oily, greasy barrels should not be used. The next thing is to construct a small house to hold the barrel. This is made with a slanting roof that can be raised and lowered, and an opening is made down near the bottom big enough to allow the fox to enter and is about ten inches square. The house itself is made about two feet wider than the barrel and about two feet longer, so that when the barrel is placed in the box there is about two feet of space on the side and two feet of space at the end. The barrel is securely placed against one side of the box, and then an entry way from the opening of the box to the opening in the barrel is constructed. This is done by making a square trough out of four ten inch planks and running it from the opening in the end of the box and then across to the opening in the barrel which gives the trough an "L" shape, thus shutting out the light from the barrel itself, so that when the animal finally gets into

the barrel it is absolutely pitch dark. An opening is then sawed in the top of the barrel and hinged so that it can be opened and closed. The advantage of this is that the entry way can be blocked up and the lid of the house raised, and the barrel opening lifted, so that the fox can be taken out and handled, which it is necessary to do at times in order to sprinkle the fox with insect powder in the summer and to examine it at other times. As an insulation the space between end of the barrel and the box and the space on the side is packed with shavings and sawdust. The idea is that the entire structure will exclude moisture and light, deaden sound, and protect the foxes from the extremes of heat and cold.

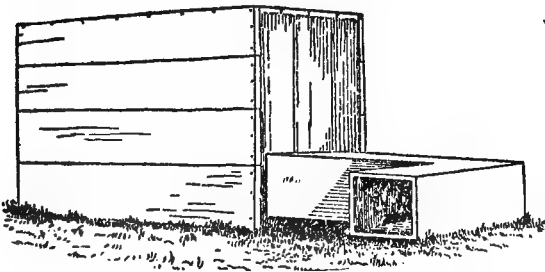
During the breeding seasons when the animals are unusually nervous, and when the cubs cannot stand extremes of heat and cold, these features are especially important.

The supports for the wire are wooden posts set in the ground at intervals of ten or twelve feet. A trench is dug about twenty four or thirty inches deep after the posts have been placed in order that the wire may go down into the ground, so that the foxes can not dig under the wire and escape. Wire netting of about 16 gauge and $1\frac{1}{2}$ inch mesh is generally used. The height of the fence depends somewhat on the depth of the snow fall, the usual height being about ten feet, but in some cases as much as twelve feet. As foxes climb wire fences readily, an inward overhanging of about 18 to 24 inches in width should be placed on the top to prevent escape. This is done by nailing a two by four cross arm on the top of the posts extending inward and laying wire netting along the top of these cross arms. In addition to the inward overhang, it is well to have an outer

overhang of barbed wire to keep out dogs and other intruders.

Provision is also made for ventilation, which is done by cutting a small hole in the top of the barrel

and nailing a piece of heavy wire screen over it. The idea of having the roof of the house hinged is so that it can be easily raised and lowered, in order to properly disinfect and clean the house when occasion requires.



Another plan, arriving at the same result, is to construct a box like the illustration. This leaves the "L" shaped entrance on the outside of the box and the box itself is just large enough to hold the barrel. However, the first plan is recommended as being the better.

After the house is built it is ready to be placed in the yard, and the best place is in the center. It is also advisable to have one or two barrels with an "L"(shaped entrance as described) in the yard as retreats for young puppies.

The Fox Yard

There are various styles and sizes of yards, but the most approved kind is the one about fifty feet square. Some breeders prefer to have a long narrow yard, which gives the foxes more space for a long run when they are playing, but it is more expensive, and the 50 foot square yard is considered the best. The arrangement of the yard depends on the number of pens and it is advisable to allow a space between them of at least five feet; in other words have each pen independent of the other so that the foxes can not reach one another through the wire. The larger ranches allow this space between the pens and in addition to this they have one space about eight feet wide so that the food can be hauled on a horse drawn sled thus saving considerable labor. It is only necessary to have the eight foot strip between every second row of pens as this large lane is used only for feeding purposes. The five foot strip between the pens can be used for tree planting in order that shade may be furnished and yet the trees not be inside of the pens for the animals to climb out. This style of detached pen costs a little more, but it is a great protection and is well worth the extra expense. As an extra precaution the wise fox rancher will build guard fences around all of the pens so that if a fox gets out of its own pen it can not escape from the yard itself, but is sure to be discovered in one of the alleys and can be easily caught and put back in its own pen.

Food

The natural food habits of foxes are similar to those of dogs; birds, mice, rabbits, and other animals are eaten, as well as grasshoppers, crickets and other insects, eggs, and many kinds of berries. In short, the animals are practically omnivorous.

The rations of domesticated foxes include beef, horse meat, mutton, veal, woodchucks, rabbits, liver, fish, eggs, milk, bread, mashed potatoes, crackers, mush, dog biscuit, boiled turnips and

carrots, and fresh fruits. The selection of meats is largely a matter of circumstances. At irregular and uncertain intervals one may obtain injured or worn-out but otherwise healthy horses, or old sheep that can not be fattened for mutton, and these, when slaughtered, make good and cheap meat. Woodchucks and rabbits, freshly killed, are always welcome in a fox yard. When cheap meats fail, beef and poultry are used.

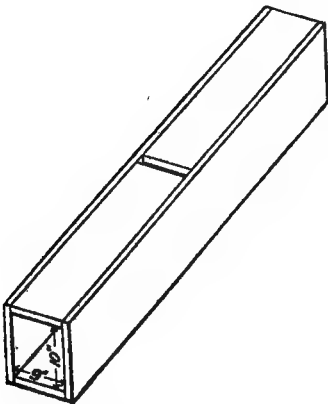
Fortunately, foxes do not need meat every day. Some keepers feed it but two or three times a week. Young foxes are not allowed meat until they are four months old, as it is likely to cause rickets. Meat intended for a brood matron may be fastened to the top of a table out of the reach of her cubs.

Milk, with some sort of bread or cooked mush, is the standard food for old and young. Foxes, which are fed twice a day, usually have meat in the morning and bread or mush and milk at night. In summer the proportion of meat is less than in winter. When smelts or trout can be had they are frequently substituted, but fish is not considered good for foxes in warm weather. Coarser fishes are sometimes used, but are not very much in favor. It is not deemed well to

feed milk and fish on the same day. Milk and eggs are often given to females about the time cubs are expected, to strengthen them, relax their bowels, and allay fever. Fish, liver, and tripe are other laxative foods which may be used instead of milk and eggs. A diet of eggs, milk, mush, and wheat bread without leaven or salt is excellent.

The preparation of food for foxes deserves careful attention. All dishes should be kept clean. Meat that is diseased, tainted, or infected with parasites must be boiled. It is

better to skin rabbits, as their hair readily felts and sometimes forms in balls in the stomachs of animals which feed on them. Their heads and entrails also should be removed, as these parts are frequently infested with parasites. Smelts and small trout may be fed whole, but larger fish should be dressed and the backbones removed. Chilled meat should be warmed before being offered to cubs or nursing females. Oatmeal or cornmeal mush should be thoroughly



cooked. All food for sick animals should be cooked to make it more digestible and to free it from disease germs.

Foxes should be fed regularly twice a day, morning and evening.

This is especially important in hot weather, as whatever is left from the first meal will spoil before time for the next. By giving at each feeding only the proper quantity the injurious effects of gorging can be avoided. Overfeeding is more dangerous than underfeeding.

Foxes that are to be slaughtered for their pelts are well fed during the autumn months, as the finest skins usually come from fat animals. Brood animals, on the other hand, are kept thin throughout the summer and up to about the first of January, when their rations are increased to prepare them for the breeding season.

Propagation

Foxes mate in February or March. The mating season is often revealed by a brownish discharge and may last anywhere from a few hours to two or three days. The gestation period is about 51 days. The size of litters ranges from one to nine, the average being about four. Each male remains faithful to the female of his choice and is a splendid husband and father. During the first few days after the cubs are born the mother remains in the den. Meanwhile her mate brings her food and remains constantly in the vicinity to apprise her by warning barks if an enemy approaches. Attempts have been made by fox breeders to mate one male with several females in the same season, but, as a rule, the results have not been encouraging.

Males are removed from the breeding yards for a part of each year, the length of their exile depending upon the relations of the pair. If they are quarrelsome, it is best to separate them soon after the female becomes pregnant. If, on the contrary, they agree and show attachment to each other, it is wise to keep them together until the cubs are four weeks old, but after that the male is likely to bite them during scrambles for food at meal times. While sequestered, the males are usually kept in small pens which may adjoin the breeding yards, as shown in figures 13 and 14, or removed to a separate inclosure, where they may be allowed to run together in a large yard or confined in individual pens. Because of their inclination to fight, individual pens are preferable.

The productive period in foxes is about 10 years. Approximately 50 per cent of the females in domestication breed each year,

and the aggregate increase is not far from 100 per cent for the total stock on ranches. Failure to breed is attributable to a variety of causes, among which are sterility, injuries, worry, and mismating. Females barren for two years in succession frequently become productive on being mated to a different male. Prolific females, run down by several litters in succession, sometimes skip a year in which to recuperate.

The excitable disposition of foxes is one of their most troublesome characteristics, and no opportunity should be lost to abate it. In the breeding season it is very essential that nothing shall occur to make them apprehensive. A nervous vixen is likely to refuse the attentions of her mate, or to injure herself and cause abortion, or, what is still more probable, to destroy her young soon after they are born, by neglect, or by taking them from the warm den and carrying them about the yard in search of another hiding place. In her extreme anxiety she loses all her instinctive prudence. She becomes essentially insane, and only closest attention on the part of her keeper can save her cubs.

From the time the cubs are born until they are two or three weeks old constant care must be taken to prevent losses in this manner. Any unusual sight, sound, or odor, by day or night, is liable to alarm a vixen and cause her to maltreat her young. The best way of dealing with a worried vixen is to shut her with her cubs in the den for several hours or until she becomes pacified. If she is disturbed by the proximity of other foxes, as sometimes happens, her view should be limited by boarding in the lower 2 or 3 feet of her yard.

Care of Young Important

Young foxes are subject to other troubles which, unless corrected, often prove fatal. They may be infested with external or internal parasites, or their mothers may not have enough milk to nourish them properly. It is very important that their condition from day to day be known. But the great value of the cubs and their danger from the irritability of their mothers generally cause the keeper to refrain from looking into the dens. By watching the behavior of the mothers they judge whether the young are doing well. It has been demonstrated by at least one progressive keeper that this uncertainty is by no means necessary. Foxes are not excited by routine events. By giving them large two-room dens, and always feeding them in the outer compartment, they learn to expect the entrance of the keeper as the regular preliminary to each meal, and even to

welcome it. When the keeper enters, they, of course, depart, leaving him free to look into the inner den. He should not touch the cubs unless they need attention.

The young are small and weak at first, and their mother remains with them almost constantly for the first three days. They grow rapidly and usually begin to appear outside the den in about a month. When 6 weeks old they eat more or less solid food. After this they may be weaned. Many breeders leave the weaning entirely to the vixen unless she is becoming emaciated. A decided advantage in weaning cubs when they are 6 or 8 weeks old is that when the keeper controls their food he can more easily eradicate the intestinal worms which usually infest them. Care should be taken to keep early-weaned cubs clean and dry. In case of accident to a mother fox, cubs may be reared by cats almost from birth. Not more than two cubs should be given to one cat. After they are about 3 weeks old their teeth become large and sharp enough to lacerate their foster mother, and they must be reared by hand.

The taming and training of the foxes when pups tends to the production of adult animals which are much more valuable for breeding purposes.

Behavior

During the day, particularly in fine weather, foxes are generally quiet, staying either in their dens or curled up among the branches of a tree or upon a shady platform several feet above the ground, whence they can see all that goes on around them. Late in the afternoon they arouse and until morning engage in a variety of activities. Sometimes they run and caper joyfully; sometimes when the soil is soft and the yards are not floored they dig, although animals accustomed to captivity rarely show a determined effort to escape by this means. When suddenly frightened they often attempt to escape by climbing the fence.

In the majority of fox yards the inmates skulk and hide whenever anyone approaches, although ordinary travel along a thoroughfare a hundred yards or more away gives them no apparent concern. All moving objects interest them keenly. Birds alighting within their yards often fall prey to their agility. Among themselves they are generally at peace, but a flash of treachery is likely to be displayed whenever one animal finds another at a disadvantage. One fox will seize and mangle another's foot that has been carelessly placed on the intervening fence, or will maim or kill a neighbor's cubs.

The natural timidity of foxes can be largely dissipated by special efforts to domesticate them in the full sense of the word. By weaning them early and thereafter feeding them from the hand, they usually become gentle and attached to their pens. When animals escape they sometimes return of their own accord or allow their keepers to capture them without difficulty. For example, a tame red fox after being liberated from a ranch maintained for cross and silver foxes went to live in the woods but presented himself early each morning at the gate of the ranch to be let in for a visit with his former comrades. After a time he commenced a burrow on a dry knoll in one corner of the outer yard and devoted half an hour daily to its extension. Although his career was, unfortunately, cut short by a trapper, he lived long enough to indicate very clearly that the wildness of foxes can be modified or even overcome.

Avoid Handling Foxes

Unless foxes are diseased or injured, it is rarely necessary to lay hands on them. When one is to be removed from its yard, ordinarily it can be first driven into its den and thence into a small handling box having a sliding door at one end and strong wire netting covering one side. In this manner it can be transferred without danger of injury to itself or its keeper. It is best to darken the handling box by covering it or by turning the netted side downward on the ground before attempting to drive a fox into it. In actually handling grown foxes it is prudent to wear gloves to guard against being bitten, though this precaution is not always adopted by experienced keepers. An effective device for catching foxes is a pair of tongs with jaws curved to form a circle 2½ inches in diameter. The fox is first driven into its den or into a large covered box. Then the cover is raised barely enough to let the tongs pass in and grasp the fox around the neck. By holding the tongs in one hand and grasping the hind feet and tail of the fox with the other, the animal can be held securely.

Healthy foxes if properly boxed and cared for can be shipped safely almost any distance. Two foxes, or even more than two, are sometimes shipped in the same compartment, but this is inadvisable unless the distance is short. As a rule, a box containing two should be partitioned, each animal having a space equivalent to 2 by 3 feet on the floor and 1½ feet high. About half of one side of the box should be removed and the opening covered with wire netting to allow ventilation and inspection. Shippers often cover the entire

box with netting or tin to preclude the possibility of escape. A dish for water should be fastened to the floor close to the front, where it can easily be filled. Foxes are not usually injured by a fast of three or four days, but they should not be allowed to suffer from thirst. Express companies, if duly instructed, will feed animals en route and add the cost to the regular transportation charge. In case the animals are very valuable or are to be shipped a long distance, an attendant should accompany them.

Sickness and Health

Generally speaking, sickness is not common among domesticated foxes that are well cared for. Once in a while one breaks a leg as the result of a fall or, more often, from entanglement in wire netting having too coarse meshes. Lacerations rarely result twice from the same cause or from fighting. Even more rarely is a fox choked while eating. Passing meat and small or soft bones and cartilage through a bone grinder will not only prevent choking, but allow enough bone to be fed with the meat to produce sturdy animals. Simple fractures, uncomplicated by abrasions, will mend if untouched, but it is better to bind splints upon the wounded limb to keep it in proper shape, and then to apply iodoform to prevent the animal from tearing them off. When a bone is badly shattered, and especially when it protrudes, the leg should be amputated. Anesthetics are likely to kill foxes and hence should not be used. Flesh wounds ordinarily require no attention other than washing once or twice a day in warm carbolyated water or with Castile soap, followed by an application of hydrogen peroxide.

Thus far no widespread disease among foxes has made its appearance. When diseases occur they mainly affect the digestive organs, and usually can be traced to improper feeding. Indigestion and inflammation of the bowels are not uncommon among cubs. Isolation in clean, dry quarters is the first step toward a cure, and rest and fasting are better than medicine. A spoonful of milk diluted with six spoonfuls of boiled water will quench thirst and aid in maintaining strength. The feces should be examined daily. Constipation is frequent, and it is especially dangerous to vixens during the first three days after the birth of their cubs. It can generally be corrected by a laxative diet, as milk, liver, or veal, but in extreme cases a dose of castor oil or an injection of soapsuds may be necessary. A protracted attack of diarrhea can usually be checked by a purge of castor oil followed by small doses of laudanum. Generally, however,

a day or two of fasting followed by short rations of cooked milk or milk and eggs, at intervals of two or three hours, will effect a cure. During such an attack vitality runs low, and care must be taken to keep the afflicted animal in a warm, dry place. It should have access to water that has been boiled. Growing cubs are frequently subject to weakened and distorted legs. This disease, known as rickets, can be prevented by including ground bone in their meat rations and by adding limewater to their milk. The bones of calves and those from briskets of beeves are comparatively easy to crush so that foxes can swallow them.

At quarantine stations where imported animals are examined, particular attention is directed to symptoms of rabies and mange. The fact that rabies, or hydrophobia, is communicable to man makes it doubly dreaded. Fortunately it has not appeared among domesticated foxes so far as known. Mange is characterized by a loss of fur. It is caused by a tiny parasite, somewhat like the itch mite and is, therefore, very contagious. Were it to obtain a foothold among domesticated foxes, it would seriously hamper and perhaps ruin this branch of the fur industry. All animals showing a tendency to have bare spots should be isolated at once. The diseased parts should be treated daily with ointments, as petrolatum or a mixture of lard and sulphur.

Foxes serve as hosts for a number of other parasites. Lice and fleas infest their hair and skin, while roundworms and tapeworms drain their vitality from within. The death of a fox has occasionally been attributed to lice. Even if not fatal, lice and fleas diminish the vigor of their hosts and should be persistently combated. Some fox breeders dip all their animals in a nonpoisonous bath such as is commonly used for dipping sheep. It is well in any case to dust the dens with sulphur and insect powder at frequent intervals.

The intestinal worms infesting foxes are difficult to eradicate. Probably more young foxes succumb to the effects of roundworms than to any other cause. These worms are whitish and cylindrical, tapering toward either extremity. Among the symptoms indicating their presence are dullness, barking, frothing at the mouth, dragging the body by the forelegs, and convulsions. The flat, jointed tapeworm, often a foot or more in length, is a less fatal as well as a less common internal parasite, but animals suffering from them are emaciated and lack overfur or guard hairs. As a cure for worms one breeder of long experience frequently gives his cubs a meal of crushed flaxseed and milk, alternating now and then with six or eight drops

of spirits of turpentine in milk. Another doses his cubs every fortnight after they are four weeks old with a proprietary vermifuge put up in gelatine capsules for puppies and pet dogs, beginning with half the contents of one capsule. Castor oil containing a few drops of turpentine is also recommended. Any remedy administered by hand must be pushed down below the base of the tongue, when it will be involuntarily swallowed.

A fox sometimes dies from no assignable cause. More often fatalities can be traced to a lack of care or foresight. The dishes from which the animals eat and drink should be washed daily and scalded frequently. The water should be clean and changed daily. The food should be varied and wholesome. Danger from unwholesome food is well illustrated in the experience of one ranchman who lost several of his choice breeders through feeding them spoiled fish; and another who lost \$100,000 worth of cubs as a result of thoughtlessly exposing meat overnight to the fumes of gasoline in his slaughterhouse. The appearance of each animal should be critically noted every day. On many of the larger ranches a doctor is regularly employed to look after the health of the stock. In the care of foxes an ounce of prevention is worth a pound of cure.

Selective Breeding

The fact that domestic animals originated from wild stock and that improved strains have from time to time been secured makes it reasonable to assume that other wild animals can be differentiated, and improved by the same method, namely, selective breeding. So far as foxes are concerned, this has already been done. The pioneer fox breeders began with ordinary silvers, which have a tendency to produce red as well as silver progeny. At that time dark pelts were more valuable than light-colored ones. By regularly disposing of the less desirable cubs and breeding only from the best, the tendency to throw red was soon eliminated and the color of the fur greatly improved. Within 16 years from the time the two pioneer fox breeders built their ranch they were sending to market the finest fox pelts in the world.

The tendency of wild silvers to produce red progeny is accounted for by the fact that owing to their scarcity probably only one in a hundred can have a silver mate; perhaps three in a hundred may mate with cross foxes, which are merely hybrids, or descendants from hybrids, between silvers and reds; and the remaining ninety-six must mate with reds. In any event, although some of the cubs may be

silver, all of them will inherit from their red ancestors a tendency to throw red. As has already been pointed out, however, this tendency very soon disappears under the influence of careful breeding. Generally speaking, pure strains of silver foxes breed true. So also do pure strains of red. When a red and silver are mated together, the color of the progeny cannot be foretold. The cubs may be red with black throats, or they may be crosses, or a mixture of the two. One or more may be silver, but this is unusual. Random breeding from silver and crosses of unknown pedigree is equally uncertain, as is shown by the following results:

A silver mated with a red produced two crosses, which when mated together produced one red and four silvers. A silver and a cross produced three silvers and two reds. A cross and a red produced two crosses and two reds. A cross and a cross produced two silvers, two crosses, and one red. Another pair of crosses produced nine crosses. A red of silver-cross parentage mated with a red of silver parentage produced one silver and two crosses. A silver and a red produced in two successive years thirteen silvers. A pair of reds from the same litter as two silvers, produced three silvers, one cross, and two reds. A pair of silvers produced one silver and five reds, two of which, when mated together, produced three silvers and one red the first year and two silvers the next year. Another pair of silvers produced four crosses, while a silver and a cross produced a litter of all silvers.

These results indicate the uncertainty of breeding at random, but they show also that if a fox of any color whatever has a silver strain, the silver can be made to appear in succeeding generations by selective breeding. This fact is most important. Suppose a breeder has a strain of silvers lacking in size, or fecundity, or in some other desirable particular. He can introduce specimens having the desired qualities without having to consider color. A red fox can be used if one of better color is not available. In the course of three or four generations the silver can be fully reinstated. Among the features to be considered besides color are size, fineness of fur, fecundity, docility, and hardiness. Fecundity appears to be a hereditary trait among foxes, daughters of prolific mothers being themselves generally prolific. How rapidly other desirable characters can be incorporated remains to be determined. As with poultry, horses, and other farm animals, so it is with foxes. Each breeder should strive to perfect his animals according to some standard.

It is not known that any particular geographic race of foxes is especially characterized by fecundity or docility. These qualities are probably individual, occurring in about the same proportion everywhere, and while of secondary importance, in the long run they are sure to be favorable to success in fox farming. Already prolific pairs bring much higher prices than those which have thrown small litters or have not been tested. Inasmuch as one of the main causes of loss among young cubs is the timidity and nervousness of mothers, the development of more docile strains will result in corresponding increase in the birth rate. Some male foxes are much better mates and sires than others. In selecting breeders the temperament of males as well as of females should be considered. The physical development and potency of males are also essential factors. Young males that are not strong or not well developed when six months old are not likely to be of use in the breeding yards the first year and should not be selected for sires.

Food is recognized as a very important element in the development of good animals. The finest specimens of domestic cattle are those which have been fed most wisely. As regards foxes, much remains to be learned concerning the effects of different rations upon such matters as fecundity, character of fur, and rate and limits of growth. It should be a part of every breeder's plan to discover all he can about the relative values of foods and methods of handling, as influencing the process of selective breeding. Ultimate success or failure in fox farming depends largely upon the aspirations of those engaged in it. If breeders earnestly, consistently, and indefatigably endeavor to improve their stock and to produce pelts that are larger, softer, and more uniformly colored than the usual run, there can be no question as to the result. There will never come a time when an extra fine silver fox pelt will not command a good price nor when a breed producing such pelts will not be in demand.

Suggestions

Contentment and vigor of the animals within a ranch is of the utmost importance. Whatever contributes toward increasing these qualities should be incorporated if possible. It is well to test young foxes with such toys as a ball, a tin can, or a piece of woolen cloth, with a view to amusing them and exciting a spirit of playfulness. A variety of objects in which they can hide and upon which they can mount for a survey of their surroundings, as hollow logs, stumps, brush piles, or open barrels, is desirable.

While the suggestions given under this heading apply primarily to persons having large capital invested in fox farming, they will also be found helpful to those operating on a small scale. The present value of silver foxes is so great that every precaution is taken to prevent accidents, sickness, or other misfortunes. Watchmen are kept on guard day and night. The keeper's lodge is just outside the guard fence. In addition there is sometimes a tower, from the top of which a view can be had of all the yards. Here are recorded the progress of events in the breeding season; and from here quarrels, accidents, or signs of sickness can be discovered without alarming the animals. A tower 12 or 15 feet square and three stories high, fitted up as a 3-room house, would contain on the top floor watchman's couch, chair, and field glasses, his table and writing materials. A cook stove, pantry, sink, and other kitchen appurtenances will be on the ground floor, and here food for the foxes can be conveniently prepared. Somewhere about the place there will be a medicine chest and various tools likely to be needed in an emergency.

Risk of loss by theft or escape is lessened by installing electric lights which can be turned on at any time, and an electric burglar alarm. Bulldogs are used to reenforce the night watchman; and on some ranches bloodhounds are kept for tracking thieves. Foxes that escape generally return to the vicinity of the ranch when hungry, and a number of small steel traps having the jaws wound with cloth should be kept on hand to catch them. Ranch foxes have less endurance than wild ones, and a good hound can usually overtake one after a short run. The manager of a ranch on Prince Edward Island has a hound which on several occasions has assisted in the capture of foxes without hurting them in the least. Such dogs are excellent insurance against loss by escape.

Other accessories of a fox ranch, and those most prominent, pertain to food supplies. There must be facilities for slaughtering horses, cattle, and smaller animals; an ice house and a refrigerator for keeping the meat fresh until it can be used; and conveniences for drying, smoking, and salting meat that must be kept a long time. A screened room or box is necessary to protect stored meat from flies. Cows are needed to furnish milk, an important element in the diet of domestic foxes. In a dairy region calves are disposed of when but 2 or 3 days old. At that age they are small, and their flesh is soft. Sometimes there are more calves on hand than can be used immediately. By having cows to suckle them a few weeks, the veal, improved in quality and increased in quantity, will be available when

needed. Rabbits are the natural prey of wild foxes. They have an important place on a fox ranch as a fox food which can be drawn upon at any time, always fresh, and which is in such small units that ice or other preservatives are unnecessary.

Occasionally a mother having young cubs is unable to give them proper attention. Then a foster parent must be supplied at once or the cubs will die. To provide for emergencies of this kind, every ranch should include several female cats.

The products of a fox farm—breeding stock and pelts—are ready for market at definite seasons. The live animals are mainly sold during the autumn, as it is to the interest of buyers to have their stock fully accustomed to new surroundings before the breeding season. By the middle of September young foxes are large enough and the weather is sufficiently cool for shipping with safety. When there is not an adequate local demand, foxes are generally disposed of by advertising in publications devoted to furs, fur farming, or trapping. Shipments of live stock by express are generally at the risk and expense of the purchaser. Valuable animals are usually accompanied by a caretaker, especially if the journey lasts more than two days.

Skins of foxes killed late in December, when fox fur is in its finest condition, are ready for market in January. Foxes are skinned by making a cut straight from one heel along the rear edges of the hind legs and beneath the tail to the other heel, and withdrawing the body through this slit. The skin of the tail should be cut along lower side, its entire length, and the bone removed in order that air may come freely into contact with the flesh side and dry it quickly. Unless this precaution is taken, the tip of the tail is likely to decompose and lose its hair. For the same reason the back skin of the ears should be separated from the cartilage to which it is attached. When the operation of skinning is over, the pelt is freed from particles of fat and muscle. Before the skin is completely dry it should be removed from the board, turned hair side out, and hung by the nose where it will be free from pressure on all sides. No preservative is required. Although raw fur buyers are to be found in nearly every town in fur-producing regions, fox farmers prefer to sell their peltries direct to the largest fur establishments, where rare furs are handled extensively and where experienced furriers are familiar with values.

Costs

It is estimated that it will cost about \$50.00 per fox per year to raise them. This of course varies and depends on general conditions.

This cost of course does not include interest on the investment, but merely actual labor charges and the cost of food. On a farm where there are cows and where grain and vegetables can be raised, it is not necessary to buy very much fox food. Except on large ranches devoted exclusively to fox raising and where a special keeper must be employed, the care of a few foxes will not entail much outlay.

The fixed annual charges against a pair of silver foxes will vary with the locality, value of equipment, etc. On some ranches it has been estimated about as follows: Interest on cost of yards, \$10; depreciation of yards, \$10; food, \$20; and attendance, \$50; amounting to \$90; added to this must be a reasonable charge for interest on the original cost of the pair. Killing foxes at the age of 4 or 5 years, when their pelts are good, and breeding always from young stock may be practicable, but this point has not yet been decided. As a rule, one may expect to keep choice animals as long as they are productive; that is, about 10 years. Deterioration, therefore, on the live stock will be 10 per cent; and to this should be added 10 per cent for insurance against loss by death, escape, or theft.

The value of breeding stock has fluctuated greatly in the past. In general, it will depend on the current demand for silver fox skins; and, in particular, on the character of the fur of individual animals. Prolific animals belonging to choice strains, in which a superior color and quality of fur have been fixed, are worth for breeding purposes as much more than ordinary stock as pure-bred horses are than common horses.

As has been pointed out under the subject of improved strains, crosses and reds derived from silvers throw a proportion of silver cubs. It is feasible, therefore, if one is willing to sacrifice the time required, to obtain a stock of silvers from these more common foxes, which cost comparatively little.

Income

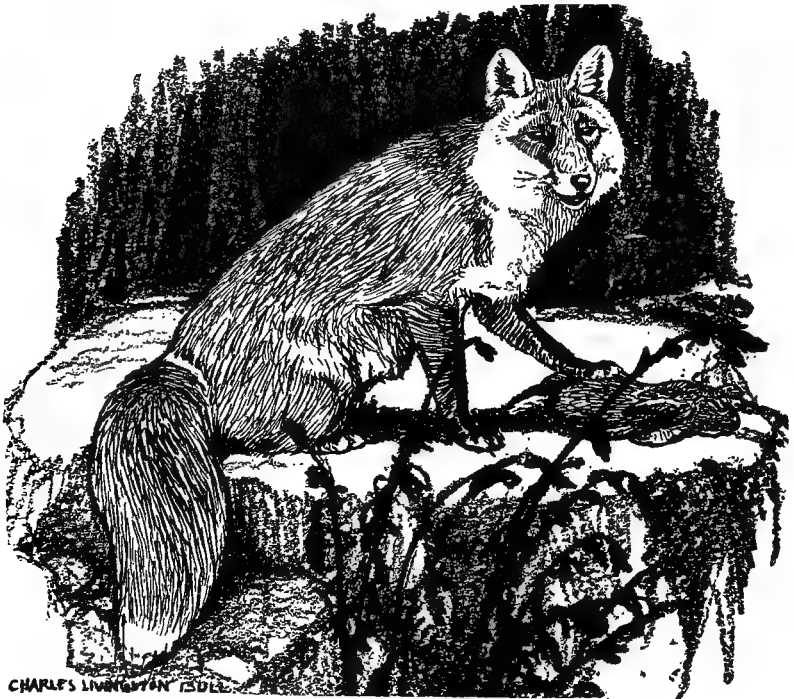
The profits from silver fox farming have generally been large. Prior to 1910 they were derived almost wholly from pelts, but since then they have come mainly from the sale of breeding stock. Following the decline of the speculative phase of the fox industry, ranch-raised silver fox pelts reappeared in the market, and brought encouraging prices, a few going as high as \$1,000 each. January quotations for No. 1 extra large skins during the 12 years from 1905 to 1916 average about \$600 each.

The supply of silver fox pelts must always come from cold climates beyond the more thickly settled temperate regions. They are not

likely, therefore, to become overabundant. Red fox skins have been marketed for many years. Their numbers, while fluctuating considerably from year to year, on the whole have remained approximately constant. Their average value, however, has increased. But the supply from wild foxes will hardly be greater than it is now. Already red foxes can be raised and their pelts sold profitably, and it may be probable that before many years the rise in fur values and the introduction of more economical methods of ranching will result in making the raising of red foxes even more profitable. The silvers are of superior beauty and many years must pass before they can become common.

Red Fox

Red Fox are found throughout Canada and Alaska, and all of our northern and central as well as the New England states, and in the far west. There are very few, if any, found in the southern states.



RED FOX

The red fox can be raised in captivity in exactly the same manner as silver fox, and while the pelts are not as valuable, it does not

require the investment or near the risk as a red fox ranch can be started in a very modest way. Red fox pelts are always in demand, especially well furred and seasonable pelts.

Grey Fox

The grey fox is common throughout the central and southern states, is found in large numbers in Texas, California, Oregon, Washington, Kentucky and Tennessee. The grey fox fur is coarse and for this reason is not considered very highly by the furriers. The pelt is the cheapest of all fox furs—that is, all American foxes. The grey fox is very hardy and should be easy to raise.

Cross or Patch Fox

The cross or patch fox belongs to the red fox family and is just another variation. It differs from the silver fox in that it is dark red where the silver fox is black, and while it is oftentimes silver tipped like the silver fox, it has a reddish cast instead of black. It also has a distinct cross down the back of the neck and across the shoulders, the fur being usually much darker here than on the rest of the body, thus forming a distinct cross. There are some beautiful specimens of the cross or patch fox and these rank next in value to the silver fox.

White Fox

The white fox is found only in the arctic regions. It is snow white in color and very beautiful. It is worn very largely in its natural color, but it is also dyed many different shades, the most popular at the present time being the platinum shade. White fox have never been domesticated and no attempt has been made to successfully raise them, except that on the government fox ranches on the Pribiloff Islands a few white foxes are taken annually.

Blue Fox

There are numerous blue fox farms on the islands off the coast of Alaska; in fact the trade depends almost entirely on these island fox farms for their supply of Alaska blue fox. The United States Government annually takes several hundred blue fox pelts from St. George and St. Paul Islands of the Pribiloff Group. There are independent fox ranches successfully raising blue fox on a large scale on the Aelutian Islands and other small islands near the coast of Alaska.

How to Trap Foxes

The following methods have been used by trappers long experienced in the trapping of fox and are given here as they were written by the trappers themselves. All of these men are prize winning trappers and have had years of experience trapping foxes.

Winner of First Prize for Best Method of Trapping Fox

"The fox is the most wily, sly and cunning of all wild animals to trap, except the wolverine. To be successful in trapping the fox the first thing to be done is to kill the odor of the traps. This may be done by boiling them in hemlock-bough water, or sprinkling them with blood, or burying them in the earth for two weeks, so that all the odor of the iron has been absorbed, and the trap smells like the earth. Soil is a common odor with the fox, for he is smelling it all the time, and he will not smell the trap when this is done. When the traps are taken from the ground, woolen gloves should be used, well-rubbed with fresh dirt.

There are two methods of trapping the fox, the land method and the water method.

The Land Method—The natural food of the fox is mice and rabbits. In the spring procure a glass jar that will hold one quart (after being cleaned). Put into it the musk bag of a skunk and the musk bag of two muskrats, and two field mice. Fill the jar half full of skunk grease. Cork and hang by the side of a building until Fall or the trapping season. This is one of the best scents for trapping the fox, except the Funsten Animal Bait. In setting traps for the fox, go where they are apt to travel. Nail bait to a tree, about five feet above the ground. When setting traps, wear woolen shoes, well-sprinkled with blood, over your leather shoes. Handle traps with woolen gloves well-soaked in blood. Touch nothing with your bare hands. Set traps two feet from the tree, bait with mice or small pieces of rabbit; put a little of the above scent on the bait, cover bait lightly. The fox in walking around the tree, trying to get the bait from the tree, when he finds he can not, will try to get the bait under the traps, and is very likely to be caught.

Another method is to go to a field near the woods, drive a stake in the ground one foot, with the top five feet from the ground, sharpened at the top. On the sharp end of the stake hang a large jack rabbit. Procure a basket of leaves or chaff and put around the stakes. Set trap three feet from the stake. Cover lightly with the leaves, put a mouse at each trap, sprinkle a little pure fox matrix on the

bait. Every fox for miles will come to that bait, as the rabbit begins to decay, and as sure as there is a rabbit on that stake the fox is sure to get caught.

The Water Method—Many a fox is caught by this method. Go to a spring where the water does not rise and fall, and place a flat stone fifteen inches from the shore, with the top one inch above the water. Cover the stone with a sod, so that the stone can not be seen. Place trap about four inches from the shore, trap all under water except the pan. Cover the pan with a thin, dry sod. Place bait on sod over the stone, and cover bait lightly. Put a little Funsten Fox Scent on the bait. Be sure and place your bait so that it can not be reached by the fox, except by stepping on the sod covering the pan of the trap. Stand in the water while setting trap, and bait trap with small pieces of cat or rabbit. A few hints—Never go near traps when they are not sprung. 2nd—take the foot of a fox and make a few tracks over the trap. 3rd—In going around to see traps drag a piece of meat with a little of Funsten's Trail Scent on it. 4th—When the snow is deep, set traps in a paper bag and cover with snow."

JOHN POOLEY.

Another Method

"Find a place where the fox is in the habit of traveling. Pick out a place where there is a nice knoll or hill, and if you can not find one, make one there. Hills should be made a month in advance, or during the summer, so the fox will get used to it. When trapping season opens get a couple of handfuls of chicken feathers and sprinkle around the knoll or hill. Now this hill should be at least two feet high. Then get a live chicken, put it in a cage and hang about ten feet from the hill, and about eight feet high, in plain sight of the mound. Set about three No. 2 fox traps and cover well with dirt from the hill and fasten chain to drag, not solid. Use a few drops of Funsten Animal Bait for Fox, and every fox that comes near smelling distance of this bait will investigate it and will go on the mound to survey the surroundings and look at the box. Do not forget that the traps must be set on the mound, and do not touch the traps with hands after you have handled the bait, or the fox will not go on the mound, and your work will be for naught. Use clean mittens or gloves."

R. G. BRACHVOGEL.

A Missouri Trappers Method

"Fox are very shy, and they catch the most of what they eat, and it is hard to get them to work at any kind of bait, but if the bait is

fresh sometimes they will eat it; but I find that Funsten's Animal Bait is a good helper to draw them to the meat baits. A red fox is hard to catch, and they only den up in the spring, when they are raising young ones, and a trapper does not care to catch them then. The way I can catch them is to set traps in their runways. I find where they travel up and down bluffs, and where they travel along paths, and where they go through fences, and I take a No. 1½ or a No. 2 Newhouse steel trap, and set it in the path. If it is a path anywhere in the woods, a fox will travel it every time. In setting traps in the path, I always find where they step over a pole or log, or where they go through a fence. If I set a trap in a path by the fence, I dig out a little hole in the path where they go through the fence, just deep enough to let trap down level with the top of the ground and about ten or twelve inches from the fence; then take some fine leaves and cover the trap. Then take a piece of fresh rabbit, bird or chicken, and lay it on the ground five or six inches to one side of the trap, and take a stick sharpened at one end and stick it through the bait into the ground. Then take Funsten's Fox Bait and put a little on the meat, and sprinkle a little over the leaves on the trap, and you will catch a fox every time they come along, for every time they smell Funsten's Fox Bait they will go to it. I have caught foxes by the use of Funsten's Fox Bait without any other baits.

Traps should always be kept clean and free from all animal scent. I have experimented with them for seven or eight years, and I find it pays well to keep traps clean and free from animal scent, especially if I am trapping at dens or on the ground. If I am trapping in the water it doesn't make any difference, for when traps are under the water no animal can smell them anyway, but I never set a trap for a fox unless it is clean, for they are a fine-scented animal. I have caught several foxes in my life, and I have caught more foxes by setting traps in paths where they step over poles and go through old rail fences than any other way. Traps set in this way will catch more foxes if some kind of scent bait is used than any way I have tried. It is best to use scent baits to attract their attention. Funsten's Scent Baits are the best baits for that purpose I have ever used, for when they smell it they will go to it and fool around the traps, and, nine times out of ten, they will get a foot in the trap while they are smelling around it.

Gray foxes are easily caught, because they den up all through the winter season, and you can catch them at dens where they go in

and come out, and they can be caught by setting traps in their runways, the same as for red fox.

J. G. BURKS

Preparing Fox Skins For Market

In preparing the fox skin for market the skin should be taken off cased with the fur side out. Be sure to see that the fur is cleaned of all burrs and mud or matted knots before packing it for shipment. Remove all superfluous meat and fat from the pelt, but do not scrape too closely as this would injure the roots of the hair. Comb the fur out well with a coarse comb so that it will look its best. Dry the skin in a cool shady place. Do not dry in the sun as the bright rays of the sun will fade the color of the fur. Do not use chemicals or preservatives of any kind, but allow the skin to dry in a natural manner.

The mating season of the red fox is in the early part of March, and there are from five to as many as nine in a litter. The mating season of the grey fox is a little later, and its young are usually produced in May. The grey fox is not as carnivorous as the red, and fruits, corn, and fish form a large part of its diet. The young foxes are covered with a soft downy yellowish-grey fur. The color of the hair does not begin to appear until they are five to six weeks old. Foxes as a rule hunt their food at night, and in some sections are most active just before daybreak when all animal life is on the move and they have a better chance to secure the small animals and birds that they depend on largely for their diet. Naturalists claim that the wild fox is monogamous, that is, the male has only one consort in a season, and while the young are being reared he dutifully forages for them. In captivity, however, one male sometimes has been mated successfully with several females. The young fox when born are small and weak. They grow rapidly, however and when about six weeks old begin to play around, and occasionally eat solid food. No doubt the raising of foxes of all kind for their pelts will be gradually developed.

CHAPTER XVI

BEAVER

The beaver is said to be the most interesting of all furbearing animals. It possesses a high degree of intelligence and its instinct is truly marvelous. It works with unlimited patience and shows great ingenuity in the construction of dams, lodges, etc. The beaver will attack any tree without any regard to its thickness and cut it down in a remarkably short time by gnawing through the wood with its sharp knife-like teeth.

The beaver prefers running streams to lakes and ponds and his choice depends somewhat on the location of timber, supply of food, etc. They prefer running streams for the reason that it is much easier for them to float their wood down stream with the current and they move immense logs and guide them to where they are needed for their dam. They usually choose a stream of water that will not freeze to the bottom, and here they will build their lodge and lay away their winter supply of food.

The beaver has played a very important part in the development of North America. It was trade in the beaver skins that caused the French and English in the early days to push out in the farthest northern points. The Beaver is on the crest of the Dominion of Canada.

The beaver likes to have a uniform depth of water in the stream where he lives and builds his lodge. In the large rivers there is always enough water for the beaver to swim to safety from his enemy and cover the mouth of the holes that he makes in the bank, but in small streams, where there is danger that the water may fall so low that the beaver will be left in shallow water, a prey to his natural enemies such as the wolverine, lynx, wolf, and even human animals, the beaver does not take chances, and to assure that the water will be always at a constant level, will build a dyke or dam across the stream and thus back up the water. Their first object is to maintain the water at a certain constant level, so that the mouth of their holes in the bank will be submerged during the dry period of the summer. They never cease to work on their dams and strengthen them constantly with clay and stone and all sorts of branches.

Their lodge consists of a hut of two stories completely surrounded by water. The upper story is above the water level and is dry and is used as the residence of the animal. The lower story is under water and rests on the bed of the stream, and is used as a storage place for their bark, etc. The lower story alone is open, and the entrance is under the water. These lodges or huts are made of bark and branches and are plastered with mud. In addition to the lodge they also have burrows along the bank in which they seek shelter when their lodges are attacked. Beavers do their work usually at night and are very industrious and apparently never become discouraged. If, after working for weeks to build a dam or a lodge house, something unforeseen takes place and destroys the dams or lodge, they immediately start in to repair the dam, and if possible work all the harder, so the expression to "work like a beaver" really means to work hard and industriously.

The Indians have always been very superstitious about the beaver, many of them believing that beaver were formerly a people endowed with speech, but that the great Spirit has taken the power of speech away from them so that they can not grow superior in understanding to mankind.

The beaver is a vegetarian and lives on the bark of young birch, aspen, and poplar trees. It is a great eater and consumes great quantities of roots and wood. The female beaver usually has from two to five young at a time, and it is said that the cry of the young beaver pup resembles the cry of an infant. During the first year the young remain with their parents. After, this and during the second year, they usually occupy an adjoining lodge or hut and assist in building, cutting down trees, and securing food. After they are two years old they usually depart and build houses of their own, and often travel for a considerable time before they finally fix on a spot for their dwelling.

There are bachelors among beavers similar to the bachelor seals, who live by themselves, build no houses, and work on no dams, but take life easy. They usually find shelter in holes that some other family of beavers have constructed, and according to old-time trappers apparently do not worry about anything except supplying themselves with food.

Experienced trappers that have studied the habits of the beavers say that the male beaver who is head of the household is very jealous of his family, and if a strange male or a bachelor beaver approaches the lodge house, the old male will swim out and drive the intruder

off, and if he does not leave in a hurry, a battle will take place immediately. The female apparently remains an unconcerned spectator, and to all appearances it makes little difference to her which one of the males comes out winner. At any rate the female does not take any part in the fight in defense of the family lodge house. It is said that the male beaver is just as constant as he is jealous, never taking to himself more than one female, but that on the other hand the female is not so particular, but is rather fond of strange company.

If the lodge house of the beaver is disturbed in any way, the whole family will leave by the lower entrance and make a break for the holes in the bank, which they use as a haven of refuge in times of trouble. The flesh of the beaver is often used as food, the tail especially being considered a great delicacy. The beaver attains its full size when about three years old, although it breeds somewhat before that. It usually mates in February, and brings forth its young some time in May. The large beaver will weigh about sixty pounds and will measure about three feet long and about thirty inches wide. The skin after it is thoroughly cleaned and dried will weigh about two pounds.

The beaver spends its life in the water and its underfur is very dense and heavy. On account of its light weight, and beautiful color, its richness and softness, the beaver has been one of the leading furs for generations. In some parts of Canada in recent years, as well as in the United States, laws have been passed protecting beaver for a period of years. In one section of Canada where this has been done they have become so numerous that the farmers have petitioned the state authorities to modify the law so that they could be killed as they have really become a pest. Beaver are protected in nearly every province of Canada as well as all of the States and may only be taken at certain seasons of the year. Most states have laws protecting their lodges and dams, which can not be destroyed, and the beaver can only be taken in traps.

At one time most of the beaver pelts taken were used by hat manufacturers in the making of silk hats, but the pelts have become so expensive that rabbit skins are used instead, and beaver are used almost exclusively by the furriers, nearly all of them being used natural for trimming on coats for both men and women. There are many other furs that are higher priced than beaver, but all in all, the beaver is one of the most staple as well as one of the best known of all furs. Its wearing qualities are splendid and it usually gives good satisfaction.

At one time people paid their bills with beaver skins and estimated the value of their possessions by the number of beavers they represented. In trading with the Indians the Hudson's Bay Company measured everything by the value of the beaver skin. It is stated that one reason why the old muzzle-loading rifle had such an extra long barrel was due to the fact that the Hudson's Bay Company sold



BEAVER

the muzzle-loading rifle to the Indians for beaver pelts, and the value of the gun in beavers was equal to the number of beavers it would take to reach to the top or the end of the gun. In other words one end of the gun was placed on the floor in an upright position, and then beavers were laid along side of it until they reached to the top of the barrel. It is easy to see that the longer the barrel of the gun the more beavers it would take to reach to the top. It took one

beaver to buy a half pound of glass beads, ten beaver for a coat, two large beaver for a pound of tobacco, two or three beaver for a looking glass, and one or two beaver for an iron kettle. In the early days beaver was a medium of exchange; one beaver was worth so many muskrat, and it took so many beaver to buy a marten skin or a fisher. On the other hand a bag of flour was priced at so many beaver, or if the trapper did not have beaver, its equivalent in muskrats or whatever furs he might have.

Old trappers claim that the peculiar claw on the second toe of the hind foot of the beaver is used as a tooth pick, and some scientists agree with this theory and that the beaver uses this peculiar shaped claw to remove the splinters of wood that get between the teeth while cutting trees.

Beaver castorium is found in both the male and female and is very valuable. It is a secretion resembling soft beeswax and is found in two glands situated in the hind part of the body, and ranges in price according to the market demand from three to four dollars.

Raising Beaver

Beaver is one of the most interesting of all furbearing animals that we have, and Dr. Wm. T. Hornaday, one of the greatest authorities on wild animals in the world, says that in his opinion beaver would lend themselves to domestication better than any of the other furbearing animals. A number of zoological gardens have taken up the raising of beaver and this has been found to be very successful. Beaver will thrive in almost any part of the United States and need very little care and attention, provided they are kept in a place where there is plenty of water and enough natural food for them to live on. They will eat nearly any kind of roots and vegetables they are provided with, and because they are such an interesting animal and because their fur is so valuable, they should be given serious consideration by every farmer who has a pond or a lake or a good-sized stream on his place that could be utilized for the purpose.

The United States Department of Agriculture will no doubt be only too glad to lend its valuable support and to give every assistance possible to anyone that will make a serious effort to start raising beaver. If there are wild beaver in your district make an effort to take a pair of them alive or a colony of them alive, and start a beaver ranch, and advise Funsten Bros. & Co., what success you have and they in turn will find you customers for live pairs, from people

in other parts of the country who are anxious to get started raising this valuable furbearer.

Most golf clubs have lakes or ponds on their courses, and as animal life is a constant source of interest both to old and young, especially children, they should stock their lakes and ponds with muskrat and beaver. It will be found to be a constant source of interest to watch the beaver building their dam and watch them at their work and play, and at the same time will be a source of profit. If every golf club in the United States were to install a family of beaver or muskrat the supply of furs would take a big jump in the next few years.

How to Trap Beaver

Before you start out to trap beaver become familiar with your game laws. The fact that there are beaver in your neighborhood and that you know where they have their lodges and dams, is not sufficient license for you to trap them. Some states have very drastic laws relating to beaver, and they can not be trapped or killed in any shape or form, and their pelts can not be taken and disposed of, nor can their houses or dams be tampered with. The larger fur houses will not handle beaver that have been unlawfully taken.

In those sections where beaver trapping is permitted at certain seasons of the year, the following suggestions and methods will be successful. These methods have been used successfully by trappers who have long experience in the trapping of beaver, and will be found useful both to the professional and amateur trappers.

Winner of First Prize for Best Method of Trapping Beaver

"They can be caught in various ways, as with a deadfall, with the figure 4, and a green popple stick for spindle and calamus root for bait to draw them, and by leak in dam, with trap set so as to catch them when repairing leak; but this only causes them to be much wilder or to leave altogether. My method is this: Fix places along sides of streams where banks are steep; dig bottom level at all steep places, so you will have flat places for traps. If bank is too steep, dig off some. Leave very slanting, so they can not climb out here. Do this early in the fall. Dash water on any fresh digging, so everything will look natural. Two or three weeks before you want to trap them, begin to bait them to all the places you have made. Dig some fresh calamus or sweet-flag root. Place a few roots at each place, just above water. Next time put bait a little higher up on bank. Watch, and when you see them begin to store up their winter supply,

which they do just before it freezes up, cut the top of young popple, stick one in bank at each place; set first time so they can cut it off without having to reach much for it; place a little higher next time. You will find the bait and popple pole gone every time.

To set traps, use boat. Have plenty of No. 9 wire, long enough to reach deep water. Tie large stone to one end of wire, drive stake full length of chain out from shore, set trap so it will be about five inches under water; bend long loop in wire, out several feet from shore, so game will be under water when trap ring reaches loop; set small prop under wire to hold wire out of mud, so trap ring will run down wire easily; set up fresh popple pole high enough now so he will have to stand on his hind feet to reach it. In this way you are sure to catch him by the hind foot. Place calamus root (I also recommend the Funsten Animal Bait for Beaver) just above popple pole; set at all places you have made, also at all places where you see they go out of water. Bait and stake all the same. With these sets you are sure of your game, as they are not hard to catch, but hard to hold. Use nothing but the old reliable Newhouse trap. When game is caught they go for deep water, the trap ring runs down wire to loop, and they are under to rise no more.

To trap them in winter, use similar places to set, having wire laid beforehand. After it has frozen up solid, and the water has settled away from ice at shore, they are searching all along shore for fresh food. Make small hole at the edge of ice, where wire is laid, put end of popple pole through hole into water at side of bank. In passing, they stop to work at bait. To set trap, cut hole in ice length of chain from shore, reach in and set trap near bait, stake through hole in ice, slip trap ring over wire and fasten to stake. Cover hole with ice and snow.

For spring trapping, use same set and bait as for fall."

C. S. BREWER.

Winner of Second Prize

"I use No. 3 Newhouse traps. Set trap as near deep water as possible, with seven-foot chain well staked. Set trap near the bank of the stream, put it four inches under the water; set it endwise, as I call it, so the animal will come over one spring to get the bait, which is on a stick six inches long, sticking in the bank four inches from the end of the other spring. Cover trap well with some soft substance, cotton, leaves, mud or moss; then get two sticks, about two feet long and the size of a lead pencil, and stick one on each side of the trap, placing the far end from you, one up the stream and the other one

down stream, so the Beaver will swim in between them when he starts to the bait. These are what I call guide sticks. I can guide a Beaver with these sticks to the very spot where I want him, and have him to stick either foot in the trap. I catch him by the left foot, as they can not handle the trap as well as they can with the right foot. Now all these things being finished about the trap, go below or above the trap as far as you can throw water with the hand, and wet all the ground which you have been working over to set the trap. Water will kill all human scent. I want to say that I have used Funsten Animal Baits for Beaver, Coon, Mink, etc., and don't think they can be beaten.

J. H. TATE.

Winner of Third Prize

"I write, sending in my entry to the Trapping Contest. I have been trapping about twenty years, and have caught fur-bearing animals of nearly every kind successfully since I have used Funsten Baits and Trail Scent. They are two of the Wonders of the trapping World, and I wouldn't be without them. I will gladly answer any inquiries as to the merits of Funsten's Animal Baits. Here is my way of trapping Beaver:

For Beaver, I take a No. 4 Newhouse steel-trap and set it where the Beaver works or at a slide. I set the trap in water from one to six inches deep. Fasten the chain to a stake, so when the Beaver is caught he can not get to the bank to gnaw his leg off. Tie an old ax to the trap, so when he makes for deep water he will drown. An old ax is very easily hidden and is very effective. Cover your trap with leaves or anything to make it look natural, like the surroundings. When you set your trap, leave everything looking natural, like it was when you came there. Drop several drops of Funsten Beaver Bait in the water over the trap, and stick a little stick up over the trap that has been dipped in the bait, and your success is assured."

CLAUDE W. WILLIAMS.

How to Prepare Beaver for Market

In preparing beaver for market take the skin off open by cutting down the belly and the back of the legs, and stretch the skin as nearly round as possible. Remove the feet and tail and cut around the edges of the skin so that no ends or pieces will be left on, leaving the skin with an even edge all around. Do not dry near the fire or sun, but

hang the skin in a cool dry place and allow it to dry out naturally. Scrape off all superfluous meat and fat, but do not scrape the pelt too closely. In packing for shipment, do not roll or fold the skins, but pack them as nearly flat as possible.

CHAPTER XVII

THE BLACK BEAR

The bear is the largest of all the fur bearing animals of North America, and with the exception of the larger members of the cat family, no creatures have longer held a place in human interest than the bears. Their size and formidable equipment of teeth and claws give a touch of fear which goes with admiration.

"The American black bear has without doubt the widest distribution of any North American bear, being found from Mexico up to the Arctic Circle. The Grizzly Bear is found in a large part of the territory in which the black bear lives although the habits of these two creatures are different. Another group is the brown bear, the largest of all the bears, and these inhabit the territory between the Northern border of the United States and the Arctic Circle. The Polar Bear is found in the everlasting ice fields of the polar regions. This species is different from all of the other bears in its color, as well as greater length of body. The inland white bear is principally found in Southwestern British Columbia and according to some authorities, belongs to the black bear group.

The Polar Bear stays well inside of the Arctic Circle; the big brown Alaska bears are only found in certain localities on or near the Northwest coast of the Continent; the Grizzly bears inhabit the mountainous regions in the extreme west from Alaska south. The black bear is found in the central and northern parts of the United States and in the central and southern parts of Canada from the Atlantic Coast to the shores of the Pacific, and his half brothers and first cousins are found in Florida, Louisiana, Texas and Mexico and are so much alike that it takes a specialist and sometimes a post mortem examination to tell them apart.

A mistaken idea, that is very old, and very generally entertained about these animals, is that there is a difference in species between the black and brown or cinnamon colored individuals of the tribe. This idea is so wide spread that one often hears it said that there are three varieties of bears in the United States—the black bear, the cinnamon bear, and the grizzly bear. This is not correct. There are many cinnamon colored bears

but there is no such species as the cinnamon bear. The difference between the cinnamon colored black bear and the black colored one is the same as the difference between a blond and brunette; while the difference between the cinnamon colored black bear and the cinnamon colored grizzly bear is like the difference between a spaniel and a setter; they are of different breeds.

The black bear has a head broader between the ears in proportion to its length and a muzzle much shorter and sharper than the grizzly. This muzzle is also almost invariably of a grayish or a buff color. The animal shows a rather noticable hump over the small of the back, just in front of the hind legs, and these legs are less straight than those of the grizzly and more sloping at the haunches. Its ears are larger, its eyes are small and pig-like. Its claws are short, much curved, very stocky at the base, and taper rapidly to a sharp point. They are far less formidable as weapons and far less servicable as digging implements than the long, slightly curved, blunt claws of the grizzly; but they are perfectly adapted to the uses to which their owner puts them. And the chief of these uses is climbing.

The black bear climbs like a squirrel and from cub-hood to old age spends a considerable portion of his time in trees. He can climb as soon as he can walk and his mother takes clever advantage of this fact. She sends her cubs up a tree whenever she wants them off her hands for a time or when any danger threatens. In the latter case, she will try to induce the enemy to follow her, and, when she has eluded him, will return for the cubs. In parts of the country where there are wolves, she will usually dispose of the cubs in this manner before herself going off to feed on berries, etc., and though it may be hours before her return, nothing will induce the cubs to set foot on the ground until then. Later in life the black bear continues to regard trees as its natural refuge from all danger. A naturalist, some years ago, while visiting Yellowstone Park, went one evening to watch the bears back of the Lake Hotel where the refuse pile serves as their dining table. Concealing himself in shrubbery, he saw an old black bear and two cubs contentedly feeding when a grizzly bear came upon the scene from another direction. Immediately, the old black bear gave a warning signal which the cubs apparently well understood for they scampered off and up a near-by tree without any delay. I have been told by experienced hunters that the cubs will not come down out of the tree unless called by the mother and that they

spend much of their leisure time in the trees, often having special ones which are used as sleeping quarters.

One sometimes hears it claimed that a black bear can only climb a tree around which he can conveniently clasp his front legs, man-fashion. They can climb and that with almost equal ease, any tree that will hold their weight; from a sapling so small that there is just room for them to sink one set of hind claws above the other in a straight line, to an old giant so big that they can only cling to its face, squirrel-fashion, and behind the trunk of which (also squirrel-fashion) they can hide, circling as you walk around it.

Another curious fact about the black bear's sharp claws is that they invariably match the owner's hide in color. A black animal always has black claws, while a brown one has brown claws; and a cinnamon-colored one has cinnamon-colored claws. This is not true of the grizzly.

The black bear received its name informally, as it were, from the early settlers of New England, where the overwhelming majority of the species happened to be black and where, by dint of saying, "I saw a black bear in the woods this afternoon", people came to refer to the animal as the black bear. Later on the name was sanctioned by scientific baptism and the animal became officially known as the American Black Bear. The designation, however, as we have seen, is by no means universally descriptive. In the east, and in the middle west, an occasional brown specimen is met with, but when the Rocky Mountain region is reached there is a bewildering variation in the coloring of the species. The majority of the breed are still black, but at least a quarter and perhaps a third of the specimens show a different coloration. Of these probably the seal-brown are the most numerous; but there are black bears of every conceivable shade, from a light cream color, through the yellow browns, to a jet glossy black never seen in the east. Occasionally albino black bears have been killed and it is believed that the Inland White Bear may have originated from such albino or partly albino black bears.

What may be the life span of the black bear in their free state it is hard to say. They do not arrive at full maturity or growth until their sixth or seventh year, and they probably live well beyond the twenty-five year mark. They are hibernating animals which means that in most, if not in all parts of their widely distributed range, they pass a portion of the year asleep and without food or drink, in a den or some sort of make-shift shelter.

Black bear cubs are born in the winter den of the mother some time between the latter half of January and the middle of March, depending upon the latitude as well as the altitude of the den. The farther north a bear happens to live, the later the spring sets in and so the later the animal comes out of its retirement. And the cubs are born from six to eight weeks before the mother comes out.

The little bears, when first born, are absurdly small and helpless; their eyes are shut and do not open for some time. They have no teeth and are almost naked, and although the mother may weigh as much as four hundred pounds or more, the whole litter of cubs does not weigh over a couple of pounds and single cubs vary from eight to eighteen ounces each according to the number in the litter. A black bear will have all the way from one to four cubs at a time, and four is not at all uncommon; three seems to be the common number throughout the Rocky Mountain region. Of course, meeting a black bear in the woods with only one cub, even in the early spring, does not definitely prove that she only gave birth to one; because the others might have died or have been killed. But, records of black bears in captivity show that single cubs are not unknown. For some time after the young are born, the family continues shut up in the winter den and the young are nursed for six to seven months.

Another point on which there is much popular misconception and disbelief is the extreme smallness of bear cubs at birth. This, at first glance, is not only astonishing, but to many people seems almost incredible. "How is it possible" they ask, "and why is it advantageous for an animal as large as a bear to have young so small? Why the puppies of a forty-pound dog are as large as the cubs of the four hundred pound bear?" Yet the fact remains, and in the case of the grizzly, where the mother sometimes weighs twice as much as the black bear mother, the cubs are, if anything, a trifle smaller at birth on the average. I have never heard the matter explained, but it seems to me that when we consider the yearly habits of the bear they tend to suggest how this peculiar race-habit has developed. A dog mother with three or four puppies, weighing six or eight ounces at birth, will eat three huge meals a day and grow thin as a rail nursing her hungry youngsters. What, then, would become of a bear mother who had to nurse three or four cubs for six weeks or two months, with never a meal at all, if the cubs were born weighing five or six pounds? It looks very much as though nature, with her usual skill at making both ends meet, had so arranged matters in the bear family that, as these animals developed the hibernating habit, the

size of the cubs was reduced in proportion to the reduced ability of the mother to nourish them. And that three or four eight-ounce cubs do not make any undue demands on the resources of a three-hundred or four-hundred pound mother is proved by the fact that both she and they are normally in excellent condition when they first come out in the spring.

There is a widespread notion that bears are given to traveling in company; that they are sociable animals, and that bear families, father, mother, and children, are not only to be met with in the woods, but den up together for the winter. This is not true. Only mother and cubs or occasionally half-grown cubs of one litter ever travel together. I have never heard from any reliable source, that grown bears, male and female, ever travel in couples, even in the mating season; nor where full grown bears denned up together.

While not much of a traveler, the black bear will wander over a fairly wide range in search of various foods in their season; yet, broadly speaking, is pretty apt to live and die in the general neighborhood of its birth. They wander both day and night, although when they are in a region where grizzlies are also found they are careful to disappear about the time that the latter, which are much more nocturnal in their habits, may be expected to come out. When a black bear has young cubs, she will stay for a week or two at a time in one place, and will scratch a bed or nest among the leaves or in a thicket and lie up there between feeds with the youngsters.

As the cubs grow larger and stronger the mother wanders farther afield with them, and, from sacrificing all her time and desires to their needs and safety, comes gradually first to tolerate, and toward the end of the season rather to resent, their persistent demands upon her. For, like other animals, a bear, while showing the most devoted and courageous love for her children while they are helpless has a very short-lived affection for them once they cease to need her protection.

An old bear hunter and naturalist writes that "Neither the black bear nor the grizzly is really a sociable animal, but black bear occasionally play together, which grizzlies never seem to do. Under ordinary circumstances, however, black bears have a funny trick of pretending not to see each other when they meet. If one of them comes into a marshy meadow or a small open glade in the woods where one or two others are already feeding, he will make the most laughable pretense of not seeing them. He will stop at the edge of the opening and go through all the motions of examining the country,

carefully looking, however, everywhere but in the direction of the other bears; all of which is vastly amusing to one familiar with the keenness of his senses and the alertness of his attention, and the practical impossibility of getting within seeing or hearing distance of him without his knowing it. Meanwhile the bears already on the ground play their part in the comedy with all the good will in the world. They have undoubtedly been aware of the approach of the newcomer long before any human watcher of the scene could have suspected it, but they give no outward sign of being aware of the new arrival. If, however, the intruder had happened to be a grizzly, they would undoubtedly have taken to their heels or taken refuge in the nearest tree with loud puffings and snortings some minutes before he reached the scene. Yet these same bears, once they have fed their fill, will frequently go to playing together as one never sees the grizzlies do. Two of them will stand up and wrestle, roll each other over and over, chase each other about, and generally have a fine romp. As a rule, however, this sort of play takes place between bears of different sizes, and the smaller one sometimes gets well thrown about and mauled.

The black bear's habits of hibernation are less rigid and apparently less developed than the grizzly's. To begin with, they are far less industrious in providing themselves with a den, and less particular in having it weather-proof and well concealed. The grizzly habitually finds some natural cave or shelter in the rocks, high up in the mountains, often above the snow line. This he prepares for occupancy by raking into it whatever he can find in the way of leaves or dried grasses, and sometimes stops up with earth and stones such holes or openings as would expose the interior to the weather. The black bear is far less particular. Any old place that offers him some fair promise of protection and privacy seems good enough for him. He dens up at much lower altitudes, goes into winter quarters later and comes out much earlier. One of his favorite stunts is to dig a hole under the butt end of a fallen tree, rake a few leaves into the opening and then crawl in himself. Sometimes when the tree is a good-sized one and the roots hold the butt a little clear of the ground he is saved the entire trouble of digging and makes a sort of nest in the space beneath the trunk. At other times, he will dig a hole in the soft ground and, of course, occasionally uses caves or other natural retreats if he happens to find them handy. The time for denning up varies with the locality and weather and throughout the northwest is anywhere from November 1st to January 1st.

There has been much scientific discussion as to the nature of this long sleep, and also much popular misconception in regard to its outward manifestations.

Perhaps most people seem to think that a bear that has denned up for the winter is in some mysterious, and more or less complete state of coma; that its breathing is all but suspended, and that it would be difficult, even by violence, to rouse it. They are very far from the truth. Bears sleep, but are easily roused, quick to scent danger, and ready to abandon their retreat and look up a new one if they think it necessary.

Since they lay up no store of provisions, it is known that the bear does not eat during its long retirement, and although, in the north, it would be possible for it to provide itself with water by eating the snow that shuts it in, it is known that bears hibernating in captivity (a thing that seldom occurs) neither eat nor drink. An odd fact about the whole proceeding is that all bears of the same class in the same locality go into winter quarters and emerge from them within a few days of each other.

During this hibernation the cubs are born. Some authorities believe that the grizzly bear breeds every year; this is true of the black bear but, one authority says, "I am inclined to believe that the grizzly bear breeds every two years. The black bear takes care of the young for the first season only and will wean them before going into winter quarters while the grizzly mother will den up and hibernate with her cubs."

Probably the explanation of this very striking difference of habit between the black and grizzly bears in the matter of breeding annually or biennially, is to be found in their different degrees of fierceness, and in the resulting fact that the black bear cubs are not so long in danger from the evil tempers and blood-thirsty dispositions of the grown males of their kind.

A new born cub of either species would be instantly killed, and probably eaten, by any old male that got the opportunity; and, unnatural as this seems to us, it is true of any or most carnivorous, or partly carnivorous, animal.

While the black bear mother shows no great concern for the safety of her cubs after they have reached the age of five or six months, the grizzly mother continues, with good reason, to evade or resent the approach of other members of her tribe till well into the second year. A famous hunter and naturalist, says regarding this: "I have on two different occasions known of a male grizzly killing and

eating a cub that had been left fastened by a chain near a camp; and in one instance I came upon a grizzly that had just killed a female and had eaten her two cubs. She had been caught in a steel trap set by a trapper, and her two cubs were with her. The male, finding her in this predicament, had doubtless attacked the cubs, and when, hampered as she was by the trap and clog, she had attempted to defend them, he had killed her too."

A female grizzly with young is one of the most dangerous animals in the world. She will allow no other bear of either sex to approach either her or them, and this invariable attitude of her fully accounts, to my mind, for her failure to breed while the young are still with her. But the black bear mother is not only a comparatively inoffensive animal at all times, but she seems to have no such lasting distrust of other members of her own species.

The black bear is described as omniverous. Literally, that means that he eats everything; and this comes pretty near to being literally true for he has democratic tastes, a magnificent appetite, and nothing much to do between meals. Technically, however, the term means that the black bear is both carnivorous and herbivorous; that he eats flesh like a wolf, grass like an ox, fish like an otter, bugs like a hen, and berries like a bird. In short he eats pretty much everything he can get, and pretty generally all he can get of it.

One would naturally imagine that so thorough-going a feeder would emerge from his long and complete winter fast terribly hungry and ready for a hearty breakfast. But this is not so. Indeed, when we stop to think of it, we can see that even a bear's cast-iron constitution and digestive apparatus would hardly stand such treatment. Examination of the stomach and intestines of a bear killed just as it came out in the spring, not only found them entirely empty but also flattened from disuse. These organs, have, therefore, to be treated with some consideration and coaxed back gradually to the performance of their accustomed functions. Shipwrecked sailors, rescued at the point of starvation, have to be forced by their friends to go slowly until their stomachs again get the habit of digestion; and while bears have no friends to do them a like service, they have practiced long fasting for so many generations that they have developed instincts that serve the purpose.

When they first come out of the winter's den they wander around for a day or so showing little or no inclination for food. Then they make their way down to where the snow is gone and the early vegetation has begun to sprout, and eat sparingly of the tender grass

shoots. But their appetites are not long in returning. By the end of a week the old saying, "hungry as a bear", is more than justified and they begin in earnest to make up for lost time. At this season they are especially fond of the parsnip-like roots of the skunk cabbage. The grizzlies work for their food like industrious men. The black bear will work hard at any kind of mischief, but seems to hate to work steadily for business purposes. The grizzly will dig for hours and heap out cart-loads of earth and rock to get at a nest of marmots or ground-squirrels. The black bear may show an interest in a marmot burrow and do a little half-hearted scratching near the entrance, but never digs deep or long for them. They kill nothing larger, in the way of small game, than field mice, gophers, etc., and are very fond of young pigs. They will turn over stumps and roll logs aside to catch an escaping mouse and will capture it before it goes a yard.

Frogs and toads are a favorite delicacy of theirs and they spend much time in looking for them. They will walk along the edge of small streams and pin down a jumping frog with their lightning-quick paws.

Practically nothing in the insect line is over-looked by them. They are everlastingly poking and pulling at rotten logs, old stumps, loose stones, and decayed trees, looking for caterpillars, squash bugs, grubs, centipedes, and larvae. Their sense of smell is wonderfully acute and one can hear them sniffing and snuffing over the punky mass of an old tree trunk they have ripped open, searching with their noses for crawling goodies.

Like all bears they are extravagantly fond of ants, and they are not only experts in finding them, but know how to take advantage of the habits of the various kinds in order to catch them. Their greatest feasts in this line are obtained when they discover the huge low hills of what, in the west, are called vinegar ants. These are only moderate in size but are extremely vicious. They get their name from a strong odor, resembling that of vinegar, that they exhale when aroused. They build large hills, sometimes several feet in diameter, made up for the most part of pine needles, bits of wood, pellets of earth, and such like stuff. They are red and black in color, have powerful jaws, and rush by the thousands to give battle to any intruder that disturbs their home. It is this latter trait that makes them an easy prey to the black bear. When he discovers an ant hill belonging to this species he runs up to it, puts one of his fore-legs deep down into the inside of it, gives a turn to his paw that

effectually stirs things up below and then stretches himself out at ease to await results, with his front legs extended at the base of the hill.

Out rush the ants by companies, regiments and brigades; mad as hornets, brave as lions, smelling like a spoiled vinegar mill, and looking for trouble. They get it, almost immediately. They discover the bear's furry paws and, struggling and tumbling through the hair like angry and hurrying warriors in a jungle, they begin to swarm over them. And as fast as they come the bear licks them up. When the excitement dies down, he gives the inside of the hill another poke. This results in another sortie of defenders, and when these have stormed the hairy heights and been eaten for their pains, he repeats the operation. A bear would eat a solid bushel of these insects at a sitting. On the other hand, a bear will by no means despise a single ant.

Bugs, bees, ants and mice are the luxuries and desserts of the black bear's diet. He is, for the most part a vegetarian, does far more grazing than is ordinarily supposed, and has his real season of plenty and stuffing when the berry season arrives. He is also very fond of fish but here again shows himself less clever and less industrious than the grizzly, who is an expert fisherman.

There is one feeding habit of the black bear that is said to be universally typical. They never store up their food. The grizzlies will bury the food they cannot eat for future use. They will also drag away and bury or hide the carcass of any animal they have found and will return to feed on it until it is all consumed. Or they will carefully cover it where it lies with earth, leaves and branches to prevent other animals from finding it in their absence. The black bear does not look so far ahead. He will carry away a few pounds of meat or bones in his mouth, but beyond that appears to take no thought for the morrow. When he has satisfied his appetite on a carcass he will leave it there and as he found it."

The Importance of the Bear in the Fur Trade

The raising of bears for profit will probably never become a popular industry, but there is no doubt but that it could be made profitable to anyone located in the western country with an ideal stretch of ground for the purpose. Bears will become very tame as is evidenced by the fact that Yellowstone Park is full of them, and where they are protected will increase very rapidly. There is a constant demand for them by Zoological gardens, circuses, etc., and in addition to

this the fur of the yearling bear is in demand for furriers' purposes and the larger pelts are made into rugs and robes. The bear also has a food value and bear steaks are considered a great delicacy by many. The writer does not know of any black bear ranch but is inclined to believe that one could be started and maintained probably easier than a fox ranch and could be made profitable. If any of the blue fox farmers of Alaska should decide to set aside one of their small islands for the raising of bear, the writer would be very glad to hear of it, or if any ranchers of the northwest should set aside a piece of ground and undertake the raising of them the writer would like to get the results of their experience for the benefit of others who might be interested. There is no doubt but that it would prove a profitable venture. There are many pieces of ground in the northwestern United States and Canada that would be ideally adapted for this purpose.

The writer on one of his trips down the Yukon River was told by an Esquimeaux chief who was a great hunter that he had known of cases where mosquitoes would kill a bear. The mosquitoes along the Yukon River are very vicious and as soon as the ice goes out of the river they will attack any living creature along the bank with vim and vigor. It seems that when the black bear comes out of his winter home he is weak and hungry and when prowling along the river bank in search of dainty morsels will be attacked by the mosquitoes. They cannot of course hurt him through his heavy coat of fur and his hide is too thick for the mosquitoes to have any terror for him. But the mosquitoes are also hungry and are just as anxious for food as the bear and they finally light on his eyelids. They attack the bear in swarms and he will fight them off with his paws but after a while he is worn out with the struggle and weak with the constant effort of fighting them off and will fall down from exhaustion, and oftentimes dies. As soon as he gives up the mosquitoes sting his eyes out.

The bear skin is of comparatively little importance in the fur trade, and most of the black bear skins find their way to the London market where they are largely used for the tall hats worn by the soldiers of the royal regiments. Bears are usually hunted by sportsmen and shot with the rifle, and a number are also taken by the trapper; but the trapper much prefers to devote his time and energy to more profitable pelts, as the pelts of the black bear will not justify the labor and trouble of taking them. A fine marten skin is much more valuable than a large bear skin, and even a fine mink will bring

more than a poor bear, so that the professional trapper who makes his living on the trap line as a rule does not bother with bear. The pelts of the bear found in the cane breaks are of little or no value for furriers' purposes, and are only suitable for mounting. As this is rather expensive the bear of the southern states is not hunted for its fur and it is rarely that a bear skin from this section is sent to market.



BLACK BEAR

How to Trap Bear

The following methods have been used by prize winning trappers who have had long experience and successful catches for a number of years on the trap line and will be of much value to both professionals and amateurs.

"I go in a rough canyon at a place where a side gulch comes in where bear travel, then hang half a sackful of partly-damaged apples on a tree or large rock, then build a V-shaped pen in front of the tree, build it higher than the bait hangs and right next to the bait. This I hang four feet high. I smear some honey on the outside of sack, and set my trap, well covered, about three and one-half feet from the tree, in the entrance of the pen. I clean the trap and rub it with sage brush, also sprinkle sage brush leaves over it before cov-

ering. Sometimes I use a large chunk of meat for bait, but prefer the apples, as Mr. Bruin is very fond of fruit and honey, and he can smell the apples a long ways off; then he will pay them a visit and be caught. I have caught many that way. Try it."

W. M. HAMMER.

"Find a hollow log with a hole in it of about eight inches. Cut a piece of it about eight feet long, take it to where you know bears travel, or where they come to drink. Place the log on a clear place. If you have lots of traps put a No. 5 at each end of the log; make a hole the depth of trap in ground, cover well with old leaves, grass or loose black earth. Never make trap fast. Clog it with a short pole that will weigh sixty or eighty pounds. For bait, get a sheep's head or some other meat such as you can procure, put it in a pan and roast it briskly for five or eight minutes over a hot fire or in a hot oven. Take it out, put the size of a large hen's egg of bee's comb, honey and all, and a half can of salmon over the bait, and put it back to roast for five minutes more, then take the bait and put on some Funsten Animal Bait for Bear over it, put cord on bait, trail it in circles 100 yards in every direction around trap, put the bait in the center of the hollow log, go away, and if two bears come along you will have them both, as bears can not leave an attraction like that."

JOHN BROWN.

"The following methods are the ones I used in trapping bear in the eastern provinces, by setting your traps in the water and on the hills in the spring of the year, and in setting on the beech ridges in the fall season.

To Set in the Water in the Spring—In the spring, when the bear comes out of his den he has a habit of traveling along the shores of streams, especially those streams that have fish in them. Locate a place where the water is smooth and where the bear, in traveling along the stream, is likely to pass. Set your trap in the edge of the water, so it is covered by about three or four inches of water. Cover it well with moss. Turn the springs of the trap well around.

Fasten the bait well to a stake and drive it out into the water about three feet beyond the trap, so that the bait will be above the water. For bait use bacon rind, fish (fresh or dried), dried or fresh fruit. Also use some scent. Beaver castor I have found very successful. I have known bear to be trapped where nothing was used for bait but a small piece of beaver castor. Before you have set your trap, as described, build an enclosure around your bait, ex-

cepting the side facing your trap. Also build the same around or on each side of your trap. For this use dry bush, such as balsam, hemlock or spruce tops. Don't put any old logs around, as the bear will be sure to climb upon them to get the bait. The bear seems to have a horror of dry brush. It is because it becomes entangled in his long fur. Cover the trap with a thick coat of moss, stick a few ferns in on top of the moss, so it will appear like a stone. Fasten the trap to a pole about twelve or fifteen feet long and large enough so the ring of the chain fits over it at the butt end. Fasten the ring of the chain to the pole by driving a wedge in the pole after you have slipped the ring over it.

Bear have what trappers call a "biting tree" at some particular point beside a stream or on the bank of a lake. They will have a small tree, balsam, spruce or tamarack, and every bear that passes it in the spring of the year will stop, get up on their hind legs and bite the tree up as far as they can reach. Close to such trees is a good place to set for bear, as they are generally looking around for something at such places. At these places it is best to set your traps beside a tree. Select a tree that has a hog's back running up to the foot of the tree; sink your trap in the ground so that it is level with the surface and when set, cover it well with moss and leaves; pile up old dry brush, on the back side of the tree and on each side of the trap. Fasten your trap as described for setting in the water. Use a No. 5 Newhouse Trap. Look at your bear traps about once a week. Don't allow your bait to get old or foul-smelling, as a bear likes his feed fresh. In the spring the green feed will commence to grow on the hills before it does in the valleys, and the bear will go to hills for this green feed. Locate a place where the hill is narrow, and set your trap as described in setting beside a tree.

The most successful method that I have used in trapping bear, is setting on the beech ridges in the fall of the year. The bear is very fond of beech nuts, and in a country where there are plenty of beech nuts on the beech ridges is where you will find the bear as soon as the nuts are ripe. Set your trap the same as described in the two previous methods, only use fresh fruit for bait, such as crab apples, or most any sort of fresh fruit; also use scent."

P. B. AUSTIN.

How to Prepare Bear for Market

Bear skins should always be taken off open and the head, feet, and legs should be left on. In taking off skins that are to be used

for mounting purposes do not leave the bones in the feet, or the bone in the skull. Take the skin off from around the feet very carefully and cut away all of the superfluous meat and fat from around the head. Then see that the skin is thoroughly and carefully dried before packing it for shipment. Do not use any preservatives in drying the pelt or chemicals of any kind, as they are liable to interfere with the dressing of the skin and spoil it for the taxidermist.

CHAPTER XVIII

WOLF

The wolf is found throughout the United States and Canada. In the West and Southwest they are commonly called coyotes. The coyote is smaller than the Northern wolf in size and its fur is not so valuable.

In recent years the pelt of the wolf has been taken up by the furriers; the soft silky skins are much sought after and are dyed and used as trimming on coats and dresses. As the fur is a natural light gray in color it lends itself very nicely to the different shades of dye. The flat coarse kind are not suitable for furriers' use but are made up into automobile robes, etc. The largest wolf are found in Alaska and the northern part of Canada. The finest wolf in quality of fur come from northwestern Canada and northwestern United States.

Constant warfare is made on the wolf and there is no game law to protect him. The wolf is a constant source of trouble to the western ranchmen and especially the sheep herders, and for this reason they are hunted at all times of the year and by every known method. One of the most common methods is to spread strychnine pills, which does little harm to the wolf, but immeasurable harm to other furbearing animals and live stock as well. The wolf is very cunning and one of the most intelligent of the wild animals. He is suspicious of all artificial foods, that is to say food that he does not catch and kill himself. It is only when he is desperately hungry that he will eat nicely prepared morsels which he seems to know are loaded.

The policy of using strychnine and other poisons should be discontinued because it is evident that few wolf are taken by this method, and great harm is done by setting out these poisoned baits. The writer holds no brief for the wolf. As a general rule it deserves to be killed on sight, because the wolf himself is a killer. For this reason most states have offered bounties for every wolf killed and in some sections where wolf are notoriously bad these bounties run very high. On account of the bounty and the high price of the wolf pelts, professional trappers as well as amateurs devote a great deal of time and attention to trapping wolf, and the

large number of pelts taken annually would indicate that they have been very successful.

The lobo wolf is usually the leader of the pack, grows to a great size, is a terrible killer, is crafty, smart, and very hard to trap. Forest Rangers are employed by the United States Government to trap wolf, especially to take the big lobo wolf in sections where they do great damage to live stock. Mr. Wm. M. Anderson, Forest Supervisor of the Ashley National Park, has been very successful in the catching of these big wolves, as well as Mr. Walter Fry, Ranger in charge of Sequoia and General Grant National Parks. Both of these men use and recommend Funsten Wolf Bait.

In the stock country food baits do not appeal to the wolf very strongly, and he is more or less suspicious of animals that are killed and prepared for him. He much prefers to do his own killing, and for this reason the big lobo wolf is very hard to coax into a steel trap. About the only way they are brought to the trap is with the use of prepared scent baits.

As a rule the wolf is a coward, but if he is forced into it he will put up a hard fight and is a dangerous opponent. Much has been written about packs of wolves attacking a man or a lone wanderer, but there are few, if any, authentic cases of this on record. The wolf is deadly afraid of man and will only attack a man when he has fallen down, weak, helpless, and exhausted, and even then the wolf would have to be starving and pressed pretty hard before he would do so. However, they will attack most any sort of an animal, and as they usually hunt in packs they can do great damage.

The Forest Service has waged war on the western wolf and large numbers of them have been captured in and around the forest reserves. In addition to the Forest Rangers the Government has employed professional trappers for this work and some of the wiliest, craftiest old wolves have been taken by these experienced men.

The wolf that roam the plains of Texas and parts of New Mexico are smaller in size than the Western wolf and the fur is coarser, in fact on some of them the fur is almost hair and is very brittle. So far as the value of the wolf pelt is concerned for furriers' purposes, the color of the wolf does not make any material difference. Practically all wolf that are used for furriers' purposes are dyed; therefore the natural color, whether it be a light gray or a silvery gray is not considered in valuing the pelt. The Southwestern coyote is even more greedy and bloodthirsty than his brother of the farther North, and if anything they are more sneaking and cowardly. They

will run down deer and hamstring the victims, and take especial delight in killing the young fawn. Their howl has a shrill piercing note, and all together the southwestern coyote is rather a mean low down creature.

In some sections of the west the cattlemen and sheepmen pay trappers salaries to trap the coyote, and to especially direct their attention against some one bad offender. Often a lone wolf will terrorize an entire county, and show wonderful intelligence in avoiding every trap and snare that can be set for him. These renegade wolf do great harm, and often stockmen become desperate and offer big prices for their capture.

Wolf are rather prolific and have from five to twelve in a litter. They are hardy, tough creatures, and soon grow up and are able to take care of themselves after they are several months old. The Department of Agriculture says that the actual number of cattle killed by wolves can not be determined. Comparatively few animals are found by cattle men and hunters when freshly killed, with wolf tracks around them and wolf marks on them. Not all of the adult cattlemisssing from the herd can with certainty be charged to the depredations of wolves, for missing calves may have been taken by dogs, wolves, mountain lions, or by *cattle rustlers*. But enough data has been secured to convince the men who have investigated the matter thoroughly that considerable live stock is killed by wolves.

In a great many sections of the West bounties are paid for wolf scalps, and oftentimes the state, county, and local cattle organizations will pay a separate bounty. It is stated that in one state alone \$160,000.00 was paid out over a period of ten years in bounties, but even with excessive bounty there is some question as to whether any headway has been made against the wolf.

Wolf skins are often badly damaged by cutting the heads off almost down to the shoulders in order to collect the bounty. This is a wasteful and absurd practice and should be discontinued. Other states require that both ears and a small piece of the scalp be turned in to collect the bounty, and this is a much more sensible plan as the cutting of the ears and a part of the scalp does not injure the fur itself, in fact there is not much damage, unless the wolf was an unusually fine specimen that could be used for mounting for museum work.

Often there is so much red tape in connection with the collection of the bounty that trappers do not bother about it, but trap merely to cash in the valuable pelts. In some states it is necessary to pre-

sent the entire skin to the county clerk and make an affidavit stating as to where, how, and when the wolf was killed and everything about it. Some of the bounties range up as high as twenty dollars on each wolf.



WOLF

There is no doubt but that some advantage has been taken of the bounty system, and probably the only safe way is to require the person collecting the bounty to present the whole skin and then have the county official remove the ears and a part of the scalp, in order that the same skin can not be presented the second time. A satisfactory way of marking the skin on which the bounty has been paid is to cut a slit four to six inches long between the ears. This does not injure the skin in any way, and prevents the possibility of collecting more than one bounty on the same skin. The Bureau of Biological Survey has prepared the following directions as an aid to the county and state officials in identifying the scalps, and skins of wolves, coyotes, the puppies of wolf, red, gray, and kit foxes, young bob cats, coons, and badgers. The variation in dogs is so great, no two being exactly alike in character, that there is no sure way that they can be distinguished from wolf and coyote, but when there is reason to suspect that dogs are being presented for bounty, their skins and skulls can be sent to the Bureau of Biological Survey for positive identification. The Department furnishes the following key to adult wolves and coyotes.

	Wolf	Coyote
Width of nose pad.....	1¼ to 1½ inches	¾ to 1 inch
Width of heel pad of front foot...	1½ to 2 inches	1 inch
Upper canine tooth greatest diameter at base.....	5/10 to 6/10 inches	3/10 to 4/10 in.

The Biological Survey furnishes the following key to Wolf, Coyote and Fox Pups.

Wolf Pups

Muzzle blackish at birth, fading in a month or six weeks to greyish.
 Head greyish in decided contrast to black of back, nose and ears.
 Ears black at tips, fading to greyish in a month or six weeks.
 Tail black, fading to grey with black tip.

Coyote Pups

Muzzle tawny, or yellowish brown, becoming more yellowish with age.

Head yellowish grey, not strongly contrasted with rest of body.
 Ears dark brown at tips and back, soon fading to yellowish brown.
 Tail black, fading to grey with black tip.

Red Fox Pups

Muzzle blackish.

Head dusky with side of face light yellowish.

Ears large, nearly the whole back of ears bright black at all ages.

Eyes and ears relatively larger and nose pad smaller than in coyote or wolf.

Tail dusky, tip white at all ages.

Grey Fox Pups

Muzzle blackish.

Head greyish, face back of eyes sharply pepper and salt grey.

Ears large, back of ears dusky at tip, fulvous at base.

Eyes and nose pad small.

Tail with tip black at all ages.

Kit Fox Pups

Muzzle with blackish patch on each side.

Head and face tawny or yellowish brown.

Ears tawny without black backs or tips.

Eyes larger and nose pad smaller than in young coyote.

Tail with tip black at all ages.

Key to Young Cats, Coons and Badgers

Young bobcats are much striped and spotted. Young cats of any kind can be distinguished by the short nose and round head.

Young coons have a broad black band across the face and eyes bordered above by a light band.

Young badgers have a white stripe between the eyes.

The big bounties offered by some states have no doubt added incentive to trappers, but is doubtful whether it has done any real good, considering the amount of money expended for this purpose. It results in inexperienced and amateur hunters setting out all sorts of poisoned baits to get the wolf scalp, and according to well informed experienced ranchmen does more harm than good.

Wolf is one of the few furbearing animals that no one has attempted to conserve and there are no fur farms devoted exclusively to the raising of wolf for fur purposes. The wolf pelt is one of the most valuable fur pelts that we have and thousands of them are used annually and thousands are wasted because of the poisoning method of killing. The fur is very popular for trimming both in this country and abroad; but because the wolf is such a destructive animal it seems to be the general policy of every one to kill and exterminate him. Wolf are hunted constantly year in and year out.

Some states have even gone so far as to pass laws against the raising of wolf and have declared war to the death against them. The time will come no doubt when wolf will be a scarce article and something else will have to be found to take the place of wolf fur in the markets of the world. This is another reason why the farmer boy and the lad in the country should be taught early to become interested in the smaller furbearing animals and to conserve them and raise them, because the coon, the mink, the skunk, the opossum, and the muskrat, will always be wanted and will become more valuable as time goes on.

For years dogs have been used to run down wolves, and wolf chasing is a very exciting sport. The Russian wolf hound is a past master of this art. The Irish wolf hound and the ground hound, and many other classes of dogs have been trained for generations to run down and kill the wolf. The wolf is a fast runner and it takes a speedy dog to catch and hold him. A well balanced pack usually has several grey hounds in it, which can outrun the other dogs. The grey hound and the wolf hound are about the only dogs that can outrun the wolf on a dead straight away, and even then they have to be mighty good dogs to do it. The balance of the pack are usually

sturdy game fighters, and the airedale makes a wonderful dog for this purpose. They are never far behind the grey hounds and usually arrive in time to put the finishing touches to the wolf.

For a while setting out poisoned baits to kill the wolf was a very common practice, but the results have been such that it is now being discontinued and should be discontinued entirely. It simply serves to pollute the country, and as strychnine is the poison used it is very dangerous. Pelts that are taken by the poison method are not desirable. The wolf that is poisoned will often be able to travel far enough from the place where it took the bait to get into some out of the way place and die. Very often it is some fine dog that gets the bait instead of the wolf. Often the bait containing the strychnine will get kicked around and cattle and sheep will graze over the spot and die from the effects of the poison. Birds will eat the poison bait and fly off and die. Fine furbearers such as skunk, marten, mink, etc., will get killed by nibbling at the poisoned bait that is set out for wolf and the wolf goes merrily on. Trappers should absolutely make it a hard and fast rule never to use poison in any shape or form.

As stated before, the wolf of the Western United States has plenty of food available and experience has taught him to fight shy of food baits that have been prepared for him, and for this reason it is very difficult to trap the wolf and depend on food baits alone to attract him to the trap. Experienced trappers such as the United States Forest Rangers depend on scent baits, such as Funsten Animal Bait, which is highly recommended for this work. This bait has been on the market for more than twenty years, was awarded the grand prize, highest award, at the World's Fair in St. Louis, 1904, and has been used by wolf trappers throughout the United States, Canada, Alaska, and Siberia. It will attract the wolf where you want him no matter how old and crafty he may be.

The No. 4½ Newhouse Trap is recommended for wolf trappers. It has large powerful jaws with a spread of about eight inches and is furnished with a strong two pronged drag and a heavy steel chain. Once the wolf is caught in this trap he is there to stay, and there is no chance for him to pull out and get away.

The No. 4½ is used where the wolf are very large and powerful. The most popular sizes for wolf trapping are the No. 4 and the No. 3. These are lighter traps, but will hold equally as well as the No. 4½. The nature of the drag depends a good deal of course on the character of the trapping ground. A heavy stone or a chunk of wood will make a very satisfactory drag, and it should be remembered

that the idea of the drag is to delay the progress of the wolf, and should be arranged so that he will not get hung up and get a dead pull and be able to break off and get away.

It is advisable in trapping for wolf to cover the trap and chain as well as the drag. This can be done by placing a thin sheet of clean paper over the jaws and pan of the trap, so that the dirt you use for covering will not get under the pan of the trap and prevent it from springing. See that the hole containing the trap is covered over and that the surroundings look as natural as before the digging was done. A little cotton under the pan of the trap will prevent it from freezing ever so slightly, because to trap the wolf the spring must work fast or he will step out and get away. Some traps have a small hole in the pan, or a small hole is drilled through the pan, and a sliver of wood about the size of a toothpick is forced through it so as to hold the pan stiff enough to prevent a small mouse or some other small animal from running over it and tripping the pan.

Some trappers recommend wearing gloves in the setting of traps to prevent the human odor from being around the trap, but we do not believe that this is advisable since the gloves will carry the human odor as well as the hands. It is advisable to handle traps as little as possible, and for this reason we recommend the Wonder Trap Setter, for with this device the trapper can set the trap without touching it with the bare hands at all.

United States Rangers after exhaustive tests say this about wolf trapping, "Success in trapping wolves depends largely on the use of scents that will attract the wolf to the neighborhood of the trap and keep them tramping and pawing around until caught. Meat bait alone is of little use, for as a rule the wolf kills ample food for himself."

If you succeed in catching a wolf you can reasonably expect to catch others at the same spot, as they will be attracted to the spot by the odor of the other wolf, and they can not resist prowling around it to find out what happened. One trapper reports having caught nine wolves at the same spot, due to the fact that the other wolves were attracted there by the odors left by the previous captives. After you have used scent to attract wolf to a certain spot, it is not advisable to use more scent, but depend on the natural odor left by the first wolf to attract others.

If you can find a runway or travelled trail of a pack of wolves, you can set your traps in this trail and have reasonable assurance that they will come that way again. The wolf is pretty much a creature of habit and will go back and forth over the same trail even at long

intervals. The methods for setting traps and placing the Funsten Animal Bait differ according to the locality, the seasons of the year, conditions of snows, etc. The following methods have been found successful, and are written by men who have had long experience in trapping wolves. All of these men are prize winning trappers.

Winner of First Prize for Trapping Wolf

“Any method used in trapping must be governed by surrounding conditions, to be successful; if using a bait to attract the animal, it should be placed where traps can be covered with some substance that Nature has provided, as sand, decayed wood, leaves, manure or snow.

Before setting traps, special care should be taken to destroy all human scent, and the scent of steel as much as possible, dipping traps in melted beeswax being a very good method, or burrowing in manure or sage leaves. Boiling in strong sage tea will kill the scent, but each different method should be used when traps are to be covered with something of corresponding odor. I sometimes kill and use an old horse or cow for bait.

In using a horse or cow for a bait, it will be found best to let the wolves start to eating before placing traps around, and when possible set traps during a snowstorm, so that traps may be snowed over evenly, and if it is still storming when wolves call around, they will very seldom suspicion any danger. Do not be in a hurry: “Haste makes waste,” but choose proper weather for setting traps. If trapping on snow, use cold, stormy weather. If in summer, the weather does not cut so much figure. In setting traps, place sheep’s wool or cotton under pan of trap, to prevent anything from getting under. If snow is not to be had, use manure from stomach of animal, if possible. Do not try to trap the wolf in soft winter weather, but take your traps away from the bait. Do not place too many traps around one bait. Three, usually, is sufficient; two close to spot that wolf has been working on, and one six or seven feet away. A clog may be used on traps to advantage, in place of staking trap tight, on account of the animal taking the trap away from the bait without disturbing the ground, as it would do if staked solid. Yet there is considerable danger of losing game and traps in storms, as the foot of the animal will come off in two or three days, if in a trap, whether the trap is staked solid or simply hanging to the foot. A very heavy weight may be used, so that the animal will not be able to drag it but a short distance, a rock being an ideal weight, as it

is small and heavy; or else a piece of wood may be substituted, in place of rock. Never use iron weight, as wolves are very skeptical of the scent of iron, but not of rocks. A good and neat way of attaching trap to the rock is to drill a hole in a rock of proper size, placing iron eye in hole and pour hot babbitt metal around it. When trap is set, turn eye under, and no suspicion will be aroused at the presence of the rock.

If traps are to be covered with snow, use a piece of hardcrusted snow to level fine snow over traps, as there will be no scent left, as if some other article were used, and if sand is used to cover traps, use a flat rock. At all times handle traps with gloves that are used for nothing else but that purpose, keeping them well-rubbed in palms with beeswax.

If using a small bait of any kind, it should be securely fastened, so that it can not be dragged away from traps.

The wolf may be readily trapped from badger mounds by placing traps on mound and bait in hole, a badger or skunk being preferable to almost any other kind of bait; but if that can not be had, use some other in connection with a good decoy, such as Funsten Animal Bait, which will be found very useful in attracting the game to the hole. Traps should be placed with deep enough cover to prevent ground squirrels from springing traps, sage brush being a very desirable place to place bait, as the strong odor of the sage will kill all human scent, and scent of the steel; besides, the leaves may be used to cover the traps, which is the best covering that can be had.

If a tame Wolf can be had, it can be used with great success by chaining it near your bait, after setting traps and covering properly, first placing blocks under pan of trap, so that tame wolf may not spring them. After wolf has been left to walk and roll over traps all day, it may be removed in the evening and blocks taken from under pans of traps, which will require but little disturbance to be made to traps, if traps have been sunken below the surface of the ground; yet if trap should be exposed in any way, it should be recovered. Manure should be used for covering traps, as it will remain less compact than dirt."

O. S. McKEE.

Another Method for Trapping Wolf

"For fall trapping, locate all the long, narrow ridges along all streams; the higher and sharper the ridge the better. If too much brush, clear narrow path where necessary, and plow furrow along

ridge in summer. Cut and make brush fence up to path on each side in several places along ridge. Early in the fall scatter fine buckwheat chaff in path at each place where brush comes up to the path; also, when leaves fall, scatter them along the path. In this way the wolf gets used to the surroundings before you are ready to trap. He travels along these ridges looking for game. Have brush in place to fasten trap to, so there will be no new object to cause him to shy. Set traps in the path at all places desired. Set down level with surface, cover smoothly with fine chaff, having first rubbed your hands and trap well with green popple bark or willow buds. Look up all old paths or roads running through timber; fix and set here as on ridges.

The best time to trap them is in winter, with plenty of snow, and in snow paths made by riding horseback. Put a stone in sack and ride out to where you intend trapping, have rope to sack and drop down and let horse drag it. In this way you can make a fine path. Go along all ridges and through brush which rabbits use, stop where you want to make a set, pull drag up close to horse, and make sharp turn. This will cause the game to come to a walk, and he will not step over your trap. Extend your snow path across prairie from stream to stream. Now you have a path for them to follow, as well as the rabbits.

To set trap, pick out your place and dig out snow so trap will set level with surface. Lay a piece of white paper in bed to keep trap from freezing down. Use bark or willow buds, as before; cover over carefully with thin cotton, putting it in around pan and spring of trap. Set trap stiff enough so rabbit will not spring it. Pick up plenty of rabbit-dropping and place around trap. Set at all places where rabbits make road into patch. Now you are ready for every wolf that comes this way, as they will use your path in search of rabbits. I also recommend Funsten Animal Baits in setting traps for wolf. Rub a little under the pan of trap."

C. S. BREWER.

Wolf Trapping

"My way of trapping the wolf: Dig a hole in the ground to fit the trap along a cow patch, near a fence or stream, sprinkle a little dry dirt over trap, then burn a small bunch of hay over trap. Wolf will always dig into camp fire.

In the winter, dig hole in ground or snow, and cover trap with dry cow chips pulverized fine. Throw a little Funsten Bait up and

down the trail, and put a little fish oil, rendered, in a bottle in the sun over trap and campfire. Make everything look as natural as possible, clean up loose dirt or snow and carry it away."

L. F. WHITNEY.

CHAPTER XIX

ERMINE OR WHITE WEASEL

Ermine, or white weasel, is the smallest of all the North American furbearers, and is a vicious and blood-thirsty killer. It preys on rabbits and all kinds of small quadrupeds, birds, and reptiles. It is especially fond of young rabbits and is said to kill large quantities for the pure love of killing. It pursues its game with great determination and rarely allows it to escape. It is a great plunderer of birds' nests and its favorite method of attack is to catch the bird by the throat and suck its blood. On account of its small size and lightning-like quickness it is able to escape most of its enemies and it will fight a larger animal without any provocation.

Nature has been very kind to the weasel in giving it a beautiful white coat in the winter and a brown coat in the summer. The white weasel running along the snow in the winter time is almost invisible except for the black speck at the end of the tail. This really is an added advantage to the weasel for the reason that if it is pursued by a hawk, the bird will make a swoop for the black tip and usually miss the weasel's body in doing so. The tail of the weasel is fully one half as long as the body and the black tip is all that is visible when it is flying over the snow.

The fur of the ermine is snow white and very beautiful, and has long been prized by royalty for use on the royal robes. The Siberian weasel is a little larger and a bit heavier in fur than the American weasel. Some of our American weasel are just as large as the Russian ermine, and just as fine in quality, although on the average this is not true, the Russian ermine being the better so far as size and quality is concerned.

While the ermine is snow white in the Winter with the exception of the black tip at the end of the tail, it turns brown in the Summer, nature thus again aiding the animal in that it is very hard to distinguish it from its surroundings in its brown coat, where it would stand out very prominently if it were snow white. The fur of the brown coat is not as thick or as long as that of the white coat, and up until a few years ago the summer coat of the white weasel was considered of no value; but in recent years it has been made up into

beautiful garments and is known as "Summer Ermine". It is a light tan in shade and is very light in weight and matches beautifully with almost any other color.

It is said that at one time ermine fur was monopolized by the royal families and nobility, and that it was never used or worn by others. Today, however, it is very popular with Her Royal Highness, The American Woman, who uses it principally for evening wraps and opera capes. It is not much given to street wear, for one reason, on account of its white color; the principal reason probably being that ermine rather calls for diamonds and low-cut gowns.

The ermine, or white weasel, is found only in the Northern fringe of states along the Canadian border, in Canada, and Alaska, the finest native skins coming from Alaska. The Alaska white weasel compares very favorably with the Russian ermine in size and quality. However, the weasel is found in the central and southern states but it is brown and does not change its color like its northern brother. It evidently takes real bitter cold winter weather to cause the animal's coat to change color.

The weasel in some sections have sulphury-yellow spots on the fur, and some people believe that this is characteristic only of the genuine ermine and the finest skins, but this is not true. The skins that command the highest prices and are the most sought after are the pure snow white skins. In addition to this yellow tinge, white weasel are also found sprinkled with gray or brown hairs, where the transition from one color to another is not entirely complete. The skins which have grey or brown hairs sprinkled through them are not as valuable as the clear white skins. Weasel are also taken that are about one half brown and one half white, and present a very spotted appearance. These have little or no value for fur purposes.

In the olden days the kings and queens monopolized the fur of the ermine, and they still are used to adorn the state robes, the black spot of the tail being used as well as the white fur.

As stated before the finest ermine come from Russia, from the Tomsy, Yakutsky, and Janiseisky sections of Siberia, the ermine from the Barbizin section probably being the largest. At the Russian fairs the ermine was usually offered in what were known as timbres, a timbre consisting of a bundle of forty ermine skins.

The weasel has a sharp eye and a keen sense of smell, and for this reason is rather difficult to trap. Most trappers depend on artificial scent such as Funsten Animal Bait to assist them in trapping this blood-thirsty little furbearer.

The female will bring forth a litter of from four to eight young at a time and generally chooses a hollow tree, or a hollow log, or a hole in the rocks as a breeding place. It is said that if the young are in danger, the mother will carry them off cat fashion to a place of safety, is not afraid of any animal, and shows remarkable courage, and will defend her young with her life if necessary. The female weasel is devoted to her kittens. The parallel of the weasel can



ERMINE OR WHITE WEASEL

hardly be found among any of the larger animals. Most animals that secure a sufficient amount of food are satisfied to wait until their hunger again prompts them to go forth in search of food, but not so with the weasel or ermine. It will assail any of the smaller animals at any time and almost any place, on the ground, in the tree tops, and it is even said that it will attack a muskrat in the water. Its main desire is evidently to deliberately kill, and it is probably rightfully called the most blood-thirsty of any of the smaller carnivora.

How to Trap Weasel

For trapping weasel most trappers recommend the smallest size steel trap, the No. 0 or No. 1. The pan of the trap should be set very lightly as the weasel is lightning fast and its light weight will not spring the trap unless it is set very fine. Some trappers recommend the larger size or No. 1½ trap, as this usually kills instantly and does not damage the fur in any way.

The habits of the weasel are very similar to those of the mink and the same general rules for trapping mink will apply for the weasel. One should be familiar with their signs and tracks and wherever there is evidence of weasel playing around several traps should be set in a circle in order to make sure of catching them. Some trappers recommend killing a rabbit and making a trail of the blood to the trap and hanging the rabbit up over the point where traps are set around in a circle and sprinkling a few drops of Funsten Animal Bait for ermine over the ground. Hang the rabbit up high enough so that the weasel will have to leap to get to it and drag it down. This together with the suggestions on trapping mink will help the beginner, and the professional trapper will study the lay of the land in his section for weasel and set his traps accordingly.

How to Prepare for Market

In skinning ermine for market the pelt should be taken off cased with either the fur or the pelt side out, although it is best to have it with the pelt side out as this prevents the fur from becoming soiled in handling. As the pelt is light great care must be taken not to tear the skin. Stains of blood or other stains on the fur take away from its value and the fur should therefore be kept as white and clean as possible in the process of skinning. Stretch on a board of the correct size and shape, but be careful not to overstretch the skin. The skin dries very quickly and if hung in a cool dry place will be ready for shipment within two or three days.

CHAPTER XX

FISHER

The fisher is found principally in Canada, the finest specimens coming from Eastern Canada. Oregon, Washington, California, Montana, Idaho, and the fringe of states along the Canadian border is also the home of the fisher. The fisher is a beautiful fur, especially the smaller silkier skins. In addition to its beauty it is a splendid wearing fur, being much stronger in texture than the fox and the long guard hairs resemble the coon in thickness and strength. The fisher does not like civilization and is usually found in rather dense forests. It is very clever and on this account it is difficult for trappers to successfully catch them. The fisher skin when stretched and cased is about thirty inches long and from six and one half to seven inches wide. Its underfur is about one inch in depth, the long guard fur being about one and one half to two inches in length at the lower end of the body, the fur around the neck and shoulders, being shorter but growing longer down to the root of the tail. The tail is about two thirds of the length of the body and is about one and one half inches in diameter, and slopes gradually down to a point, being larger where it joins the body.

Boys, especially those living in the South, often catch large black house cats that have run wild and that have developed a rather heavy coat of fur, and invariably think they have caught a fisher; but there are no fisher found in the central and southern states, their home, as stated, being in Canada and the northernmost states of the Union.

The color of the fur varies, the finest specimens being a very dark deep rich brown on the lower half of the body and a little lighter in shade around the neck and shoulders. The very large fishers are oftentimes coarse and these skins are not as valuable as the smaller soft silky-furred ones. The fisher is one of the most powerful animals for its size that exists and is a game fighter and never gives up. It preys on rabbits and other small animals as well as birds, and will destroy any animal that it finds caught in a trap and like the weasel, is a killer.

There are a few fishers in captivity in zoological gardens, but they do not thrive very well where too closely penned up. Some

fox farmers in Canada have been very successful in the raising of fisher, and as the pelt of the fisher is very valuable, fine specimens being worth up to one hundred dollars, it should prove very profitable to raise them if one has an ideal location. Fishers are scarce in most sections and anyone undertaking to raise them will find a tremendous demand for live stock as well as a ready market at high prices for the pelts.



FISHER

How to Trap Fisher

In trapping for fisher it is necessary to use the very strongest steel traps, and the No. 1½ Newhouse Trap equipped with the Funsten Triple Grip Jaws is highly recommended as the most efficiently

rigged trap for the purpose. The high grip of the Triple Grip Jaw will hold him fast and prevent him from jerking or pulling out. The fisher is very powerful and unless securely caught will surely get away. Oldtimers use the deadfall for the purpose, building a pen and a runway of boughs leading up to it and placing a few drops of animal bait back under the deadfall which Mr. Fisher will try to get. The deadfall is very effective for the experienced man who can carefully plan and build it, as it usually kills the animal instantly and he is there when you come to look for him. The fisher is very difficult for the amateur to trap and as a matter of fact it is not usually trapped for by amateurs; and it is safe to say that the majority of fisher taken are taken by oldtime professional trappers who have studied its habits and know its runways. The methods of setting traps for the fisher will be covered by the same general rules and suggestions given for the trapping of marten. A little animal bait placed on a brush or twig above the place where the traps are set will draw the animal to the spot, and to make doubly sure of getting him it is advisable to set more than one trap at each place. The pelt of the fisher is very valuable and for this reason it will pay the trapper to exhaust every resource at his command in order to catch him, so that a circle of half dozen or more traps is the best method in order to be sure and catch the animal when the animal bait has brought him to the vicinity of your traps. Where there are a number of traps in a circle the fisher is more apt to be caught by more than one trap and thus it will not be easy for him to escape.

CHAPTER XXI

WOLVERINE

The wolverine is principally found in Canada and Alaska, with a few in the northern part of the United States, especially in the Rocky Mountain region. He is a night prowler and preys on the smaller animals, and is known as "The Glutton". Trappers say that it will follow a line of steel traps and will steal the bait and kill any other animal that it might find caught in the traps and very seldom get



WOLVERINE

caught itself. One of its principal delights is to raid the caches of the hunter or trapper or raid the cabin and take everything away that it has time to move. It will even carry away pans and kettles and bury them. However, there is no doubt but that many of the stories told about the wolverine are exaggerated, but it is probably the most detested of any of the furbearers on account of its mean tricks.

When pressed by hunger the wolverine will tackle most anything. It is greater in length of body, but has not the wonderful lightning-

like quickness of the fisher. The skin of the wolverine is prized very highly by the Esquimaux of Alaska, who use the fur as a trimming around the face of their parkas. They claim that it is the only fur on which the breath will not congeal and form icicles. This is probably not entirely true, but at any rate for this reason very few of the wolverine that are trapped in Alaska are sent out, being kept by the natives for their own use. As a matter of fact wolverine are often sent into Alaska by fur traders to be sold to the Indians, where the Indian is prosperous enough to buy fur.

The wolverine has a very strong coarse fur, and has a peculiar light stripe or patch running down the sides of the back of a lighter shade than the fur on the rest of the body. Its marking in a way is like the skunk, except that the color of the wolverine is a dark rich brown and the stripes are of a lighter shade. The tail is short and brushy. It is seldom used in the manufacture of fine furs, but is made principally into rugs and mats.

There are very few wolverine in captivity and as far as the writer knows no attempt has ever been made to domesticate the wolverine and raise them for their fur, and it will probably not be a profitable venture to attempt it, as they are very destructive and would be hard to keep penned up.

The wolverine is very hard to trap, and as a rule they are only taken by the Indians who are familiar with their haunts, or by professional trappers who become exasperated at the tricks of some particularly devilish member of the wolverine tribe and set out with the determination to rid their trap line of the pest and continual trouble and loss of having their baits stolen and furs taken and mutilated. However, the general rules for trapping fox would apply to wolverine.

CHAPTER XXII

LYNX

Lynx is found in Alaska, Canada, and the northern United States. It has a very soft, thick, luxurious fur, that is about one inch to one and one half inches deep. It is about an even thickness over the entire pelt and is a brownish grey in color. It is about two feet in

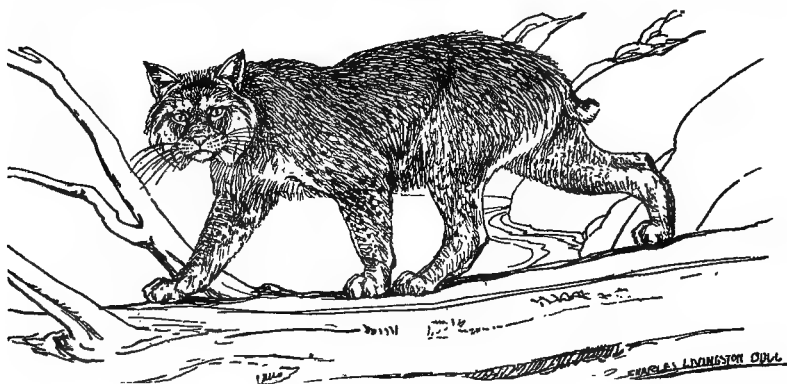


LYNX

height at the shoulders, and three to four feet long, including the tail about five inches long. The tip of the tail of the genuine lynx is solid black. The hind legs are longer than the front legs, and the claws are very sharp and are concealed in thick foot pads. The fur on the under side is finer and longer than that on the back, and when dyed black has a beautiful rich sheen. Most lynx for commercial furriers' purposes are dyed a rich glossy black. Trappers say that the lynx is a good swimmer. It preys on rabbits, which is its principal food. However, it will attack other small animals and will kill young fawn. It has a small tuft of hair on the ear and a fringe of fur around the jaw which gives it the appearance of having side whiskers.

The Lynx Cat or Bay Lynx

This is a species of the lynx, but is not as large nor is its fur as valuable. The color and the depth of the fur varies depending on the locality in which it is found. The lynx cat of California is dark reddish in cast and is marked with dark spots. The lynx cat of Idaho and Montana is a light creamy tan, and the fur is thicker than that



LYNX CAT

of the California lynx, but is not as long or as fine in quality as the Alaska or Canada lynx. Its habits are very similar to those of the true lynx. It is rather destructive in the farm yard, and will kill young pigs and lambs, and is very fond of poultry.

Wild Cat

The wild cat is another type of the lynx and is found in the central and southern states. The lynx, lynx cat, and wild cat are very often taken with deadfalls, especially in districts where the snows are heavy and where steel traps would be easily covered up. The lynx is found principally in timbered country. Where the lynx is taken with steel traps, trappers set in runways, along the banks of lakes and rivers. The lynx cat, lynx, and wild cat are more successfully trapped with the use of scent than they are with food baits. Some trappers recommend setting traps where there are signs that the animal has made a killing, as the lynx is almost sure to return to that place several times. The wild cat in the central and southern states is often tracked down and shot in preference to being trapped. There are various methods of trapping lynx, and the most successful methods will depend largely on local conditions. Some trappers recommend building an enclosure with a runway big enough for

the lynx to easily enter and about six to eight feet long. Inside of this runway set several No. 3 traps, either Newhouse, Victor, or Triumph Traps, equipped with the Funsten Triple Grip Jaws. At the far end of the enclosure sprinkle a few drops of Funsten Lynx Bait. In sections where the snows are heavy, this is a very good plan as it keeps the traps from being covered up. A freshly killed rabbit is also a good bait, and this may be suspended from the branch of a tree, and two or three drops of animal bait placed near the rabbit, traps being set around in a circle directly under the rabbit, so that the lynx in jumping up for the rabbit will be apt to catch his hind foot in one of the traps. There are usually numerous rabbits where lynx are found, and as the rabbit is sometimes attracted to the trap by the same attraction that draws the lynx, some trappers recommend placing a piece of brush in front of the pen so that the rabbit will have to jump over it in order to get inside. As the rabbit very much dislikes to jump over or go into brush this effectually keeps him out of the pen. Some trappers also recommend the placing of a small bent springy twig under the pan of the trap, strong enough to support the weight of the rabbit, so that if he should step on the trap he will not spring it. However, great care should be exercised in doing this, for if the twig is too strong the lynx will not spring the trap, and then you have missed out on a good catch. It sometimes is advisable to set traps for lynx on a log that has fallen in such a manner that it is high enough from the ground so that the traps will not be sprung by rabbits or other small animals. Arrange the traps in such a manner that the lynx will have to pass over them in order to get to the bait.

The following methods have been successfully used by men who have had much experience in the trapping of lynx.

Winning Method

Take the entrails of a deer, beef or sheep, take a part of them and hang on the side of a tree where two trees grow up together, so they will be about four feet from the ground. Then set one or two No. 4 traps about one foot from the tree, cover well with leaves, put a few drops of Funsten's Animal Bait on the tree, so as to attract attention. They will smell the bait a mile away when the wind is blowing a little, and as soon as they get a scent of it they usually come to find out what it is. They will try to get the bait, and they usually will get their foot in it. When you get a Bob Cat or Lynx, take and skin it and put the carcass in the end

of a hollow log, or in a fence corner; then, set one or two No. 3 or No. 4 traps in front of the carcass about fifteen inches, and cover well with leaves. Stake the carcass down so they can not get it away, for every one of them that smells the carcass will try to take it away. Put a rope around the neck and drag the carcass through the woods a mile or so, and as soon as they come to the trail they will follow it up. Leave part of the carcass where you start from. This gives you a chance both ways, as the animal is liable to go both ways on the trail.

I now use Funsten Animal Baits in all my trapping. A friend of mine gave me my first bottle of Funsten Animal Bait. I put a rabbit in a drift pile with five drops of Funsten Animal Bait on it and caught thirteen Mink and one Coon in eight days, when I was trapping on the creek. This was the best at one single set, and only used five drops of the Bait.

I am located in Iowa just now, but I got my knowledge and experience in Lynx trapping in Washington, British Columbia and the Northwest, where Lynx abound most."

S. A. DAVIS.

Winning Method

In the days when a good-sized, prime Lynx was worth, say, from \$1.25 to \$1.75, very little attention was paid to this particular member of the cat tribe, and little or no interest taken in his capture, unless, perchance, he had been unusually active and aggressive in raiding some settler's chicken-coop, in which case it behooved said settler to take prompt and effective measures in his immediate capture or destruction, else his flock of poultry was but a dream of the past. More than this, the family cat was apt to suddenly and mysteriously disappear.

Now, while I do not mean to say that the trapping fraternity ever ignored the Lynx as a fur-bearer, the size of the animal, as compared with a Marten or Mink, gave the trapper the impression that he was handling a very large pelt for a very little money. All this has been changed, however, within the last few years, this article of fur having come into prominence as one of Dame Fashion's favorites, and has now taken its place in the list of fine, long-haired furs. In like proportion has the trapper's interest increased, and, as a matter of fact, when he strings out his line of traps wants everything of fur-bearing value there is.

Now, in my own experience, which has covered some ten or twelve years, I may say I have been fairly successful in trapping

Lynx, as well as other kinds of fur, having captured over four hundred of the big cats alone.

Right here a few words in regard to the habits and characteristics of this animal will be in order. He is a great traveler, and covers a lot of territory, but he usually goes over the same route a number of times. Along late in December or January, when the snow falls thick and fast, very little of him will be seen, for, like all other of the cat family, he has little liking for deep, soft snow. It is then he betakes himself to some sheltered clump of timber where rabbits abound. However, a little after midwinter, when the snow begins to pack and harden, he is on the move again. Should there be any beaver dams or marshes anywhere in the vicinity of his circuit, there his tracks will be much in evidence. Although the lynx will eat most any kind of meat when hungry, beaver is his chief *piece de resistance*. Knowing, then, this particular weakness of the lynx, the trapper will provide himself with some beaver castors when starting on a trapping campaign; also have a lot of fish (trout are the best) chopped up fine. Have enough to make a gallon. Don't be afraid you will have too much. Hang up in large bottles, say, along in July and August; cork bottles loosely, put something over top to keep rain out. Be sure and hang in a place where sun will shine on them, and by the time you are ready for it you will have a mixture of fish oil which will make a bait for lynx second to nothing but beaver castors.

As a rule, the lynx is not a difficult animal to trap. When he is hungry he will eat most anything in the meat line. He is not in the least afraid of a steel trap, no matter whether covered or exposed, and will step squarely on the pan of trap, with as much indifference as if he were merely stepping upon a log to view his surroundings. Now, it is up to the trapper to see that he does this very thing. To bring about this result, I will explain as fully as possible. Build up a pen or enclosure in a sheltered place, if possible. Use dry spruce, fir or hemlock branches. I say dry, because if you use green branches the rabbits will be an unending source of trouble to you. Stick the branches upright in the ground or snow, as the case may be, so as to form an enclosure about two feet wide at the mouth, where trap is to be placed, and tapering to seven or eight inches at the back end, where bait is to be securely fastened. The branches should be cut or broken long enough so that the pen will be about three feet high. You now have an A-shaped enclosure two feet wide, three feet high, and about three feet in length. Do not put any covering over the top, except at back end, and then only a foot or nearly so, just enough to cover bait-

Mr. Lynx strongly objects to having anything touch his back. Now, set your No. 3 Newhouse, and place evenly and solidly down about one inch to the right of center of mouth of pen. On each side of trap place a small, dry branch and let lean against side of pen. This will guide him squarely over the trap. As to question of bait, most anything in the way of flesh or fowl will do, but sometimes our friend, the lynx, is not hungry, and may pass indifferently by, no matter how temptingly the bait be displayed. Very well then, if we can not appeal to his stomach we will excite his curiosity. Now, if you take a piece of deer or rabbit skin, say, about half the size of your hand, well and vigorously rubbed with some beaver castor, the chance would be only one in a hundred that he would pass your trap without going over it to investigate matters. Simply place the doctored piece of skin back in pen, behind the bait, which should be about twenty inches from the trap. If you do not have, or can not get the castor, you still have recourse to fish oil. Take a handful of rotten wood, saturate it thoroughly with the fish oil, and place it well back in pen, and, as I stated before, about twenty inches from trap. It is important that the bait be back that distance, so that if his foot should happen to miss the pan of the trap in entering it will not be likely to miss it in backing out.

Once caught, the lynx is easily held. I have frequently caught them in a No. 0 trap by one toe, but I recommend a No. 3, as the lynx foot is very large, and a trap needs to have considerable spread of jaws to make sure of him.

Now the trapper will note that there is nothing at all difficult in the *modus operandi* of taking the big cats, and if instructions be carried out as stated in the above, there will be little need for the lynx trapper, at the end of the season, to complain of a poor catch."

W. B. ROBINSON.

Winning Method

The following method is the one used by me last season for catching lynx.

"The lynx, like a mink, establishes a runway, or a course over which he travels, making return trips in about five days, and seldom ever leaving his back track more than few yards, his course always being chosen through heavy undergrowths, in swamps, along lake sides or streams, or, in short, where rabbits and pheasants are most likely to inhabit, as these are the main food of the lynx. In such places I go to look for tracks. After finding one I follow it until it goes into a narrow strip of land between water, or a narrow strip of

timber, brush or swamp between open land, my idea being that in such a place the animal is most apt to travel closer to his back track when he makes his return trip; then I pick out a tree or stub within a few feet of his track, and as near the center of the strip of timber as possible, the idea of this being to have my bait or scent placed in a position most likely to be smelled by the lynx while passing. I prefer the size of the tree to be not over ten inches, for if it is too large the body of the tree will shelter the bait from the wind, and it is not likely to be smelled at so great a distance. Next, I choose the south side of the tree, so that the sun will shine on the bait, which will help it to throw off a stronger scent. Next, if the spot chosen looks as though the snow would drift in, on or around it, I take a No. 1 or No. 1½ Newhouse trap and fasten it to a pole (six feet long and two inches in diameter) two feet from one end. Stand the pole on its four-foot end, eighteen inches from the tree on its north side, then lean the top end of pole against tree; then, take fine-blade grass and roll up into a ball half the size of a hen's egg, then part it a little, and place in its center eighteen or twenty drops of Funsten's Lynx Bait. Close up and bind it on to the upper side of the pan of trap with a thread. Now I drive a small nail into the south side of the tree, high enough so that when the trap is hung on it by the link of chain nearest the trap, the pan of the trap will be about twenty-four inches from the ground. Set the trap and swing the spring to the locked jaw, then bring the chain around the tree and hang the trap on the nail. I then drive another nail in such a position that the back rib of the trap will rest on it, leaving the loose jaw of trap hang down a little. This nail will steady the trap firmly, if driven in the proper distance. I then take a small handful of fine-blade (dead) grass, about eight or ten inches long, with the blades all running one way, tie the butt ends together, and then tie to the top side of the spring of trap, letting top ends of grass hang down over the trap; then spread the grass out thinly over the trap, and tie one or two blades of the grass to each jaw of the trap, so that they will stay in place; now part it a little in the center, and let the ball of grass on pan of trap project out a little the farthest. Now I rub some of Funsten's Trail Scent on my moccasins and smooth out all of my tracks with my foot, at the same time backing away. A lynx will smell this bait of Funsten's as far as sixty yards, if everything is favorable, but the colder the weather the less apt he is to smell it, although I have had them come a distance of fifty feet, straight to the bait, when the wind was unfavorable and the thermometer registered 58 below zero.

Once they smell it they go directly to it, and, like a cat, instead of putting his nose up to smell it, as a dog would do, he reaches up with one front paw and cuffs it, or tries to pull it down to him. In doing this he springs the trap. If a No. 1½ trap is used it seldom ever misses getting a hold, while a No. 0 will miss getting a hold more times. It will always hold a lynx if it gets hold of only one toe back of the knuckle. A trap set this way never freezes up or snows under, and never gets sprung by birds or rabbits, but it is never left unprung by a lynx once he smells that odor of Funsten's Bait. On the other hand, if the spot I have chosen is surrounded by brush or small trees, in such a manner that snow is not likely to drift there, move off 100 yards or more, and cut an armful of straight, dead sticks three feet long, and about the size of your thumb at the small end. I cut them slanting on one end and square on the other. I then choose the south side of the tree, and with a stick mark off a circle four feet in diameter, by starting at the east side of the tree and ending at the west side. I then draw the snow from center of circle to the outside edges, and press it down into a ridge about six inches deep and wide; then cut two sticks twenty inches long and forked at one end. These I stand in the snow, fork end up, three feet apart, east and west in line with the extreme south edge of the circle or ridge. I then take a pole five feet long and two inches in diameter, and lay it in the forks of the two sticks just set up; then to the center of this pole, just half way between the two forked sticks, I tie one end of a strong, hard-twist cord, which is a little larger than a wire clothes line and is about twenty-eight inches long. With the other end of cord I make a slip-noose loose enough so that the weight of the cord will slip it. The cord must be long enough to form a circular loop or noose six inches in diameter, and not leave more than one and one-half inches of cord above the loop. I now take the armful of sticks first cut and stand them, square end up, one and a half inches apart in the ridge of snow, all the way around, except where the loop hangs. Here I leave a space six inches wide; then tie the sides of my slip-noose to the sticks forming the sides of the opening. Have the noose in the form of a circle, as near as possible. I use a blade of grass to make this tie, so that it will require but little force to break it loose. Now take a dead stick, the size of a lead pencil, and stand it in the ridge, directly under noose, allowing it to be just long enough to reach one-eighth of an inch above the bottom cord of noose and on the north side of it. This will hold the bottom part of noose still. If it is put on the south side of cord the lynx may step

against it and shove the noose in. I prefer dead sticks as rabbits sometimes get to eating the bark of green ones, and in this way destroy the pen. My object in cutting the top ends of sticks square, is so there will not be any bright, slanting cuts to attract attention, and the lower end, being slanting, it holds better in the snow. Now I cut a stick about seventeen inches long, sharpen one end and split the other about four inches. Roll up fine-blade (dead) grass into a ball about the size of a hen's egg and place it in the split. Now stand the stick, sharp end down, in the snow four inches south of the center of the pen or circle, then lean the top end about two inches towards the noose or loop. When it is placed right, the ball of grass will be eighteen inches from noose. It will be closer (by a few inches) to the noose than it will be to any other part of the pen, and will be on a level with the center of noose, which will be about seventeen inches from ground. Now put about twenty drops of Funsten's Lynx Bait on the ball of grass. Rub Trail Scent on moccasins and smooth out all tracks, at the same time backing away. The lynx smells the bait and goes to it. He finds no entrance to it except through the noose. In here he puts his head and starts to force a way in. This breaks the blades of grass holding noose in place. The noose then tightens, the lynx backs away, upsetting the two forked sticks. This leaves him with the large pole tied close on to the back of his neck. He goes but a few feet, lies down and dies. Sometimes he does not put his head into the loop, but tries to reach, the bait with his paw. In this case I find him alive and fast by a foot instead of dead and fast by his neck. They will not chew the cord off, as one would suppose.

The main objection to this way is that all that get caught by neck are dead and frozen when I get them, and then the wolves sometimes find them before I do. I have had seven large ones eaten and spoiled by wolves this winter. The lynx loves the smell but does not care to eat Funsten's Animal Bait. He likes to play around it and tries to get it to rub against it. He will seldom touch a frozen-meat bait.

When there is no snow, I use the same methods of trapping Lynx except that I place my sticks in the ground. And then I can't track them, so, of course, choose places where they are most likely to come, but without Funsten's Bait and Trail Scent this method would be no good at all.

I have caught, since November 1st, fifty-three lynx. It is now March 20th. Forty-seven of them I caught with Funsten

Lynx Bait. I had out forty traps with Funsten Lynx Bait on them, and thirty traps with other bait on them, but all my traps have Funsten bait on them now, you bet. I am no hand to flatter, but can't help saying that there is more lynx in one of those little bottles than on any quarter section of land I ever saw. In the month of February I caught, by the use of Funsten baits, 21 lynx, 30 wolves, 8 mink, 14 weasels, and 356 Muskrats. (Witnessed by I. A. Wilber.)"

H. E. WILLIAMS.

CHAPTER XXIII

BADGER

The badger is very shy and will always avoid danger, however, it will put up a fierce fight if cornered, like most timid animals. It lives in deep burrows which it builds itself, and is said to hibernate in the colder regions. It is fond of all sorts of fowl and small rodents, and will also eat birds' eggs, etc. It is a very fat squatty animal and measures about two feet in length. The fur is a light yellowish color with black tips. Badger are found throughout the central and southern states. In some sections the fur is long, soft, and has a beautiful silky quality. As a rule, however, the average badger pelt



BADGER

is useless for furriers' purposes. It is only when the fur is very thick and long that it is valuable for trimming. The coarse long hair skins are not wanted by fur manufacturers, but usually find their way to the brush manufacturers, who cut the hair off and make it into shaving brushes, etc. The full grown badger will weigh from thirty to forty pounds. The amateur fur buyer often-times loses heavily buying badger skins. The fine heavy-furred silky skins that can be used for furriers' purposes are valuable and are worth from two to three dollars each and sometimes more. Another badger pelt taken in the same section and at the same time, but with coarse wiry hair will probably not be worth more than twenty five to fifty cents, although it would be fully as large as the more valuable skin. The reason for this is that one skin is what is known in the fur trade as hair, and the other is fur.

A man not well posted on badger skins might buy a fine skin at a small price, ship it into the fur house and get two to three dollars for it, and at another time, a badger skin equally as large, and find that it was only worth from twenty five to thirty cents. Therefore it is advisable to be cautious in buying badger skins for these reasons.

The badger is not at all difficult to trap and traps may be set in their runways and in the same manner described heretofore for trapping coon and like animals. Badger are often taken by puffing a little smoke into their dens, not too much but just a little in order to give them the odor. They are afraid of smoke and will come piling out of their burrows in a hurry. Extreme care should be taken not to put too much smoke in the den, as this will do more harm than good.

The breeding season of the badger begins early in the spring and during the month of May and June it brings forth a litter of from three to five, which are born in the den. The mother takes care of them for from sixty to ninety days and then turns them out to catch and kill their own food, such as mice, worms, etc. As soon as they are proficient in catching their own food they are turned loose to take care of themselves.

It is said that the male badger inhabits an abode all to himself, and that oftentimes a fox will den up with the badger, possibly skunk, and they all get along together very nicely. Badger, that are taken for their fur should only be killed in the very height of the winter, for as stated before the pelts are of little value unless the fur is well developed, which as a rule happens only in the very coldest weather.

CHAPTER XXIV

MARTEN

The marten is more generally known by the trade name of Hudson Bay sable. It belongs to the same family as the Russian sable, in fact it is difficult to tell some fine Hudson Bay sable from the Russian sable. The Russian sable is usually a little deeper in fur. The marten is found throughout Canada, but the larger and finer specimens come from Alaska. They are also very plentiful in the western states, especially in Oregon, Washington, California, Idaho, Montana, Wyoming, Nevada, Utah, and Colorado, in the states along the Canadian border, and are found as far south as the Adirondack Mountains in New York. Like the mink, which it very closely resembles in size and color, it avoids human habitation.

Some trappers believe that the marten migrates in large numbers for the reason that one season in a district the catch will be very large, and the next year there will not be a marten to be found, and none will be seen until the tenth year, when they will come again in large quantities. They seem to migrate in cycles of ten years. This seems to be especially true in certain parts of Canada and Alaska and no one seems to know where they go to during the nine year period when they are not plentiful.

Some of the most beautiful Hudson Bay sable come from Labrador. They are as fine in quality and almost as silky as the Russian sable. In fact they are better than the Amur class of Russian sable. Very fine colored skins, as well as fine in quality are found in the Stewart River section of Yukon Territory, and also in Alberta and Manitoba, and a great many very fine specimens of marten are trapped in British Columbia.

The marten found in our western states are known as the pine marten. They differ somewhat from the Alaskan or Canadian marten. The underside along the neck and breast is quite an orange yellow color. The rest of the body is similar to the Canadian or Alaskan marten, except that the fur is not as deep, the color is not as lustrous, and the quality not so good.

The marten usually lives in trees and is not fond of open country. It ranges through thickets, and is a wonderfully quick climber.

The marten lives largely on birds, moles, rats, mice, etc., and along the coast of British Columbia it is said to feed on mussels.

The marten is often trapped with the deadfalls, using the figure 4 trigger. The tree trap was especially designed for trapping the marten, and is very successful for this purpose. It is se-



MARTEN

curly nailed to the side of the tree, the bait being placed above the trap or on the hook provided for it on the trap. The tree trap kills instantly and for this reason is very much favored by most trappers. One of the difficulties that the marten trapper has to contend with is the wolverine and the fisher who seem to follow the marten trapper, and whenever a marten is caught are quick to destroy it. The wolverine especially seems to take great delight in following a line of traps for the express purpose of destroying marten after they are

captured. Where the tree trap is not used, most trappers recommend the building of a small abode and setting traps inside. This is done so that the traps will not be buried in the deep snows.

The following methods for marten trapping have been successfully used by old experienced trappers that have trapped large numbers of marten and who are glad to pass their experiences on for the benefit of others.

Winning Method for Marten

"I use Newhouse No. 0 traps for marten, and set them in the following manner: First, after locating the marten region in which I decide to trap, and just about the time in the fall the fur is getting prime, I leave good-sized baits of horse meat, or most any kind of meat, throughout the timber, and let the marten commence to use them before trapping. Then I set from four to six traps around, near the large baits, under logs, and in bushes, or up against and under rocks, baiting with a small, fresh piece of meat. (Mountain rat is the best marten bait I know of, and one rat will bait two traps.) If I do not find a natural place that can be re-enforced, I build a small house or pen of evergreen bark, and in this set my trap upon two sticks, lying flat upon the ground, lengthwise with the pen, just large enough to keep the trap off the ground or snow, fastening the bait in end of pen by pegging, slipping over a small bush, or wiring. I place the trap ten inches in front of bait. I seldom cover the trap proper, as marten are not afraid. When I do, I use feathers or light trash. By having trap and bait under a pen or house of boughs, it serves the purpose of keeping birds from stealing the bait and springing the trap, keeps the snow off the trap, and protects the marten after being caught, from eagles and owls, which sometimes prey upon them.

Tree Set —Where two trees come out of the same butt, and fork out two or three feet from the ground, I cut a few evergreen boughs and pack tightly in the fork. On this I set the trap snugly, and nail the bait above, about twelve inches. The marten jumps up into the fork to smell of the bait, even if he is not hungry, and is pretty sure to land in the trap before he gets down. This is a first-class way to set when the snow gets pretty deep. A little snow falling on the trap in this manner rather helps than hinders.

I find No. 0 traps better than larger sizes, for these reasons: First, a person can carry more in his pockets, thus having more chances. Second, they hold as well and do not smash the leg-bones

and mutilate or bloody up the skin or fur. Third, they can be set, on account of their size, in many places where it would be difficult to put a No. 1½, which is commonly used by marten trappers. Fourth, they are cheaper than larger sizes of the same make, thus a marten trapper can have more traps for the same money invested. It pays big to have the best traps, and Newhouse are the best. I recommend the Funsten Animal Bait to all trappers.

I adapt myself to the individual spot where I wish to set a trap, use my best judgment, set carefully, make the pens snow-proof, and attend to my line of traps regularly. I find it best in winter to have three different lines set, and go to each every three days, staying in camp Sunday. I skin, stretch and handle the Marten very carefully, and naturally look for the best market returns when I ship. Be thorough. It pays me, it will pay you."

JOHN D. CRAWFORD.

Winning Method for Marten

"Early in the winter the marten are found on the high grounds, later on they go down on the bench lands.

In the first place, take the Newhouse trap, No. 1½, find some sheltered place; a tree with a heavy top is the best, for they stay in trees a great part of the time. Nail your bait on the tree about two and one-half feet from the ground, set your trap about ten inches from the root of the tree, cover it nicely with leaves and dirt, take some bark or whatever can be found, and stand it up on each side of the trap, so the marten has to pass directly over the trap. Cut some green branches from a tree and fix them about two feet above your bait, so as to protect the bait and trap from the weather. Sometimes it is good to set two traps under the same tree, fixing it the same way on the opposite side of the tree, for marten go in pairs. If you catch one marten you are almost sure to catch two in the same place. Rough places, such as brushy and loggy places, are generally the best, as martens hunt birds and mice for their living. They hunt their living, a good part of the time, in the day time, as well as at night. I have caught marten the same day I set the traps, coming home on my back track after setting traps, so that proves it.

For bait, take about one or two pounds of well-tainted venison, nail it tightly to the tree, about two or two and a half feet above the trap, put two or three drops of Funsten's Animal Bait on the piece you have nailed to the tree, and it will surely get the marten every time."

J. C. WILEY.

Winning Method for Marten

"I will give my ideas and methods of trapping marten. I will first tell what I have learned about the nature of the marten on the Pacific Coast.

They most always frequent the north and east side of a mountain that is pretty heavily timbered. About the 10th of December is the time to commence to trap, as the fur is fully prime by that time, and stays good until about the latter part of February. Marten should never be caught earlier or later than that on this Coast. Last year I commenced to trap the 21st of December and quit the middle of February, and caught forty-one marten.

I use a No. 0 or No. 1 Newhouse trap, as they are plenty large and strong to hold the biggest marten, and much lighter to carry around. I always take a supply of Funsten Animal Bait and Trail Scent with me. Run your trap line around a mountain, keeping in the thick timber. Make your sets about two hundred yards apart. When signs are thick, set closer, as a marten is missing in the keen scent that a fox or other animals have. I always make a set near a dead snag or old log, for marten are great mousers. Fasten your bait on the side of a tree or snag, with a single staple or nail, about twelve inches from the ground, place some bark or boughs in the snow on each side to force him in; if in the snow, place a wide leaf or bough on the snow, about eight inches from the bait, set the trap on the bough and cover with fine leaves or boughs. Put a few drops of Funsten's Bait on meat or whatever you use. Take a piece of meat about as large as your two fists, and cut several slits in it. Fill the slits with Funsten's Trail Scent, and drag behind you with a long string every time you go around to your traps. When the scent wears off, put on a few drops more. I never had a marten cross my trail but what he stopped and followed it one way or the other to a trap. I have had them follow the trail after six or eight inches of snow. It beats anything that I ever tried. I most always use a piece of duck or bird for bait. Use plenty of Funsten Bait in cold, freezing weather. To kill a marten, I always hit him a tap on the head with my hatchet handle, to stun him, and then get hold of him just back of the forelegs and smother him to death, for a marten is hard to kill by striking him on the head. I have cut holes in the hide by striking them too hard. Always skin them as soon as caught and they skin much easier. Be sure and flesh the hide well, and don't stretch too tight. Leave them on the board about four days and then take off."

JOHN P. FRAME.

Raising Marten

The Hudson Bay Sable or marten has been successfully domesticated and raised and the same general instructions apply to marten as those given for the raising of mink. The marten is a very valuable fur, the finer skins selling up to fifty dollars, and there is also a demand for them for zoological gardens. They are rather prolific, the female bearing from three to five in a litter. The young are usually born in April, and it is a very hardy animal. Marten raising is carried on in Canada on a rather large scale and has been proven to be a successful and profitable enterprise. It is said that marten, except during the time of mating, are very quarrelsome. The mating season is from January to March. It is said that one of the principal things in raising marten, is to know when the female is in season, for the reason that if the two are put together when the female is not in humor to receive the male, they will fight and probably injure one another. The mother will take fairly good care of the young until they are about two months old. They usually wean when they are about four months old.

Marten raising should prove very profitable for the Canadian and Northern rancher. It is one of the most valuable American furs that we have, is always in demand, and the fine dark skins bring very high prices; and even average colored skins are in demand at prices that will well pay for the trouble of raising them. As stated before this industry has already been established in different parts of Canada and it is to be hoped that more people will become interested in it.

CHAPTER XXV

CIVET CAT

The civet cat is sometimes called the "Pole Cat". In color the fur is black with white spots of irregular shape. It differs from the skunk in that the stripes of the skunk are regular and run from the back of the head down to the tip of the tail, while in the civet cat there are no stripes but spots of white fur from one half to an inch



CIVET CAT

in diameter and of irregular shape covering the entire body. The full grown civet cat is about one half the size of the skunk, and the fur is about one half inch in depth and of an even length over the entire body. The tail is about one half the length of the body, and is rather round in shape being about three quarters of an inch in diameter, and is not large and brushy like the tail of the skunk. The civet cat is found in nearly every state in the Union, and is one of the big articles of the fur trade. It is very popular in Europe, especially in Russia, or rather it was popular in Russia before the Great War and was largely used for coat lining. It is a very beautiful and striking fur when made into a garment, the black being a rich beautiful glossy black and the white a snow white. This contrast in color makes a beautiful fur garment, and it is difficult to

understand why civet cat is not more popular in this country than it is. It is probably due to the fact that for many years it was referred to as the "Pole Cat" which people usually connected with a strong odor. But that is all nonsense. The modern method of dressing and cleaning absolutely removes every trace of odor.

The civet cat skin when taken off cased and stretched is about 14 inches in length and 4 inches in width. The finest civet cat pelts come from Minnesota and the Dakotas and the Northern part of Iowa. However, as stated before they are found pretty generally throughout the United States, but seem to go no farther North than the Canadian line, and few are found in Minnesota.

On account of the comparative low price of the skins very little if any attempt has been made to domesticate and raise the civet cat for market, however, there is no reason why they could not be successfully raised. As the civet cat very closely resembles the skunk in its habits, the same general methods given for trapping skunk will apply to civet cat.

MOUNTAIN LION

The mountain lion is variously called the puma, the panther, and the cougar. It is found in the Western states, Arizona, New Mexico, Texas, and some are still found in Florida and the swampy sections of the gulf states. It varies in size, the larger specimens coming from Arizona and New Mexico. It has little or no value for furriers' purposes, and only the larger specimens are used for mounting life size for museums, etc., and for rugs. The color is a yellowish brown with a darker shade down the back and to the tip of the tail. The color varies in different sections.

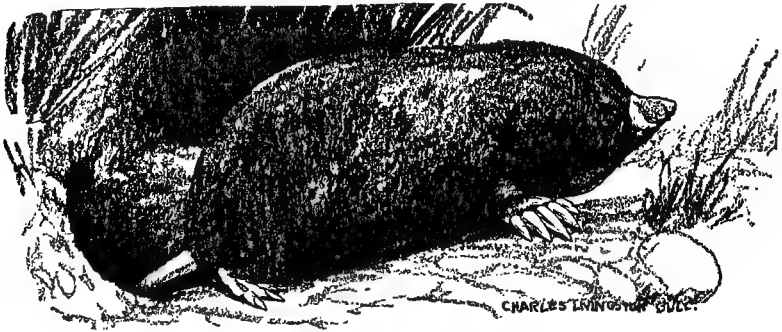
Some naturalists claim that the panther, as it is known locally in the Southern states, is a different species from the puma, found in the more Western states. However, they are very similar in every way except that the panther is smaller in size than the larger mountain lion of the Western States. The mountain lions of the West grow to a very large size. They are powerful animals and will put up a terrible fight and are very destructive to live stock. A full grown mountain lion will easily kill a large steer and will attack a full grown horse with remarkable ease. They are very quick and are light of foot and spring a considerable distance, and usually pounce on their prey from an overhanging ledge of rock, or from overhanging branches. It is said that when food is plentiful they only suck the blood of the animal they kill and very seldom, if ever, return

to feed on the carcass. As a rule the mountain lion is hunted down and shot, rather than trapped. However, some trappers set steel traps for them, where they are particularly bad about killing live stock. Mountain lion, as far as the value of the pelt is concerned for fur purposes is hardly worth the trouble to trap as their pelts are usually damaged, and it is only the finer specimens that are valuable for rug purposes.

CHAPTER XXVI

MOLES

The mole is found throughout the United States. The larger species come from the Northwest and are found in large quantities in the states of Oregon and Washington. The Northwestern mole is almost twice as large as the mole from the Central and Eastern states. The mole lives chiefly on earth worms and insects and inhabits the ground. To the extent that they destroy insects they are beneficial to the farmer, but they often work in gardens, lawns, and young orchards, and do considerable damage by ploughing up the soil and undermining tender plants.



MOLE

In recent years the mole has become very popular as an article of fur. They are collected in large quantities in Europe. The mole is most abundant in moist, rich, soil and prefers damp shaded ground. The mole is often confused with other small ground animals, such as the meadow mouse and the gopher. It can, however, be readily distinguished from any of these by its short, stout front limbs ending in a broad rounded hand with the palms turned outward. It has a very close plush-like fur, and a pointed snout and a short tail. Neither external eyes or ears are evident. There is a question as to whether the mole is totally blind or not, but at best it can merely distinguish between light and dark, as the vestigial organs of sight lie wholly beneath the skin.

The mole is a creature of strictly subterranean habits. Such experiences as fall to its lot must necessarily come through its sensitive touch, acute hearing, or highly developed powers of smell. While the animal is seldom seen above ground, it sometimes ventures out of its tunnels perhaps chiefly at night.

Runways and Nests

The living quarters of the mole consist of a series of galleries and tunnels 12 to 15 inches beneath the surface of the ground, usually deep enough to escape the plow. This central part of the system of runways can ordinarily be located by little piles of earth thrust up from deeper tunnels. These elevations are easily distinguished from the surface ridgings caused by the mole's burrowing just beneath the sod. They may be looked for on the higher spots of an open field or where natural objects offer concealment and shelter.

The nest of the mole is usually in a chamber 4 or 5 inches in diameter and about a foot beneath the surface. The materials of the nest consist mainly of closely cropped pasture grasses with the fine fibrous roots attached. It is probable that this grass stubble is pulled down by the roots into the upper surface of the burrows and then carried to the nesting chambers. When located near trees the nests sometimes consist of leaves mixed with grass.

Certain galleries or passages leading out from the deeper central system trend upward here and there to join the shallow subsurface runs that range over the mole's hunting grounds. These hunting paths produce the ridges with which we are familiar in our lawns, gardens, and fields. Beneath these ridges the little animal hurries along at irregular intervals in search of food, and when occasion demands, it extends the limits of its operations by pushing out into untouched soil. As it extends the subsurface runways its movement is almost literally one of swimming. With powerful action of the heavy shoulder muscles the hands are brought forward, palms outward, until they almost or quite touch in front of the snout. They are then thrust outward and backward to push the soil aside, while the body follows in the passageway thus created.

It is commonly believed that the mole works only at regular periods each day, but direct observations taken in late summer, and in the fall fail to show that there is any one time of day when it is more active than at others.

If a slight opening is made into a mole's runway the little animal will invariably repair the breach when it next comes that way.

As to seasonal activity, it may be said that moles are probably never dormant, that they never hibernate. They may be trapped at any time of the year when the ground is not frozen too hard to permit the working of the trap. It must be understood however, that extension of surface runways occurs mainly at times when soil conditions are favorable—after rains in the summer or during periods of thawing in the winter. At other times the mole may secure his food by retraversing his old runs or by working at depths unaffected by frost or drought. Movements of soil-inhabiting worms, insects, and larvae tend to bring ever fresh supplies of food into the moles' passageways.

By reason of its secluded life the mole is little subject to attacks by many foes of other small mammals. Its burrow is so small that no formidable enemies except the weasels or snakes can follow in the passageways, and as it seldom leaves these there is little chance of its being seen by predatory animals. However, the movement of the soil when a mole is working near the surface may readily be detected by a watchful foe, and it is probable that hungry foxes and coyotes secure a tidbit now and then by springing suddenly upon a disturbed spot of earth and hurriedly digging out the furry little miner. On the other hand, there is evidence that moles are distasteful to some animals, for they are seldom eaten by domestic cats and dogs which have learned to catch them. A peculiarly disagreeable odor attaching to the mole may account for its not being relished by the carnivora. It is quite likely, also, that the dense soft fur is objectionable to some animals.

The mole may be a comparatively slow breeder and still maintain its normal numbers from year to year. Such is found to be the case. The little animal breeds but once a year and the number of young at birth averages about four. They are produced in March or early April. Development after birth is comparatively rapid.

How to Trap

A number of excellent traps are on the market and most of them will give good results if properly set. However, the mechanism of a trap is of secondary importance to the operator's knowledge of the mole's works and ways. A mole trap can be successfully operated only when set on that part of a runway that is near enough to the surface to upridge the sod or soil. A little observation will soon enable one to distinguish newer and more frequently used runways from those that have been partially or wholly abandoned. A little

cracking of the soil where the sagging roof of the ridge has been raised again, a few particles of fresh earth thrust out to close a tiny opening or crevice, the wilting of grass or foliage along the course—these are indications of an occupied run way. When in doubt the question may always be settled by making a small breach in the ridge, and if that particular part of the burrow is in use the mole will invariably repair the break when he comes that way on his rounds. By following this plan all the centers of mole activity on one's premises may be definitely located. In placing the trap one of the stretches of the run that seems to be leading in some definite direction should be selected, rather than one of the turns of a labyrinth that may not be traversed every time the mole comes in the vicinity.

Before setting the trap it is well to ascertain the course of the burrow by thrusting down a lead pencil or stick of about the same size. The trap selected should then be lined up with the course as nearly as possible; the jaws of the scissor-jaw type should straddle it, the loops of the choker type should encircle it, and the spikes of the harpoon type should be directly above it. In the case of the harpoon type it is best to force the impaling spikes into the ground once or twice to facilitate their penetrating into the burrow when the trap is later sprung; this type of trap injures the pelts of moles impaled, and is not recommended for use when it is desired to preserve the fur. It is desirable in setting any of the traps to depress only that part of the mole ridge that is immediately beneath the trigger pan, using the hand instead of the foot for this purpose. A little earth may be built up snugly under the pan if necessary. Avoid treading upon other parts of the runways. It will pay to visit the traps at least twice a day.

The persistence of the mole in repairing breaks in his runways is equaled only by that of the spider mending its torn web. One can take advantage of this known trait not only in selecting locations for trapping, but in planning the capture of the animal alive. Though requiring more time and attention than trapping, the method of catching moles by surprising them at work is fairly practicable. In following this plan one should open up 5 or 6 feet of ridge in each of the several distinct runway systems and make the rounds of subsequent inspection every few minutes. When a mole is found repairing a break he can be tossed out with a shovel and dispatched.

Mole skins should be stretched square and not round. The American mole is usually stretched round and is neglected somewhat

on this account. The European trappers who trap moles stretch the skins square or oblong, but never round. Moleskins are in good demand, but those improperly stretched and poorly handled have little or no value.

THE RINGTAIL CAT

The ringtail cat is not familiar to most trappers as it is found only in parts of New Mexico, Arizona, Texas, California, Oregon and Washington. The animal is about the size of the mink, the body being from twelve to fourteen inches in length and the legs



RINGTAIL CAT

raising the body about four inches from the ground. The most distinguishing feature is the tail, which is about the same length as the body and marked in alternate rings of black and white, and of a very bushy appearance. The color of the body is a greyish yellow and always lighter on the under side. The animal is nocturnal in its habits and is rarely, if ever, seen in the day time, its large eyes being especially adapted for use at night. The ringtail cat does not belong to the cat family, as the name would imply, but is really a member of the monkey family and has hands resembling those of the common monkey with almost perfect fingers. Their chief food is frogs, mice, and insects, and sometimes vegetables, and the animal prefers thick woods which abound in insects, to the open land and thin timber, where his natural food would not be so plentiful.

The Ringtail is very suspicious and is rather a hard animal to trap. For this reason most trappers prefer to use a scent bait to attract them to the trap. In general the same trapping rules as given for mink will apply to ringtail.

In stretching and preparing ringtail for market the skin should be taken off cased and stretched with the pelt side out. The tail bone should always be carefully removed, as the tail is a valuable part of the ringtail pelt, and if the bone is left in, is very apt to taint.

CHAPTER XXVII

SEAL

The seals are divided into several different groups. They are known as fur seals and hair seals. The fur seals have a short thick underfur which is dyed and makes the seal skin of commerce. The hair seals do not have this soft underfur, the hair being coarse, wiry, and loose. These skins are usually taken for the hides only, and when they are tanned make wonderfully fine leather. Some of the better kinds are dressed with the fur left on and are used for robes, and other purposes. The largest herd of fur seals at certain seasons of the year inhabit the Pribilof Islands off the coast of Alaska. In addition to the Alaska Seals, there are the Commander Island, the Shetland Islands, the Lobos Island, the Faulkland Islands, and the Cape of Good Hope seals, and a small herd which occupies the Sakhalin Islands North of Japan. The hair seals are largely found off the coast of Newfoundland and Labrador in the Gulf of St. Lawrence. They are also found off the coast of Western Greenland and in the Caspian Sea.

The seal is a very gentle and submissive animal and very seldom offers any resistance when attacked by man. They have a strongly developed social instinct and have an extraordinary affection for their young. Strange as it may seem the young pup seals have to be taught the art of swimming by the mother.

The Northern fur seal that inhabits the Behring Sea breeds on the Pribilof Islands. These islands are the breeding grounds for the largest herd of seals in the world. The Commander Islands, which belong to Russia, and the Kurile Islands which belong to Japan, are also the home of the northern seal. This particular species of fur seal, it is said, does not breed in any other part of the world. The fur seals of the Islands of the South Seas belong to a different species. The fur seal is polygamous and the male is about five times as large as the female. As a rule one bull seal takes care of a family of from fifteen to twenty females, and in some cases up to fifty or more. The seals inhabit the Pribilof Islands eight or nine months of the year. The balance of the time they spend in the water and at times will appear as far South as Northern California. When they return, the old bulls reach the Islands much earlier than the rest of the herd and take

stands on the rookery where they await the arrival of their families. Each bull selects a prominent place which he holds against all comers, unless he is driven off by a larger and stronger opponent. The bulls often fight savagely among themselves for choice positions on the rookery and for possession of the cows and often are severely wounded. The females have a single offspring, each mother knowing her own pup and will not permit any other pup to nurse. This is said to be the reason why so many seal pups starve to death on the rookery when their mothers are killed out at sea hunting food. The seals have been using these islands for their breeding grounds for many many years. The Islands are of volcanic origin and there is not a trace of a tree, a shrub, or a vine on them, and yet this is the favorite haunt of this tremendous herd of Alaska seals, as well as the home of many millions of birds, which also use the islands to rear their young. Every year the seals come back to the same spot and make their home on land for at least six months of the year, during which time they bring forth and rear their young, after which they return to the sea and depart to the depth of the great ocean until it is time for them again to return.

Early in May the big bulls begin to arrive in large numbers and select their stations. When they have won their places, they lie down and sleep oftentimes for several weeks until the breeding cows are expected. They then sit up and begin to take notice, and send forth their peculiar cry which is supposed to be a cordial invitation to the approaching female seals to hurry. Along about the middle of May and before the arrival of the females the bachelors begin to arrive and they too would establish themselves in prominent places on the breeding grounds were it not for the older and larger bulls who are there to prevent this very thing and do so by driving them off. No male seal can stay on the breeding grounds that is not big enough and strong enough to maintain his position against all comers. It is purely a case of the survival of the fittest, and the larger the bull, and the greater his strength, the larger is his breeding ground, and the larger his harem. The young male bachelor seals are thus very naturally forced to herd by themselves and are required to keep a safe distance from the breeding grounds during the breeding season. They group together and discuss their own troubles and watch the proceedings. The life of the young bachelor seal is a hard one. He is not only prevented from coming on the breeding grounds, but when the killing time comes the bachelor seals are driven off in herds and cracked on their heads and skinned for their pelts which are more

valuable than those of the old bulls, and their carcasses are used for food by the native esquimaux. As a matter of fact the pelts of the old bulls have no value for fur purposes. It is only the young seal, either male or female, whose pelts are suitable to be dressed and dyed and made into fur garments. Therefore, only young seals up to about three years old as a rule are taken for their pelts, although at times they are taken when they are much older. However, the finer pelts come from the young seals. Some authorities claim that the old bull meets the cows at the water's edge to welcome them back home, and oftentimes terrible battles are fought between the bulls for the females. Other authorities claim that the female herself selects her own station and chooses the harem which she is to enter. However, after once making her choice, she is certainly compelled to remain there, and the old bull will stand for no trifling. One authority claims to have seen as high as seventy females in one harem. Shortly after their arrival at the islands the females bring forth their young and the cows go to sea to seek food, which is largely fish, and return to nurse their offspring every few hours, gradually lengthening their stay into days and sometimes weeks before they return. When the pups are about four or five weeks old they begin to stir around and get acquainted with one another, forming into crowds and running in companies, at first inclining towards the middle of the island, but afterwards, as they advance in age and strength, they direct their steps towards the deep, where they paddle around in the shallow water until little by little they learn to swim. About the first of August the harems break up and the different sections mingle together indiscriminately.

When the old bulls first land on the island in May they are as fat and as round as a barrel and sleek and glossy. But after four months residence on land defending his harem, when he never takes food or drink during all that time, he becomes so poor, gaunt and weak, that it is with the utmost difficulty that he crawls into the sea when he leaves, which is usually late in August or early in September, to make his annual trip down through the Behring sea and the Northern Pacific Ocean. The females do not leave until about the first of November, and the pups leave about the middle of November, the yearlings, both male and female, the first half of December. As stated before the pup seal when born can not swim. If he is dropped into the water his head, which is heavy, will immediately sink, and suffocation is only a matter of a few minutes. The pup cannot live in the water until it is about six weeks old, and then begins to try

to swim, never going out, however, beyond his depth. After a while he becomes bolder and then grows more and more expert until he finally becomes an expert swimmer. The young seal therefore up to the time he learns to swim is a land animal, and it requires four months of nursing by its mother on land before it becomes able to shift for itself and is abandoned by its parent. It is said that the young seal can swim at the rate of eighteen or twenty miles an hour for many consecutive hours without pause or rest.

The bull seal when at its greatest weight will weigh up to five hundred pounds and will measure from six to seven feet in length. The female, however, only weighs from seventy five to one hundred and twenty five pounds, and is about four and one half feet in length. The young bachelor seals from one to five years old, weigh from fifty to two hundred pounds, and are from four to five feet in length. It has long been a mystery as to where the seals go when they leave the islands. They swim out into the open sea and some authorities claim that they speed south off the coast of British Columbia as far down as the northern line of California, but wherever they go, one thing is certain that they do not touch land until they again return to their breeding grounds. One of the remarkable facts in connection with seal life is the long fast of the bull seal on the breeding grounds. As stated before from the time they establish themselves, which is from the first to the fifth of May, they do not leave their posts for a single instant night or day, until some time between the first and the tenth of August. The bulls, therefore, for a period of three months or more, absolutely abstain entirely from any kind of food or drink, and when they do return to the water, they are, to borrow a slang expression, "all in", and have barely enough strength to crawl into the water and get ready to start in all over again.

The females on the contrary do not fast but feed at frequent intervals and during the end of the season on the island are usually as sleek and fat as when they first arrived.

It is said that the bull seal is expert in the management of his harem. Whether he has a harem of five members or fifty, he is master of the situation. His will is law; not that it is always tamely accepted as such, but the result is the same. If a female becomes restless and moves about, a warning growl usually quiets her. If the movement is persisted in and an attempt to escape evident, the bull is up at once with a show of fierceness. He may simply strike the cow down, or he may even seize her in his mouth and deliberately throw her, or carry her back, to the herd. If the female thinks she

has a chance to get away, she may try to outrun the bull. If she miscalculates the distance, he seizes her by the back of the neck and restores her, sometimes in a torn and bleeding condition, to the family circle. As a rule, however, the cow avoids this seizing by turning and facing the bull biting him on the breast and neck. The bull by steadily pushing her before him, forces her back into the fold and does not seem to mind her bites.

There is constant noise going on all the time at the rookery. The bulls are giving vent at intervals to their savage roars of defiance. In their more subdued efforts to maintain discipline in the harem they are constantly whistling, chuckling and scolding



· BULL SEAL AND HAREM

in various notes. Mingled with all this is the shrill bleat of the females and the call of the pups. When it is considered that thousands of these animals are calling and answering all the time, some idea of the uproar and confusion incident to their life is possible. Nor is the din and noise peculiar to the day, but is heard at all hours of the night; in fact, if anything, there is more noise at night. In the early season the animals sleep much of the time, but there are always large numbers coming and going, even when there are a considerable portion of them comfortably asleep. Every animal in one harem may be sound asleep, including the old bull, while in the harem next to it, everything is confusion and every animal will be up and stirring and most of them calling. They assume every conceivable position while asleep. One animal will be stretched out full length on its back, another on its side; one might have the hind flippers under the body, and another may have them reversed. They seem to enjoy the rocks, and do not care for a smooth even bed. Some go to sleep

sitting up with the body waving back and forth as if it would fall. Where parts of the rookery have perpendicular cliffs, the animals are to be found lying out on little shelves at angles where it is a wonder they can keep their position at all. The seal also sleeps very soundly in the water. It lies on its back in a bowed position, nose just peering above the surface, and it is said always to the leeward, the hind flippers being held aloft as a wind break to keep the animal in this definite position. In this attitude the seal can apparently sleep with the greatest comfort rocked by the gentle swell.

Color of the Seal

The little pup at birth is a shiny black. Some of them show a brownish shade along the throat and belly. In September they shed their black coats and acquire coats of grey, which under the action of the wind and weather soon changes into brownish, or combination of brown and silvery color, which gives the skin the appearance of a silvery brownish grey. When the female first comes out of the water and lands on the island her coat is a dark grey, but under the constant exposure to the weather and sun it turns to a rusty reddish brown, somewhat darker on the back and along the throat and belly. The young bachelor seals have silvery throats and bellies, but their backs present the same dark brownish shade as the females. The old bulls are usually always black, while others are a reddish brown. The average color of the seals that are taken for fur purposes are the brownish grey skins with the underpart of the throat and belly a lighter silvery shade. The color of the seal is in the top guard fur, or water hair as it is called. The underfur of the seal is very uniform in color, when the top water hair or guard hair is plucked out, and it is this soft thick under fur, about one half inch in length, which is dressed and dyed and becomes the seal skin of commerce, out of which garments are made.

Killing Seals

When it comes time to kill the seals the whole population of the islands turns out to join in the work. A gang of twenty five to thirty seals are cut out from the main herd at a time and driven up to the killing grounds, where men stand around with heavy clubs with the ends bound in sheet iron; and as the seals are driven up, these men walk up to the seal and with a crushing blow on the skull stun the seal and one or two more blows usually finishes him. It is said that it takes a hardened individual to kill a seal. If you have ever seen a seal in a zoo, you know what wonderfully appealing eyes

they have. The seal is an intelligent animal and has been trained to do marvelous tricks of balancing. It seems to be an affectionate animal and easily trained, and it is necessary for the person doing the killing to be a real butcher. A bungler, who is not expert in seal killing and who would not hit a hard blow, would probably have a difficult time clubbing a seal to death. After the seals have been killed they are dragged into line, then stuck and "flipped." In other words they are stabbed to the heart and allowed to bleed freely. Then a knife is drawn around the head and flippers, severing the skin and leaving it ready for the skimmers, who split it up in short order and spread the skin evenly on the grass flesh side down to cool.

After the skin is removed the carcass is stripped of the blubber or fat. The skins are then salted with a heavy coarse salt, and are folded and rolled in compact bundles, tied with a rope, and placed in large wooden casks ready for shipment. The skins are then ready to be sent to market to be dressed and dyed and made into fur garments.

The Dressing and Dyeing of Seals

The dressing and dyeing of seal skins is a process that requires several months. The seal skins are first scraped free of all superfluous meat and fat. This is called blubbering. The loose salt is shaken from the skin. The skin is then placed hair side down on a beam, the ears being cut off if they have been left on, and all salt and dirt removed. The skin is then turned over with the pelt side up on the beam with the head held at the top, and the superfluous blubber and meat is all removed with a dull knife, care being taken not to cut the grain of the skin. After this is done the skins are washed in hot water containing a solution of soda. This washing process is kept up until the skins are thoroughly cleansed. The skins are then unhaired, that is the long top guard hairs are plucked out leaving the soft underfur, which is about one half inch in length and light chocolate brown in color. The skins are then leathered, that is the pelts are dressed and the hide converted into soft pliable leather. The dressing of the skins is done with the natural seal oil, which is rendered from the blubber that is first scraped from the skin. After the leathering process the skins are then ready to be dyed. Each dresser and dyer of skins has his own process and formulae for mixing dyes, but the method of applying the dye is largely the same. The most successful dye for sealskins is a vegetable dye, the base of which is logwood and galls (Note—Galls are an excrescence on plants

due to insects puncturing the surface of the bark or leaf and depositing its egg in the cavity. The subsequent growth, constituting the gall, is the effect either of some virus deposited with the egg, or of the irritation caused by the larva, which lives in the gall until its development into an insect. The gall of commerce is the product of a gall-fly, which lays its eggs in the soft twigs of an oak tree of western Asia and southern Europe. The gall used in the manufacture of dye-for seal skins is largely the Aleppo gall. Aleppo is a district in Turkey. Logwood is from the logwood tree which is found in Jamaica, the wood of this tree containing the crystalline principle hematoxylin which is used for dye stuffs.)

The finished article requires fifteen or twenty applications of dye, each application must be dried, and the work done by skilled men. The result is that the skins, which in their natural state have a silvery grey unattractive color, are turned out a beautiful lustrous glossy black. It looks black in most lights, but there is a brownish sheen to it. The pelt of the seal is rather thick and heavy. To make it more supple and to reduce the weight the pelt side of the dyed skins are sandpapered down as thin as possible, this not only thins the pelt but removes the dyed leather leaving the pelt side white like the inside of a white kid glove. The seal herd is the property of the United States Government, and the Government has recently taken over the supervision of the killing and taking of the pelts, as well as the utilizing of the carcasses for their by-products.

CHAPTER XXVIII

GINSENG

For many years the ginseng business has gone hand in hand with the fur business. The man that has a fox farm, or a skunk ranch, usually raises ginseng, although it does not necessarily follow that all of the ginseng farmers raise furbearing animals. Ginseng is a root that is found wild in many parts of the country and that in recent years has been cultivated and some very fine roots grown.

The questions are constantly asked what is ginseng and what is it used for. In answer to the first question, ginseng is a fleshy-rooted herbaceous plant growing naturally on the slopes of ravines and other shady but well-drained situations in hardwood forests from Maine to Georgia, and as far West as Minnesota, throughout most of the central Mississippi Valley. In its wild state the plant grows from eight to twenty inches high, bearing three or more compound leaves, each consisting of five thin, stalked, ovate leaflets, pointed at the apex and rounded or narrowed at the base, the three upper leaflets being larger than the two lower ones. A cluster of from 6 to 20 small greenish yellow flowers is produced in midsummer, followed later by as many bright-crimson berries, each containing from one to three flattish wrinkled seeds the size of small peas.

In answer to the second question, no one seems to know. It has long been valued by the Chinese for medicinal use, though rarely credited with curative virtues by the natives of other countries. The roots have been exported from this country for about one hundred years, and today there are larger quantities exported to China than ever before, due to the fact that the supply of ginseng has been materially increased by the cultivation of the root, and the cultivated crop is now larger than the crop of wild roots.

The cultivation of ginseng began about fifteen years ago, and many growers have been very successful with it. At this time the price is about \$12.00 per pound, and those fortunate enough to harvest a large crop of the root at the prevailing price are to be congratulated. One grower informed the writer that he recently gathered 4000 pounds of roots from a two-acre patch, for which he realized \$50,000.00 net cash. This crop took eight years to grow.

It is said that the Chinese do not use ginseng so much as a curative medicine as they do as a preventative. It is said that their favorite method of taking ginseng is to steam the roots for many hours, drinking it as a tea. It is their belief that many diseases are caused by indigestion, and that ginseng has the qualities of a medicine that will regulate the digestion and thus forestall disease. Whether this is true or not, it is a fact that practically all of the ginseng produced, both the wild root and the cultivated root, is exported to China. It is also said that the Chinese will pay big premiums for certain peculiarly shaped pieces of root. For instance a piece of ginseng root that resembles the human form is said to be particularly desired and in high favor with the Chinese. As to whether there is any medical merit to the root or not, has not been decided by medical authorities in this country. At any rate the medical profession seems to give little value to it. But that is not the question. Whether it has merit or not, the Chinese believe that it has, and they are the users, and we have been exporting ginseng root to the Chinese for over one hundred years. There is a big demand for it now and probably will be for many years to come, so that any one who will undertake the raising of ginseng, and raise it successfully, will be well repaid for his work.

It requires an infinite amount of patience and quite a little work to successfully raise ginseng. One must wait for several years before cashing in any profit, but when you finally reap a crop of roots and are able to sell it at the prevailing price on today's market of \$12.00 per pound, there is no crop that will return the same high rate of cash dividends.

Ginseng in its wild and natural state grows mostly in thick hardwood forests. The seeds ripen early in the fall or late summer, depending a good deal on the locality in which it is found. For many years the only crop of ginseng was the wild root, which was gathered by ginseng diggers, many of whom were trappers in the winter time, and looked for ginseng during the summer months. They became familiar with the leaf and general appearance of the plant and would then travel through the woods and when they found a plant that was the proper size and gave evidence of having a fair sized root, they would dig it up with their mattock, carry it home, wash and dry it, and ship it into market. In some districts where ginseng was plentiful this would be a very profitable summer occupation, but the diggers would soon strip the district of all the wild ginseng there was to be had. In some sections large beds of ginseng would be found,

and the lucky finder would reap a harvest. Some one conceived the idea of planting ginseng seed and raising the plant. Just who first hit on this idea is a mooted question. At any rate the pioneers were not very successful, and most of those who tried it, gave it up. However, it has been shown conclusively that ginseng can be successfully grown, and that a larger root can be produced than is found in the wild state. When the cultivated ginseng first made its appearance on the market, the Chinese did not value it very highly and it looked like cultivated ginseng was due to be a failure, but evidently the Chinese have overcome their prejudice against the cultivated root, as there is very little difference between the market value of the cultivated and the wild root at this time.

It is often asked why the Chinese do not raise their own ginseng. One answer to this question seems to be that the ginseng requires virgin soil, and some growers who have experimented claim that it is impossible to raise a second crop of ginseng on the same land. At any rate it grows best in new land, which would seem to indicate that it requires the same natural conditions to cultivate the root as in the wild state. This is further indicated by the fact that leaves are used for mulching and every effort is made to create in the cultivated field the conditions that exist in the wild state, both as to the leaves that cover the plant and the shade that is furnished by the trees.

Fromm Brothers, who probably have one of the largest ginseng beds in this country, informed the writer that they got the best results after the plant was six years old. Their method is to take the ginseng seed, which has a very hard outer shell, and place it in sand and leave it there for a year to germinate. This is done by taking a wooden box, the size depending on the number of seeds that are to be used, and laying a layer of sand on the bottom of the box about six inches deep. Over this they spread a layer of ginseng seed, and then a layer of sand about two inches deep, then another layer of ginseng seed, etc. This box is kept in a damp, moist place, and is allowed to remain as it is for one year. The seeds are then taken out and planted in a bed and are allowed to remain there for two years. At the end of the two years, the plant is about three or four inches high. It is then transplanted and allowed to remain three years and then the root is dug. It takes six years to mature a crop from the time the seed is first planted; but after the 6th year a crop may be gathered each year, and it is estimated that the yield of dry roots from a well managed planting will be about a ton to the acre. At the present price of \$12.00 per pound this would net

\$24,000.00 per acre, so that it can be readily seen that a successful crop of ginseng is a very profitable undertaking. In fact there is no other crop that will return as big a dividend if it is brought to a successful issue.

The seed also is a big source of profit to the grower. They are sold by the thousand and vary in price from two to four dollars per thousand. It takes about 8000 seeds to weigh a pound. Plants that are five years old will produce an average of fifty seeds annually.

The Department of Agriculture has this to say about ginseng. They are usually stratified in moist sand, old sawdust, or woods earth and stored in a damp cool place until cracked by incipient germination, which may be considerably delayed and usually does not occur until the year following their ripening. The subsequent development of the plant is also relatively slow, as it requires from five to seven years to grow marketable roots from seeds or young roots. Under favorable circumstances the plants begin to fruit about the third year and when over 5 years old may produce as many as 50 seeds annually.

The older roots possess the most substance and when properly cured realize the highest prices. It appears almost useless to offer for sale 3 year or 4 year roots, even if well grown and of good size, as buyers for the Chinese market have learned to discriminate against them.

Starting the Plantation

In planting ginseng beds it has been found desirable to start with both young roots and seeds. By securing roots three or more years old a moderate seed crop may be had the first season. A stock of 1-year or 2-year roots set at the same time will start the rotation, and it is well to plant seeds also if germinated ones are available.

As the output of seeds is likely in time to exceed the capacity of the plantation, it is well to restrict the production by nipping the flower heads, unless a good market for the seeds is assured. Roots gain more rapidly in size and weight if the plants are not permitted to seed.

While small dooryard and woodland plantings may be grown with little outlay, ginseng culture on a large scale is quite expensive. The cost of equipping the starting ginseng beds on a commercial basis does not appear under present conditions to fall short of \$1,500 per acre, exclusive of the value of the land.

The Culture of Ginseng

Ginseng grows naturally in rather dense shade and when placed under cultural conditions must be shielded from direct sunlight by tree shade or some construction that will reduce the light to about one-fourth its normal intensity. This may be accomplished by planting it in forest beds, or, in cultivated ground, by erecting sheds open to the north and possibly to the east, but covered at the top and the south and west with laths or boards so spaced as to cut out nearly three-fourths of the sunlight. Brush and heavy burlap have been used with fair success for shading, but thin or ordinary muslins are useless, as they do not intercept enough light. Denser shade is required in southern localities than in the North. The rule appears to be one-sixth sunlight in the latitude of Kentucky and somewhat denser south, rising to one-fourth or more in Michigan and Wisconsin. In the North, where open construction is preferred, Lima beans or morning glories may be planted on the south and west sides and allowed to run on poultry netting, thus furnishing shade during the brightest summer months.

There are many methods of construction, but the most common is to set posts firmly in the ground 8 feet apart each way and about 7 feet high above the ground. Scantlings 2 by 4 inches in size are nailed on top of the posts, running the long way of the shed. The shade is usually made in sections 4 by 8 feet long, using common 4-foot laths or slats nailed on strips 2 by 2 inches and 8 feet long. The laths should be spaced from one-fourth to one-half inch apart, according to locality, whether in the North or in the South. These sections of shading are laid on top of the 2 by 4 inch runners and so nailed to the posts that the laths run about north and south, thus giving the plants below the benefit of constantly alternating light and shade

For covering seed beds a rather low shade is desirable, in order to prevent the washing out of the seeds by the drip from the laths. Poultry netting covered with brush, straw litter, or burlap, made light in spring and denser as the sun gains power, answers very well.

The beds under shade should be 4 feet wide and preferably should run east and west, being so placed that the drip will fall to a great extent in the paths. The sides may be of 12-inch boards set 8 inches or more in the ground to keep out the moles and held in place with small stakes. The soil should be fairly light and so well drained naturally or artificially that water can at no time remain on the beds

It should be in a condition to grow good vegetables without the addition of strong manure.

The very best fertilizers are wood soil or rotted leaves 4 to 6 inches deep, well incorporated to a foot in depth, and fine raw bone meal well worked in, applied at the rate of 1 pound to each square yard. If yard manures are used they should be very thoroughly rotted and in order to give the best results should be worked in some months previous to planting the beds. Chemical fertilizers and wood ashes have been used, but as seriously injurious results have sometimes followed it is best for the beginner at least, to depend on rotted leaves and raw ground bone to enrich the soil. For seed beds the soil should be half woods earth, free from fiber, and if inclined to be heavy, enough sand should be added so the mixture will not bake or harden even after heavy rains.

Planting the Beds

Ginseng seeds are best planted in spring as early as the soil can be worked to advantage. Only cracked or partially germinated seeds should be used. They may be planted 6 inches apart each way in the permanent beds or 2 by 6 inches in seed beds and transplanted to stand 6 or 8 inches apart when 2 years old. The seeds should be covered 1 inch deep with woods soil or old rotten hickory or basswood sawdust. That from pine or oak trees should not be used. The roots may be set any time from October to April when the soil is in suitable condition, the crowns being placed about 2 inches below the surface. The most approved distances to plant are 6 or 8 inches apart each way, the latter being preferred when the 7-year-old roots are to be grown.

Many planters round the surface of the beds, making the center several inches higher than the sides, since they find space for more plants on the curved than on the flat surface, but others claim that the possible injury from drought in very convex beds more than offsets this advantage. It is important, however, to have the centers high enough not to retain water after a rain. For roots the beds should be worked fully 12 inches deep, but the seed beds need not be so deeply stirred, as it is not advisable to have them settle to any marked extent.

Ginseng needs little cultivation, but the beds should at all times be kept free from weeds and grass, and the surface of the soil should be scratched with a light tool whenever it shows signs of caking. Ginseng seedlings grow about 2 inches high the first year, with three

leaflets at the apex of the stem. The second year plants may reach 5 or 6 inches in height, bearing two compound leaves each composed of five characteristic leaflets. A third leaf is generally added the next year and fruits may be expected. In succeeding years a fourth leaf is formed and the fruiting head reaches its maximum development sometimes producing as many as 100 seeds, but the average under cultivation seldom exceeds 40 seeds to a plant.

Mulching

In accordance with natural conditions a winter mulch over the crowns is essential, especially in northern localities. Forest leaves held in place with poultry netting or light brush are best, but corn-stalks stripped of the husks, bean vines, cowpea hay, or other coarse litter not containing weed seeds or material attractive to mice will answer the purpose. It should not be placed in position until actual freezing weather is imminent and should be removed in spring before the first shoots come through the soil.

A mulch of 4 or 5 inches of leaves or their equivalent in litter is ample for the severest climate, and less is needed in the South. Seedling beds particularly require careful mulching to prevent heaving by frost.

Free ventilation is very necessary for ginseng. In the forest, owing to the height of the protective canopy of trees, air currents are almost constant. This condition should be borne in mind in the construction of artificial shade, and the shed should contain as few obstacles as possible to the free circulation of air. Open sides at the north and east will generally insure free ventilation.

Owing to the comparatively high cost of ginseng plants and roots, the beds should be well protected by secure fences from the intrusion of wild or domestic animals and should also be securely guarded against theft, which is not uncommon with this high-priced product. Protection is especially needed with forest plantings which should always be well inclosed. Moles may be controlled with suitable traps, of which there are several kinds on the market, or the beds may be guarded with boards or wire netting of sufficiently close mesh set 12 to 18 inches in the ground.

Ginseng Varieties

The culture of native ginseng has been too brief to induce varietal changes, but liberal fertilization and continual selection of seeds from individual plants having superior commercial characteristics will doubtless in the end modify the wild type of plants. There are,

however, various recognizable geographical races, not all of the same value to the grower. Plants from the northern range, particularly those indigenous to New York and Wisconsin, appear to possess the most useful characteristics and form the best basis for breeding stocks. Southern ginseng, though vigorous and forming roots of good size and shape, does not seed well in northern localities, evidently finding the season too brief. Some of the western types have long thin roots of undesirable character, and another local form, dwarf in growth, has small, round, and almost worthless roots. The beginner should endeavor to procure from reliable dealers the best commercial types of ginseng as a foundation for his breeding stock.

Diseases of Ginseng

The diseases of cultivated ginseng appear to be chiefly incident to the crowding of the plants, deficient drainage, and lack of ventilation. In their natural state the plants as a rule are thinly scattered on the forest floor under advantageous conditions of ventilation and the soil drainage, the normal action of tree roots playing no inconsiderable part in the latter condition, and diseases, of which there are several, are likely to remain quite local in effect, but under the crowded conditions of commercial culture they tend to spread and may cause material injury. Errors in fertilization and soil treatments are also fruitful sources of injury and by weakening the resistance of the plants further invite the inroads of disease.

Forest Plantings

The earlier successes with ginseng culture were made with forest plantings, and this method is still preferred by many growers where the proper conditions are available. The shade should be fairly dense, but should be produced by tall, open-headed trees rather than by undergrowth. Good drainage is essential, as the plants will not thrive in wet soils. The soil should be deeply plowed or spaded, all tree roots removed, and their further encroachment should be prevented by cutting around the beds yearly with a sharp spade. Leaf mold or well decayed litter should be liberally worked into the soil, and an application of bone meal raked into the surface will in most cases prove a useful addition. The culture of forest beds is in all respects similar to that under artificial shade, and the winter mulch should in no case be omitted.

Digging the Root

The cured root is valued by the Chinese largely according to its size and maturity. The best qualities of proper age break with a

somewhat soft and waxy fracture. Young and undersized roots dry hard and glassy and are regarded as less desirable. Very small roots and root fibers often realize less than a dollar a pound, while those of the proper size and quality sell readily at top quotations. Cultivated roots as a rule attain greater size than wild ones of the same age, but lack density of substance until well past the fifth year of development.

Beds should rarely be dug for market until the sixth year, and should then be taken up solidly and the undersized roots replanted or securely heeled in until time to plant in the spring. Good roots should run nearly four inches long, half an inch in thickness below the crown, and average about an ounce in weight in the fresh state.

Roots may be dug at any time after growth ceases in September, but mid-October is regarded as the most favorable time. They should be carefully washed or shaken free of all adhering soil, but not scraped, as it is important to preserve the natural dusky color of the skin with its characteristic annular markings.

Curing is best affected in an airy room heated to about 80° F. by a stove or furnace. The roots are spread on lattice trays and are frequently examined and turned, but must always be handled gently to avoid breaking the forks or marring the surface. It requires nearly a month of drying to cure the larger roots properly, but the heat may well be diminished toward the end of the process except in noticeably damp weather. In all stages of curing particular care should be taken to see that the root does not mold or sour, as any defect will greatly depress the selling price. On the other hand, overheating should be avoided, as it tends to discolor the surface and spoil the texture of the interior. Once well cured, the roots should be stored in a dry and airy place, secure from vermin, until ready for sale. The market lies with the wholesale drug dealers, some of whom make a specialty of buying ginseng root for export.

Ginseng is a native product of recognized importance. The export trade in dry roots has existed for more than a century and has attained an average value of over a million dollars annually for the past decade.

The natural production, diminished by overcollection and the contraction of suitable forest areas, has dwindled to such an extent that prices have risen to levels warranting cultivation, which has proved quite successful in judicious hands. The plant, however, has little domestic value except for the exploitation of amateur cultivators and depends on a distant oriental market for its standing as a commodity.

As a commercial product it would appear particularly liable to overproduction, which danger, however, is greatly lessened by the slow development of the plant and the inherent difficulties of its cultivation.

Under the present conditions of production ginseng offers attractive possibilities to patient cultivators who are in sympathy with the limitations of growth and the slow development of woodland plants in general and who are willing to make a material outlay with only scanty returns in view for several years to come, but it holds out little inducement for inexperienced growers looking for quick profits from a small investment.

The culture of ginseng and of special crops generally is best begun in an inexpensive and experimental manner, enlarging the equipment only as reasonable success seems assured. "Plunging" in ginseng is as likely to prove disastrous as in other forms of business enterprise.

CHAPTER XXIX

BUYING AND VALUING RAW FUR

The buying of raw furs in the country by the inexperienced is rather hazardous business. The value of raw furs depends upon the quality of the fur and the size and condition of the skin. A large skin that is poorly furred may be worth less than a small skin with the fur fully developed. Raw furs are divided up into several grades as follows: extra large #1 prime, large #1 prime, medium #1 prime, small #1 prime, #2, large #2, #3 and #4. With some furs, such as mink and marten, the color and gloss of the fur plays an important part in its value. While size is important the value of a pelt does not depend upon size alone. For example, two mink skins of equal size and coming from the same section of the country may vary greatly in price. One skin may be worth ten dollars and the other twenty-five cents. The ten dollar mink would have its value in the fact that it would be prime, full-furred and dark colored, the other would be unprime, that is, the pelt would be almost black in color and the fur would be just fuzz. There are other mink skins that would range in value somewhere between these two extremes and, as stated before, their value would depend upon size, quality and the color of the fur.

The principal thing to keep in mind in valuing and buying raw furs is the fact that it is the fur on the pelt that makes the skin valuable, and the finer and silkier, the better colored the fur, the more valuable it is. Therefore, when starting out to buy furs, these facts should be taken into consideration and the buyer should be well enough posted to know one grade from another at least in a general way. Furs are bought with the idea of ultimately making them up into fur garments, and as stated before, it is the quality of the fur or the quality and beauty of the fur that makes one skin more valuable than another. The first consideration in buying furs, therefore, should be given to size quality and color. By quality is meant the thickness, softness and silkiness of the fur, the primeness and condition of the pelt. By color is meant the richness, gloss, luster and shade of color of the fur. As a general proposition, in most furs where the color is an element of value, the dark shades of

color make the fur more valuable. In other words, dark, deep, rich brown mink is more valuable than the yellowish, lusterless, faded looking mink. These are two extremes, but serve to emphasize the point of what is meant by color.

Another important element that enters into the value of pelts of course is the size. The difference in the value of two furs being equal in color and quality would be the size. The one having the largest number of square inches of fur would of course be the more valuable. Therefore, to repeat, in judging the value of pelts, there are three important things to bear in mind. First the quality of the fur, the thickness and silkiness; second the gloss and shade of color; third the size and condition of the pelt and the color of the flesh side of the pelt. Funsten Bros. & Co. quote prices on the different grades and kind of raw furs according to their standard grades, which are #1 extra large, #1 large, #1 medium, #1 small, #2 large, #2, #3 and #4.

Grading and valuing furs is a good deal like valuing and judging diamonds or pearls. A man, to be an expert, must have years of experience and not everyone handling or buying furs becomes an expert. The writer believes, however, that these suggestions will be of value to the man or boy possessed with what is called "fur sense." When you stop to consider that it takes a man with "fur sense" working in furs every day and handling thousands of pelts, about five years to become a qualified fur grader, you can readily understand that it is not possible to become an expert in furs by merely trapping or handling a few skins each season, but the man who has this experience and will read carefully and follow the suggestions in this article will find that his ability to judge the value of raw furs will be aided materially.

A Number One Prime Skin

Any pelt to grade number one prime must be prime pelted; that is, the flesh side of the pelt must be a healthy reddish white, clean color. The fur must be full, the under-fur well developed, and the guard hair not rubbed off. In addition to this, the skin should be stretched properly.

Now it would be graded an extra large number one, large number one, medium number one, or small number one, according to the size. Right here we would like to call attention to this fact, that the size of a number one extra large skin in one section often differs from that of another section. For instance, the size of a number one large mink from the state of Maine would be about the same size as a

number one small mink from Alaska. In the same manner a skunk from Kentucky that would grade prime large, would grade small from Dakota. We mention this because furs from different sections vary in size, quality, and color, but a pelt from any section to grade No. 1 prime must be prime pelted and full furred as described above.

Unprime Pelts—The flesh side of an unprime skin is a bluish color, and such skins are called blue or unprime. Pelts of this kind usually grade number twos, threes, or fours, according to the amount of fur on the pelt. Some unprime skins have a flesh or pelt side that is almost black in color. Pelts of this kind are usually very poor in fur and are low grades and of little value for fur purposes.

Furs that grade as twos, threes or fours, are usually blue pelted, but a skin may be red pelted and not be number one prime. This would apply especially to skins that are trapped in the late Spring of the year, when the pelts are red, but very dry and brittle, and the fur is rubbed or shedded. These are known as "springy" or "rubbed" skins, and are usually classed as number twos, threes, or fours, the same as the blue pelted skins; in other words, they are not number one prime pelted furs.

Furs become unprime due to any one of several causes. As a rule blue pelted unprime skins are found before real cold weather sets in, and before the animal has developed a heavy coat of under fur. The pelt side of the skin indicates the health and condition of the animal and the quality and thickness of the fur. Blue pelted skins, as a rule, indicate that all the fur has not fully developed.

A few skins are found to be blue pelted even when the animal is taken in real cold weather and at the best time of the year. This may be caused by the animal being diseased or sick.

In buying furs, or grading furs, a safe rule is to class unprime and springy or shedded skins as number twos, threes, or fours, according to the quality of the fur and the condition of the pelt and the size.

In spite of all that has been written about not trapping out of season, there is a certain number of inexperienced trappers who take furs at the wrong season. These furs are of little or no value. Again, animals are diseased and even when taken in the winter their coats are mangy, shedded and of little value for fur purposes. Singed furs, especially mink, must be watched, for the singed fur is the same as a hair that is burned; the end of such hair being usually curled. Animals that lay out in a strong sunlight often have the top guard hair singed. This is especially true of otter. Many otter skins that would otherwise be perfect in fur and pelt have the top or guard

fur singed. Badly singed otter skins are usually plucked as singed pelts do not make up attractively.

It pays to trap when furs are at their best. Take mink for instance. A mink skin could be of large size but if the pelt were black, and the fur just a little fuzzy hair, the skin would grade low and would be worth a low price. On the other hand, if the same mink (unless it was a sick or diseased animal) were trapped when the fur was at its best and the pelt prime, it would be worth big money.

Color

In addition to the primeness and condition of the pelt and the thickness and quality of the fur and the size of the skin, another important element that enters into the grading of some furs, such as mink, marten, otter, fisher, raccoon and even muskrat, is the fur color. As a general rule the darker skins are the more valuable. Silky dark mink bring higher prices than coarse brown ones.

Beginners, and sometimes older trappers, make the mistake of believing they have very dark skins because it is the darkest one they ever have seen in their vicinity, when as a matter of fact, the skin would not grade dark in the market because in some sections darker skins are produced.

A skin to grade dark should be a rich, dark brown chocolate color, and the tips of the guard hair must not be singed by the sun. Under an electric light on a dark day such skins look almost black.

You will readily see therefore, that in grading and valuing most furs there are four distinct things to take into consideration—primeness or unprimeness of the pelt, the size, the thickness and quality, and the color of the fur. Also take into consideration that cut skins, tainted skins or improperly stretched skins are not strictly No. 1 skins.

MINK

Mink is one of the most beautiful and servicable of our American small furs. It is found in nearly every state in the Union and in large quantities in Canada and Alaska. Its habits, etc., are described in another chapter. The finest mink in color and quality are found in the Northeastern states and Eastern Canada; Maine mink probably being the finest in quality. Michigan and Wisconsin are famous for mink of fine quality and color; Minnesota is the home of mink of splendid size and color. The largest mink probably are found in North Dakota. Louisiana is a big mink state, although quite naturally the quality of the fur is not as fine as those found in the more northern states. Many mink are found in parts of Texas

but they are usually of a coarse variety. The Carolinas are famous for mink. Alabama, Georgia and parts of Mississippi produce mink of splendid color. Virginia and West Virginia also have mink of good color. All of the Central and Western States produce mink in large quantities of varying quality, the mink in one section of a state often differing considerably from those found in other sections. As a rule the mink from the Northern part of a state are softer and more silky in fur than those found in the Southern sections. Practically all mink, even those of the very finest color and quality, are stretched cased with the fur side in and the flesh side out. This has many advantages over the other method and is preferred by all experienced buyers. Mink that are shipped to market with the fur side out and the pelt side in are bound to get more or less greasy which causes the fur to look dead and flat. To determine the grade and value of a mink, first examine the pelt carefully and determine whether it is prime or not. If the pelt is prime, that is if the flesh is a clean reddish healthy color then it will grade as number one. The next thing to determine is the color and size and whether the skin or the fur has been damaged; next consider how the skin has been stretched. The proper way to stretch mink is pelt side out and they should be shaped like the one shown in the illustration. In some sections are found a class of mink called cotton mink. The under fur is almost white or a very light tan. These mink are usually poor in quality, do not match with other mink and are not as valuable, and usually grade No. 3. Remember that a mink to be classified as dark must be a rich dark brown; dark mink are not found at all in some sections. The color seems to be determined by the soil conditions, amount of timber and possibly food. Mink that live entirely on fish are rarely good in color, in fact they are a pale light brown. All mink begin to lose their gloss and get lighter in color in the spring and in some sections the fur is singed when the weather turns suddenly hot; the mink lays out in the sun and its fur will quickly shed and turn color.



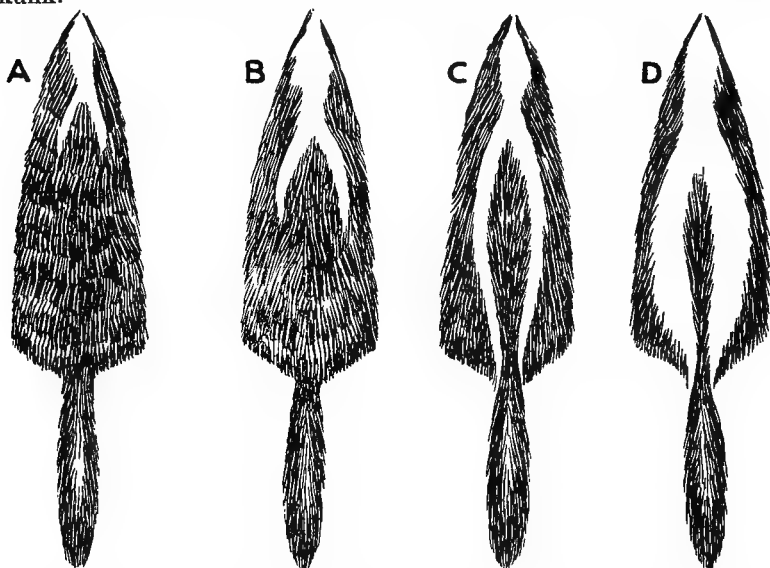
Mink, Pelt and Fur
Side Out



Grading Sable

SKUNK

In the grading and valuing of skunk the same rules apply, so far as the skins being prime or unprime are concerned. But in addition to the condition of the pelt and the length and thickness of the fur, skunk of equal quality are valued according to the amount of black fur that is on the pelt. As a rule the more white on the skunk the less valuable it is. Therefore, skunk are graded as black skunk, short stripe skunk, narrow stripe skunk, and then broad or white stripe skunk.



Sometimes a beginner will think that he has a black skunk because after he has skinned the animal the pelt turns black. A skunk that is black on both sides, fur side and pelt side, is not very valuable. What you want is well furred skunk; silky, glossy fur and a prime pelt. These are the skins that bring the fancy prices. Other kinds are valuable, of course, in proportion to their quality.

Skunk, that are classed as black, are nearly all black, with the exception of one or two small white spots on the back of the head. The short stripe skunk has two small stripes running almost down to the shoulders. The narrow stripe skunk has two narrow white stripes, about the width of a knife blade, which run from the top of the head to the root of the tail. The broad stripe skunk has the same two white stripes as the narrow stripe skunk, except that the white stripes are about twice as wide as those of the narrow stripe skunk.

The more black fur on a skunk pelt, the more valuable it is. The color of the pelt side of an unprime skunk is blue, or black; in fact this applies to the pelts of all unprime skins.

Illustration (A) shows the black skunk, (B) the short stripe skunk, (C) the narrow or long stripe skunk, (D) the broad or white stripe skunk.

These skunks are illustrated fur side out in order to show you the relative difference in the stripe. The length and width of these stripes vary according to the section of the country in which the animal is trapped.

The proper way to stretch skunk is to case the pelt with the fur side in and the pelt side out. Always be sure and have the pelt scraped free of surplus fat before packing for shipment.

It is very important to take the color of the flesh side into consideration in judging the value of a skunk pelt. The all important thing that makes a skin valuable is the amount of fur, but the inexperienced often mistake hair for fur. The color of the flesh side usually indicates the condition of the fur; if it is prime, that is if the flesh side is a healthy reddish white color, you can be reasonably sure that the fur is fully developed. If the pelt has a slightly bluish cast, it indicates that the fur is of good quality, though not fully developed. But if the pelt side is a flat looking black color, then you must be careful and look for fur that has only partly developed, and that is lacking in a full growth of under fur.

OPOSSUM

Opossum is one of the leading American furs and one of the greatest sources of profit to the trapper and fur shipper. In some sections they are used as an article of food and are therefore valuable in two ways, but to be valuable for fur purposes opossum skins must have fur. Opossum skins that are taken before they are full furred or when they are shedded are sometimes of very little value. If you are buying opossum we would advise you to pay attention to the amount of the fur, and not judge the opossum by the size of the pelt alone.

Opossum are not judged so much by the pelt as other fur bearers. It is the thickness and the quality of the fur that counts and a skin may be large in size, and look prime, but if poorly furred has little value.

Opossum that just have long coarse hairs, and no under fur have to be graded as twos, threes or fours. In grading or valuing opossum

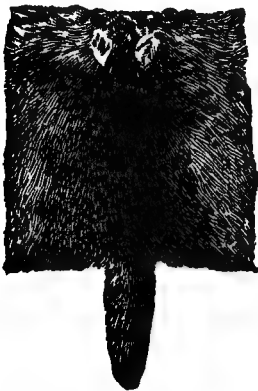
remember it is the thickness and quality of the fur that counts in addition to the size of the pelt.

The color of the fur does not enter into the value of opossum pelts. Most of them are dyed so that the color is not important. The under fur should be dense and long. The animal does not lose the long guard hair in hot weather but the under fur sheds out. Pelts that are taken before the underfur has fully developed are not valuable for furriers purposes. When buying opossum, be sure and examine the fur closely; opossum pelts are seldom blue in color like other unprime pelts. Stretch the skins pelt side out as shown in the illustration.

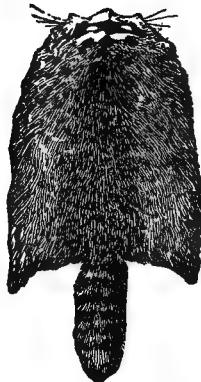


RACCOON

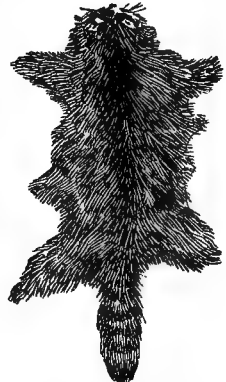
In grading raccoon the same general rule as to the primeness or unprimeness of the pelt applies, however, raccoon is one of the few fur bearers that are stretched open and not cased. Most all of the raccoon from the central and southern sections are stretched square as shown in illustration.



SQUARE HANDLED
Properly Stretched



INDIAN HANDLED



ROUGH HANDLED
This coon stretched square would be worth more money

In northern sections coon are stretched in Indian style, but as a general rule it is better to stretch all coon square.

Prime pelted coon would be graded number one extra large, number one large, number one medium and number one small and the unprime pelts would be graded as number two large, number two, number three and number four, with the exception, however, that very pale, faded coon, even if the pelt is prime, are not graded number one.

The best colored raccoon are dark over almost the entire surface of the pelt. Some coon are prime pelted, but they lose their color from lying out on the limb of a tree in the hot sun and the fur becomes faded and spotted yellow in color. They may be full in fur, but the color is so bad that they cannot be classed with the rich dark colored skins, and therefore must be graded accordingly.

In some sections of the south many raccoon skins are taken off and nailed up on the side of the barn and are not properly stretched. These skins may be well furred, but when they are received in the market, they look like the rough handled skin shown in the illustration. Such skins are not as valuable as they would be if they were stretched square as illustrated. All of the small pieces around the edge must be cut off and this is a total waste, where if the skin is stretched square the manufacturer can utilize these ends and it is, therefore, advisable to stretch all raccoon as nearly square as possible. Some heavy raccoon that are trapped in the north section can be stretched in Indian style; that is the skins are stretched to the natural shape of the skin, but even then they try to get them as near square as the shape of the skin will allow.

In some sections the raccoon are heavier furred than in others. This is especially true in most of the northern states. Raccoon that are full grown, fat and heavy, develop an extra heavy coat of fur in real cold weather and the texture of this fur is usually very fine and the under fur extremely dense. These extra heavy skins are used for trimmings on fine coats and are usually dyed. For this reason, most fur houses quote prices on extra heavy raccoon as well as average raccoon.

In the late spring of the year, raccoon begin to show signs of the warm weather and start to shed and rub. This happens sometimes in the midst of winter in some states when the weather turns suddenly warm. Such skins are classed as springy or shedded furs. As this shedding and rubbing usually starts back of the head, it is well to examine raccoon for rubbed or damaged spots.

MUSKRAT

Muskrat are found throughout the United States and Canada, but they vary considerably in size and quality and, strange as it may seem, the muskrat from Alaska are not as valuable as those from the central states like Illinois or Michigan. For instance, a large Illinois muskrat is much larger than a muskrat that would be classified or graded as large trapped in the northern part of Canada.

The muskrats from Minnesota, Wisconsin, Michigan, Northern Illinois and East Canada are very fine in quality and are usually very good in color. This class of muskrats is often used natural; that is they are not sheared and dyed but are made up in the natural color. Muskrats from other sections are also used for this purpose, but a great many of them are sheared and dyed seal color and are known as Hudson Seal which is described in another chapter. The art of dyeing the muskrat seal color has been developed to such a state that many women prefer the Hudson Seal to the Alaska Seal with a result that the price of muskrat has advanced considerably and the skins are in big demand.

In the earlier days muskrat were of little value and then they were divided into three grades, spring, winter and fall, and were usually sold at an average round price with the kits out. Now, however, the price of muskrat is high, in fact, muskrat is as high today as mink were 15 or 20 years ago and the result is that muskrat are now graded just as carefully and into the same number of grades as other fine furs and is really valued by the square inch. In other words, they are divided into the standard grades. The muskrat is usually at its best in the late winter and early spring, when the pelt is thin and the fur thick. However, the early winter muskrats are usually better in color although the pelts are not quite as thin as the spring muskrat. The fall muskrat is thick and heavy in pelt and not so thick in fur, the flesh or pelt side is usually blue and this class of rat is not so desirable for shearing and dyeing and making into Hudson Seal.

In former times a great many small kit muskrat were taken, but as these have very little value, trappers have learned the wisdom of passing them up until they are full grown with the result that the percentage of kits coming to market is decreasing every year. The fine dark colored muskrats with reddish pelts are the most valuable and of the finest quality.

There are still some hunters who take muskrat by shooting. Muskrat that are shot or speared are not as valuable as those trapped, as the shot holes and spear holes damage the pelt and reduce their value. The muskrat also fight among themselves and in some cases rip the fur and the pelt so that when the skin is taken off, it is full of holes and these skins must be graded as damaged and are graded 2, 3 or 4 according to the number of shot holes or damaged spots or the number of cuts in the skin.

After a muskrat is dressed the leather becomes very soft and what might have been a small hole in the raw skin will stretch into a large damaged spot in the dressed skin, therefore, be careful in buying cut, shot or damaged muskrat and take these facts into consideration. They should be considerably discounted if they are damaged. It is difficult to give any accurate size, for as stated before, muskrat vary considerably in size depending upon the section in which they are found, but a full grown male muskrat pelt after it is stretched and dried will measure about 15 to 18 inches long.



The grading and classification of muskrats, like all other furs, is according to the standard grade for the particular section in which they are found. For instance, the muskrat of western Canada average smaller in size than the muskrat from Michigan and the muskrat from Alaska are smaller than those from Arkansas; but they are all classified and divided into the grades of extra large #1, large #1, Medium #1, Small #1, #2, #3, kits. Muskrat should be cased and stretched pelt side out as shown in the illustration.

WOLF

Wolf is one of the most difficult pelts for the inexperienced to grade and value. As a rule when a beginner traps a large wolf he feels sure that it should bring the very highest price, but a wolf to be valuable for fur purposes must have soft under fur. A large wolf skin might be valuable as a local trophy, but to bring the best price in the fur markets, it must be well furred, and have fur of soft, silky quality. Wolf should be cased fur side out after all the surplus fat has been removed from the pelt. As a rule the big coarse mane that is down the back of most wolf is cut out by the fur manufacturers, as it will not work with the softer fur on the sides.

Large, soft silky wolf are worth the most, but it must be remembered that it is not size alone in the wolf that counts, for a wolf is judged, first by the quality of the fur, and then the larger the skin of course the better it will grade and the more valuable it becomes.

The color in wolf does not make any material difference, for as a rule they are all dyed when they are made up into garments.

In some sections, the State authorities, when they pay bounty on wolf, cut the heads off at a point almost at the shoulder and, when this much of the skin has been cut off, it reduces the value of the skins and they have to be graded accordingly.

In some sections of the Southwest large wolf are trapped that have little or no fur. They are just covered with coarse hair and these skins have very little value for fur purposes. In some sections, it happens that the largest wolves are very coarse and very thinly furred and not worth as much for fur purposes as smaller wolves from the same section that are full furred and the fur long, soft and silky. Wolf are trapped and killed at nearly all seasons of the year, with the result that many wolf are taken that are poor in fur. When buying wolf be careful to examine the fur closely, see that it is free from rubbed or damaged spots. Shedded, rubbed or damaged wolf must be graded as twos, threes or fours. Wolf skins that are badly taken off are not as valuable as those that are cased fur side out and stretched properly. Unprime wolf pelts are seldom blue so the

safe rule is to judge the value by the quality of fur alone. The correct way to case and stretch wolf is like the illustration.



FOX

The same general rules apply to fox as to the other furs, except that at times a fox may be prime pelted and well furred but be classed as "rubbed". This is sometimes caused by the fox sitting on its haunches or rubbing itself against a tree, thus damaging the guard hair, which necessitates the grading of the skin as a number two. Sometimes fine fox skins are damaged by having the fur rubbed off at the rump.

In buying fox skins it is important to watch the fur and see that the fur is thick and even and not rubbed and damaged in places.

The same general rule applies to all foxes, except the silver, blue and cross fox, where the color also plays a very important part. The silver foxes that are now bringing the highest prices are those that are about half black and half silver, and of a rich, clear color. Silver foxes that have a rusty color, or a reddish cast to them, are not so desirable, and a rubbed spot on a fine silver or cross fox reduces its value considerably.

The darker cross foxes with just a tinge of red are the most valuable.

Blue foxes are a solid dark bluish color, with a brownish cast. These skins come mostly from Alaska. Red fox and grey fox are the



most common, the red fox being found in nearly every state in the Union and it is the ambition of most fur buyers to buy red fox and add it to their collection. In most cases the inexperienced buyer overpays for his first red fox. When you buy a red fox examine the fur carefully, look for rubbed and damaged spots; if the pelt is prime the fur will stand up and have life and gloss; if it is of poor quality the fur will lay flat; if the pelt is blue you may be sure the fur has not fully developed. Size is important but a fox skin that is large in size but poorly furred and blue pelted will grade a number two, three or four. Grey foxes trapped at the right season of the year are usually full furred. The fur is coarse and wiry and is not likely to have rubbed spots like the red fox which fur is very much softer and silkier than the grey fox. Case all foxes fur side out and stretch as shown in illustration.

BEAVER

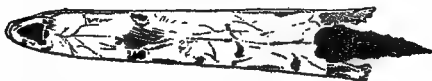
In quite a few of the States beaver are protected the year around and must not be trapped. There is no market for skins illegally or unlawfully taken. However, where there is an open season for beaver, it is a very profitable article for the trapper and the same general rules apply to the grading and valuing of beaver as to the other kinds, except that they are stretched open and round, and not cased.

In the old days beaver were sold by the pound, as they were largely used to make beaver hats, but now they are graded into the standard grades the same as the other furs and the thickness and quality of the fur determines the value, as well as the size of the pelt. Color is not important in beaver; the size and thickness of the under fur is of most importance. Beaver is one of the few furs that are stretched open as shown in the illustration.



OTTER

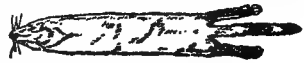
The otter is one fur bearing animal that is becoming scarce in all sections. Trappers and hunters should realize this fact and not hunt the otter out of season or shoot them for sport at any season of the year. Otter is a splendid fur, the finer skins are almost black in color. Many otters are singed, that is the tip of the guard hair has a slight curl caused by the animal sunning itself. The size and color is important and



these points should be taken into consideration first. Otter pelts taken in season are nearly always prime. On account of the scarcity of otter in some sections, they are valued very high locally and buyers often greatly overpay for them, especially the poor skins. Case otter pelt side out as shown in the illustration.

ERMINE OR WHITE WEASEL

Ermine, or white weasel, are graded by the size, clearness of the skin and depth of fur; but regardless of size and quality of the fur, if the white weasel has brown or gray hairs sprinkled through it, it cannot be graded as a pure white skin, and they are known as gray ermine.



The first consideration in buying ermine is to see that the skins are pure snow white, and full furred. Pelts with dark spots on them usually indicate that the fur is not perfectly white and has brown or gray hairs scattered through it.

FISHER

Fisher are graded and valued entirely by the color and silkiness of the skin and not so much the size. The softer and silkier the skins and the better the color, the more valuable. As a rule the small female fisher are of finer quality and of better color than the large male fisher. The pelt should be soft and pliable. Heavy, boardy pelted skins are usually graded as number two's.



MARTEN

Marten are valued according to the color, depth and silkiness of the fur, although of two skins of equal quality and color the larger would be the more valuable. The most important thing to consider in valuing marten is the color. There are three classifications, dark, brown and pale. The finer skins are almost black in color and at times show a few white hairs. The next color is a rich brown. The pale skins are a very light brown, and in some sections are almost yellow. The darker the fur the more valuable the skin. Marten should always be cased and stretched with the fur out as shown in illustration.



CIVET CAT

Civet cat, or pole cat as it is often called, is at times bought for skunk by the inexperienced. The civet cat is much smaller than the skunk and is not nearly as valuable.

It is spotted black and white, and usually graded as ones and twos and trash. The number ones are prime pelted and full furred, and the number two are blue pelted. It is an important fur and is found in large numbers in the central and northern states and in Texas. They should always be cased and stretched pelt side out.



RINGTAIL

The ringtail fur is light tan in color and the body is about the same size as the mink. The tail is about as long as the body and has alternate rings of black and white fur.



The finer skins come from Oregon and Washington, they are also found in Texas and

California. They are classified the same as civet, that is, as ones, twos and trash. They should be cased and stretched pelt side out.

LYNX

Lynx to be graded number one, must be full furred. The pelts are nearly always prime, therefore, in buying lynx, attention must be paid to the length and quality of the fur and the size. As lynx are nearly always dyed by the manufacturer the color is not important. The finest lynx are thin pelted with a heavy, dense fur. Prime winter caught skins have fur one



and a half to two inches in depth that stands straight up. Poor quality skins have flat looking short fur. Lynx should always be cased and stretched fur side out as shown in illustration.

WILD CAT

Wild cat are usually poor in fur and their value depends largely on size. House cats are an important article of fur, the black being valued higher than the mottled. They are valued according to size.

In conclusion, remember that the thickness and quality of the fur should be your first consideration in valuing a pelt and then the other general rules as outlined above will help you to grade correctly.

Furs that are shipped in a wet, sloppy condition, or furs that are tainted, or furs that have been badly cut in taking off, or that have been badly damaged, or that have been improperly dried so as to be grease-burnt, or that are trapped in off season so as to grade as trash, cannot be classified in the standard grades, and the rules of grading do not apply to this class of fur, for the reason that tainted and badly damaged skins are practically worthless. Before you start to grade a lot of furs to buy them, be sure that none of the skins are hair-slipped or tainted.

After one or two shipments to any of the old reliable fur houses, the fur shipper will become familiar with the standard grades of the different pelts from his section, and he is then able to arrive at the value of his shipments in a fairly accurate manner. Strange as it may seem there are hardly any two pelts that are just exactly alike any more than there are two persons exactly alike in size, height, features, etc. Therefore, there is no stated rule that can be laid down that will apply to each and every skin. Furs cannot be measured or weighed off and their value determined by any scale. But the general rules and suggestions set out will be of service to any man who is grading, valuing, or buying furs.

The Proper Way to Take Off Pelts

There are two ways of removing the pelts of fur bearing animals. One is to take them off by splitting the carcass down the belly and down the back of the hind legs and the inside of the front legs. This is known as taking the skin off open, and it applies to raccoon, badger, beaver, and bear. The ideal way to stretch coon after the pelt is removed from the carcass is to stretch it square. This may be done by cutting small holes around the entire edge of the skin and splitting the head about half way down, and then inserting small round sticks about one half inch in diameter through the holes, and stretching the skin square.

Coon that are stretched square in this manner will always command better prices than those that are simply tacked up and dried in their natural shape, for the reason that in the latter way the head and legs all go to waste and in the former way, by stretching it square, the furrier can work them up and match them up better.

Beaver should be stretched in an oval form and the tail and feet removed. With badger it does not make so much difference and they can be stretched open or cased.

Mink, skunk, opossum, muskrat, otter, civet cat, and ringtail, should be cased pelt side out. Foxes of all kinds, lynx, lynx cat,

fisher, wolf, marten, white weasel, wolf and wild cat, should be cased fur side out. To take the skin off cased cut it loose around the hind feet, rip the skin down the back of the hind legs, and then peel the skin carefully from the hind legs down to the tail. Then remove the tail bone. This may be done by inserting a small stick in between the top part of the tail bone and the skin of the tail and keep pulling down around it and the tail bone. Do not split the tail if it can be avoided. After the tail bone is removed draw the skin downward from the body keeping it as clean of meat and fat as possible.

Use a Funsten gambrel if you have one; if not, it is well to suspend the carcass from the limb of a tree or other projection and make a strong loop around the hind legs with a cord. The skin can then be pulled off the carcass very easily. Care should be used when the head is reached. Cut the skin loose from about the eyes and nose. The skin will then be in the form of a long pocket with fur in. Stretch the skin on a Funsten Universal Stretcher to its natural size, either fur side out or pelt side out, as suggested.

Remove all fat and meat, but do not scrape the pelt too closely, as that will injure the roots of the fur. After you have placed the skin on a stretcher tack it up or hang it in a cool place, sheltered from rain to dry. Never dry a skin by the fire or in the sun. Never use preparations of any kind for curing skins; simply stretch and dry them as they are taken from the animals. It is only necessary to have the skins dry enough to hold their shape in order for you to ship them.

See that the skins are clear of all burrs, mud, and superfluous fat, etc. Furs are valuable and should be thoroughly cleaned and made to look their best before they are packed for shipment.

How to Ship Furs

There was a time when the trapper or store keeper waited for a traveling buyer to come along and put a price on his pelts, and usually sold them, whether he had a few skins or a large quantity, in preference to what he considered the bother of shipping them. However, he has learned that he can turn his furs into cash quickly and get considerably more money for his pelts, whether he has one or two skins or a large quantity, by shipping them to market than he can by selling them at home. The most successful city road buyer can cover only enough territory to allow him to take up a small quantity, and he has to apply all of his traveling expenses, his own salary and time against the cost of the fur, and then he in turn must

ship them or take them to the fur house—the very same place to which the original owner could have shipped them himself. Therefore, the road buyer does not serve any economic purpose. The ideal way to handle any merchandise, or any product, is to sell it as nearly direct to the consumer as the nature of the business allows. Therefore, the time has come when the Store Buyer and the producer of furs, market their furs by shipping direct to Funtsten Bros. & Co., in St. Louis. The proper packing and shipping of furs is a very simple matter, and it is just as easy to do it right, as it is to do it in a slipshod and haphazard manner. Today the parcel post is a great boon to the small shipper. He can send one or two skins just as well as he can a hundred and send them safely and quickly by using the parcel post; or if he has easy access to the express office he can send larger quantities by express, especially any wet, heavy skins, which he wants to get to market quickly; and it is always advisable to ship wet and greasy skins by express. Before packing see that the skins are free of superfluous meat and fat. Do not scrape them too closely, but have them in good clean condition. Remove all mud, burrs, etc., from the fur. Comb it out and clean it well. When shipping greasy skins, do not put fur side out mink in between them. If you are shipping furs such as raccoon lay them pelt side to pelt side and put any mink you may have in between the coon,—that is, in between the fur sides of the coon. Never place one cased skin inside of another. Oftentimes a man will place a mink inside of a greasy opossum, or will place a small ermine inside of a muskrat. Never place one skin inside of another. Lay each skin folded but do not crumple them up. Put the small skins on the inside and the large skins on the outside. Tie them together securely with a strong string—never use wire. When you have the furs securely tied together wrap them in a piece of burlap or place them in a burlap sack. If you use a sack see that it is free of holes and cuts. Sew the sack up tightly so that it cannot be tampered with. Before finally closing the sack be sure that you have placed your invoice tag on the inside with the fur. Always write your name and address on the inside count tag and write the contents of the shipment, so that if by any chance the outside address should be destroyed, the inside tag will serve to identify the shipper. This is very important. An inside address should always be placed on any shipment of fur or anything else that is sent by parcel post or express. If you ship by parcel post be sure that it is insured parcel post. After the inside tag has been securely fastened to the furs, sew up

the sack. If you are shipping by parcel post you can place the package in a pasteboard box or wrap it in a piece of paper, but never wrap paper around the furs themselves. After you have securely tied up the package, attach a regulation Funsten shipping tag to the bundle, being careful to write out your name and address plainly, or better still print your name and address and do the same on the package. (Funsten Bros. & Co., will send you all the shipping tags you want free—write to them). Be sure you get a receipt for the shipment from your rural mail carrier, or from the express agent, and there is nothing further for you to do, as it is not necessary for you to notify the fur house by mail that you are making a shipment.

The main thing to remember in shipping furs is to see that they are clean, packed straight, flat, and not rolled and crumpled up, and that your name and address is on both the inside and the outside tag.

When your shipment is received it is given a number and it is then sent to the grading room. Here the package is carefully opened and its contents checked and rechecked against the shipper's invoice tag. At Funsten Bros. & Co., the furs are then handled so as to make them look their best, and they are then ready to be passed to the grader to be assorted into the different grades. Appearances go a long way in furs. Therefore, you can see how important it is for your furs to be packed in such a manner that they will look their very best when they are received in the market. Never dress or tan raw furs that are intended for shipment to market.

How Furs are Dressed

The art of dressing furs is very old, and there are many different methods by which the skins are dressed and the leather made soft and pliable for use. In later years chemicals, such as alum, sulphuric acid, peroxide of hydrogen, and other acids have been introduced into the dressing process. The art of dressing prior to the war was developed to a very high state in Germany. During, and since the war, the American dressers have turned out as good and in many respects, better work.

The first step in the dressing of skins is the liquoring process, which means that the pelts are soaked for about twenty four hours in order to open the pores and soften the skin. They are then taken out and thoroughly cleaned, some skins being washed and rubbed with soap and water in order to get them thoroughly free of oil. They are then drummed; that is, they are placed in a large slowly revolving cylinder which contains sawdust. They are allowed

to remain in this drum from two to three hours. They are then placed in another drum without sawdust in order that they may be freed of sawdust. After remaining in this drum for an hour or two, they are cleaned and are now ready for fleshing. In the case of small skins, the skins are fleshed by being passed over a circular rapidly revolving knife. This requires considerable skill on the part of the operator. Just the superfluous meat and skin is shaved off, leaving the pelt intact that holds the roots of the hair. After they are properly fleshed, they are sent to the drying room, which in the case of large plants is usually heated by steam. After they are thoroughly dried, the skins are taken out and are practically as they were in the beginning; that is the pelts are hard and dry, but free from superfluous meat and skin. It is now necessary to soften the skins again, which is done in some cases by a bath of salt water in order to open the pores. After this is done they are rubbed with oil or tallow and this work is usually done by hand operation. They are then thoroughly stretched in order that the grease will soak thoroughly into the pores. The skins are then put into a kicking machine or leathering machine, where they are knocked about until they are thoroughly soft. The kicking machine generates a certain amount of heat which softens the pelt and forms it into leather. The skins are then put into a sawdust drum to be again cleaned of the grease. They are then taken out and put into a caging machine to clean off the sawdust. After this each skin is individually cleaned by hand process of combing it out and whipping it with a small rattan. After they are combed and whipped they are stretched and turned fur side out and are ready for delivery to the manufacturer.

Home Dressing of Furs

Never dress furs intended for shipment to market.

A simple formula for the home dressing of small skins:

Prepare a tanning liquor composed of a quart of salt and one half ounce of sulphuric acid to each gallon of water (this mixture must not be kept in a metal container). Allow the skins to stand in this liquor for about twenty four hours. When you take them out wash them thoroughly, in soapy water, and wring them as dry as possible. Rub the flesh side with a cake of hard soap. Then hang the pelt up and allow it to partly dry, but not near a stove. Let it dry out in as natural a manner as possible. While it is still damp and moist, flesh it, which is done by laying the skin on a keg, or any round board, placing the nose of the skin over the edge of the

keg and allowing the body to lay flat, and then scraping off the meat and skin with the edge of a file, or similar blunt edge tool, that will not cut into the hide itself, but simply pull off the stringy outside skin. In this way the inner layer of skin is removed and the pelts are nearly white in color. After this is done see that the skins are thoroughly stretched, rubbed, and twisted until dry. If parts of the skin are still hard and stiff, soap, dry, and stretch them again, until the entire skin is soft. Some dressers recommend the rubbing of fresh butter or other animal fat into the skin and then working it out again in dry hardwood sawdust; or the grease may be quickly extracted by a hasty bath in gasoline. The rubbing of butter or other grease into the skin, then extracting the grease by the sawdust or gasoline process adds very much to its softness. This method will apply to the pelts of most of the small furbearers. While the method described is alright for home use, if you have fine furs to dress it is advisable to send them to one of the old reliable fur houses that you are in the habit of shipping your furs to, and ask them to have them dressed for you by a regular dresser and dyer. The cost of this work is comparatively little.

It should be remembered in dressing furs that the idea is to retain the natural color of the fur and render the pelt as supple as possible. Therefore, the leathering of the fur pelt is entirely different from that of the leathering process required for cow hides, goat skins, etc.

The Indian Method of Tanning Buckskins

The North American Indians have for ages dressed deer-skins into leather and the leather made by them is renowned for its toughness and durability.

The method used by them is as follows: The skin is fleshed and every bit of the flesh and membrane is removed. It is then soaked in water to swell it and free it from blood, when it is ready for graining, which is done with a sharp flint, a case-knife, or a butcher's knife on a beam, having a diameter of six or eight inches. This way of removing the hair and the grain makes the Indian dressed buckskin of the highest class.

Another way of preparing the skin for graining, after the skin has been fleshed and soaked is to handle it in a weak lye for two or three days, and then to grain it. But this does not yield a product equal in toughness to that by the former method. The skin being grained, it is ready for the tanning or tawing process, which is done with the brains of the deer or those of cattle, horses, hogs, etc.

To prepare the brains take a piece of loosely woven factory cotton eight inches square, place the brains of an animal on the center of the cloth, gather the edges of the cloth into the hand and lift it up from the table and tie a string around the cloth two inches above the brains.

Now boil the brains in one gallon of soft water for an hour, then remove the kettle from the fire, and pour the contents into a clean pail, and let it stand until it cools sufficiently to bear the hand in it. The temperature having fallen to this point, take hold of the part of the cloth containing the brains and rub it between the hands, most of the time under the water, until all the brains have been forced through the cloth. This done, place the skin in the solution and work it with the hands. First knead it thoroughly, then stretch it in every way. Repeat kneading and stretching at intervals of ten minutes for an hour, then let the skin remain in the liquid two hours, when it is kneaded and stretched once more and allowed to remain another hour, then lifted out of the liquid and hung up to dry out two thirds.

In cold weather the skin is allowed to remain in the liquid over night for it will not suffer in substance so quickly as in hot weather.

After the skin is two-thirds dry it is taken down and stretched in every way.

The stretching is repeated at intervals until the skin is dry.

The stretching and drying being completed, the skin is folded into a small compass, wrapped in cloth or in a finished skin to exclude the air, and allowed to remain two weeks or longer to season, when it is ready for the smoking process. Smoking the skin colors and retans it, the retanning bringing it to a state in which it may be washed with soap, yet dry soft.

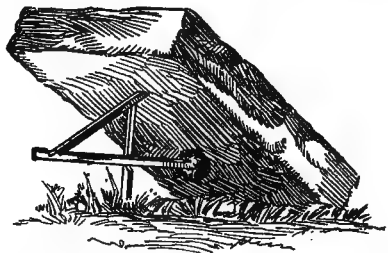
The skins may be smoked in a smoke-house such as is used for curing meat. In such a house the skins should not be hung up by the hind shanks or by the head, for if they are, they will not be of a uniform color throughout. They should be tacked lightly to frames so that the smoke has free access to both sides of them. The skin being smoked, and ready for washing, scour it thoroughly in lukewarm water. This done, hang it up without wringing, by the hind shanks to dry completely. Let it remain in the crust or dry state for a week, then immerse it in water three seconds; lift it out, give it a shake, fold it tightly and cover it for half a day or over night, stretched every way, and then hang it up to dry out partly. Repeat the stretching and hanging-up at intervals until the skin has dried completely, which finishes the work and leaves the skin soft and pliable.

STEEL TRAPS AND OTHER TRAPPING DEVICES

In the early days of trapping, it was necessary for the trapper not only to have a knowledge of the habits, signs, and tracks of the furbearers, but also to be able to build deadfalls and to make snares that would successfully catch the elusive and suspicious animals, such as the mink, marten, and the fox. Up until the invention of the steel trap this was the only method in use. About seventy five years ago Sewell Newhouse invented the steel trap, and this gradually came into general use. Today deadfalls and snares are used very little as it requires considerable skill and knowledge on the part of the trapper to build them successfully. On the other hand the steel trap can be purchased at a very small cost. The trapper equipped with a dozen steel traps can set them out in as many different places and thereby greatly increase his chances of success, where to build a dozen deadfalls would require a great amount of work, and furthermore they cannot always be erected at desirable spots. It is therefore safe to say that practically all modern trapping is done with the steel trap, and the other accessories that go with the steel trap, such as Triple Grip Jaws, Holdfast Jaws, Radiolite Tin Fish, Animal Bait, etc. One of the advantages that the deadfalls do have is that they usually kill the animal; the two trigger steel trap is also designed to kill the animal instantly.

One of the most popular deadfalls and one that is easily made is the Figure Four Deadfall. The

figure four may support a large flat rock, or a heavy log, or any other heavy object, that will drop quickly and crush the animal that springs the trigger. The Figure Four is made by cutting three sticks as shown in the illustration.



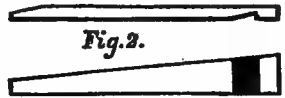
The sticks should be about one half inch in diameter and of



well seasoned strong wood. The success of this method depends largely on care-

fully making the Figure Four. One of sticks should be about fourteen inches long. We have illustrated both the side view and

the top view and it will be noted that there are two notches in the end, and the opposite end is tapered. The second notch is made about four and one half inches from the first and is cut diagonally across the stick (see illustration). The pointed end is the end that holds the bait and is really the trigger stick. Figure 2 is



the lever and you will note that it is wider at one end than the other. Cut a notch across the wide end as shown in the illustration, and

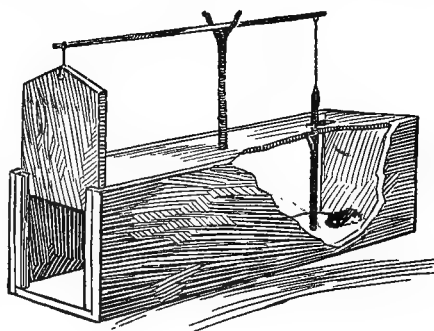


slope the opposite end. This piece should be about six and one half inches long. If the stone used is a heavy one, the notch should be not more than one inch from the end, otherwise the constant tension on the notch would be greater than is desirable and would have a tendency to bind and hold the parts together too rigidly. Figure 3 is the upright post and is about seven inches long, slightly forked at the bottom as shown in the illustration. This is done to make it stand securely and prevent it from twisting. The upper end is beveled from the front backwards at an angle. On the right side cut a long notch one half the width of the wood, commencing the hollow slope of the notch one inch from the lower end as illustrated and making a square shoulder three inches from the bottom of the post. The Figure Four is now ready for setting. Place the figure 4 upright with its forked end standing on a piece of wood or a flat stone to prevent it from sinking into the ground. Arrange the other two pieces as shown in the illustration and bait the pointed end of the trigger. Let the stone rest on the top end of the lever and arrange the position of the stone or log so that the bait end will be near the lower end of the stone. If properly made and constructed the figure 4 will be held firmly together by the weight of the stone, and yet the slightest interference will displace the trigger and figure 4 will collapse and cause the support to fall instantly. It is a good plan to hollow the ground out somewhat under where the stone falls. See that the bait is something that will flatten easily. The figure 4 as described may be used as a support for any trap which catches by falling, such as a large flat stone, a heavy log, a box, a coop, or a wire net.

For catching animals alive for breeding purposes or for pets, the box trap is commonly used. One of the simplest, easiest made, as well as the most efficient of box traps, is made in the following manner.

Build a rectangular box about two and one half feet long, 12 inches high, and 9 inches wide. Close up one end and leave the other end open. In the top board of the box bore two augur holes, one about the center of the box, and one about six inches from the back, or closed end. In the center hole set up a crotched stick about 12 inches high. Build a door of just the size to fit the front opening of the box without closing too tight, and build just inside of the opening of the box a set of small slats to guide the door in its progress up and down and to prevent it from pushing in or out when the door is closed.

Build a trigger stick by cutting a round piece of wood about 12 inches long and notch it in such a way that the notch will fit in the rear augur hole in the top of the box with the end extending down into the box and almost touching the bottom floor. Cut the notch in such a way that an animal entering the box will push the trigger stick



backwards past the notch, causing the notch to become disengaged from the augur hole. Cut a cross piece the same length as the distance from the door to the end augur hole. Set the cross piece up in the crotched stick at the center of the box (see illustration.) To one end tie the door with a heavy piece of twine and to the other end tie the trigger stick. Make the cord of such a length that when the trigger stick is engaged in the last augur hole, the door will be entirely open. The weight of the door will bind the parts together and hold the notch in place. Place a piece of bait in the very back end of the box. When an animal enters the box to get the bait it will push the trigger stick backwards in such a way that the notch will no longer be held in place and the weight of the door will then cause the door to fall into place, and the animal will not be able to push the door either forwards or backwards on account of the slats which you have built to guide the door. If you can secure a hollow log of the proper size, you can use it as your box by closing up one end of it and making your trigger and door as described.

Spring Pole Snare

Find a young sapling near where you want to make your set, strip off the leaves and bend it in a half circle so that the end will almost touch the ground. If you cannot find a young tree close to the spot, cut one and fix it firmly in the ground, placing heavy stones around it to hold it firmly in place, and then bend it over as described. After this is done tie a strong cord or wire to the end of the pole and make it into a loop like a lasso. Cut a notch in the end of the pole, drive a stake firmly into the ground and cut a notch in the stake, and set the two together. Arrange the pole in such a manner that the animal will have to pass through the noose to get to the bait, and so that the slightest pressure will release the spring pole from the stake and yank the animal around the middle and toss it high in the air. A little ingenuity is required to successfully arrange this device, but it is one that has been in use for many years and is very successful, if properly constructed. Another method is to make a figure four. Hold the end of the spring pole down with one end of the figure four and bait the other end and arrange the snare around the bait, so that when the trigger is touched you will get the same result as described heretofore. Deadfalls and snares are both successful methods of trapping, but their success depends on the skill of the trapper in making the necessary parts and the best results are obtained only after practice. In handling the steel trap, however, it is an entirely different matter. The traps themselves are mechanically perfect, and the success of the steel trap depends on the manner in which it is placed and the method of attracting the animal to the trap.

Steel Traps

There are numerous sizes of steel traps ranging from the No. 0 size which is designed to trap white weasel and other small furbearers, up to the double spring No. 6 Newhouse Trap, which is designed for grizzly bear and other large animals. The most popular size is the No. 1. This trap when equipped with the Funsten Triple Grip Jaws is the most efficient trap that can be used for most any of the furbearers. As they are light the trapper can easily carry two dozen, and when it is equipped with the Triple Grip Jaws will hold any animal that gets into it. The success of the steel trap depends greatly on the kind of bait used and the method of applying the bait to attract the animal to the trap. There was a time when it was thought good practice to bait the pan of the trap, but experience has shown that this is not a desirable place to put it. The attention

of the animal is of course drawn to where the trap is, but is far better to conceal the trap entirely from view and depend on the animal stepping into it in searching around for the bait that attracted him to the spot. This is done by scooping out a little hollow in the ground and setting the trap in the hollow, covering it over carefully with moss, grass, feathers, rotten wood in powdered form, chaff, or any other substance calculated to drive away suspicion and make the surroundings natural. Some trappers recommend scraping out a little hollow large enough to hold the trap and covering it over with a thin piece of paper and sprinkling earth over the paper in order to make the ground appear perfectly natural, and thus covering the trap entirely. Directly over the trap or close by it, it is best to sprinkle a few drops of Funsten Animal Bait. The animal will smell this at a great distance and be attracted to the spot where the bait is and in sniffing around for it is very apt to be caught, if the steel trap is properly set. Recently there has been a steel trap invented that not only catches the animal, but also kills it instantly. This is the Funsten Two Trigger Trap. This trap can be handled in identically the same manner as the ordinary steel trap. The ideal place for the bait is directly over the trap and at a spot that will require the animal to reach up to it so that it will step on the pan of the trap with its hind foot and thus spring it. Some trappers depend on hiding their steel traps in the middle of a beaten track which indicates the runway of the animals. If this plan is followed it is advisable to construct a small enclosure or lay a stone, or stick, in such a position as to narrow down the middle of the runway over which the animal will pass, and then place the trap in the narrow part of the runway. In selecting a place to set a trap in a runway, select a spot between two trees, or between two stones, or wherever the runway narrows down. The expert trapper is always on the lookout for natural advantages which he can turn to good account and thus save the construction of artificial runways.

Many farmers use steel traps to catch animals that raid their chicken houses at night, and oftentimes find valuable furbearers in the traps the next morning, such as mink, weasel, and sometimes skunk. If the poultry house is being raided, the box trap method is very successful in getting the killer. This consists of a long oblong box with one end open and a trap set just inside. Cut an opening in the top of the box and across this place some slats or a piece of wire netting. Construct another box with no bottom and set this over the wire netting. When the time comes to set the trap place

a chicken in the top box and set it just outside of the poultry house. When the mink or weasel comes prowling around it will be attracted to the box trap by the chicken and in trying to get to it will invariably spring the steel trap and thus get caught.

Most trappers recommend the use of the small steel trap for coon, mink, skunk, muskrat, fox, etc., and in order that the animal will be securely held most trappers equip their traps with an additional set of jaws, the latest and most successful of which is the Funsten Triple Grip Jaw. This increases the spread of the small No. 1 trap to the size of a much larger trap, and really gives, as the name implies, three grips. The Funsten Two Trigger trap is designed to kill instantly and prevents the animal from injuring its fur by struggling and from a humane standpoint prevents any pain, however wild animals are comparatively insensible to pain. Steel traps are distributed to the trappers by the big fur houses, who annually send out to trappers a supply catalog quoting prices of guns, traps, smokers, animal baits, and other articles necessary to successfully take the pelts of the fur bearers.

There is considerable knack in setting a steel trap and some men are much more expert in doing this than others. The inexperienced will often set the trap with the heel of their shoe and thus press their entire weight on the spring to hold it down until the jaws are put in place. This is a bad practice as it tends to flatten the spring and thus weaken it. A pressure only sufficient to depress the spring in order to spread the jaws should be placed firmly at the end of the spring where it joins the jaws and not at the opposite end. Most animals are lightning fast and if the spring is not working properly you will not get the animal you are trapping for. Therefore, care should be taken that the spring is not mashed flat the first time you set it. For years there has been a need for a perfect small trap setter, and recently such a device has been invented. It is the Funsten Trap Setter, costs but a trifle, and will enable the most inexperienced to instantly set any of the small traps no matter how stiff the spring; and what is more important it does not injure the action of the spring. All trappers should use this trap setting device instead of the cruder method of mashing the spring down, thus putting too much pressure on the spring and weakening its action.

See that your traps are well oiled when you put them away and when they are not in use. If you have a supply of traps that have been put away improperly and are rusty, go over them carefully before you start to use them, and see that they are put in first class

condition. It is only a waste of time and money to start out on a trapping expedition with a lot of worn out traps. A bath of kerosene will usually remove the rust and any good grease will put the trap in good working order. If you catch an animal in your trap, a good plan is to render the oil and use this animal fat to oil your traps. It is just as important to have new traps well oiled as it is old ones. It is well to grease them up a week or ten days before you expect to use them and try them out and see that each trap works perfectly. If you are using old traps see that the swivel is not rusted out and that the chain is strong and equip them with the Funsten Lightning Spring so that the trap will hold the animal you expect to trap with it. After you have cleaned and oiled your traps, in order to remove any odor from them, it might be well to boil them in ashes and water and scald them clean with hot water. Some trappers prefer to leave a little grease or oil on the working parts of their traps and rubbing them in rabbit blood or chicken blood, but it is probably best to scald them clean of all odors and coat them with beeswax in order to take away the taint of the steel. In order to coat the traps with beeswax, place the traps in a bucket of hot water, then pour melted beeswax over the top of the water. Lift out the traps and the beeswax will cover each trap as it comes from the water.

Some trappers find that unscrupulous persons will steal their traps and to prevent this it is well to mark the traps in such a way that they can be identified and the person prosecuted if they can be found. One way is to mark them with a file on the bottom side or any place that will not injure the spring.

Spitz-Devil

The Funsten "Spitz-Devil" is a very clever device, designed to scare the animal but not to injure it in any way. It consists of a wire metal container attached to a ten foot wire cable. This container is pushed back into the opening of the den or hollow log. The shells used in the container are lighted when everything is ready and throw an immense shower of sparks, which are infinitesimal. It makes a great ball of fire but the sparks will not burn. If there is any fur bearing animal in the den, it is bound to come out. In connection with the sparks, there is a puff of smoke.

This device is very successful for scaring out skunk, fox, wolf, etc.

Suggestions for Fastening Traps

In trapping for muskrat a sliding pole is often used. It consists of a long smooth pole with a fork at its upper end and the other end

is sharpened. The ring of the trap chain is placed on the pole and the sharp end pushed firmly into the bed of the creek or pond in deep water, the trap being set in shallow water. The idea is that when the trap springs, the ring sliding along the pole will guide the muskrat to deep water and the weight of the trap and the slant of the pole will prevent him from getting back to shallow water. The pole of course should be pushed well into the mud and held in such a manner that it will resist the efforts of the animal to escape. Another adoption of this same principle is to use a stout wire securely fastened to the bank with a rock on the other end anchored in deep water.

One of the latest inventions for successfully taking the muskrat is the Two Trigger Trap. This trap is so designed that it not only catches the animal in the same manner as the smaller steel traps, but it also kills the animal instantly, and is used by the muskrat trappers of Louisiana and the marsh trappers of Maryland very successfully.

Trappers have different ideas of their own about securing their traps, but the most practical way is to use the Double Hook drag or to drive the staple into a small bush, or the chain can be fastened over a forked bush in such a way that it can be pulled away. The size of the bush will depend entirely upon the animal you are trapping for and more especially on the size of the trap.

A good way is to use the "Double Hook Drag" which is an ingenious drag hook for small traps. It consists of a double hook fastened to the trap chain which will drag along and catch into any object that it comes in contact with, and there is enough spring in it so that it will not be rigid and allow the animal a dead pull so that it can break away.

Another method is to securely fasten the trap ring to a chunk of wood or anything that will drag along. The whole idea in fastening a trap is to arrange the trap so that it will not be fastened solid.

Another method is to secure the trap to the end of a young sapling, or to cut a smooth pole from a wood that will bend easily, and then fasten the trap ring to one end. Bend it down and catch the end in a notched peg or root in such a way that the least struggle of the animal after it is caught in the trap will release the pole which will immediately spring up and hold the animal high in the air. The Funsten Two Trigger Trap is recommended for this set, for the reason that it not only catches the animal but also kills it instantly, and this trap attached to the spring pole is very effective.

When and Where to Set Traps

Probably the most important thing is to know where to set a trap. This the trapper learns only by practical experience, and he must study the signs and know the tracks, habits, and whereabouts of the different furbearers. The smart trapper and the one that looks ahead and desires to maintain a constant supply of furs on hand, will never bother the dens of the furbearers or the homes of the muskrat. Destroy the den and drive the animals away and you will kill the goose that lays the golden egg. In order to get the valuable pelts it is of course necessary to trap the animal, but this should be done in a humane manner, and at such a time that you will only take the surplus, and that you will in no way disturb the home. You can thus be assured of a constant supply of furs.

A good place to set your traps is to find where the animal feeds, where it visits the creeks and ponds, and where it hunts for bugs. This can be done by looking for signs along the piles of driftwood, over old logs, and other favorable places. It will not take an amateur long to become familiar with the furbearers of his locality. You can look for mink along the streams and in the swamps. You can look for muskrat in the ponds and lakes; skunks around old barns and outhouses and in dens on the side hills, and the opossum and coon, in the thick woods, especially where the Paw Paws and Persimmons and other delicacies that the coon and opossum like, are found.

Remember that one of the most important things is to leave the surroundings as natural as possible after you have set your traps, and wear gloves, so as not to touch the trap with the hands, as the animals have a very keen sense of smell and can detect the human odor very quickly. As soon as it detects the human odor it will leave and not come near your trap, so that it is advisable to bear this in mind at all times. Use the Wonder Trap Setter in setting steel traps with a long steel spring. This setter enables you to set the spring without touching it with the hands, allowing you to set the trigger just as fine as you want it with your knife blade. See that there is nothing under the pan of the trap which will prevent it from springing when the animal steps on the pan, and cover it over lightly with moss and leaves as described in another chapter.

If you are setting your trap in front of a den, do not set it too far back, but rather well out in front and then great care must be taken that you leave the entrance of the den as natural as possible.

Some trappers that are trapping for beaver and otter set the pan of the trap very stiff and place a small twig under the pan of the trap

sufficient to bear up the weight of smaller animals in order that traps they are setting for beaver and otter will not be sprung by muskrat. This requires some skill, and it is often the case that in trapping for beaver and otter the trapper will find a muskrat in the trap, and this can only be prevented by placing something under the pan of the trap that will require the heavy weight of the beaver or otter on the pan to spring it. This is especially true in setting for bear. Bear traps are very dangerous; and in some sections trappers that are trapping for bear send out a general warning, so that some brother trapper will not be caught in the trap.

The amateur trapper will often merely set his steel trap on the top of the ground and trust to luck that the animal will come along and poke its foot in it and get caught. This will never happen, or at any rate rarely happens. You must get your animal to the trap, and after you get him there, you must get him caught and killed, in such a manner that he will be there when you arrive and you can take his pelt and thus be paid for your work and trouble. Therefore, the things for you to consider are, first, where to set your trap, how to set your trap, and then how to get the animal into your trap. As to the place, this is something that will have to be left entirely to the individual trapper himself and can be decided only by careful inspection of the ground over which you are going to trap. Pick a place where you find the signs and after you have found a likely place, scoop out a hole big enough to carefully conceal your trap from the animal. Then line the hole with leaves or cotton so that the trap will not freeze or stick to the ground, and it is well to put a small piece of cotton between the pan of the trap and the bottom of it so that they will not freeze together if you are trapping in real cold weather. Then cover your trap over in such a way that a strong wind will not blow off the leaves, leaving the trap bare and exposed. Cover it so that it will be only lightly covered, but cover it enough that the first puff of wind will not blow the covering away. Then just over your trap, say two or three feet above it, on a convenient bush or against the side of a tree, or against a bush that you have placed there yourself, sprinkle a few drops of Funsten Animal Bait. Next arrange a pathway so that it will be narrowed down and the animal in getting to the spot will have to walk directly over the trap pan in sniffing around for the Animal Bait. If you are using meat or vegetables, the same rule will apply. If you desire to kill the animal instantly use the Funsten Two Trigger Trap for this purpose.

The Number 1 Steel Trap is recommended for small furbearers, such as coon, mink, skunk, opossum, and muskrat. This trap equipped with the Funsten Triple Grip Jaws will hold a fox or a wolf and will catch even a muskrat or a mink doubly sure. For wolf we recommend size No. 3 and for otter and beaver, the No. 3½. In trapping in the marshes for muskrat the Jump Style of Trap equipped with the Funsten Triple Grip Jaws, and the Two Trigger Trap is recommended. The following list of traps will serve as a guide as to the different sizes and kinds to use for the different furbearers

For muskrat, weasel and gopher, Victor No. 0, Newhouse No. 0, and Jump No. 0. For skunk, mink, opossum, and muskrat, Victors Nos. 1, 1 Giant, 91 and 91½, Newhouse, No. 1, 81, 81½, 91, 91½, Jump No. 1, 91 and 91½, Tree Traps No. 1, Funsten Two Trigger Trap, Coil Spring No. 1, Kompakt No. 1.

For coon, mink, skunk and opossum, Victor No. 1½ and No. 2, Newhouse, No. 1½ and No. 2, Funsten Two Trigger Trap, Jump No. 1½ and 2, Coil Spring No. 2. For fox, wildcat, fisher and marten Victor No. 2 and No. 3, Newhouse No. 2, Jump No. 2 and No. 12 Funsten Two Trigger Trap, No. 2 Tree Trap and 3 Kangaroo.

For wolf, fox, beaver and otter, Victor No. 3 and No. 4, Newhouse No. 21½, 2½, 3, 3½, 4, 14 and 48, Jump No. 3, No. 13, No. 4 and No. 14, No. 3 Kangaroo and No. 3-xk Triple Clutch.

For bear, Newhouse No. 50, 150, 5, 15, and 6.

ADVENTURES OF A PIONEER TRAPPER

THE FOLLOWING IS A PRIZE-WINNING STORY SELECTED FROM A NUMBER
WRITTEN BY TRAPPERS, RELATING THEIR ADVENTURES.

I was born on the sixth day of November, 1863, at Dartford, (now Green Lake) Green Lake County, Wisconsin. My father, Danford Rounds, was a captain on a vessel running from Green Bay to Buffalo, New York. My mother died when I was only two weeks old and my great uncle and aunt (on my father's side) adopted me. It was my uncle, no doubt, who early inspired me with the desire to become a trapper, for as early as September, 1872, I was permitted to accompany him, and one of his pards on a trapping expedition through the pine-tree section of Wisconsin and on into Northern Minnesota.

Oh, the thrills of those early morning tramps through the forest! The crisp, vitalizing air, the snow crunching beneath our feet, the mists that hung like fairy clouds over hill and dale—all held an irresistible charm for me—a charm that grew stronger as the years advanced until it became the predominating factor in my life.

Well do I remember our first morning on the trap line. My uncle had promised me that the first fur he caught was to be mine and I spent several hours trying to decide just what I should buy with the money I would realize from its sale. The first trap had remained unmolested, as had the second and third, but as we approached the fourth trap, which was down near the water's edge, we saw a large black something. It proved to be a fine dark mink. My uncle smiled when he saw what it was, and said "Well, Jack, that's a pretty good start for so young a trapper." I thought so, too, and I felt rather "chesty" as I carried my prey back to the house and rubbed my hand over its fine, soft fur.

In the fall of 1874 my uncle asked me if I wanted to go on a real hunting and trapping tour. Jack Haley, his old friend from Iowa was with him and they were planning a trip down the Mississippi. The opportunity for adventure appealed to me and I readily accepted the invitation. Arrangements were made to leave the following morning.

Morning dawned grey and cold, with a drizzling rain, but we determined to make the best of it. Packing our provisions and equipment in the boats, and arranging ourselves as comfortably as our limited space would allow, we started down the river.

The weather during the day, continued to grow colder, the rain turning to sleet, soon had us covered with a coat of ice. Indeed, the weather became so bad that we were forced to make a landing about four o'clock, having covered a distance of approximately eight miles.

The sleet on the trees had now become so heavy that the limbs were beginning to fall, and occasionally a tree would snap under the strain and come crashing down to earth. We pitched our tent in a place as far from the trees as possible, which, although it was beyond the reach of the branches was still within the danger zone of the larger trees. After supper we sat in silence for there was no use trying to talk; the crashing of the trees and limbs, aided by the roar of high water in a nearby creek, drowned out all other sounds.

Shortly before dark we spied a hay stack on the opposite side of the creek, which we were able to reach by means of a log which the high waters had thrown across the stream near its mouth. We made a small "dug-out" in the hay stack and slept comfortably all night.

The next morning we had occasion to feel extremely thankful for that hay stack, for a tree had smashed the ridge-pole of our tent.

Although the weather was still cold and cloudy, with a chilly wind from the northwest, the rain and sleet had ceased to fall, and we decided to resume our journey. We pulled down the river to a point past Clarksville and made a landing about five o'clock. Here we sighted an old cabin near the upper end of King's Lake, which, being devoid of inhabitants, we proceeded to occupy. Jack volunteered to prepare supper, so uncle and I went out to explore the neighboring territory. We found some pretty good mink signs, so we set a few traps and returned to the cabin as it was fast growing dark. The savory odor of good bacon greeted us when we opened the cabin door. Jack then proceeded to "dish up" and after a hearty supper, he and uncle related some of their previous hunting experiences.

Early the next morning we visited our traps, finding that we had captured three mink and two skunk. That was pretty good, considering the small number of traps we had out, so we decided to stay and put out all the traps we had. My uncle set most of the traps, as he was accredited with being a "past master" in the trapping art.

On our way back to the cabin we noticed that there were quite a few wild ducks on the lake, so Jack and uncle took their guns and went duck hunting. They killed eight that afternoon and at supper I almost made myself sick eating wild duck. It was the first I had ever tasted—and the last, for I never cared for wild duck after that.

We had a wonderful catch of furs the next morning—about all we could carry and we made up our minds that this wouldn't be a bad place to establish our headquarters for the winter.

That morning my uncle gave me my first lesson in setting traps for fox. Using for bait some small pieces of muskrat which he had prepared by placing in a glass jar until tainted, he selected a place near the bank of the creek where the tracks were thickest and dug a hole about three inches deep, where he set the trap and fastened it to a peg driven underneath it. This done, he covered the hole up with dry leaves and sprinkled small bits of his prepared bait around over it. Three traps were set in this manner, concluding our work for that morning and we returned to the cabin to get the guns for another duck hunt.

We were very much surprised, upon reaching the cabin, to find that the door, which we had taken care to close when we left that morning, was standing wide open. The reason for this was soon made apparent, however. Someone had been there, and in their haste to get away with our provisions and camping equipment, had forgotten to close the door. They had taken everything in sight, leaving only uncle's shot gun, which, standing in an obscure corner near the fire place, had obviously escaped their notice. Uncle was surely peeved but there was evidently nothing to be done about it.

The idea of living on an exclusive ration of wild duck did not appeal to us, so it was decided that one of us go up the river and attempt to obtain some supplies. I was hungering for a trip on the river alone so I persuaded my uncle to let me go.

I was not an expert at the oars, and it was pretty hard pulling against the current, but I didn't mind that; propelling a boat up the Mississippi River alone was no small accomplishment in my eyes, and as I felt the boat lurch forward with each stroke, my heart swelled with pride.

I must have traveled about three miles when I sighted what appeared to be a crude cabin, the upper portion of which was dimly visible through the trees. I was overjoyed at finding a place so soon, for my arms were getting pretty tired and my strokes with the oars were growing shorter. How surprised uncle and Jack would be to see me

back so soon—but maybe there was no one living in the cabin—I hadn't thought of that. My fears were soon dispelled, however, for as I came in full view of the cabin I saw a thin, blue spiral of smoke curling up from the chimney and the sound of blows from a hammer assailed my ears, coming, as it seemed, from the rear of the cabin. I did not stop to knock on the door, but walked immediately around to the back where, bending over a wooden bench, was the stalwart figure of a man. He was unusually long and lanky, with broad shoulders and a face overgrown with a reddish beard. He seemed to anticipate my coming as he evinced not the least surprise when he saw me, but kept pounding away on his bench.

"Pardon me, Sir," said I, "but can you tell me where I can buy some food and rations?"

"Guess ye c'n get some over at the store" he answered carelessly—then as if by second thought, he added "if ye got the money."

I told him I had a little.

"Well, then," said he, "come around in front and I'll show ye where to go."

"See that tree over yonder with th' bark scaled off?" "Well," he went on, without waiting for my reply, "there's a little store just four miles due west through th' woods."

I saw the tree he referred to, so I thanked him and bade him goodbye. He nodded his head, and went on around the cabin, but I saw from the corner of my eye as I walked toward the river, that he was watching me and that he had returned to the front of the cabin with another man.

I rowed down the river a little ways and hid my boat behind some bushes, then I walked back up to the scaled tree and started directly west. I walked, it seemed, for miles, but there was no sign of life or habitation anywhere. A brisk wind had started up from the North and it was snowing lightly. Presently, I came to a cypress swamp which appeared to be at least a half-mile in width. I started to wade into it, but after sinking almost to my knees in mud and water I scrambled back to solid ground. Following along the edge of the swamp for about a quarter of a mile, I came to a crossing of footlogs. Without knowing in what direction I was traveling, I crossed the swamp on the logs, and now, on the other side, I noticed that I was coming into a clearing. Presently I struck a foot path which led me, at length, to a saw-mill. The owner of the mill was not there, but one of the men sold me ten pounds of corn meal and a gallon of molasses. When I told him I was looking for a store, he

laughed, and said I wouldn't be very likely to find one within ten miles. He also warned me to be very careful in any dealings with our friends up the river as they were regarded with suspicion by everyone in that section of the country.

I thanked him for the information and began to make rapid strides back towards the river, hoping to reach my boat before dark. I re-crossed the swamp and followed the same trail I had taken that morning. I reached the river bank just as the shades of night were falling and the wolves were setting up their song for the night. As quickly as possible I made to the spot where I had left my boat among the brushes—but, lo! and behold—not a sign of the boat was to be found.

Tired, hungry and footsore I started down the river, still lugging, my corn meal and molasses which now seemed like a ton in weight. Thanks to the snow, it did not get very dark and I was able to see quite a distance around me. For hours, it seemed, I trudged along, keeping close to the bank of the river. I felt as though I could not walk another step; my knees were so weak it was necessary for me to stop and rest frequently, and my eyes threatened to close in spite of me.

Then I heard the wolves howling, nearby, it seemed—and I was at least another mile from the cabin. The howling grew louder and more frantic, and I was sure now that the pack was headed in my direction. I was certainly in no position to offer resistance to a pack of hungry wolves, so I made my way to the nearest tall tree and started scrambling up its trunk as fast as my weakened limbs would permit, leaving my meal and molasses in a nearby bush.

I was none too soon, for by the time I had secured my hold on the first limb the tree was surrounded by a pack of hungry wolves, howling furiously. I secured myself as well as possible in the branches of the tree and relaxed as much as I could. I sat thus for thirty minutes or more (it seemed like years) while the wolves continued their vigil below me.

Down the river I saw a light suddenly appear and vanish. It was gone for a moment—then it appeared again and seemed to grow brighter. Gradually it grew nearer and finally I heard the splashing of oars and the sound of voices reached my ears. A moment later I realized that it was uncle and Jack exploring the river in search of me. I called to them as loudly as I could, but the wolves were still howling lustily and my voice sounded like a whisper in comparison. Obviously, I could never reach them in that way, but I reasoned that

the howling of the wolves would at least cause them to look in my direction.

Breaking a small branch from the tree, I fished some paper out of my pocket and tied it to the end of the stick by means of a handkerchief. Fortunately, I had some matches, so I made a temporary torch which I waved aloft in a manner similar to our present-day wig-wag systems. The wolves, seeming to apprehend the approach of someone and probably being frightened by my torch, had calmed down considerably, so I availed myself of the opportunity to do a little "screeching" myself.

Evidently, I had succeeded in attracting their attention, for presently I saw the lantern wave back and forth and the boat started pulling in my direction. They soon landed, and the wolves, who were already slinking away, were quickly dispersed by a shot from uncle's gun.

John volunteered to let uncle and me take the boat, while he followed along on the bank of the river, as three people, ten pounds of corn meal and a bucket of molasses (which, happily, the wolves had not destroyed) was more than our small craft would carry.

To my great delight, a roasted rabbit was waiting for me on the griddle when we reached the cabin. I ate everything but the bones, interspersing my feast with tales of the day's adventures.

The next morning we took up our traps, with eight mink, six muskrat and two grey fox, and moved down the river, Jack walking along the bank, and uncle and I taking the boat. While we strongly suspected the whereabouts of the thief who purloined our supplies, we thought it better to sacrifice them rather than create any disturbance.

Late that evening we made camp and the next day we pulled into St. Louis where we bought a new stock of provisions and some material for making a canvas boat.

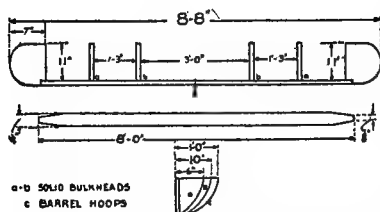
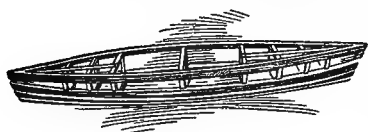
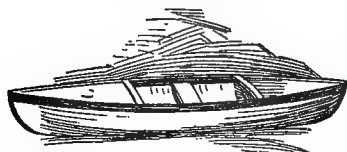
We next shipped our cargo to Iron Mountain by freight, following it ourselves that night. When we arrived we found that our freight would not be in for three days, so we were obliged to look around for a place to stay in the meantime. We secured lodging at a farm house and bought our meals in town, which was two miles away.

When our freight came in we hired a man to haul us over the hills to the river several miles distant; camped at sundown, and the next morning started to work on our boat.

For the benefit of those who may be unfamiliar with the process of canvas-boat making I will give here instructions and diagrams which

I believe will enable anyone to construct a good substantial canvas boat in a few hours' time.

Our first, and likewise, most important step was to assemble the framework of the boat. Using for the bulkheads the ends of boxes which we had selected and used to ship our freight from St. Louis (barrel hoops may be used for this purpose when box ends are not available, although the box ends are more durable) we proceeded to construct a framework in accordance with the diagram here shown.



For the longitudinals we used thin strips of pine.

Finding that one man could accommodate himself in a cockpit three feet long, we set two bulkheads, three feet apart on the keel, equally distant from the midship section. A "collision bulkhead" was set fifteen inches from each of these. In the midship section we used a barrel hoop for stiffening.

After the framework was completed we tacked on the canvas, using common carpet tacks for this purpose and covering as shown in the accompanying photograph.

We were then ready for the paint. Before putting on the first coat of paint the canvas must be wet. It is not necessary to use heavy canvas; six or eight ounce duck is the weight most commonly used for this purpose. Three coats of paint are usually applied, but we didn't have time to wait for a third to dry, so we let it go with two.

When launched the boat was complete in every detail; it set on the water like a duck, drawing only about 3 inches, in perfect trim, without the slightest list, and not leaking a drop.

I have built no less than ten canoes in this way and they have always given good service. Seven or eight dollars usually covers the cost complete.

It was about 3 o'clock when our boat was finished, but it would not be ready for use for twenty-four hours, as it would take that long for the paint to dry. That night we set a few traps for fox and mink of which there were signs in abundance, my uncle using for the

mink set, a method which he had learned from an old Indian trapper. He found an old log along the river, and we towed it down to a place where the water was shallow. This was not hard to find, as the river was little more than a creek. We placed the log so it was covered with about one or two inches of water, securely fastened it by means of a stake driven in the middle of the stream and a wire wrapped around the log and attached to the stake. We then chopped out a place for the trap, but found it necessary to raise the log a little more so the trap would not be more than two inches under the water. My uncle then took some mud and smeared over the fresh cut place so it would have an old appearance. He then set the trap and covered it with a few water-soaked leaves. Obviously, this set should be made where the water does not run too swiftly.

Uncle offered to bet he would have a mink in that trap the next morning, and sure enough, when we reached the log the next morning, there was a good sized mink dangling from the trap—drowned.

We then took up our traps and about noon started down the river again. This time uncle took the wooden boat and Jack and I the canvas one. For a while all went well, but as we proceeded down the stream the current became very swift and the first thing we knew we were headed for the rapids. There was no way of getting out, as the bank rose abruptly to a height of about twenty-five feet on either side. We saw there was no way out of it, so we steeled ourselves for the occasion, holding on to our boats with all our might. On and on we went, faster and faster the sound of the rapids swelling into a deep, hoarse, roar. Uncle was in the lead and I saw his boat pause for an instant on the edge of the foaming precipice, then shoot downward like a bullet. I closed my eyes, gritted my teeth, and tightened my hold on the sides. And then—plunge! I felt myself hurled from the boat and my head struck something hard—I knew no more.

When I regained consciousness and opened my eyes, Jack was moving my arms up and down in an effort to induce respiration, while uncle was lying prone upon the ground with an ugly gash in his head, and a sickly pallor on his face. "Good Heavens, Jack, is he dead?" I asked. "He was mighty near it—I surely had my hands full between the two of you—but I think he'll be alright now" he answered, encouragingly, holding a cup of water to my lips. I drank the water and felt pretty good, so I got up slowly and went over to where uncle was lying. He was breathing in short rapid puffs and his contracted features bore evidence that he was suffering

intensely. I asked Jack if there was anything we could do for him. He said that the only thing he knew was to rub his hands and arms. This we did for about fifteen minutes, at the end of which time he opened his eyes for a moment, but did not seem to recognize us.

It was fully three hours before my uncle regained consciousness, and even then he was so weak from pain and the loss of blood that he could hardly stand up.

Jack had managed to save the wooden boat in which most of our supplies were stored and there was still a box of canned goods under the front seat. There was plenty of brush around, but the matches were all wet and we had no way of starting a fire. Having read in a trapping book of a method of starting a fire with ice, I thought this would be a good opportunity for testing out the idea. Of course, everyone is familiar with the method of starting a fire by means of a sun glass by bringing the rays of the sun to a focus. Well, my idea was the same, except that I was to do it with ice. Fortunately, I found a clear piece of ice about three-eighths of an inch in thickness. With my pocket knife I cut a disk about three inches in diameter, then trimmed as nearly as I could to represent a double-convex lens, or reading glass, leaving its thickness about three-eighths of an inch in the center and tapering both sides to a straight thin edge. At first it did not concentrate the rays to a good focal point. I thought its surface perhaps was too rough. Taking it between the palms of my hands I made circular movements back and forth, and this heating of the surface quickly formed it into a lens good enough for starting a fire, which it did so quickly that we were astonished. We soon had a good fire and after devouring a can of beans and a can of corned beef, we felt greatly strengthened. We camped there that night and the next day we pushed on to Malden, Missouri. Here my uncle said he didn't care to go any further, so he took the train for St. Louis and returned home, leaving Jack and me to continue our journey alone.

On the afternoon following my uncle's departure, Jack chanced to meet an old friend of his, John Gregory by name, whom he invited to join us. Gregory was a man about thirty years of age, tall and slender with dark swarthy complexion and black, penetrating eyes. Something about the man, his appearance, or his manner, caused me to dislike him from the very first. He seemingly entertained a similar feeling for me, and I noticed that he was always ready to offer opposition to anything I might say. His disposition toward me, together with the growing intimacy with which he and Jack

regarded each other, soon led me to the conclusion that I was no longer wanted in their company, so on the day following I gathered up what few traps and other belongings I had and started for home.

That evening I reached the town of Kennett, having covered a distance of thirty miles, and here I sold my belongings for the aggregate sum of \$6.00.

The next day I resumed my journey on foot, taking, as near as I could determine with the aid of my compass, a course directly towards home. A cold, blustery wind was blowing, and dark clouds were scurrying across the sky, betokening the approach of a snow storm. I pressed on, walking through dense forests hour after hour, and as evening drew on I felt the pangs of hunger approaching. At length I came to a section of prairie land and as I stood scanning the horizon I saw a light flickering faintly through the mists. With visions of a warm supper and a soft bed luring me on I increased my pace almost to a run, my fatigued limbs taking on new life under the spur of my anticipated good fortune. I soon covered the distance between myself and the light and as I drew nearer I saw that it radiated from the window of a low cabin. I let myself in through a small gate that separated the yard from the adjoining territory, taking care to close and lock it carefully. I crept stealthily up the narrow little path-way, and was almost to the door, when there issued, from the rear of the cabin, a fierce growl, followed immediately by a series of deep gruff barks. Then a huge black dog, about the size of a young grizzly, came bounding towards me. With one leap he was upon me, his great claws imbedding themselves in my clothes, his great white teeth gleaming from his parted jaws, his eyes shining with a ferocious hatred. Weakened by my long tramp and shocked by the suddenness of the attack, I was unable for the moment to offer any considerable resistance to the brute. I toppled backward under his weight and fell, striking my head against the door-step as I did so. Although badly stunned, I was not insensible, and an instant later I saw the cabin door open.

"Carlo!" "Carlo!" It was a girl's voice. The beast released his hold upon me and walked sneakingly around the corner of the cabin. The girl came nearer.

"Did he hurt you?" she inquired anxiously, bending over me. Looking up, I saw, for the first time, her face. In all my days I had never glimpsed a face more beautiful, nor heard a voice more sweet. As might be supposed, I had not, in my rambles through the forest, come in contact with a great many members of the fair

sex and the few I had met were not particularly appealing to me. But now, as I looked upon the sylph-like loveliness of the girl before me, I was possessed of a strange feeling of an indescribable "something" which welled up within me and made me wish that my wounds were more serious. Then it occurred to me that I could practice a little deception, so instead of answering her, I merely opened and closed my eyes again, grimacing as if in great pain. With the gracefulness and sprightliness of a fairy, she flew to the rear of the cabin and brought a damp cloth which she placed on my head, also a bottle for me to inhale. I inhaled deeply, and presently felt greatly "revived." I opened my eyes and smiled as gratefully as I knew how, and was overjoyed when she returned the smile, asking me again as she did so, if I was badly hurt.

"No, not much," I said, "only that my head feels rather queer."

"I'm sorry," she continued "that father isn't here to help you up, but if you think it safe to try, perhaps I can help you into the house." Nothing could be fairer than that, so I told her I was quite sure we could make it. We did. She led the way to a couch, but I told her I felt much better and if she didn't mind I was going to sit up.

"Very well, then, you can sit right down here at the table. I'll soon have supper ready. Now I must see how mother is. She is very sick and I'm afraid she will have pneumonia."

She disappeared into the adjoining room, while I removed my coat and deposited my knapsack near the fire-place. As I did so, my attention was arrested by the familiar appearance of a gun reclining on the mantle-piece. Surely, I had seen that gun before, I thought. It was an exact duplicate of the fire-arm that Jack Haley carried when we started on our hunting trip—the gun that was stolen from the cabin on the morning we were running our trap line. But Jack's gun, I remembered, had his initials cut on one side of the stock. Taking the gun in my hands I examined the stock very carefully, and while no initials were to be found, I noticed that the spot where Jack's initials were carved was slightly hollowed, and it occurred to me that they had been shaved off and the surface smoothed down with sand-paper, followed by a coating of varnish.

Here I was interrupted by the re-appearance of the girl who reported, smilingly, that her mother was resting well.

"This is a nice gun your father has," I said, trying to appear natural.

"Yes—father always keeps a stock of guns of various kinds. There are some more in the rack there."

"He is a hunter then?" I asked, stepping over to examine the rack. There were ten guns of various kinds on the rack and I wondered if they had all been stolen as I believed the one on the mantle to have been.

"Oh, yes," she replied, placing the chairs to the table, "father usually hunts and traps about six months out of the year. He's very seldom home, except during the summer when he works at the saw mill and now, wont you sit down and make yourself at home and have supper?"

"Thank you very much," I answered, "but isn't your mother able to eat with us?"

"Oh, no, mother hasn't eaten at the table in more than three weeks. Besides, she's asleep now, and it wouldn't do to wake her."

I had never enjoyed a supper as much as I did that one. Whether it was the food on the table or the fair face which sat opposite me that gave such zest to the meal, I could never say, but I never ate more heartily nor enjoyed a meal as thoroughly.

After the meal was finished my young hostess insisted on showing me to my room, so I went to bed and slept soundly. The next morning I awoke to find my eyes staring into the face of a hard-visaged middle-aged man. There on the wall was a picture of the very man whom I had encountered on my trip up the river in search of provisions. Then, surely, her father was the thief and that was Jack's gun on the mantle-piece.

I heard dishes rattling in the next room and the rich aroma of coffee told me that breakfast was in preparation. I found a basin of water, a towel and a bar of soap on the washstand so I made my toilet and hastened to make my appearance at the breakfast table. Everything was in readiness and presently my hostess greeted me with a cordial "Good morning," placing in front of me a generous dish of oatmeal.

An inch or so of snow had fallen during the night, but the morning was clear and the sun, now well beyond the horizon, was filling the room with a flood of light. This illumination only served to enhance the beauty of the girl whose charms were already holding me spellbound.

"I wonder," said she, as we took our places at the table, "if you'd object to telling me your name."

"Not by any means," I assented, "my name's Rounds—Tom Rounds, and if you don't mind, I'd like to ask the same of you."

"My name is Alice Blake," she confided.

"A very pretty name," I said, earnestly, sprinkling sugar over my oatmeal.

She only smiled in acknowledgement and we sat for some time in silence.

"Alice! Alice!" came faintly from the adjoining room. It was her mother calling, and I saw from the expression on her face as she left the table that she anticipated difficulty of some kind.

I had finished my breakfast hurriedly and was ready to go when she entered the room again.

"You are going?" she inquired with a look of what I hoped was disappointment.

"Yes, unless I can be of some help to you," I replied.

"There is nothing that you could do here, mother won't see anyone but me and she refuses to have a doctor."

I had hardly expected this reply from her, but I lost no time in getting on my way. I placed a dollar on the table to pay for my night's lodging and the two meals, and thanking her very kindly for her hospitality, I put out for home once more.

That day I passed through Clarkson and on to Malden. At Malden I stopped at an inn and partook of a thirty-five cent supper, and leaving a little before sundown I followed the roadway into a big forest. Darkness came on, and with it the distant howl of the wolf. I shuddered as my mind reverted to my former experience with the wolves and I was on the point of turning back to the town when I saw a light burst upon my horizon. Advancing in the direction of the light I saw presently a saw mill. The mill-owner, who was leaving for the night, granted me permission to sleep in the mill, giving me some old robes for a bed. Here I would have doubtless slept comfortable had it not been for the rats, but they seemed to hail my coming as an occasion for great merry-making and all night long they scampered gleefully across the bare floor, stopping now and then to gnaw a hole in a board close by.

Unable to sleep, I contented myself by visioning the face of Alice Blake and attempting to account, in some manner, for the fact that she, a beautiful and, apparently, innocent girl, was the daughter of a bandit and a robber. Certainly, I had never had any high regard for bandits and had I felt that she was in any way involved in the malicious practices of her father, I would have banished her

from my mind without a further thought. But I could not bring myself to think of her in that manner.

At last morning brought an end to my tortures and with it came an opportunity to ride into St. Louis on a load of corn. I accepted the offer and after a long, tedious journey of several days' duration, we arrived. In St. Louis I bought some food and made my way toward St. Charles. Night overtook me and with it came a drizzle of sleet and rain, chilling me to the bone. Arriving at the river I found that the ferry had gone for the last time; the railroad bridge offered the only means of crossing, and this, I learned, was in no healthy condition, a train having fallen through it but two weeks before carrying down one span. The carpenters suggested that I might be able to cross on the new stringers. This seemed feasible, so I walked on to the bridge until I reached the section under repair. I did not attempt to cross the stringers on foot—they were only eight inches wide and were wet and slippery. The only thing to do was to straddle one of them, using my hands as a means of locomotion. Far below me I could hear the roar of the river. Fortunately, it was very dark and I could not see the water; if I could I believe I would have toppled over. I progressed very slowly and was compelled to stop and rest frequently, but I finally came to the boards again and the rest of the distance was easily covered. I must have walked two miles beyond the river before I stopped. Here I found a board fence, and, removing one of the boards, I proceeded to cut it up into small pieces with the aid of my jack-knife and soon had a fire started. Warming as best I could, I made some brush into a bed and went to sleep with the rain and sleet beating a merry tattoo on my overcoat, which I used as a cover. Strange as it may seem, I slept—and slept soundly—much more so than on the previous night.

The next morning I had some difficulty in extricating myself from that bed—I seemed to have virtually "grown to it," my clothes having frozen to the brush and, in some places, to the ground. I felt pretty good when I finally got straightened out, all things considered, except that I had a voracious appetite. About noon-time I came to a farm house. By this time my appetite had increased to an alarming degree, and when the lady of the house opened the door and I sniffed the aroma of fried sausage, I smiled a big hungry smile which must have been a bit too expressive. At any rate, she gave me a furious look and when I asked for a bite to eat, she only turned up her nose and politely shut the door in my face. I intended to tell her I would pay for the food, but after such a demonstration I

didn't feel like troubling her further. Perhaps I would soon find another house, anyway.

Farm houses, in those days, however, were few and far between and night found me far from any signs of civilization—and still with an empty stomach. My hunger, now, however, had abated somewhat and I piled myself on top of a brush-pile and went to sleep.

The following afternoon I arrived at Clarksville and I knew then that I was but eighteen miles from home. I walked on until at 9 o'clock that night I came to a neighbor's house, where I was given a good supper and a warm bed.

The next morning at ten o'clock I was at home toasting my shins by my father's fire.

CHAPTER II

It was a day in October. The leaves on the trees in the upper Mississippi Valley had taken on a golden hue; great yellow pumpkins intermingled with acres of corn shocks heralded the approach of winter. Already Jack Frost was in the air and cool breezes began to sally down from the Northland.

Out in the woodshed I found my traps with the summer's accumulation of rust. I took them out, sandpapered them as best I could and finished by boiling them in a solution of water and walnut hulls.

This time I was to take my hunting trip alone. Uncle was getting too old to hunt, so he said, and there was no one else in the immediate vicinity whom I could prevail upon to accompany me.

With 150 traps, my rifle and a week's provisions, I started down the Mississippi River on the 28th of October. Pulling down to the mouth of the Missouri, I established my headquarters in a deserted cabin. Here I proceeded to set my traps, extending my line over the hills and bluffs, creeks, lakes and, in short, every conceivable place where there were signs of fur-bearing animals.

Muskrat trapping proved especially good that winter, the best ground being the stagnant pools away from the river. Houses built by these animals were quite numerous and I would often break into them and kill the game. If this proved impossible I would place traps within. This latter method was one that entailed easier work than placing the traps at sides or holes for once a house was located it would accommodate several traps while I was forced to search for the holes and slides. However, nowadays I do not recommend destroying muskrat houses.

Mink and coon were also present in numbers, but to catch them, especially the mink, required skilled knowledge and its correct application. The minks were lighter colored than some of the northern minks I had seen, but of good size. I would see their tracks along the streams and lakes, sometimes where they had passed over submerged and mud-covered logs; sometimes where they had entered holes in the banks for exploration or plundering purposes.

Now as my provisions had given out and I was far from any trading post, I learned to depend upon fried muskrat and roast coon for sustenance; indeed, I might say that these two dishes comprised my principal diet and I began to actually relish them as I would chicken or duck.

Speaking of coon reminds me of an incident that occurred that winter—or rather a series of incidents which led up to the capture of the animal. Noticing the tracks of a large coon along the river where he had been frolicking with a fish or clam, I decided that his pelt would make a nice addition to my collection. Judging by the results of my initial sets he doubtless had other uses for his hide.

Near the tracks was a large log, one end of which was projecting out into the water. Many trappers would have considered that a trap set at the land end of the log would have been an admirable one. So it would—for mink—but the muddy top of the log told me that here would be a better one for Mr. Coon. His tracks were numerous on the top of the fallen monarch of the forest, showing that he was in the habit of playing or devouring his “three squares” there.

Accordingly I began preparations for his capture. In the mud on the log I hollowed out a depression just large enough to insert a trap comfortably. Over the trap I spread some wild goose feathers freshly plucked from the bird. Then I fastened the chain to the log and departed for the night confident that such a set would prove Mr. Coon’s undoing. Such a cumbersome and unwary animal as a coon would never evade capture, I thought.

The next morning my visit to the spot was postponed by necessity. I first visited some sets up the river and on the shore of a little lakelet down the stream. When I finally arrived at the place where I confidently expected to see Mr. Coon struggling frantically to free himself, night had fallen. But for the full moon, darkness would have prevented my seeing anything.

From a distance of fifty feet I could see that the trap had been sprung and was dangling over the edge of the fallen tree. A few gray hairs in the jaws bore unmistakable evidence of a close call.

But a miss is as good as a mile and I suppose the animal was somewhere in the vicinity laughing at me and enjoying my disappointment. He had played about on the log as usual and even had blundered into the jaws of what should have been death eventually, but had escaped. The fact that he had escaped was evident beyond doubt, but I was now more anxious than ever to catch him.

I will not detail the various methods I adopted in an effort to catch him. Bait sets, water sets, land sets—everything was tried and found wanting in this case. The old pelt was still as safe from my clutches as if it had never been. All the sage teachings of my uncle in regard to trapping were brought to bear upon the situation without avail. For a time I ceased operation near the fallen log and devoted my attention to my line in general. All my traps were not set, but there were at least a hundred in operation and the catches from these gave me all the work I was able to attend to.

In a few days I found where the old coon had entered a large hollow log. I knew he was in there because I had chased him in. He had seen me approaching and as this retreat appeared to be the only available one, he had used it as any sensible coon would have done. Realizing that he would have to come out sometime I decided not to smoke or drive him out by other means, so I placed two traps at each end of the log, one about where he would naturally step on when making his exit and another a little farther away and straight ahead. Then I left.

This set was his nemesis. The next morning when I arrived at the spot he was hopelessly caught by his hind foot in one of the traps set farther away from the mouth of the log. He was a whale of a fellow and I am sure would have been fully a match for a good dog. At my approach his strength seemed doubled. He tore at the chain but it was only for an instant. In a brief time I returned to camp with the biggest coon I had ever seen. His pelt was rather coarse but I cared little for that. I had outwitted him after more futile attempts at capture than I had ever previously made. Some of the meat was cooked but I found it tough and unpalatable. To be good a coon must be young else the gravy will be the only tender part of the creature.

At times mink can be very aggravating. Their almost uncanny sense of smell will often detect the presence of a man if no evidence of his handiwork is visible. For this reason it is vitally important to use care when in mink territory and especially when making sets for the animal. I always wore gloves dipped in blood if possible.

Whatever care you exercise you will frequently learn that his power of observation and his sense of smell have thwarted your earnest efforts to trap him. He will thoroughly scrutinize the ground surrounding a trap before drawing near. Water sets, for this reason, are particularly desirable and are considered effectual by trappers. Their preference to land cubby sets and those at the ends of hollow logs is well known.

Personally, I prefer water sets to those made on land. If possible visit your proposed trapping ground prior to the opening of the season so as to ascertain the best locations for sets. Go along the streams and lakes and make small holes, say two inches in diameter. In many cases you will find when you have returned several weeks later that mink have completed the digging and enlarged the holes, for such places are like heaven to a mink. He will enter them in the hope of finding a muskrat or other animal or merely to gratify his uncontrollable desire for exploration. The male mink makes long nocturnal journeys along streams, lakes and ponds, visiting whatever openings in the banks appeal to his fancy. He will be cautious at such places but a clever set with a well-concealed trap, will, in the greater number of cases, bring him to bag. At least, this has been my experience.

I have trapped mink in cubby sets, at ends of fallen and decayed timbers, at stream junctures; in fact, in every conceivable place.

One old male mink caused me no end of trouble that winter. For two months I had resorted to different methods to get him. Like the coon he was either darned lucky or extremely observant. More than likely it was cleverness in this case, since the mink is a more adroit creature than the awkward coon.

Sets were made at holes, at points where he would have to trespass unless he resorted to swimming, on fallen logs, in addition to those made in the water, of which there were many. Every variety of bait, from duck heads to muskrat flesh, was temptingly placed. Sometimes no bait was used but always with the same results—failure.

At last I fairly stumbled onto a place which I conceded to be a novel one. On the edge of the stream where they loved to ramble, was a rotten log, one end of which lay several inches below the water's surface, the other protruding into space and leaning against a sort of natural dam built by the eddying current.

He had often climbed through this log I knew and it was exceedingly improbable that a previous set had ever been made there. The tracks of his feet were clearly defined in the soft, yielding slime near

the dam and I imagined I could see the dimly-outlined imprint of his foot at the spot where he would naturally emerge from the log. Decayed vegetation and rotten wood formed a superb cover for a trap and I immediately began work. With gloves eliminating as much as possible the human scent so unerringly detected by the minks, I carefully removed a sufficient amount of the material of the drift to enable me to use the depression to veil the trap. The aperture at the open end of the log was minute enough to render it unnecessary to set more than one trap for if the slim figure did not scent the trap and leap over it or purposely spring it he would be forced to put his paw in it.

My reasoning proved correct. The next morning the trap had fallen from the drift. I was not surprised to find something heavy on it when pulling it up the sliding pole arrangement that I had fixed. He had passed through in one of his nightly raids and met the fate I had planned for him. Like all minks, he had headed for deep water, when he found it was impossible to get away and had been drowned. He was a large animal and somewhat darker in color than the others I had caught. He was nearly as dark as the average northern mink. Strong and wary and acknowledged master in the tricks of the game, he had at last wandered into the hands of his most-dreaded foe.

A few days subsequent to the capture of the mink, I was sitting in my hut one morning upon my return from the trap line, when I heard a loud knock on the door of my cabin. Visitors in those days were very rare, and I could not imagine who it could be, unless it was the owner returned to reclaim his cabin. To my surprise, I found upon opening the door, that it was Tom Hicks, an old friend of my uncle's. He was looking for a good trapping location, and upon my assurance that he had found the precise location he was looking for, he decided to stay with me. I helped him set his traps and the next morning he was delighted with his catch.

In one of my very first traps was a large coon, and further on down the line I caught another, and still larger one. He was alive and making every effort to get loose. As was my usual custom in such cases, I hit him a resounding whack on the head with my club and knocked him down. I then took up my trap and reset it and turning to get my coon I found that he had come to life and was making a wild attempt to scramble up the bank. I grabbed him by the back, pulling him down and with my knife, gave him a jab in the throat. At the same instant he doubled up, cat style, and

kicked me across the back of the hand, cutting two ugly gashes, which caused me to loosen my hold on his jaws. Thus liberated, he gave a quick snap and caught my hand between his teeth, biting clear through to the bone. Then he gave a final lurch and jumped to the ground. I caught him again and this time delivered a herculean blow, burying my hatchet in his skull. He was the largest coon I have ever seen. My hand, by this time, was bleeding profusely and giving me severe pain. I hurriedly washed away the blood, applied a handful of mud and bound it up with my handkerchief.

When I had finished with my trap line that morning I had two coon, nine muskrat, four mink and one red fox and Tom had seven muskrats, one coon, five mink and one civet cat.

Our catch for the next few weeks was extremely heavy and by the last of January we had 350 muskrats, 54 otter, 76 coon, 65 mink, 40 opossum and 24 red and grey fox, the whole of which we sold to a road buyer for the paltry sum of \$165.00.

At this time I received word that my uncle was in very poor health and we decided to do no more trapping that season, but it was mutually agreed that we would be on the line early the following season.

On the 18th day of October, 1889, having heard no further word from my friend, Tom Hicks, I resolved to set out upon my annual hunting tour, alone, if necessary. So far my efforts had been directed toward the trapping of small game, but this season I was going to undertake bigger things. I had now been trapping for several years and I felt that with my ripened experience and the confidence which came with it, that I could safely tackle any fur-bearing animal from a rabbit to an African lion.

Accordingly, I bought traps and equipment for the larger sized animals, taking, of course, my usual supply of small traps. I bought ten No. 4½ Newhouse Special Wolf Traps and three No. 150 Newhouse Bear Traps. My next move was to construct a new boat, as my boat from the previous season was in very bad condition. In this new boat and with a full three week's provisions, I decided to leave on the 23rd of October. Late in the evening of the 22nd, however, Bud Hailey, one of the neighbor boys strode up to the shed where I was putting the final touches on my rigging and asked if I would consider taking him with me as a partner.

"Bud", as everyone called him, had always been a good fellow and as I was not averse to company on my trip, I readily accepted his

offer. So on the morning of the 23rd, Bud and I pushed off down Salt River, determined to live with the fur-bearers for another season.

Selecting for our temporary headquarters the remotest spot from civilization that we could find, we pitched our tent as the shades of evening drew on, and slept unmolested all night.

The next morning, however, we were startled to find the woods full of smoke, which continued to grow denser every minute. Suspecting that it might be a forest fire, we hastily finished our breakfast and started on our way down the river which was very narrow at that point. The density of the smoke increased as we progressed and breathing became extremely difficult. At length we came around a sharp bend in the stream which brought us in full view of the oncoming conflagration. Borne on a brisk breeze, the flames were spreading rapidly bringing death and destruction to everything in their path. We quickly made a landing, and tying a rope to our canoe, hoisted it up over the bank. As it would be out of the question to carry all our equipment, we decided to leave it in the canoe and drag the canoe along behind us. This we proceeded to do, making our way as rapidly as our luggage would permit, toward the open country. The fire was following us with terrific speed; bits of burning wood and leaves had already started a fire in the underbrush on our side of the river and the flames licking up the small bushes and trees.

We saw that we could no longer afford to encumber ourselves with the canoe, so we took what few articles we could conveniently carry and started running. Even then, we were forced to maintain a very moderate pace, as the forest was extremely dense and there was a likelihood of colliding with the trees. The open section of the country did not appear as soon as we expected—in fact, it did not appear at all, and we began to feel that we were hopelessly lost.

Despite the fact that we were going as fast as we possibly could, the roaring flames crept nearer and burning sticks fell around us, igniting the leaves around our feet.

A pack of frightened wolves came rushing by without giving us so much as a passing glance.

The smoke was becoming suffocatingly dense and the roar of the flames beat upon our ears with increasing fury. My breath was coming shorter and sharp pains pricked my left side. I noticed too, that Bud, while straining every nerve and muscle to increase his speed, was slowly dropping behind. His nose was bleeding, also, and the crimson stream coursing down his chin and spattering his

clothes made him hideous to behold. Suddenly, his foot caught in some brush and he went reeling forward, striking his head against the trunk of a tree as he went down. In a wild frenzy of terror and despair I shook him and called to him, but he made no attempt to answer me. Not a moment was to be lost. Discarding the last of the food supply, I managed to raise his limp form and place it on my shoulder. The heat from the flames and the asphyxiating smoke maddened me. With a supreme effort I lurched forward, dashing madly through the entangling underbrush. Devoid of feeling or sense of pain, I tore through thickets and briery brambles, not knowing whether the body I was carrying was that of a live man or a corpse.

Gradually the distance between the trees began to widen; I could walk without stumbling and ahead I could see what appeared to be a broad expanse of water.

I also became aware of a decided clearing in the atmosphere; there was less smoke in the air and I no longer felt the heat beating upon my back. Then as I drew out into the clearing I noticed that the wind had shifted to the west and was blowing the flames to the east.

I now clearly saw that the body of water ahead of me was a large lake. Never had water been more of a Godsend than at this time. I was parching with thirst; my tongue clove to the roof of my mouth.

Then, as if the curtains of night had drawn around me, all grew dark, my head reeled and I sank to the ground, carrying the body with me.

How long I had lain there I do not know, but I was awakened by the sound of voices and the splashing of oars in the lake. Raising my head I saw that Bud was still lying in a stupor, but the labored heaving of his chest told me that he was still alive.

Two men were pulling toward us in a boat, and as I looked up I noticed that the man in front bore a strangely familiar appearance. Fortunately, it proved to be my old trapping partner, Tom Hicks. He and his pard had been driven from their haunts by the forest fire and had lost one of their boats, a valuable lot of furs and most of their food supply, in the scrimmage.

After administering cold water packs to Bud's head for about ten minutes, we were rewarded by seeing him sit up and talk; but he was still very pale and weak.

Having no provisions and being entirely devoid of trapping equipment, I was in favor of returning home. Bud was more than ready to go, so after helping devour the remaining portion of Tom's

food supply, we took the shortest route for home, arriving in good time, without any serious difficulties.

At first we felt inclined to abandon the trap line for the balance of that season, but after a few days of idling around I found myself hungering for the trap line. I found Bud recovered from his fright, and he was willing to engage in another voyage, so we bought a supply of new traps, rigged up another boat and pulled down the Chariton river. We camped in the old familiar woods where I had accompanied my uncle on my first hunting trip. Here we remained about a week, caught one hundred muskrats, 16 coon and 8 mink. Then it turned severely cold and we decided to move down the river a little farther and go into winter quarters. We then sold our furs, and although I have forgotten the amount we received for the coon and mink, I remember distinctly that the one hundred muskrats brought \$16.00. Today the same kind of muskrats at Funsten's would bring one hundred and fifty dollars.

While we didn't make an enormous lot of money, we had some mighty good times attending parties, wood choppings and tobacco stripping parties—the chief social functions of that day. Here I met quite a number of young ladies who were charming, in a way, but for some unaccountable reason, they did not influence me in the least beyond the point of calling to mind the little girl who saved me from the vicious dog. In fact, it seemed that the presence of members of the fair sex, stirred up much the same feeling that I had experienced when I was the guest at the girl's house and soon I found myself fighting an intense desire to see her again. This I could not very well do, as I did not wish to leave Bud, and I didn't care to have him know about my attachment for the girl, so I determined to put the matter out of mind.

The winter passed without any more thrilling escapades, and in March we sold our furs and left for home. Our catch consisted of 365 muskrats, 68 coons, 45 mink, 8 red fox and 5 beaver, the whole of which was sold for \$150.00.

CHAPTER III

The last rays of an October sun were tinging the hilltops of Northern Missouri with gold, which, mingled with the gay hues of Autumn, made a landscape more picturesque than words can fitly describe.

I scooped the last shovel full of corn into my uncle's crib marking the completion of the summer's work, then I sauntered to the old

woodshed and hauled forth a tangled mass of chains and traps. Tomorrow I would start preparations for another trapping season.

Bud, I learned, had secured a job on the railroad, so I had no immediate prospects of company for my journey. This, however, was no serious handicap from my point of view. I had grown to love the solitude of field and forest until the very solitude itself spoke to me in a language more potent than words.

I embarked on the morning of October 30th, just as the yellow Autumn sun cleared the horizon. I pulled down the river and camped in what was known as the Shepherd Woods.

And—talk about your coons! I never saw them so thick in all my life. Caught 48 in one week. Mink and muskrat were also plentiful, and by the end of November I shipped several hundred dollars worth of furs to Funsten.

Cold, squally weather ushered in the month of December. The river froze over solid, putting an abrupt end to my trapping success. I climbed the bluffs and set a few traps, catching, during the week, one skunk, one mink and one red fox—quite a perceptible slump from my previous week's record.

By this time my rations were reduced to a half a loaf of rye bread (stale) and a can of beans. I prepared one grand spread of bread and beans, took my luggage to a farm house and went home for the holidays.

January 15th I was back again with a fresh supply of beans, bacon, bread, corn meal and various other commodities. Securing my boat and supplies again I pushed out into the river which was about two feet below low water and filled with great cakes of floating ice. The trees, covered with a glistening mantle of white, presented a panorama of rare beauty. It was truly a grand sight. I could look for miles around me and trace the course of the river by the vast bluffs and rocks that rose on either side.

It was too cold for trapping the first week or so, but warmer days soon followed. Then I began to catch furs again. I caught a nice lot of red foxes, using a special set which was made in this way:

I would go to a sand bar where they played; then I would dig a hole about six inches deep, throwing the sand back as a dog would do in digging. I would then set my trap down in the hole and cover with tissue paper and sprinkle fine sand over just enough to hide it; then cover spring and chain and drive trap stake down level with the sand and smooth over nicely.

Last of all, I took some weeds and made a brush and walked backwards, brushing out my tracks until I was entirely off the bar.

There was one sly old fox, however, whose antics completely baffled me. He would come within three or four feet of my trap and then scamper away in the opposite direction. I saw that I must devise a different scheme if I would land him, so I made use of a box trap which a friend of mine recommended to me. There was a farm house within a mile of where I was camping so I bought a chicken from him to use in conjunction with the trap, in the following manner.

The trap was of the common box variety, with a wire partition about four inches from the back end. On the back end of the trap I put a wire door that could be opened and closed. I then took the trap to the den to which I had traced the fox in question and I then put the chicken (still alive) in the back part of the trap. The noise of the chicken attracted the attention of the fox, and he, being naturally very curious, entered the trap to see what was going on.

I not only caught the sly fellow who had so carefully avoided my steel traps, but I caught three others in the same manner. Then the chicken died and I went back to my old method.

One morning as I was rowing along the river I saw a man standing on the bank, waving his hat and going through all sorts of contortions in an effort to attract my attention. I pulled up to the shore and was surprised when he, a total stranger, spoke to me and called me by name. He was tall and raw boned. He said his name was Henderly and that he was just planning on a trip to the Gulf in search of some desirable land, and having heard of me, he thought I would be the logical fellow to take along for company.

The opportunity struck me at once as being highly desirable, but as I had never seen the man before to my knowledge, it occurred to me that I had better think the matter over. I told him I would tell him within three days whether or not I could go, to which he readily assented. During these few days I made inquiry at a number of farm houses, but they seemed to know very little about him, except that he was a land dealer and trader.

As I thought the proposition over, however, I felt the most intense desire to make the trip, so when I saw him the following day I told him I had decided to go. He appeared greatly pleased and said that he was quite sure I would enjoy the trip very much. He invited me to come over to his house and spend the night with him, saying that we would start the following morning.

So that evening I bundled and shipped my furs, gathered up my traps and, about six o'clock, found myself outside the door of my newly-acquired friend. His house, to my surprise, was of good size, and up-to-date in every respect. I did not have to knock, for as I stepped upon the porch Mr. Henderly came around the house and, relieving me of my baggage, led me around to a rear door. Here he led me into the kitchen where a negro cook was preparing supper. Inquiring if supper would soon be ready, to which the dusky lady answered in the affirmative, he ushered me into the large front room. This room was very long, with a lofty ceiling, and the windows which were draped with sombre curtains, were also long and narrow. The room was plainly furnished, but there was a noticeable nicety of arrangement which bespoke good taste on the part of the mistress.

Knowing my passion for the craftsmanship of hunting and trapping, my friend asked me if I would like to look over his collection of private trophies gathered through his twenty-five years of cruising on trips between the Gulf and the Great Lakes. I assured him that nothing could give me greater pleasure. Bidding me wait until he could get the key he made his way again into the kitchen, closing the door after him.

I was struck with the gloomy silence that seemed to pervade the house. There was a marked absence of vitality about the premises, and the entire scene impressed me as being very dull and colorless. To all appearances, my friend was living entirely alone, except for his house-keeper, but this, I thought, seemed hardly probable for a man of his age and inclination as revealed to me during our short acquaintance.

Presently he returned with the key, but as supper was ready he invited me into the dining room, promising to show me his collection immediately after supper.

We seated ourselves at the table, and I noticed that there was a third chair drawn up to one side with the usual plate, knife and fork on the table in front of it. Thinking that possibly another was to come, I did not start eating immediately, but my friend, noticing my hesitancy, invited me to "pitch right in", and stating that "Alice" for whom the other plate was intended, usually dined alone. I did as he suggested, and partook of the biggest supper I had eaten for many weeks.

At the close of the meal, while we were lighting our pipes, and the cook was clearing away the dishes, the door opened and the frail

figure of a girl, with a death-like pallor on her face, entered and passed without even glancing at us, into the kitchen. For some unassignable reason I felt strangely impressed by the girl's appearance; there was something strikingly familiar in the profile of her face as I saw it when she passed through the room and involuntarily my eyes had followed her retreating steps. My friend, however, gave not the slightest evidence that he had seen her at all and was now amusing himself by blowing smoke rings at the light on the table. He arose presently, and adding more tobacco to his pipe, beckoned me to follow him into the next room.

He unlocked the heavy oaken door to the room, and after making a light, we entered, closing the door after us. The room in which I now found myself was small, but contained the most elaborate collection of fire-arms, furs, mounted heads, horns, etc., that I had ever seen. Most of the articles were protected by a glass case consisting of a succession of shelves similar to a book case. We spent an hour or more looking over the various articles, my friend telling me stories of certain ones which he seemed to feel were most interesting. There was one case, however, which I noticed and what I saw of it was sufficient to convince me that he did not want it to be spoken of. It contained six guns, four rifles and two shot guns and one of the shot guns I recognized to be the same as the one that was stolen from Jack Haley many years before.

Once more in the front room, we filled our pipes, and reviewed our plans for the following day. Presently the cook entered and deposited on the table a tray containing two glasses and a bottle of brandy. It was wonderful brandy and we were not long in emptying the bottle. Then the clock struck ten and my friend suggested that we go to bed so as to be up early the next morning.

The next morning dawned grey and cold, with a drizzling rain. I was dressing myself when Henderly knocked on the door and announced that breakfast was ready. As I passed out into the hall, I heard someone coming down the stairs and looking up, I found facing me the girl who had saved me from being torn to pieces by the dog. I was startled to notice her pale, emaciated appearance, and had I but caught a glimpse of her face as on the evening before it is doubtful if I would have recognized her. For a moment she seemed to hesitate on the stairs, uncertain as to whether she should speak to me or return to her room.

I managed to say "Good morning," and she replied coldly, without the faintest sign of a smile.

"You are going with my uncle?" she asked, in the same manner.

"With Mr. Henderly, yes," I answered, "but I didn't know he was your uncle."

"Yes he is my uncle and guardian."

"You will have to watch him very carefully. There are times when he gets beastly drunk—and when he's drunk he's liable to do anything."

"I'll keep my eye on him," I assured her.

We were interrupted here by Mr. Henderly. He opened the door quickly, and seeing us standing as we were, she on the third step and I at the bottom, uttered a most terrible oath and commanded the girl back to her room.

He was very sullen all through the morning meal and when we had finally taken our leave he asked me, casually, if I had ever met his niece before.

Feeling that I should have to account, in some measure, for my unusual conduct that morning I told him frankly about my first meeting with the girl.

My story must have been unwelcome news to him, for I noticed that he grew more sullen from that very hour and his attitude which had before been one of utmost friendliness and confidence changed to one of comparative coolness and reserve.

Nevertheless, he provided me with plenty to eat, stopping often at towns along the river to replenish our supplies, and I determined to continue the journey at all hazards, if only to find out more concerning the girl and her situation at that time.

In time we arrived at the city of New Orleans and here Henderley was busy for two weeks or more negotiating with the land dealers. We had one of the finest rooms in the hotel there and I spent the first week around town, taking in points of interest and resting. On Monday night of the second week Henderley came in earlier than usual and for once seemed quite talkative. One of the land dealers was giving a party on the following Wednesday night and he asked me if I would care to attend. I told him I wouldn't mind it if I had some decent clothes. To my surprise he gave me \$30.00 and told me to buy myself a suit and whatever else I needed. I bought the best outfit I could get for \$25.00; got a hair cut and a shave and still had \$4.00 in my pocket.

I determined that as soon as the party was over I was going to get out on the river and trap, as I had grown very tired of idling around in the city.

The party on Wednesday night was to be held at the club house of one of the leading New Orleans land dealers, which was located quite a distance from the city on the shore of Lake Borgne. The party was an extremely hilarious affair; liquor flowed freely and towards the time for breaking up I noticed that Henderley was not a little intoxicated.

We did not return to New Orleans that night but took a room at the club house. My friend went to sleep, as I thought, very quietly (it being near one when the party broke up), and appeared to be in perfect possession of his senses. It might have been half an hour from the time of our getting in bed, and I was just sinking into a doze, when he suddenly started up and swore with a terrible oath that he was going to row down to the gulf and take a look at Jackson's land. I never was so astonished in all my life, thinking that the wines and liquors he had drunk had set him entirely beside himself. He proceeded to talk very coolly, however, and assured me that there was every reason in the world why he should examine this land before he bought it. Besides, as he said, he was tired of lying in bed on such a fine night and felt that a little ride in the boat would do him good.

Whether he was drunk or sober, I realized that it would not do to let him go alone, so without any objection at all, I put on my clothes quickly and prepared to go with him. It was truly a beautiful moonlight night, rather cool, with a strong wind from the north-west and as we neared the wharf I began to feel a thrill of the greatest excitement and pleasure and was quite as much in favor of a boat ride as my friend.

Upon reaching the wharf we found a sail boat which Henderley designated as the one to be used. It had a half deck or cuddy, and was rigged sloop-fashion—I forgot her tonnage, but she was large enough to hold ten persons without much crowding. We hoisted jib and mainsail, and started boldly out toward the gulf.

The wind, as I said before, was blowing strongly from the north-west. Henderley had taken the helm, and I stationed myself by the mast, on the deck of the cuddy. We flew along at a terrific speed—neither of us having spoken a word since leaving the wharf. I now asked my companion in what direction he proposed to steer, and how long it would take us to make the trip. He whistled for a moment, and then said, gruffly, "I am going to sea—you may go back to the hotel if you prefer." Turning my eyes upon him, I saw at once that, in spite of his assumed careless manner, he was greatly agitated. I

could see him distinctly by the light of the moon—his face was paler than marble and his hand shook convulsively. I knew that something had gone wrong, and became seriously alarmed. At this time I knew little about manning a sail boat, and was entirely at the mercy of the nautical skill of my friend. The wind, it seemed, had increased and we were fast getting out of the lee of the land—still I was ashamed to betray any uneasiness and for almost a half an hour I retained my position in absolute silence. At last I could restrain myself no longer and I suggested that we had better turn back to the shore. He only laughed at my suggestion, asking me if I was getting cold feet. I had expected such a reply, but there was something in his words that filled me with a feeling of intense fear. I again looked at the speaker attentively. His lips were perfectly livid, and his knees shook so violently that he seemed scarcely able to stand. Presently he released his hold on the tiller and fell forward into the bottom of the boat. The truth now flashed upon me. I rushed to him and raised him up. He was drunk—beastly drunk—he could no longer stand, speak or see. His eyes were perfectly glazed, and as I let him go, he rolled like a mere log into the bottom of the boat which was now covered with water.

It is almost impossible to describe the feeling of absolute terror that possessed me. I knew that I was altogether incapable of managing the boat and that a fierce wind and strong ebb tide were hurrying us to destruction. A storm was evidently gathering behind us and we had neither compass or provisions, and it was clear that, if we held our present course, we would be out of sight of land before daybreak. These thoughts, with a score of others equally terrifying, came with such rapidity that I was for the time in a complete state of paralysis, being unable to lift a hand. Still the wind was increasing fearfully, and whenever we rose from a plunge forward, the water behind us fell combing over the edge of the boat, deluging us with its spray. I was so completely benumbed, too, in every limb, that I was almost unconscious of sensation.

At length I summoned up the resolution of despair, and rushing to the mainsail, let it go by the run. As might have been expected, it flew over the bows, and, getting drenched with water, carried away the mast short off by the board. This latter accident alone saved me from immediate destruction. Under the jib only, I now skimmed along before the wind, shipping the water occasionally, but relieved from the terror of immediate death.

Henderley still lay senseless in the bottom of the boat; and as there was imminent danger of his drowning (the water in the boat now being almost a foot deep) I contrived to raise him partially up and keep him in a sitting position, by passing a rope around his waist and tying it to a ringbolt in the deck. At this point I seated myself as comfortably as possible and determined to resign myself to whatever fate might befall me.

Hardly had I reached this resolution, when suddenly, a loud and terrifying scream or yell rent the atmosphere around and above our boat. As long as I live I can never forget the extreme horror I experienced at that moment. My hair stood erect on my head—I felt the blood congealing in my veins—my heart ceased utterly, and before turning my head to ascertain the cause of my alarm, something hit me and I evidently fell headlong and insensible upon the body of my fallen companion.

I found myself, upon reviving, in the cabin of a large whaling ship just off the coast of the Gulf of Mexico. Several eager faces were bending over me, and two of the men were busily engaged in chafing my hands. I finally came back to life and seeing nothing of Henderley, I made inquiry concerning his whereabouts, whereupon, a fellow by the name of Wilson, (whom I later learned was largely responsible for my rescue) said that he had not been found. I was sorry to hear this, for although his conduct toward me had been anything but friendly, I did not know how the news of his death would be received by Alice, or what affect it might have on her affairs.

As soon as I was able to pull myself together I asked Wilson to tell me just what had happened. He said that our boat had been run down by their ship, which was pulling into the Gulf with every sail on board set, and consequently, running almost at right angles to our own course. Several men were on the look-out forward but did not see our boat until it was too near to avoid collision—their shouts of warning upon seeing us were what so terribly alarmed me. The huge ship, he said, rode immediately over us, as though our boat had been but a feather.

It was some time before the vessel could be gotten under control, but there was no delay in lowering the rescue boat, with Wilson in charge, as he described it. They had just left the lee of the vessel (the moon still shining brightly) when she made a heavy roll to the windward and Wilson, at the same moment, starting up in his seat, bawled out to the crew to back water. The men on board put back as speedily as possible, but by this time the ship had gone round and

gotten fully under headway, although all hands on board were making great exertions to take in sail. Another huge lurch now brought the starboard side of the vessel out of the water nearly as far as her knee, when the cause for Wilson's command was obvious enough. The body of a man was seen to be affixed in some manner to one of the chains. After a series of unsuccessful attempts, during lurches of the boat, they finally managed to detach me from my perilous position and get me into the rescue boat. It was fully three hours, following my rescue, before I showed any signs of life, although the men were working constantly with my arms in an effort to induce respiration.

After resting a few hours in the cabin of the ship I went ashore and made my way back to my stopping place in New Orleans. Leaving New Orleans, I took the train for St. Louis, and a week later I found myself approaching the Henderley homestead.

The house, gloomy upon my first visit, was even more so now; all the curtains were drawn, and but for the small column of smoke that issued from the kitchen chimney, one would assume the house to be devoid of occupants. This feeling of depression was not a little relieved when the door opened, however, for instead of looking, as I expected, into the dusky face of the housekeeper, I was staring into a pair of wondering blue eyes.

At this time Alice appeared more beautiful than ever before.

As soon as I was in the house I began to relate the harrowing incidents of the past four weeks. She evinced not the slightest interest when I told her of her uncle's tragic end; she only sat for a long time and gazed blankly into space, shivering slightly as I told her of my narrow escape.

I found out later that Henderly had secured possession of all of Alice's property and by some forgery had produced a will which appointed him her guardian. He had been very cruel to her, especially when on one of his drunken sprees, and it must have been a relief to be rid of him; but she rarely ever mentioned his name afterwards.

In the weeks that followed I came to know Alice better, and, knowing her, I came to understand her and to love her more than I ever thought it possible to love anyone—and always will.

I still keep up my trapping and every winter manage to send a few good shipments of furs to my old friends, Funsten Bros. & Co. in St. Louis. There are still plenty of small fur-bearers for the man or boy who wants to trap. There is still the same thrill and romance

in the trapping game for me that there was forty years ago. No boy's education is really complete until he has studied the habits and characteristics of the wild fur-bearers, and I hope that every young trapper who reads this will find it of some interest and that he will remember that the furbearing animals are his friends and treat them accordingly.

NOTE—The following article was published in one of the leading American Journals.

AN AMERICAN FUR MERCHANT IN THE FAR EAST

Experiences of Albert M. Ahern in Japan and Siberia—Japanese Energy and Courtesy—The Boundless Resources of Siberia—A Traveler's Experiences Between Harbin and Vladivostok—Elastic Train Schedules—A 16-Year-Old Engineer—A Town Destroyed by Bandits—Seven and One-Half Days to Make a 36-Hour Journey

PART I—JAPAN

The *World Salesman* is a substantial-looking illustrated journal published in Yokohama, Japan. The first 66 pages of the issue for October, are printed in English. Then come five pages in Russian, four in Spanish, two in Esperanto, five in Japanese and four in Chinese. On page 50 of the October issue is found a "two-deck" head, which runs as follows: "American Firm Teaches Far East Fur Shippers to Turn Furs, Hides, Bristles and Skins Into Gold Dollars. St. Louis Has Won Place as Principal Fur Market of the World." The page article which follows is an interview with Albert M. Ahern, of Funsten Bros. & Co. of St. Louis, who has recently returned from an extended trade pilgrimage to Japan and Siberia.

A Commercial Ambassador

Mr. Ahern has proven an effective commercial ambassador for St. Louis in the Far East. "When the commercial confusion caused by the war had twisted and closed the old-time trade routes of the world," said Mr. Ahern, as quoted in the Yokohama journal, "the fur merchants of the Far East hardly knew what to do. The famous fur marts of Nizhni Novgorod, which served simply as an ante-chamber to the Leipzig sales, have ceased to serve a purpose and have died out because the road to Germany is closed. The European markets outside of Germany were similarly affected because of the irregular supplies reaching them. Then St. Louis became the logical channel into which the fur shipments of the world began to be diverted. It is in St. Louis that these merchants change their furs for American dollars."

Mr. Ahern left Vancouver for Yokohama on April 12. He began his return journey about the first of September. "The traveler from St. Louis to the Far East," said he to a representative of AMERICA AT WORK, "is impressed at the outset by the magnificence of the distances. After more than 2,000 miles travel to reach Vancouver, you have 4,600 miles journey to Yokohama and 1,100 from Yokohama to Vladivostok. In short, the ocean gateway of Eastern Siberia is something like 8,000 miles from St. Louis.

Japanese Energy

"The first impression which Japan makes on an American business man is that of tireless and ceaseless energy. Once a week the wheels of American commerce and industry come to rest. But the Japanese week knows no Sunday or rest day, and the Japanese population toil long hours, the vision of a possible six-hour day and five-day week not having entered their heads. A day's work in agricultural Japan is fourteen hours. You see the laborers going into the rice fields before sunrise by the light of dawn, and they work steadily on till sunset.

Much Beside Cherry Blossoms

"The visitor to Japan who imagines Japanese life to be all cherry blossoms and formal observances over delicate porcelain on lacquered tables is headed toward a rude awakening. My hotel commanded a view of the harbor. Along the curving shore in one direction stood great industrial structures with a sky-line broken by the cranes, furnaces and stacks of a vast steel plant. In the other direction was another factory district. It is 20 miles from Yokohama to Tokyo and a row of factories extends all the way. The traveler never knows where Yokohama leaves off and Tokyo begins.

"We all know in a general way that the war tremendously stimulated Japanese commerce and industry, but here is a fact which may serve as an index of the extent of that stimulus. The possession of a telephone is prized by a Japanese house not only as a business convenience, but also as indicating a certain standing in the commercial world. The demand for telephones is so great that contracts which promise speedy installation have a high surrender value in the market. The fortunate firm that possesses one can sell it for something like \$1,000 and there is a sort of 'curb market' where these telephone contracts are dealt in. The orders for additional telephones are so many in Tokyo that they cannot all be installed in less than four years.

"From the point of view of the fur trade, Japan's interest for the visiting dealer is wholly that of a producer of furs—not a consumer. The women of Japan do not wear furs, nor are there changing styles in woman's outdoor dress. Every Japanese woman when she goes on the street is dressed like every other Japanese woman. All shoes worn on the street, for example, are wood. The field for luxury in the display of individual taste in Japan is confined almost entirely to the indoor life.

Streets and Fords

"Speaking of shoes naturally suggests sidewalks. There are few in Japan. The automobile driver plunges into the midst of the crowd of pedestrians. Why there are not more accidents is hard to understand. The wonder is that a machine ever runs through the streets of a great Japanese city without the sacrifice of a victim or two.

"When Fords become numerous in Japan the cities will have to be remodeled. The streets and also the railroads of Japan are narrow and were built before her great rise in industry. The Japanese realize now that building a narrow-gauge railroad was a big mistake. I understand they are planning now to change to a standard gauge railroad. The change however, will cost many millions.

"Japan presents a curious composite of old ideas with new ones. The people belong partly to the Twentieth century and partly to ages of the past in which the Far East was utterly cut off from the rest of the world. For example; certain progressive statesmen and industrial leaders recently started a Safety First movement and distributed cards among the people in order to secure their co-operation. Strangely enough, the first day after the distribution of these cards was marked by a sad number of accidents. 'Why did you take that risk?' was asked of a man who had jumped off a street car under full headway. 'Why', responded the man, 'I did it because the Government had issued me a card which promised safety no matter what I did.'

The "Japanese Peril"

"We hear more or less in this country about 'Japanese peril.' Speaking from my own observation, I wish to record the uniform kindness and courtesy with which the traveling American is treated and to say that if the 'Japanese peril' exists, it is simply the risk of competition with a nation which sets an example to the whole world by its industry and whose government actually works with its people.

I had never dreamed of such co-operation between the government and the country's commerce and industry as Japan showed. This may mean peril to us, but it is a peril which we can avert by learning to do a little better team work ourselves. No business man could help but admire the co-operation and team work that exist between the Japanese merchant and his government. In this connection England is not far behind. The military, the naval, the consular authorities of England leave no stone unturned to help the English merchant in a foreign land."

"The resources of Siberia stagger the imagination; the vastness of its fertile lands, the unlimited range for cattle, the extent of its mineral wealth and its wonderful furs, fisheries and forests. I was deeply impressed with Harbin, in Northern Manchuria, which seems likely to become one of the greatest industrial cities of the world. It must be remembered that Siberia not only has a fertile soil, extensive forests and great resources of mineral wealth; there is the inexhaustible labor reservoir of China to draw from.

"The country is but in its infancy. It has one railway system—the Trans-Siberian, and this is certainly a real railroad. When the European war began Russia realized the necessity for increasing her transportation facilities to the east and enormous orders were placed in the United States for all sorts of railway supplies. There they are, stacked up beside the track, ties, steel, bridge girders, castings, enough to build another railroad. This is, so far as I know, the only wide-gauge railroad in the world, its rails being about eight inches further apart than the standard track to which we are accustomed in this country and in Europe. This makes the cars very commodious. The bridges of the system are magnificent structures and even the smaller station buildings show by their size, solidity and convenience the far-reaching plans of the Czar's engineers. There is no dust; the track is ballasted not with earth, but with rock.

A Traveler's Experience

"Some experiences of my journey from Harbin to the coast will convey the idea of the problem of ordinary life and work in a country struggling with Bolshevism. In Siberia it requires some influence to obtain a first-class railroad ticket, as first-class coaches are supposed to be reserved for military officers and high officials. There was no such thing as an ordinary reservation of space. You get your ticket and then if you have the good luck to arrive first and the strength to maintain your rights, you can hold possession of your place. While handsome and spacious, the cars are lighted by candle-light. Per-

haps they had been cleaned before the revolution; I hardly think they have since. In starting on a railway journey you carry your own blankets and you carry your food.

Elastic Schedules

"The schedule on Russian railroads is a joke. How fast trains run, when they stop and when they start again, are all matters which depend on the whim of the engineer. When I got ready to leave Harbin I had desired to go west to Omsk, but the reports of Bolshevik disturbances were so alarming that I finally—fortunately enough as it proved—gave up the idea and decided to return to Vladivostok. I learned at the station that there was one train on the road beyond Harbin. No one knew how far from Harbin it was, whether 50 miles or 500. As Omsk is two-thirds of the way across Asia, as close, in fact, to the European boundary as Harbin is to the sea, it is evident that there was a good deal of room for difference of opinion as to just when that train would arrive. There was a general strike on, caused by the depreciation of the Siberian ruble, and information was hard to get.

"I was very anxious to get out of Harbin. The weather was terribly hot. There were no rooms to be had. The houses were filled with refugees from portions of Russia under the domination of the Bolsheviks, and there were 80 cases of Asiatic cholera there. Food was plenty, but there the cold-storage facilities are very bad; most of the meat served was tainted, and Northern China is the original home of the fly. Flies are everywhere and in and on everything. I waited at the station for that train from 2 o'clock in the afternoon to 11 o'clock of the following night. Then on the advice of the station agent, who thought it very unlikely that the train would arrive before a comfortable hour next morning, I went back to my room to get a little sleep.

The Vanishing Rear Platform

"The next morning I walked to the station, not being able to find a droschky and taxis now being unknown luxuries in Harbin, just in time to see the rear platform of the last car of that train moving on as it left the station. The situation seemed rather desperate. The railroad people thought it unlikely that there would be a train for three or four months, or as long as the strike lasted. I might say here that after I heard the fate of that train, I had scant regret at missing it. About 100 miles out from Harbin the strikers or Bolsheviks or Chinese bandits had pulled the spikes from a rail and the

train jumped the track, rolled to the bottom of an embankment and was utterly wrecked. How many people were killed I do not know, but I saw the wrecked cars as I passed the site a few days later.

One More Train

"And now we began to hear of another train, which was also west of us and moving east. The station-master had high hopes of this train, for the engineer lived in Harbin and would naturally want to visit his family; but he had grave doubts as to whether he would be willing to continue his journey east. In time this train came. It carried people on it who had been there for ten or twelve days, crawling at a snail's pace over Siberia in an attempt to reach the coast.' Among the number there was a general officer of the courageous little army of Czecho-Slovaks, which made history in Siberia for two years. I made friends with an American lieutenant who was a friend of this Czecho-Slovak general and could speak a few words of his language. The general sent a file of soldiers to the home of the engineer, who was just enjoying a family reunion, to give him a choice between continuing his journey toward the coast and being stood up against the wall of his own house and shot. He decided to continue.

A 16-Year-Old Engineer

"We started east and ran in a desultory way until the engineer, who was not well, broke down entirely. A sixteen-year-old boy was found who had had a little experience as a fireman. 'You will never get there,' said a chance sympathizer. 'That boy doesn't know a thing about an engine and he will either blow you up or throw you off the track. We had few dull moments after he took the engine. Sometimes we ran 40 miles an hour for a few hundred yards and then the air, which he did not understand and was evidently experimenting with, would go on and the coaches would crash together in an emergency stop. We reached a water tank at one point, only to find that it had been destroyed, and we crept on in danger of coming to an utter standstill on account of lack of water. Now we began to hear of the work of Chinese bandits. We did not pay very much attention to these stories until we came on the smoking ruins of a considerable town. The bandits had given the inhabitants the choice of paying a million rubles or having their town burned down. They were unable to raise the money and the town was burned and 100 people killed about six hours before we reached it.

"S. R. O."

"Among the casualties was an American Y. M. C. A. man, who had been shot in the mouth. I put him in my bunk and for the rest

of the journey had no place to sleep. During the last 24 hours of that torturing trip I did not even sit down. Our little compartment, containing four bunks and meant for four people, had twelve crowded into it. When we reached the coast we had been seven and one-half days making a journey which in normal times consumes 36 hours. And never did anything look more welcome than the clean, spacious steamer, with its shining decks and its atmosphere of discipline and comfort, upon which I stepped to return to the United States."

The fur trade is one of the oldest in existence and is a fascinating business in many ways. St. Louis, from an humble beginning as a small fur trading post, has grown to be the greatest raw fur market in the world.

If this book has been of interest to you, the writer will be greatly pleased and it is his hope that the supply of furs will increase and be a source of comfort to people for many years to come.

If you are a trapper or fur buyer or interested in raising furs, I will be glad to hear from you.

The writer would be pleased to receive any information regarding the raising of fur bearing animals that will help further this industry.

Albert M. Ahern,
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