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*Title:* Four-Footed Americans and Their Kin

*Date of first publication:* 1898

*Author:* Mabel Osgood Wright (1859-1934)

*Editor:* Frank M. Chapman (1864-1945)

*Illustrator:* Ernest Seton Thompson (1860-1946)

*Date first posted:* July 28 2012

*Date last updated:* July 28 2012

Faded Page eBook #20120740

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FOUR-FOOTED  
AND AMERICANS



BY L. OSCOOD  
AND WRIGHT

# FOUR-FOOTED AMERICANS



THE AMERICAN DEER.

# FOUR-FOOTED AMERICANS



**AND THEIR KIN**  
**BY**  
**MABEL OSGOOD WRIGHT**

**EDITED BY**  
**FRANK M. CHAPMAN**

**ILLUSTRATED BY**  
**ERNEST SETON THOMPSON**

**New York**  
**THE MACMILLAN COMPANY**  
**LONDON: MACMILLAN & CO., LTD.**  
**1898**

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**Norwood Press**  
**J. S. Cushing & Co.—Berwick & Smith**  
**Norwood Mass. U.S.A.**

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**To**  
**WILLIAM T. HORNADAY**  
**DIRECTOR OF THE NEW YORK ZOÖLOGICAL PARK**  
**This Book is Dedicated**  
**BY THE AUTHOR**  
**IN RECOGNITION OF HIS EFFORTS TO PRESERVE THE**  
**LIVING AMERICAN MAMMALS WHERE THEY**  
**MAY BE KNOWN TO THE CHILDREN**  
**OF FUTURE GENERATIONS**

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*SCENE:*  
**ORCHARD FARM AND TWENTY MILES AROUND.**

*TIME:*

FALL UNTIL SPRING.

*CHARACTERS:*

DR. ROY HUNTER, a naturalist.

OLIVE, the Doctor's daughter.

NAT and DODO, the Doctor's nephew and niece.

MR. and MRS. BLAKE, the parents of Nat and Dodo.

RAP, a lame country boy.

MAMMY BUN, an old colored nurse and cook.

ROD, the farmer.

OLAF, a sailor and fisherman.

NEZ LONG, a charcoal burner and woodsman.

TOINETTE, Nez' wife.

QUICK, a fox terrier.

MR. WOLF, a St. Bernard dog.

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EXPLANATION.—Dr. Hunter, after travelling for many years, returned to his old home at Orchard Farm, with his daughter Olive, aged seventeen, and Mammy Bun. He invited Nat and Dodo, who had always lived in the city, to spend the summer with him, so that they might learn about outdoor things, and told them the story of the birds.

Mr. and Mrs. Blake came for the children in the autumn, and they expected to return to the city to school; but Dr. Hunter, who was always making delightful surprises, arranged for the whole family to spend the winter at the Farm. What they did, and how they became acquainted with the FOUR-FOOTED AMERICANS, is told in this story.

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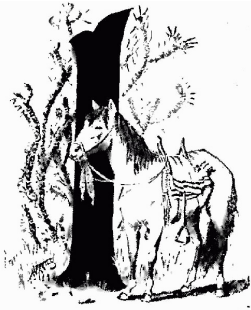
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# FOUR-FOOTED AMERICANS



## IN THE PASTURE



T was circus day down at East Village. Not the common circus, with a Lion, Elephant, a cage or two of Monkeys, a fat clown turning somersaults, and a beautiful lady floating through paper hoops, but a real American circus—the Wild West Show, with its scouts, frontiersmen, Broncos, bucking Ponies, Indians, and Buffaloes.

Of course the House People at Orchard Farm made a holiday and went down to see the show, giving many different reasons for so doing. Dr. Hunter and Mr. Blake said it was their duty as patriotic Americans to encourage native institutions, and Mrs. Blake said that she must surely go to see that the young people did not eat too many peanuts and popcorn balls. The young people thought that going to the circus was a *must be*, unless one was ill, or had done something very, very wrong, that merited the severest sort of punishment. Mammy Bun, too, who had been groaning about pains in her bones for fully a week, took out her best black bonnet trimmed with a big red rose,—headgear that she only wore on great occasions,—saying:—

"Pears to me nuffin eber does ma reumatiz de heap o' good like hearin' a real circus ban' a playin'. Land alibe, honies! I feel so spry alreddy seems like I'se could do a caike walk dis yer minit."

\* \* \* \* \*

It was October. Everything looked cheerful at the farm. The maples were dressed in dazzling red and yellow; heaps of red and yellow apples lay under the orchard trees, and the house and barns wore a glistening new coat of yellow paint, with white trimmings and green blinds.

A deeper yellow shone from the fields where jolly pumpkins seemed to play hide-and-seek behind the corn stacks, which the children called wigwams when they played Indian. Everything looked as thrifty as if the outdoor season was beginning instead of nearly at an end; and well it might, for it had been many years since the old farm held such a family. There would be no closed blinds, leaf-choked paths, or snow-drifts left to bury the porch, this winter.

"Yes, the Chimney Swift was right," said the Meadowlark in the old field, to the Song Sparrow who was singing cheerfully in a barberry bush. "We shall be better off than before these House People came; they have already begun to scatter food in the barnyard, though there are enough gleanings about to last us citizens until snow comes. The village boys never think of coming up here now to shoot, as they used to every season when the wind began to blow cold"; and the Meadowlark flew to the top rail of the fence, boldly showing his yellow breast, and giving a note or two to tell how trustful he was.

"Where have you been all summer?" asked Comet, the young trotter, of the big brown farm horses, who had come to drink at the spring in the pasture below the barns. "It is so long since I have seen you I was afraid that you had been sold."

"Oh no, youngster!" replied Tom. "Jerry and I have only been summering up at the wood lots at the far end of the farm. We had our shoes off all the time, and could amuse ourselves as we liked. We never saw a harness or wagon; all the work we did was to roll in the grass or wade in the river to keep the flies off. The grazing up there was simply delicious, you know,—all sorts of relishing little bits of herbs mixed in with the grass.

"Now that we have had our rest, it is our turn to work, and gray Bess and Billy have gone to the paddock, and we have come to take their places. There is plenty to do on this farm in fall and winter, though it is very lonely. I can remember, when I was a four-year-old, that House People lived in the big barn with all the windows, and they used to ride over the snow in the low wagon without wheels, and we all had fine times together."

"There are fine times here now," said Comet, shaking his mane importantly; "but of course you do not know about them, because you have been away. House People are living here again. We all have great fun and the best of eating, with more

picnics than ploughing for the horses. Children play about the farm, who feed me with bunches of pink clover and little lumps of nice-tasting stuff they call sugar. I mistrusted it at first, it looked so like the hard pebbles in the brook, but it chewed up all right when I nibbled some."

"*You* don't look as if you had been having *half* enough to eat, in spite of the good times," said Tom, pityingly. "Only look at your ribs. I can count every one of them. If you were harnessed to a plough, you would come apart at the very first pull. How could you drag a load of hay? As for working in the threshing-machine, those little feet of yours would catch between the slats. What use are thin horses, anyway?" concluded Tom, rather rudely, not realizing that his remarks were impolite, while Jerry looked proudly along his fat sides and pawed the ground with a hoof nearly as large as a dinner plate.

Comet was going to answer angrily and say something very saucy about clumsy work horses, but he stopped himself in time, being every inch a thoroughbred; for good breeding shows in the manners of animals as well as in House People.

"No," he answered after a moment, "I can't plough, nor drag a load, nor work the threshing-machine; but horses are made for different kinds of work. You do not think a cow useless because she gives milk instead of doing any sort of pulling, do you? Now I can drag the little wagon over to the railway station—where the great iron horse drags the string of covered wagons along the ground on the queer shiny fence rails—in half the time it takes you to go round the ten-acre lot. When I hear that horse coming, breathing hard and roaring, I prick up my ears, and you can hardly see my feet when they touch the road, for I do not want that great roaring horse to get there before I do. So the master is pleased, and always takes me. How would you like to go fast like that?" said Comet, smiling behind a bunch of grass.

"I couldn't go fast if I wanted to," said Tom, honestly. "I tried it once, when a plough-chain fell and banged my heels. They called it running away, I believe. My! how warm I was. Everything looked red as the sun in August, and a warm rain storm rolled off my coat on to the grass. That is what it seemed to me, but the farmer said, 'Tom is too fat and soft. See how he sweats!' and they skimped my dinner for a month."

"Well, then, to continue," said Comet. "We animals haven't been shut up all summer except in stormy weather; the bars have been down between all the best pastures. Even Sausage, the sow, and her nine little pigs, have been out walking every day, and her sty has had fresh bedding in it the same as if they were Cow or Horse People.

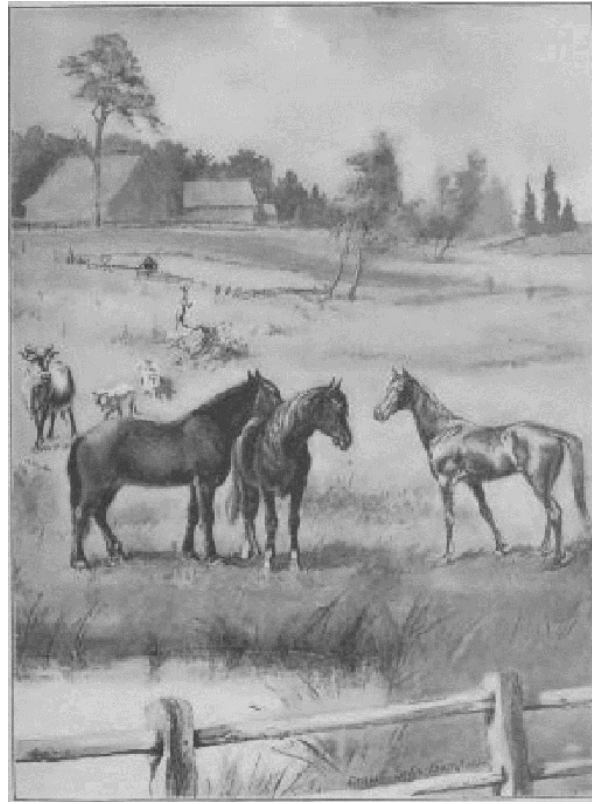
"We had so much freedom that I thought at first that there would be a great many fights, but we have all behaved beautifully. Even Nanny Baa, the stubborn old sheep, and Corney, the mischievous goat, have not butted any one or fought each other.

"We've had a chance to hear about the world and the other animals in it too, for a circus has been camping a few fields further down."

"I don't like a circus," interrupted Jerry, decidedly. "There are always a lot of bad-smelling, foreign beasts in cages with a circus, that a respectable farm fourfoot should not encourage. Then there is a terrible noise,—worse than milk-pans falling off the fence,—that they call a band; it makes me forget myself and dodge and dance all over the road. Yes, indeed, I well remember the first circus I ever heard. It came here when we were five-year-olds. Tom and I upset a load of cabbages, and they rolled all the way down Long Hill into the brook."

"There were no foreign wild beasts in *this* circus," said Comet, proud of his knowledge. "I put my head through the fence bars and had a fine chance to talk to some of the horses. There were several kinds of Horse Brothers there that I had never seen before; different even from the long-eared Donkey and Mule Brothers." Here Comet stopped, took a bite of grass and a drink of water, waiting to see if Tom and Jerry were interested.

They were, and as Comet looked up he saw that some of the other animals were coming down to drink,—Daisy, the finest cow in the herd, and Nanny Baa, sauntering all alone, the other sheep not having yet missed her, while Corney, the goat, whose whole name was Capricornus, danced about on a rock, charging at an imaginary enemy in the sky.



TOM, JERRY AND COMET.

"What other horses did you see?" asked Tom and Jerry together, as the others came up.

"There were small horses, homely and thin, with straight necks and rolling eyes. Some of these were brown, and some all mixed brown and white. They ran up and down the field, clearing the old division fence at a jump. These were called Indian Ponies, and men they called Indians, with small eyes and dark rusty faces, rode on them for exercise. Beside these there were some others, called Burros, with longish ears, who did not seem to know how to either trot or run, and some of the small horses kept jerking and humping up their backs, so that the men could not ride them.

"Who told you all these names?" asked Tom, suspiciously.

"There was an old horse who did not work in the circus, but only helped draw wagons, who stayed by the fence and talked to me. He had seen a great deal of life in his day, and what do you think he said about those strange horses? That they were not born and raised on nice farms like you and me; that they came from the west country where they run wild until they are old enough to work, and they live in great flocks as the Crows do hereabouts. Every horse has a mark on his side, put there by the man who owns him. When they are young they have fine sport, but when it is time for them to work, men ride after them on swift horses and catch them by throwing a rope loop over their heads, and sometimes this hurts them very much, and they are also sorry to leave their friends.

"Out in the west country where these horses lived, the plains are full of fourfoots,—not Horse and Cow People,—but real wild fourfoots, strange as any of the Elephants or Lions. There are more kinds of them than you could ever dream of, even if you ate a whole bushel of oats for supper.

"The Horse said that they belong to older American families than any of us farm animals, and that once these four-footed Americans and the Red Indian Brothers, who lived in tents, owned all the country, and there were no real House People or farm fourfoots here at all."

"That must have been a long time ago," said Jerry. "I remember my grandmother, and she never said anything about wild people, and I never knew about any other animals but ourselves."

"Who am *I*, pray?" squealed a Squirrel, scampering along the fence. "How ignorant you are not to know that I belong to a *very* old family."

"You don't count," neighed Jerry. "I never thought you were an animal."

"Not an animal, hey? I will show you what a sharp-toothed animal I am, some fine day, and nibble up your dinner when you are asleep," and the Squirrel jumped over Jerry's back, and ran up a tree.

"My friend told me," continued Comet, "that some of those wild fourfoots are working for their living in this very circus. They are quite rare now, though they used to be as plentiful in the west pastures as ants in a hill. He showed me some of these beasts this very morning when they were being led down to the village."

"What did they look like?"

"Something like bulls, with low backs and great heavy heads, all bushy with thick brown wool. My friend said they are called Bison by the Wise Men; but in the circus and out where they used to live, every one calls them Buffaloes."

"I wonder if they are related to me?" said Daisy, who had joined the group.

"They are not as handsome as you, though they might belong to your family," said Comet, politely.

"Perhaps I may have some wild cousins," said Sausage, rooting up the turf. "I wonder what they eat?"

"I should like to go and meet my wild relations, if I have any," said Corney. "I wonder if they could beat me at butting and sliding down hill?"

"Humph, it is very strange about all these wild things," said Jerry. "I—My, they are making that bang noise again, down at the village!"

"That is the band. I think the circus is over," said Comet.

"Which Horse Brother dragged the people down there, and who went?" asked Daisy, who was always inquisitive.

"They all went, and they walked with their own feet, because the Doctor knows that we do not like smells and noises," said Comet. "They are coming back up the hill now. Nat is following 'way behind, carrying something. Ugh! It is a big snake, and he has it by the tail. I hate snakes; they look up so suddenly out of the grass when one is feeding, and they always seem to be by the nicest bunch of clover."

"Perhaps the people will stop here to rest, and we may hear something about our wild brothers," said Daisy.

"I think Dodo has sugar for me," said Comet to Tom and Jerry. "I will drop a piece, and you can pick it up, and see how you like it."

"Comet is quite a gentleman, if his ribs *do* show," muttered Tom to his companion, looking pleased, while the other animals lingered about the spring, waiting for the House People.

"Here are the horses that I haven't seen before from the grass farm; and Comet, too, and Daisy!" cried Dodo, climbing over the fence. "Please stop a bit, Uncle Roy, and let me give them some of my popcorn balls; I'm *sure* they will like them, and Corney simply loves peanuts."

"What did I tell you?" whispered Comet to Tom, as Dodo chirped for him to come to her.

---

## II

### THE ANIMAL TREE



COME up on the fence too, please, uncle," coaxed Dodo, and Dr. Hunter climbed over the pasture bars, seating himself on the fence in answer to her request to 'stop a bit while she fed the animals.' He motioned to Rap, who was rather tired with his walk, to come beside him, while Nat and Dodo divided the contents of their pockets into little heaps.

"Give the popcorn to Daisy and the horses," said Dodo. "The peanuts are for Corney; we can toss them up, and see him hop and scramble to catch them. It's lots of fun. Sausage can have all the mixed crumbs, 'cause she likes grubby things. Please, Nat, won't you bury your snake, or

hang it up, or something? Whichever way I look, it seems to be too near."

"I'll hang it up on the tree, because I'm going to put it in a glass jar to keep. Daddy has gone back to the village to buy me some alcohol to pour on it."

"Ugh! what do you want it for? If I were you, I'd rather have the money the alcohol costs to buy a new butterfly net."

"Uncle Roy says it is as fine a rattlesnake as he ever saw. That is why he bought it [off](#) the man from the mountain, who killed it. There aren't any hereabouts now. A good thing, too, because they are biters; but I want it for my collection. I haven't many reptiles, you know; only a garter snake, two lizards, and a frog—whoa! Tom, eat fair; your mouth is twice as big as Comet's."

"How queer Daisy's tongue feels—it tickles my hand," said Dodo. "She licks everything into her mouth, but the horses take food in their lips. Uncle Roy, please come down here and see how queerly Daisy eats, and oh, my! she hasn't any top front teeth, either. Is she very old? Do look; her jaws wiggle as if she was chewing gum!"

"No, little girl; none of the Cow Family have any front upper teeth. A well-behaved cow sticks out her tongue with a sidewise motion to guide the grass into her mouth, while in the Horse Family the habit is to seize it with the lips, and then nip it between the teeth."

"Yes, but, uncle!" cried Nat, jumping hastily over the fence to dodge Corney, who was tired of eating peanuts one by one, and, giving a sudden butt, had seized bag and all; "Uncle Roy, cows are ever so fond of chewing. They eat all the morning, and then they go under the trees and chew, chew, chew, all the afternoon; but horses gobble their food once for all."

"I'm very glad you have noticed this, Nat. The cow is built upon a different plan from the horse. The horse has a complete set of upper and under teeth, and a single stomach—something like our own—to receive the food. The cow has four stomachs. When she eats, the food goes into the first stomach, where it stays a while to grow soft. After Daisy has filled this first stomach, she goes to rest for a while, brings up the softened food into her mouth, and chews it again. This softened food is called the 'cud.'"

"Oh, now I know what Rod meant," cried Dodo, clapping her hands, "when he said the cows were chewing their 'cud.' They were lying under the trees, and didn't seem to have anything near them to eat. I thought cud must be moss or something. Do any other of our animals beside cows have several stomachs and chew cud?"

"Yes, all the animals that belong to the Meat Family: Sheep and Goats, and, among their wild American brothers, the Deer and the very Buffalo that you saw at the show this afternoon."

"Were those strange beasts any relations of our farm animals?" asked the children in one breath.

"Were our farm animals once wild like the Buffaloes, and did they live far out West? Who first caught them and made them tame?" gabbled Dodo, only stopping when her breath failed.

"Our farm animals were never, in the true sense, natives of this country. In the far back days, before the pale-faced voyagers came to these shores, the Red Brothers had no horses to carry them, nor cows to give them milk. They followed the war-path and game-trail on foot, and their clothing and tent homes were made of the skins of the beasts they took with bow, arrow, and spear. Time was when they had not even spears and arrows.

"When the pale-faced settlers came to America they brought the useful animals from their old homes with them: pigs, sheep, horses, goats, cows, dogs, cats, etc.,—so though these have lived here as the people have, long enough to be citizens, they are not native or *indigenous* Americans any more than we ourselves. That distinction belongs to the Indian, Peccary, Buffalo, Musk Ox, Mountain Goat, Bighorn, Wolf, and Wildcat, who are the wild cousins of House People and their farm fourfoots. The horse alone has no *living* wild cousin here, though there were horses in America ages ago."

"Then those horses that the Indians rode at the show, who hopped around so, weren't really wild at all," said Nat, with a look of great disappointment. "They seemed really, truly wild, and *how* the Indians stuck on and dodged and fired their guns!"

"They are wild in the sense that they were born on the open prairie and lived in vast herds, but they are the great-grandchildren of tame horses. In the southwest, as well as in South America, vast herds of these horses, descended from those brought in by the Spanish, roamed at large. From time to time the Indians dashed into the troops and lassoed those that they desired and rode them as we saw the Indians do this afternoon, but they are not true four-footed Americans like that little Chipmunk over there, who is stealing a few peanuts that Corney overlooked, or like the sly, fat Woodchucks that we are trying to trap in the orchard."

"Please, Uncle Roy, can Dodo and I put halters on Tom and Jerry and see if we can ride them round the field without any saddles?" said Nat, looking fearlessly up at the big horses, whose mouths barely touched the top of his head.

"You can try, if you like," laughed the Doctor, "but I'm afraid it will be too hard travelling for Dodo. No, you will risk a bumping? Very well, then, but tell Rod to bring blankets and surcingles."

In a few minutes Rod came, strapped a folded blanket on each horse, and gave Nat Jerry's halter, but insisted upon keeping hold of Tom.

"Now, if I only had something to shoot with, we could play circus. Hoo-oo-oo!" cried Nat, trying to imitate an Indian cry, at which sound Jerry galloped very quietly down the pasture, switching his tail. But to Nat it seemed as if he was seated on an earthquake, and he clutched Jerry's mane, whereupon the horse gave a little kick of surprise and cantered heavily back to the spring.

"I think T-o-m is falling to pieces," chattered Dodo, as Rod ran him round the pasture. "He—is—so—fat, too, my legs can't bend down;—I—guess I'll stop, please," and Rod swung her down to the wall beside her uncle.

"A circus isn't as easy as it looks," said Nat, wiping his face, and Rap laughed heartily and pounded his crutch on the fence.

"Farm horses are *not* saddle horses," said Comet to himself.

"I'm all mixed up about animals," said Dodo in a few minutes when she had caught her breath. "Our farm animals aren't real Americans, yet Daisy is a kind of cousin of the wild Buffalo, because she has no upper front teeth and chews a cud. Birds seem so much easier to understand. Birds are animals with a backbone, a beak for a mouth, and two legs. They wear feathers and lay eggs. But these others are different in their mouths and stomachs and feet, and some have horns and some don't. Some have little tails like Corney, and some long hairy tails like the horses, and oh, Uncle Roy, that snake there is all tail!"

"Olive says bugs, and beetles, and flies, are animals, too, and beetles are crusty, and caterpillars are squashy, and flies are buzzy, and I'm sure I never can tell who is who. Birds look something alike, even when they are as different as a Hummingbird and a Duck; but I *can't* understand how all the other animals are related."

"Not so fast, dearie," said the Doctor, laughing at her inquiries until the tears ran down his cheeks. "The differences and the relationships of these animals are no harder to remember than they are among the birds. You know that with them

their beaks and feet were arranged to suit their needs. Have you forgotten how we classified the birds, and the little table of the Animal Kingdom that you wrote?"

"Yes," said Nat, hesitating; "that is, I did know, but I've forgotten most of it."

"I remember," said Rap, "that you said classifying was to put the animals together that were the nearest alike, and the two great divisions of the Animal Kingdom were animals without backbones and animals with them."

"Olive says my sponge is an animal," said Dodo, doubtfully. "Surely it can't have any backbone, for if it did it would scratch my face; but then it was full of prickles when it was new, perhaps its backbone was crumpled up!"

"I must try to make this Animal Kingdom and its chief divisions more clear to you," said the Doctor, pausing a minute as he looked across the pasture. "Do you see that great chestnut tree yonder, with the thick trunk and wide-spreading branches?"

"Yes, indeed," said Rap, "and it bears the fattest, sweetest nuts of any tree hereabouts; but it takes a very hard frost to open them."

"I remember how good the nuts used to be, but now I want you all to notice the way in which the tree grows. Above ground there is a thick straight part which is called the trunk; then this soon divides into large branches. A little further up these thick branches separate into smaller branches yet, until they end in little slender twigs.

"The Animal Kingdom is like this tree in the way in which the different members all are developed side by side, interlacing and depending upon each other. It is difficult to tell some of the lowest branches of the animal tree from plants: as none of these animals of the first branches have any backbones, they are called Invertebrates, and their inside parts are held together in a little tube."

"Are birds on one of the high branches?" asked Dodo.

"Yes, one of the very highest, next to the great branch, where man himself sits, surrounded by all his faithful four-footed friends, just as he is when he walks about every day."

"Do House People and fourfoots belong on the same great branch?" said Rap, looking puzzled. "What is it called, please?"

"It is the Mammal branch, the highest of all, and it has so many little branchlets and twigs that it is large enough to be a tree all by itself."

"Exactly *how* are the other Mammals like us, and what does Mammal mean? Do they all have warm red blood like ours?" asked Dodo, who was celebrated for cutting her fingers.

"They all have warm red blood, but so have birds; there are other differences that you will learn later. The one thing that makes them Mammals is that they suckle their young with milk."

"M—mammals; m—milk," sang Dodo. "Why, that is as easy to remember as 'Billy Button bought a buttered biscuit'! Please tell us the names of some nearby Mammals, Uncle Roy."

"All the farm and house fourfoots are Mammals; also the wild Deer, Wolves, Foxes, Rats, Mice, Squirrels, Moles, Skunks, Weasels, and Woodchucks, beside many others you do not know even by name."

"So all those nuisance animals are Mammals too," said Dodo, meditatively.

"Nuisance animals! Which are those?" asked Rap.

"The naughty, bothersome ones that eat things and bite holes in the house, and dig up the orchard, and smell, oh, so bad! Why, Rap, don't you remember the evening we thought there was a black and white rooster by the orchard wall, and Quick and I tried to catch it, and it turned out to be a Skunk? Then my clothes had to be boiled so hard they were no more use, and Quick tried to get away from himself for almost two weeks."

"Oh, yes, I do. Mammals must have a great many shapes, Doctor," continued Rap, thoughtfully. "How are they made into families?—the same way as birds?"

"In very much the same way. To-night, after supper, I will draw you a picture of a part of this wonderful animal tree, and tell you the names of some of its branches, and perhaps you will remember a few of them. I do not wish to bother you with long words, but there are a few that you must learn.

"The history of this animal tree is the most interesting story in the world, and the Wise Men call it Zoölogy, after two Greek words that mean the 'history of animal life.'"

"Then that is the reason why an out-door menagerie is called a Zo-o-logical Garden," said Nat, stumbling a trifle over the word. "Daddy was reading to mother about such a beautiful garden for wild animals that is going to be made near New York,—the very biggest in the world,—so that every one in America can see how the animals live. Perhaps we can go there some day and see all the Mammals."

"Daisy gives milk, so I am very sure I know one Mammal anyway," said Dodo, who was growing a little tired. "Oh! oh!" she cried, suddenly jumping off the fence. "The sun is going down pop. I never noticed it, and Rod said I might help milk to-night. He's taking the cows in now. Won't you come and see me do it, Uncle Roy?"

"You help milk?" laughed Nat. "Who taught you how?"

"Rod; I've had four lessons, and I can milk almost a quart. Then my hands grow all weak and shaky, and Rod says it's enough for once, both for me and for the cow. Daisy is the only one that will let me."

"Poor, patient Daisy," laughed the Doctor. "To be sure we will come and see this famous milkmaid."

Dodo led the way to the cow barn, where each cow had a clean stall marked with her name. Then she tied a queer sort of apron round her waist, made, like Rod's, out of a meal sack, hunted for a small stool, also like Rod's, and prepared in a very businesslike manner to wash off Daisy's bag with a sponge and some clean water.

"Bravo! Bravo!" cried the Doctor. "My little farmer has already learned that everything about milk, from the animal to the pans, should be very clean."

"Zig-zig-zig-zig," said the milk, splattering on the bottom of the pail. In a few minutes the splattering stopped.

"Now it's beginning to purr like a cat," explained Dodo. "It does that when the milk begins to fill up a little."

Dodo kept bravely at it until her fingers, now red and tired, had coaxed about a quart from Daisy.

"That will go for to-night," she said, "though I'm sure I milked more last time. I'm dreadfully thirsty; suppose we drink this now, Uncle Roy. There's a glass by the well, Nat,"—and the milk rapidly disappeared.

"M—mammals; m—milk," sang Dodo, skipping ahead toward the house, as the short twilight hurried after the sun.

"I wish the days were longer," sighed Rap, turning to go home.

"But evening with a wood fire in the wonder room is lovely," sang Dodo, "and to-night uncle he, will draw a tree,"—she sang; then stopped and laughed at her rhyme.

"Uncle Roy," she whispered, "it's been such a happy day, can we have Rap to help finish off by toasting crackers in the wonder room, and see you draw the animal tree? Yes? I'll give you a bear's hug!"

"I reckon there will be a frost to-night," said Rod, passing on his way to the house with the milk-pail.

"Frost!" shouted Nat, dancing round in glee. "Frost—chestnuts, Rap,—and to-morrow will be Saturday!"

\* \* \* \* \*

"How do you like this?" said Comet, looking up from his oats over to Tom and Jerry, as the stable door closed with a

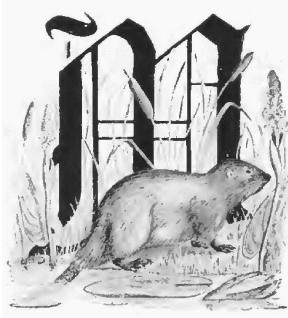


click. "Box stalls and two bundles of clean straw apiece, and warm bran mash for you beside. Did you ever have anything as nice as this where you were this summer?"

"I think the House People here understand a horse's feelings," answered Jerry, plunging his nose into his supper.



## WAFFLES AND A WALK



AMMY BUN cooked a delicious supper for the children that night, for the circus had put her in extra good humor.

As it was the first of the really cool evenings, she surprised them with hot cocoa in the place of their usual glasses of milk, and there was cream toast, and cold chicken and tongue sliced daintily together.

The children had famous appetites, and Mr. Blake said he expected by spring they would all be as fat as Sausage herself.

"Not if you carry out all the plans I have for making you work and keeping you out-of-doors," said the Doctor.

"What? What are we going to do? Is there a surprise?" asked Dodo eagerly, reluctantly setting down her teacup. "School takes so much time and the rest of it is nearly all dark. Oh! I smell waffles!"

"What is nearly all dark,—the school, or the time, or the waffles?" asked the Doctor, as soon as the laugh, caused by Dodo's mixed-up sentences, had stopped.

"I mean that night comes nowadays very soon after we come home from school. Why are the days so short in winter, Uncle Roy, just when we need the sun to warm us, and so long and hot in summer when we want to be cool?"

"Why, it's the other way round," said Rap; "it is because the sun stays up so long in spring and summer that the days are warm, and because it comes so late, and hurries to bed, that the days are cold."

"But *why* does the sun stay longer some times than others? Why need the days ever be so very short?"

"Your supper would grow cold if I stopped to explain," said the Doctor. "Some day we must make ourselves into a class in astronomy and learn how the sun, moon, and stars all go bowling about in the sky, and how the old earth looked when she was young."

"There is the moon now. Oh, how fat it is to-night," said Dodo, looking toward a window where the curtains had not been drawn.

"The hunter's moon," said Mr. Blake, "and many a good time I've had by the light of it."

"Why is it called hunter's moon, daddy," asked Dodo, "and what did you do with the light of it?"

"It is the moon that comes in October when all the game birds and wild food and fur beasts are through raising their families, and it is fair for House People who need fur or food to go and hunt them."

"Did you ever need food and fur, daddy?" persisted Dodo.

"Yes, sometimes I really did; and should have starved except for my gun and what it brought me; and sometimes perhaps I *thought* I did," said Mr. Blake, looking at the Doctor, who was shaking with laughter.

"Did you ever shoot anything just to see if you could hit it?" asked Nat.

"Yes; I'm afraid I did often, before I had travelled over the wild west country and learned for myself that shooting food and fur beasts to 'see what you can hit,' is making this wonderful land of ours as bare of four-footed things as it will be of birds."

"Say, Mis' Cherry, can de young uns hab a spoon o' jam 'long o' dere waffles?" asked Mammy Bun in what was meant to be a whisper, popping her head in at the door.

"I'm afraid not to-night, mammy," said Mrs. Blake, whose girlish name of Cherry, mammy still used. "We should have the children dreaming of Buffaloes and Indians and rolling out of bed. Waffles are quite enough."

"But Mammy Bun's waffles are such well-behaved things that they never hurt anybody," said Olive.

"Yes," echoed Dodo, "mammy says it's all in the beating up; if you beat waffles ever so hard when you're making them, they'll never talk back after you eat them. I know something that does talk back, though—it's turnips if you eat them raw like apples, and chew rather quick and then drink water. Oh, it was dreadful!"

"So, missy has been having indigestion, has she?" laughed the Doctor.

"Yes; if that name means that inside your chest is too big for your skin. What makes indigestion, Uncle Roy?"

"Indigestion comes when the food you eat is not of the right kind or quality for your stomach mill to turn into good flesh and blood. Then it stays in the mill, swelling up, growing stale and sour, choking up the little wheels, and souring the wheel grease that helps them move, causing pain and sickness, until it is turned out in some way. That is the reason why we should be careful what we put into the mill.

"To make sure that mammy's waffles do not grumble, suppose we all take a little walk down the road before we go into the wonder room to draw the animal tree. Come, Cherry," said the Doctor, drawing Mrs. Blake's hand through his arm, "you, too. I'm not going to have you stay in the house all the time. We need you, and you need the fresh air to give you back the red cheeks that gave you your pet name. Olive, dear, please get your aunt's warm wrap—never mind gloves; here is a coat-pocket for each hand," and the procession stepped out into the bright moon path.

"There will be no frost until this wind dies down," said Mr. Blake.

"What nice clean shadows the trees make," said Olive, after they had walked in silence down a lane that led from the turnpike toward the pastures and spring.

"Hush! what was that?"

"A bird, maybe, that was sleepy and fell off its perch."

"No, a Flying Squirrel," whispered the Doctor. "There it goes!" and on looking up they saw a dark object, a little larger than a Chipmunk, half spring, half drop from a birch tree on one side of the lane to a maple on the opposite side.

"Can Squirrels fly? I thought only birds could do that," whispered Dodo, awe-struck.

"Look yonder, but keep very still," said Mr. Blake, holding back some branches that hid the view of the spring.

"It is a little dog drinking," said Nat. "What a bushy tail he has. See, he is going over toward the barns; perhaps he is a friend of Quick, or Mr. Wolf."

"No, it is a Fox, and he is going to see where the chickens live."

"A Fox!" screamed Dodo, forgetting the need for silence. "A real wild animal! Oh, uncle, do let us catch it!"

"I very much wish you would," said the Doctor, as the Fox raised one paw, sniffed the air, and disappeared like magic between some low bushes.

"He is the most cunning of our beasts, and if the wind had been the other way, he would not have given us even this peep at him."

"What difference does the wind make?" asked Nat. "Is he afraid of it?"

"I know," said Rap; "for before my leg was hurt I went often with the miller and his dog to hunt Foxes that stole his turkeys. Little wild beasts look for food mostly at night, or late in the afternoon, or early in the morning, when it isn't so easy to see, so they use their smeller to tell them a great many things that they can't see with their eyes. They can smell so well that if the wind was blowing from us to them they would know we are here and would run away."

"That is right, my lad," said the Doctor. "The wild beasts have a much keener sense of smell and hearing than we House People, and you will do well when you wish to watch even a Squirrel to keep from stepping on a dry leaf and to see which way the wind blows."

"Only think, we've seen a real wild animal," chuckled Dodo to Nat.

"I've seen a Coon and a Muskrat and a Mink," said Rap, "besides Foxes and Squirrels."

"I know what Mink is," said Dodo; "it's nice brown fur, and I have some of it on my winter coat."

"Uncle Roy is going to take us to the old log camp in the Owl woods some day, and there are fur beasts up around there, he says."

"Daddy has been all about the wild west country on business, and he has seen dreadful fierce, wild animals, and he is going to tell us about them by and by. You know daddy goes round to find out about the country and look for mines that are hidden in the ground," explained Nat to Rap, "and that's why we haven't seen much of him for a long time. You see mines are often in very savage places, and now daddy is staying here this winter to write down all he has seen and draw plans for people to work by in the spring."

"Oh, then your father is a miner," said Rap; "I've read about them."

"No, a miner is the man that digs with a pick and shovel; daddy is the one who digs with his brain and tells the miner how to work so that the earth won't fall in on him, and how to cut away the rock and get to the treasure. Daddy is what they call a Mining Engineer!" and Nat stopped suddenly, as if the two big words were too much for him.

"Some day I suppose you will go with him and see all these things. It *is* nice to have two legs," said Rap, half sadly, looking at his crutch.

"Never mind; we will be partners. *I* will go out and hunt, and *you* shall write the book about it the way uncle does, for I don't like to write."

"I do," said Rap, cheering up; "that will be splendid."

"Don't try to walk through the fence," said Olive.

Then the children found that they had been so busy talking that they did not realize they were walking back toward the farm, until they had bumped into the front fence instead of opening the gate.

The log fire in the wonder room was not a bit too warm, and as they gathered around it Mr. Wolf and Quick came in from the kitchen licking their lips, as if they had been so busy with supper that they had not missed their friends.

Wolf settled himself at Mrs. Blake's feet with all the dignity of a St. Bernard, but Quick kept prancing and springing from one to another with Fox-Terrier nervousness.

"In the spring when we began to learn about birds, I told you a few facts about their bones and feathers, the way in which they were made and for what they were useful," said Dr. Roy, sitting at his desk and tipping back his chair. "We found the bird was a good American citizen, and I think you feel now as if you really had a bowing acquaintance with some of these feathered folk."

"Yes," said Dodo. "I forget some things you said about them for a while, and then I remember again. We saw a Screech Owl in the woods yesterday, and I remembered its name right off, and that it was one of the good Owls that mustn't be shot."

"Good girl, that encourages your old uncle to tell you more stories this winter about some of the other creatures that are branches of the wonderful animal tree."

Nat and Rap brightened up, and Olive said she could not imagine anything pleasanter for winter evenings.

"But we have to do our lessons in the evenings," said Nat, dolefully.

"Uncle Roy will manage it somehow," said Dodo, shaking her head confidently; "there is a surprise somewhere, I know. I've been expecting it." At this Mr. and Mrs. Blake and the Doctor smiled, but said nothing.

"Uncle Roy," persisted Dodo, after a pause, "won't you do as you did with the birds, and tell us about the wild American animals instead of about menagerie beasts, and then make us a book about them? There must be as many as fifty kinds of usual animals in America, counting all those in the west country. I'm so tired of menagerie beasts—

"L is for Lion who roars in his rage,  
T is for Tiger who snarls in his cage,'

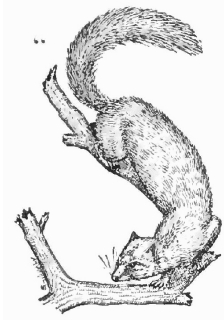
that was on my picture blocks when I was a little child. I had picture books of Cockatoos and other strange birds, too, but they never seemed to mean anything until you told us about our American birds."

"You are right, Dodo," said the Doctor, "and you have given me some new ideas for my surprise. Yes, there is a surprise hiding somewhere near! We are to have a winter camp here at the farm, and the stories told at the campfire shall all be about four-footed Americans, with a few about some no-footed and wing-handed ones thrown in."



## IV

### CLIMBING THE ANIMAL TREE



PLENDID!" cried Nat and Rap together, as soon as they realized what Dr. Roy said. "When shall we have the stories?"

"What is a campfire? Is it made of logs or coal?" asked Dodo.

"Where are you going to have the camp? Here in the wonder room?" asked Olive, who was as much surprised as her cousins.

"What are no-footed Americans, fishes?" persisted Dodo.

"Fishes have no feet, and yet these no-footed beasts are not fishes. The Americans you shall hear about will all be our blood brothers, the Mammals—the highest branch of the animal tree, the one that I said has so many smaller branches that it seems almost like a whole tree by itself."

"M—mammals; m—milk," said Dodo, proud at not having forgotten. "But, Uncle Roy, we can't see all these M—mammals outdoors, as we did the birds, and there aren't any here in your wonder room. How can we tell how they look?"

"You will probably see some of the smaller ones this winter, just as you saw the Fox to-night. I have the skins of others packed away in chests; and some you must learn to know by pictures, until you have a chance to see them in the Zoo or in a Museum.

"No more questions to-night. You will hear more about the surprise to-morrow. Now I must try to tell you how to climb the animal tree, so that you may step easily from branch to branch and have a general understanding of its groups and families."

"This will be harder than learning about bones and feathers that built the bird."

"Yes and no! When you began to learn the geography of our country, what was the first map you saw, Nat? A map of one state, with all the mountains, rivers, cities, and towns, large and small?"

"Ah, no, uncle; a plain, easy map of the whole of North America, with only the very big chief mountains, rivers, and land divisions put down. It took us a long time only to learn the names of the states and how they were bounded; then by and by we took them in groups, until at this school we are having each state by itself."

"Precisely. Now, in drawing this animal tree, I will not put down all small branches and twigs, but merely the chief branches, so that you may have what is called a 'general idea' of the whole. Then from time to time you can study by itself any branch that particularly interests you.

"Now watch," said the Doctor, drawing rapidly on a large sheet of cardboard. "Your old uncle is no draughtsman, but this will do for a beginning, and I will copy it neatly by and by, so that we can hang it on the wall of our camp. This animal tree has a straight trunk, and first come eight branches."

"Ah! Ah!" cried Dodo. "Mother! Daddy! Come and look! Uncle is making each branch end in an animal, so we can see with one peep where they belong, and the little first animal that belongs to the trunk hasn't any more shape than an ink blot!

"What is that queer little spot, uncle? Has it a name? Ah! now you are writing the name on each branch," chattered Dodo.

After everybody had looked at the sketch of the animal tree, the Doctor hung it up on the door, and said he would try to answer a few of their questions about it.

"These," said the Doctor, pointing to the lower branches of the tree that he had drawn, "are the animals which have no backbones,—*Invertebrates*, the Wise Men call them,—and though I do not want to trouble you with long names, you must try to remember this one, because it is important and you will meet it often in reading.

"With these branches begin the lowest forms of animal life. This little thing on the trunk that Dodo called an ink blot is the very first form of animal life, it is called a *Protozoön*, and it is really so small that you could not see it without a microscope."

"That is a pretty big name for next-to-nothing," said Rap.

"Yes; but the name, like many of those the Wise Men give, explains the meaning. It comes from the Greek words *protos* (first) and *zoön* (animal), so among ourselves we will call the trunk of the tree the first animal, as it is the first step from the vegetable to the animal kingdom."

"If it is so small and has so little body, how can you tell it isn't a vegetable?" asked Olive.

"It is very difficult indeed to distinguish between the lower forms of animal and vegetable life, and we must leave the reason why to the Wise Men; for it puzzles them very often, and I could not explain it without using long words."

"Why, Uncle Roy," said Dodo, "I know a real simple reason,—animals can move and plants can't!"

"Wrong, missy; many of the lower animals cannot move. The coral, for instance, and the oysters, are as much fixtures as the geraniums in their pots over by the window.

"But to return to our animal tree. Besides having no backbones, these lower animals have no hearts, lungs, or brains; they are not built around a bony skeleton, as birds are or we ourselves. Their vital parts are held in a single tube. These animals are of various shapes and live in many ways and places,—on the earth, in the water, and in mud. Among the lower branches of the animal tree, you will find things that are familiar to you, though you probably never have thought what they were, whether animals or vegetables.

"To repeat all the names, even of the animals that belong on each branch, would confuse and tire you sadly, so I will only tell you of some of the principal kinds that you are most likely to see, to act as steps, so to speak, by which you may climb to the branch where our four-footed Americans live.

"On the next branch to the trunk, or First Animal, belong the Sponges; they are plant-like water animals that cannot move. Then the Jelly Fishes and Sea Anemones, which are masses of clear, jelly-like stuff floating in the sea, and many of these are beautifully colored."

"I saw some Jelly Fish when we were at the shore this summer," said Dodo. "I walked on some, and though they felt so slimy they sort of made my feet tingle."

"Olive," said the Doctor, "suppose you take out the blackboard and write the names of these lower branches who have no backbones."

## THE TRUNK AND SOME OF THE LOWER BRANCHES OF THE ANIMAL TREE

### **Protozoa or First Animals**

The trunk. The lowest form of animal life, body; a single cell. Most of them too small to be seen without microscope.

#### 1. **Sponges**

Plant-like water animals that cannot move.

#### 2. **Jelly Fishes**

Round masses of clear, jelly-like stuff floating in the sea. Sea Anemones, etc.

3. **Corals** The white, lace-like specimens that you have seen in cabinets, or the polished pink sprays that are made into ornaments or carved into beads. You may have thought these some sort of stones, but corals are tiny, soft-bodied animals living in cases made of lime. Many of these cases built up close together form the beautiful shapes that you know.
4. **Star Fishes** The five-pointed prickly animals found on sea beaches. Sea Urchins, etc. Crinoids, etc.
5. **Worms** Long squirming animals, of both land and water; also living as parasites upon the insides of other animals.
6. **Mollusks** Shell Fish, such as Oysters, Clams and Mussels, Snails, Slugs, Cuttle Fish, etc.
7. **Crustaceans** Animals covered with a hard shell, having many legs and a pair of feelers, or antennæ, breathing through gills the air that is dissolved in the water. Lobsters, Crabs, etc., are Crustaceans.
8. **Spiders and Scorpions** (Called Arachnidæ, from Arachne, the Spinner, because they spin webs.) Are a sort of cousin to Crabs, but live on the earth instead of in the water.

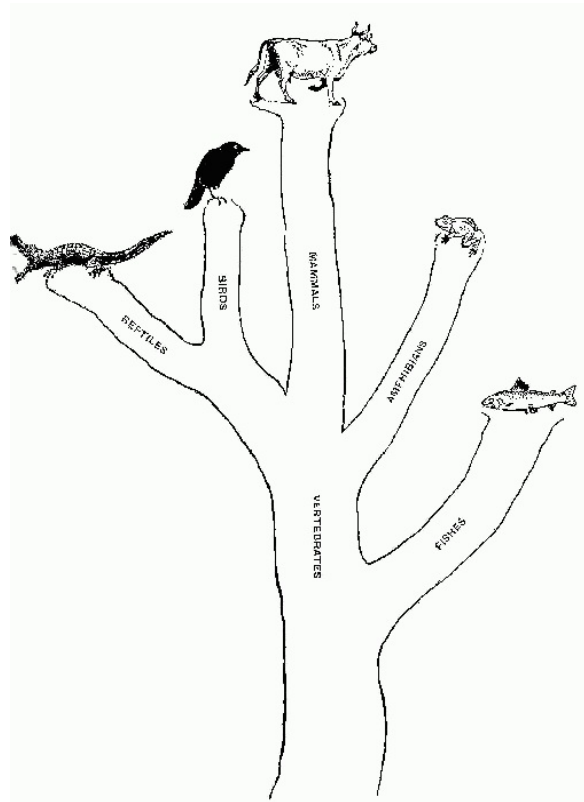
"The top branches of this group contain the Insects, with many legs, their bodies being divided into three parts. Insects go through many changes in the course of development. Take the butterfly as an example. First an egg is laid by a fully grown butterfly; second, a caterpillar is hatched from the egg; third, the caterpillar spins itself into a chrysalis, or cocoon, out of which comes the winged butterfly. Ants, mosquitoes, flies, and beetles are all insects.

"Among the next circle of branches we find the animals having backbones, the Vertebrates. I think you will feel more at home with them, and we are more nearly concerned with them now, as our mammals belong in this order, although there are many things you must some day learn of the many backboneless twigs, especially about the insects with their wonderful wings and stings."

"I suppose my Rattlesnake is a rather low-down Vertebrate, Uncle Roy," said Nat.

"No, my boy, there are two grades below him and two above. See,"—and the Doctor drew a branch with five divisions.





VERTEBRATE BRANCHES OF THE ANIMAL TREE.

## THE VERTEBRATE BRANCHES OF THE ANIMAL TREE

### ANIMALS HAVING BACKBONES

Animals with bony skeletons; never having more than two pairs of limbs. These animals inhabit both land and water, and may either swim, fly, crawl, or walk.

<b>Fishes</b>	Cold-blooded animals that live in water; usually covered with scales. They breathe through gills, and in their fins we see the very beginnings of limbs.
<b>Frogs, etc.</b>	(Amphibians.) Going through several transformations, from egg to perfect animal, but having legs when fully grown. The stepping-stones between fishes and reptiles.
<b>Reptiles</b>	Cold-blooded, egg-laying animals, either with a shell or scaly covering, living on land or in the water; some kinds doing both. They have simple, three-chambered hearts. Alligators, Turtles, and Snakes are Reptiles.
<b>Birds</b>	Warm-blooded, air-breathing animals. They are covered with feathers, have four-chambered hearts and the young are hatched from eggs.
<b>Mammals</b>	The highest order of animals. Warm-blooded, air-breathing, having a four-chambered heart and double circulation. The young are born alive and nourished by their mother's milk. Mammals are all more or less covered with hair. The Whale, Seal, Cat, Cow, Dog, Rabbit, Mouse, Bat, Monkey, and

Man are Mammals.

"The Mammal branch is so large and important and has so many small branches and twigs of its own that by and by I shall make you a tree of it by itself."

"Are you going to draw the Mammal tree to-night?" asked Dodo, anxiously. "Because I think my head is as full of thinking as it will hold."

"No, missy, not another word to-night; it is half-past eight, and your mother has been making 'time-to-go-to-bed' signs at me for half an hour."

"But, mother," pleaded Dodo, "though my head is full, my stomach feels real hollow, and we were going to toast crackers, you know."

"Very well! Nat, rake open the hot ashes and see if you can find another pair of tongs. Two crackers and a glass of milk make a very comfortable nightcap; for if you go to bed with an empty stomach, you will probably wake up with an empty head," said the Doctor, rubbing his hands together. "Am I invited to this feast?"

"Of course; you and mother and daddy. Olive belongs with us children. It wouldn't be a real feast without you all," said Dodo, a look of perfect content resting on her round face.

"Here are three pairs of tongs. Nat, you toast for mamma, and Rap for uncle, and I'll toast for papa and Olive; then afterwards we can toast for each other. It's lots more fun doing it for somebody else, and then having somebody do it for you."

In a moment the three children were crouching in front of the fire, holding the crackers by the rims with old-fashioned tongs, over the bed of glowing hickory fragments.

"The crackers that fall into the fire belong to the dogs," said Dodo, consolingly, to Rap, who had just dropped his first one. "They don't mind a few ashes."

"Here is mammy with the big pitcher," said the Doctor. "Now all stand in a row and drink a health, in milk, to home, and the blood-brothers whose acquaintance we are to make—the Four-Footed Americans."

"Is Rap going to stay here all night?" asked Nat, as they put down their glasses.

"No; his mother would worry. Your father and I will walk home with him; we have some things to talk over."

"Is it anything to do with the surprise?" asked Dodo.

"Miss Inquisitive, if you poke your precious nose so far into things, some day it may be shut in the crack of a door," laughed her father.

"Ah! the wind has fallen and the frost has come. I'm glad Rod covered those pumpkins," said the Doctor, who was already out on the porch.

"Then we can go nutting to-morrow," said Nat, capering. "Come up early, Rap."

"We shall go nutting to-morrow, but Rap need not come up; we will call for him," said the Doctor.

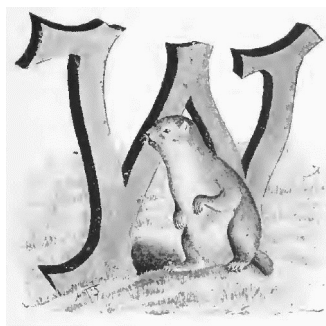
"But the chestnuts are all up this way," persisted Dodo.

"I did not say we were going *chestnutting*," replied the Doctor, closing the door so suddenly, that if Dodo's nose had been anything longer than a pug it might really have been squeezed in the crack.

"M—mammals; m—milk," she half sang, half whispered, as she stumbled sleepily up to bed, hanging on her mother's arm.

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## AN AUTUMN HOLIDAY



HEN Nat awoke the next morning, he lay quite still for a moment, rubbing his eyes and wondering what it was that he was trying to remember.

He did not seem to be in any more of a hurry to get up than the sun, who was only beginning to peep through the most southerly corner of the orchard trees, instead of being up above them at this hour, as had been his habit all summer.

Nat finally opened his eyes and looked toward the window, still half dreaming about Wild West Shows, animal trees, and four-footed Americans, wondering why the light was so speckled. Then as he saw the frost crystals that covered the panes with their beautiful fern

traceries, it all came back like a flash, and he jumped out, shouting, "There's been a hard frost, and we are to go nutting to-day, and hear about the surprise!"

At the same moment Dodo's sturdy fist pounded on the door. Bang, bang, bang! "Aren't you up yet, Nattie? I am, and all dressed." Bang. "My boots laced to the very top, and my teeth cleaned with powder." Bang, bang, bang! Lacing her boots and cleaning her teeth were usually two weak spots in Dodo's toilet, and the fact that she had done both so early in the morning made Nat feel sure that something unusual was afoot.

"Yes, I'm up," said Nat, "and I'll be ready in a minute."

"Father says, put on your thick very old clothes, and the old boots with the scraped skin."

"Where are we going? Was there a big frost?" spluttered Nat, struggling with his sponge full of water.

"Uncle Roy said he would tell when we are all dressed. I can't seem to make Olive hurry one bit, and breakfast will be at seven, and it's a quarter to, now. Only look out, and you'll see what kind of a frost there was,"—and Nat could hear the squeak and flop that she made as she slid down the bannisters and landed on the rug at the foot of the stairs.

He wiped off the frost with his towel and looked out. Near the house everything was glittering with diamonds, for Jack Frost had only fingered the nearby things, but down in the low pasture by the spring the blackened ferns showed where he had walked with his heaviest boots. There was quite a commotion and bustle over by the barns. The long market wagon with all three seats screwed in place was pulled out of its shed, and Rod was putting bundles of straw in the bottom. Mysterious baskets stood about, and in one Nat thought he saw a tea-kettle. Who was that man in a queer furry-looking cap, thick short coat, and leggins buttoned up to his knees? Nat looked again and then exclaimed to himself, "Why, it's daddy, and the other humpy-looking man is uncle!" Then he hurried on with dressing as the only means of solving the mystery.

This morning there was a roaring fire in the Franklin stove in the dining-room. This stove, which is a sort of open fireplace on legs that stands out a little way from the chimney, throws more heat into the room than a hearth fire.

"Now," said the Doctor, coming in with his arm around Olive, who met him in the hall, "hold your ears wide open and stand away from the table so that you will not break the china.

"We are going to the far-away hickory woods, where we expected to go on Dodo's birthday to look for owls! Stop a moment! that is not all. Instead of taking sandwiches and such things for lunch we are going to take pots and pans and food and play camp-out and cook our dinner and supper in the woods, and come home by moonlight!"

"That will be fine," said Olive. "I half expected this last night."

"Jolly!" cried Nat.

"But," said practical Miss Dodo, "if we are to cook, Mammy Bun will have to go, and being out after dark will make her

grumble about her bones."

"I am the c-oo-k who is going with you to-day," said Mr. Blake, coming in; "and a very good cook, too, I can tell you."

"Why, daddy," exclaimed both children, "can *you* cook, and out in the woods, without any stove, too?"

"Indeed I can, and many's the day that your Uncle Roy and I have not only had to cook for ourselves, but catch or shoot our own provisions, and as for stoves—we often hadn't even a bough wind-break over us, and slept on the ground in our blankets."

"On the ground? And wasn't it wet, and didn't things bite you? Ah, what is that? Come, look out here, Uncle Roy. Wolf and Quick have caught some kind of a wild beast. It's too small for a Fox. What is it?"

"One of the big Woodchucks who would not go in the trap we set in the rocky pasture, and who is rather late in holing up. They generally go to sleep for the winter before hard frost."

"Why don't they freeze?" said Dodo. "You told us once that it was very extra dangerous to go to sleep out doors in cold weather,—that we would freeze in a twinkling."

"Is that beast one of the four-footed Americans you are going to tell us about?" asked Nat. "What queer long teeth he has: two upper and two under ones, with straight edges, and no little pointed ones like our eye-teeth. Do the four-footed Americans belong to guilds the same as the birds do, Uncle Roy?"

"Yes, my boy; and those four powerful teeth show to what guild the Woodchuck belongs,—the greatest guild among the Mammals,—the Gnawers.

"Mother is coming," said Dodo, going to the stairs to meet her, as Mammy Bun came in the opposite door with the coffee-pot. "Now everything is started, 'cause nothing really begins right end up until mother comes!"



THE WOODCHUCK.

The Doctor would not let the children hurry their breakfast, and Mr. Blake said, "Eat all you can now, for you may not

like my cooking."

"Are you not going to take some cake or bread, or at least cold chicken?" asked Mrs. Blake.

"No, dear; not even bread. Ginger cookies are the only cooked food allowed. I want to give the children a nibble at the way people live who explore, or hunt, or for any other reason take to a wild life. Don't worry; we shall neither starve nor be out *quite* all night, though it may be late before we return."

Tom and Jerry were harnessed to the farm wagon, so Comet was left home by himself. "You see this wagon is only suitable for *stout* horses," said Tom, with a wink to his mate, as they drove round to the house.

"Are you sure you have everything?" asked Mrs. Blake, anxiously.

"I will give you a list of our belongings: a tea-kettle, a coffee-pot, a frying-pan, and a small tin kettle, six tin plates, cups, knives and forks, salt, pepper, sugar, coffee, flour, part of a ham, a dozen eggs, a small bag of potatoes, a quart of beans, a ball of stout cord, my shot-gun, a small axe, a shovel, and plenty of matches."

"Pears like you uns was calkerlatin' to plant a gardin, wif beans and p'taters and a shovel," chuckled Mammy Bun, who was never far away when a picnic was about to start. "For de law's sakes, Massa Doctor, do fetch along a jar o' sas,—all dem vittles am chokin' dry!"

"Mr. Blake is the cook, and you know, mammy, cooks don't like to be interfered with."

"No mo' do they," she chuckled.

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They stopped at Rap's house and found him waiting, with a feed-bag, all ready for the nuts he expected to get.

"Which way are the hickory woods?" asked Olive; "toward the shore or inland?"

"Inland and almost twenty miles due north of here. There was a logging camp there years ago. I am sure that you have never been in that direction."

"Is there any river in the woods?" asked Rap. "Perhaps we may see some wild ducks."

"There is a strong, swift river beyond where we are going, though I am not sure that we shall get so far to-day, but there is a small river and pond near the hickory woods, where you may see ducks. It is by the big river that the lumber camp is, where Olaf expects to stop for a few months this winter."

Some of the trees that were almost covered the day before had dropped their leaves entirely after the hard frost, and the Red Squirrels were chattering and running along the stone fences. One little fellow was carrying a nut in each cheek, and looked very comical, as if he either had the mumps or a toothache.

"I never noticed before how many Squirrels there are about here. I suppose because the leaves hid them. Are they Mammals, Uncle Roy, and what guild do they belong to?" asked Dodo.

"Yes, they are Mammals, and they belong to the same guild as the Woodchuck,—the Gnawers. Watch that little fellow as he sits up and turns the nut about with his paws, which he uses quite as we do our hands. See how quickly he gnaws through the hard shell."

"So he does," cried Nat.

"Chipmunks gnawed up a lot of our seckle pears this year before they were ripe," said Rap. "They seemed to want the seeds, for they left the fruity part chipped up all over the grass under the tree."

"That is one of their habits; in fact, *the* bad habit of the whole guild, that they destroy much more than they need for food."

"Most of the little beasts hereabouts belong to the Gnawers, don't they, Doctor!" asked Rap. "Squirrels, Chipmunks, Muskrats, Rats, Mice, Woodchucks, Rabbits, and all such things?"

"Yes, all those belong to the Gnawers, and some of them we call vermin, or, as Dodo says, 'Nuisance Animals,' who do more harm than good. Yet many of them are wonderfully intelligent, and it seems hard sometimes to say that we should kill even one of these little mischief-makers.

"The great balance wheel of Nature is so carefully made and well planned by its Maker that we must always touch it reverently."

"What do you mean by balance wheel, Uncle Roy?" asked Nat.

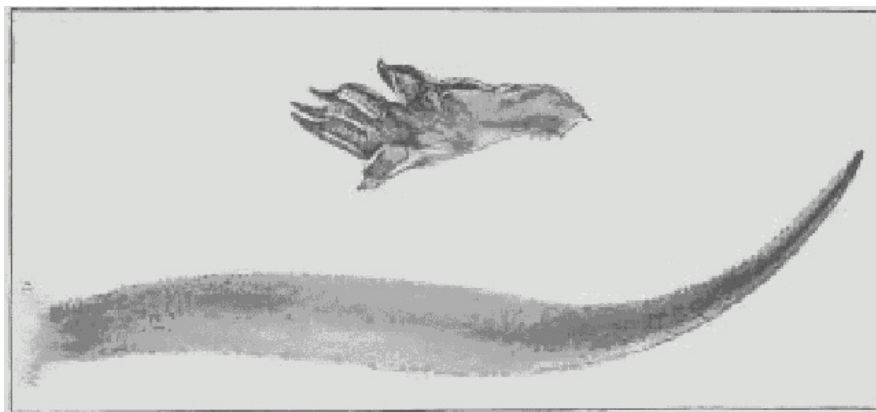
"This, my lad. In this world of ours nothing, from the least grain of sand to the strongest animal, was made for itself alone. Each thing depends upon some other thing, which is equally dependent in its own turn. So we may compare this plan to a wheel which, though it is made of many different parts,—hub, spokes, rim, and tire,—would not be a useful, perfect wheel if even a single spoke were missing, so much does the strength of the whole depend on even the least part. We may think that this animal or that is of no use, until we find by experience that it filled its place as a small but important spoke in this life-wheel."

"But, father," said Olive, "it is surely necessary for us to kill Rats and Mice and other nuisance animals?"

"Certainly, we must kill them now because the balance wheel has been so disturbed that these animals have multiplied out of their due proportion and we have made ourselves responsible for their increase. This is a penalty man has to pay in many ways for eating of the fruit of the tree of knowledge. He has to labor to accomplish many things that Heart of Nature intended doing for him."

"Then maybe if people hadn't shot so many Owls and good Cannibal Birds, it would have helped keep down the nuisance animals," ventured Dodo. "Oh, uncle, what are those funny little haystacks down in the water in the marsh meadow?"

"Muskrat huts. Stop a minute, Olive, and let us look at them," said the Doctor, shading his eyes with his hands. "The animals who make their homes in those haystacks, as Dodo calls them, are very curious as well as both mischievous and useful. They look like something between the Woodchuck the dogs brought in this morning and a great Rat. They are a little under a foot long, and they can swim as fast as a Duck. Their front toes have long claws for scratching, and their back toes webs for swimming. They live in the banks of rivers and ponds in summer, and retire into these huts, made of rushes and old weeds, before winter. They will suck eggs and steal poultry like common Rats. They have a stiff, hairy-looking coat, but underneath it is soft, beautiful fur. Why, that old cap your father is wearing is Muskrat fur—where did you get it, Blake?"



FRONT PAW AND TAIL OF MUSKRAT.

"Out West, with many other such things to keep out cold. But this is only the common uncolored skin; the furriers dye it a soft brown, selling it for French seal,—and a very pretty fur it is, too, for caps and mittens."

"There seem to be a good many wild animals about here, even though it's a pretty tame place—I mean a civilized place," said Nat, correcting himself. "I never thought that we should find fur beasts so near home. I'd like to see into one of those Muskrat houses, uncle."

"And so you shall, as soon as it is cold enough for the water that surrounds it to be frozen so that we can walk to them. The story of that animal and his cousin, the Beaver, is enough to fill a book all by itself."

After they had jogged along a fairly level road for a couple of hours, the children asking questions and begging to get out at intervals, to pick up some particularly nice apple that had fallen outside a fence and been passed by in the general harvest, they turned into a lane road with turf between the wheel tracks. The ground now began to rise in a zig-zag fashion between a wall of hemlock and pine trees, under which were mats of ground pine, partridge berry, and wintergreen.

Whirr-whirr, and a pair of large brownish birds flew up from the roadside and disappeared in some bushes.

"What were those birds as big as chickens?" screamed Dodo. "Oh, why didn't some one catch them? They went right by your nose, Olive!"

"I think partly because I was as much surprised as they were," laughed Olive.

"As fine a pair of Ruffed Grouse as one could wish for dinner," said Mr. Blake.

"Ah, papa, you wouldn't eat them?" wailed Dodo.

"Why not, girlie? They are game birds made for food; their nesting is over, and this is the season that the Wise Men say we may take them by fair hunting."

"What is fair hunting? I don't think any hunting is fair."

"Using no trap or snare, but following the game afoot, if it be birds with gun and dog, killing no more than you need. If it is a Deer, Elk, Moose, or Antelope, using your own perseverance and rifle without a dog, and never taking a doe or fawn unless absolute starvation stares you in the face."

"But if you are trying to kill nuisance animals?" asked Rap.

"Then use gun, trap, snare, poison, or any other means you have; but never put a nuisance animal to torture—never leave even a rat to die miserably in a trap."

"I guess I'll let you do my hunting for me, daddy," said Dodo, duly impressed. "I'd rather not kill *anything* myself."

"And I had much rather you would not," said Mr. Blake, putting his arm around her. "Keep your little heart tender. There is greater need for such things than for game and guns in this world nowadays, little daughter. I would not *now* willingly kill a big game animal myself and see the light fade from its bright eyes and the last flutter of its breast."

"It wouldn't be any harm if we learned *how* to shoot, would it, daddy?" asked Nat. "'Way back in the summer Uncle Roy said perhaps you would teach me some time, and Rap, too," for the boys had long since become inseparable.

"Certainly, you shall learn this very fall. Every man should know *how* to shoot and handle a gun properly, if need requires. Shooting game fairly is a manly art, and it is also a manly art to know when and what *not* to shoot."

"See the river," said Dodo. "You called it little, but it is much bigger and swifter than our river. Oh, what a queer bridge, and all the evergreen trees are on the rocks on one side, and great tall barky trees with no leaves on the other."

"This is the beginning of the hickory wood, where we are going. It looks to me as if some one had been making improvement here, since my day," said the Doctor. "Though the biggest trees are gone, the dead ones seem to have been taken away from year to year, and the young growth encouraged."



"Stop a minute, Olive; your father, Nat, and I will walk this last mile; the road is too steep and rough for a full load."

"Is the far west country wilder than this?" asked Dodo, who of course wished to walk with the others, holding tight to her uncle's hand. "I think it's lonely enough for Tigers here, if it was only warm enough."

"Bless my heart, this is not wild! You have a road to walk on; you know where you came from and where you are going. To call a country really wild it must have no roads, but only gaps or trails between the trees, and often not even these, but you must cut a path for yourself. You will more frequently know where you wish to go than where you are going; and you are never sure when, if ever, you will get back to the place from which you started."

"What is that ahead? Smoke coming from the hillside. It must be from the charcoal-burner's hut that Olaf spoke of last summer. I supposed that was the other side of the mountain, but I see the wood here is about right for making charcoal."

The Doctor and Dodo had fallen behind Mr. Blake and Nat. When they overtook them they found that the lane ended in some high hickory woods, and Mr. Blake suggested they couldn't find a better place to halt and make their play camp.

While they were discussing where it would be best to tie the horses, a tall, thin, but wiry man, came noiselessly from among the trees and stood looking at the party. He had a long, straight nose like a Fox, and deep-set eyes; his face was as brown as his beard, and his clothes were very much like some of those worn by the scouts in the Wild West Show, his shoes being without seams, like moccasins.

In spite of his strange face and dress there was nothing forbidding about him, and he had a pleasant smile as he stepped noiselessly up.

"A woodsman, I know," said Mr. Blake to himself, scarcely looking at the man's face, but judging by his soft tread.

The man stood still a second, looking as if he saw some familiar object, but from a great distance, and then exclaimed, "I want to know!"

The Doctor and Mr. Blake both started forward, and the strange man grasped each by the hand.

"Nez Long! Is it possible?" said the Doctor, clapping him on the back with his free hand, while the children stood looking on in amazement. Olive, however, knew who he was as soon as she heard the name, and explained to the others, while the three men continued to talk eagerly.

Nez was a man from northern Maine whom her father and uncle had known out West. He had been a trapper, hunter, and cowboy, all by turns, and the head of a lumber camp in Canada. The French Canadians called him Nez Long, which means "long-nose" in their language. He had once saved Mr. Blake's life, when he was almost crushed by a falling tree and in danger of being torn by a bear, but how he came in the hickory wood she of course did not know.

"Yes, I'm the charcoal-burner, I reckon, now, and canoe-maker, too, and do a bit o' huntin' and trappin' raound about, and raise some truck t'other side o' the woods, and get out railroad ties. I've a camp o' my own inside the first belt, and a wife, and she isn't a squaw neither, and two young uns. You see I've got some property at last, Doc, in spite of being a sort of wild Injun myself. We live in a log house, though; we'd choke in any other kind,—my woman an' me's agreed on that. She was 'Toinette Pardeau—old Dominique's daughter. You'll remember him; he was your guide the day you got that thunderin' big Bear. All these your young uns, Jake?"

"What a queer man," said Dodo. "And not very polite. He calls Uncle Roy, Doc, and daddy, Jake. I don't think he is nice."

"You must remember," said Olive, "that he has been with them in wild places and they have shared danger, and worked and hunted together as if they were brothers, and when men do this, the Mister drops away from their names, and they feel to each other as you and Nat and Rap do."

"Of course they must," said Dodo, repentantly, "and he picked the tree off daddy;" so, without hesitating, she walked up to him, holding out her hand, and saying solemnly, "Good morning, Mr. Long Nose, I'm glad to meet you and thank you very much for taking the tree off daddy's leg."

"I want to know!" stuttered Nez, more surprised than if a Grizzly Bear had spoken to him.

Every one laughed then, and it did not take long to explain why they were there, and how they were going to cook dinner camp-fashion; and Nat feeling the sudden confidence in Nez that young people and dogs have in those who really love them, said, "I'm going to learn to shoot this winter and hear all about the wild American animals, and sometimes you will let us come to see you, won't you, and you'll tell us stories?"

"Oh, do," echoed Dodo, looking up at him with a smile that generally had *yes*, as its reward, "and perhaps you'll tell us just one story for dessert to-day."

"Sure enough I will," he answered; "and I'll set you a camp and a fire all slick and ready while you're a-gettin' your nuts. Then you can come over yonder," and without more ado he disappeared in the trees.

"Where are the nuts?" asked Dodo, looking up to the sky.

"On the ground partly and in the trees mostly," said Olive. "If these trees in front of us had a good shaking, we could pick up enough hickories to last all winter."

The horses were unharnessed, tethered to stumps and blanketed; for in spite of the bright sun the air was keen, and the wind had suddenly sprung up, scattering the leaves and sending down quite a hailstorm of nuts.

When Mr. Blake and the Doctor, climbing some of the smaller trees, aided the wind in its work, the nuts gave the gatherers such a pelting that they had to stop until the squall was over.

"It's almost too easy to be fun," said Nat, as they tied up the mouth of Rap's bag, which was already filled. "I think I'd rather hunt for things a little longer."

"Good boy," said his father; "that is the spirit that makes a real sportsman,—the watching and waiting and finding, not simply the greedy getting that makes the selfish sort of man I call a Hunting Wolf."

"You had better make the most of this easy nutting, though," said the Doctor, "for when it comes to picking up chestnuts, you will have to look and poke about between the leaves and stones, I can tell you."

"I wonder what Mr. Long Nose is doing, and how he is going to fix our camp for us," said Dodo, emptying her little basket into the big one for the third time. "I think we have enough now."

"I thought there was some other reason for your hurry beside the filling of the bags. I never knew before that children could have too many nuts. But don't call your friend Long Nose, Dodo; he has a real name, though it was never used among his camp-mates."

"What shall I call him then—Mr. Long?"

"No; simply Nez, pronounced as it is spelled; he will understand it better, for if you called him Mister, he would be put out, perhaps."

"Oh, what a big Squirrel!" called Nat. "Twice as large as those about the farm, and all one color, like a Maltese cat, only a little browner. There is another, and another yet, chasing about like anything! See, Uncle Roy; up there!"

"Gray Squirrels, and fine ones, too. These are exactly the sort of woods that suit them; plenty of hickories and beech trees, and water not far away."

"How many kinds of American Squirrels are there?" asked Dodo, "and is the lining of mother's coat made of the fur of this gray kind?"

"There are sixty or seventy kinds in North America, but the Red, Gray, the big Fox Squirrel, and the little Chipmunk, or Ground Squirrel, are the ones most likely to interest you. The lining of your mother's coat is probably made of the skins of a Russian Squirrel. Strange as it may seem, the skins of our species are too thin and tender to let them go in the list of valuable fur-bearing animals."

"I suppose they are like the Moleskin that Rod gave me to make a muff for my doll. It cracked like a piece of paper, and wouldn't stay sewed well, and it had a very queer smell that took a day to wash off my hands. Why do some animals have such strange smells, Uncle Roy?"

"For two reasons. There are protective smells and signal smells. The Skunk's odor belongs to this first sort, and he uses his evil odor as a weapon of defence and seems to thoroughly understand its power, for very few of the large beasts of prey ever care to get within range of it.

"The signal smells are as important to the Four-footed People as speech is to House People. In fact, the power of scent largely takes the place of speech with them. What they lack in tongue is made up by a wonderful keenness of ear and nose.

"A Fox goes through a lane and can tell by the smell whether it is a dog who has been there before him or a brother Fox. The dog in his turn who follows knows by the scent where the Fox has gone and can find him unless he crosses water."

"Why can't he follow him across water? Does it wash away the smell?" asked Nat.

"Exactly, but—"

"What, is that terrible noise," cried Olive, starting, and they all listened, somewhat startled, while Dodo crept close between her father and uncle, saying, "It must be a very wild sick cow that is hurt."

"If we were in a swamp a couple of hundred miles further north, instead of here in a hickory wood, I should say it was either a cow Moose or else some one imitating one," said Mr. Blake.

"Why, it's Nez, of course," said Dr. Roy. "He used to be one of the best Moose callers along the border. He is ready for us to come up, and has taken that way to call us, though we are not Moose."

"Let's go quick and see," said Dodo, recovering her courage, and hurrying the party along. "What are Moose, and what do people call them for?"

"Moose are the largest of our Deer. The cry we have just heard is the cow Moose's call to her mate. Men who hunt the Moose imitate this call, and the bull (which is the name given male Moose and Elk) comes hurrying up to meet, not his mate, but a bullet."

"Do you call that fair hunting, daddy?" asked Nat.

"No, I do not; unless the hunter is hungry and cannot get food in any other way, it seems to me little better than setting a trap. A sportsman should show his skill in finding the Moose, not calling him by a trick."

"Yes," said Nat, "I understand that. It's the same as if when we play hide-and-seek I wanted Dodo, and instead of hunting for her I cried or did something to make her come out, and then cried 'I spy.'"

"Look, father! Look there!" said Olive. "It's like the old days in Canada."

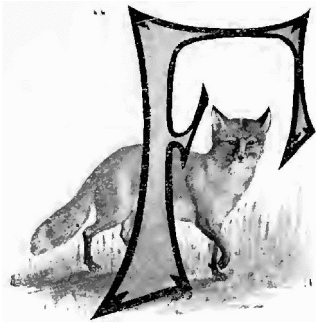
As they left the narrow footpath where they had been walking in Indian file they stepped into an open space from which all the trees had been cut, as well as the underbrush. At the further side, with its back against the hill toward the north, was a log-cabin with small windows in the front and sides. A little way from it was a sort of long shed, roofed with hemlock boughs, under which was a grindstone, some tools, etc. In the centre of the open square the earth was black, and there were many ashes, as if a fire had often burned there.

At one side Nez himself was at work, axe in hand, before a sort of tent made of two upright poles, and a crosspiece against which he was laying hemlock boughs. Not far from this two logs about five feet long were placed side by side on the ground. The upper side was shaved off; at one end they were about four inches apart and at the other eight. Between this was a line of glowing charcoal, kept from burning the logs by the earth which was heaped against them. At either end there was an upright stake, and a bar was laid between these so that it came about a foot and a half above the fire.



## VI

### OUT-DOOR COOKERY



ETCH yer blankets. Thar's yer lean-to and thar's yer stove," said Nez, pointing to the slanting hemlock roof and the line of glowing coals. "Now git out yer kit and yer grub, and let's see what sort of a feed we can cook up."

"The woman and the young uns are gone over the mountain to Chestnut Ridge tradin', but they'll be home b'fore night. I'd be pleased to have yer eat in the cabin b'yon' there, but yer seemed to want to play campin'."

The three children looked on in open-eyed wonder, but Olive, who had some experience in woodcraft, began sorting and arranging the things that Mr. Blake, the Doctor, and Nez brought

up from the wagon.

First she put the food and cooking utensils on planks near the fire, and then spread the wagon cushions at the back of the brush lean-to, and laid some extra horse blankets upon them.

"I wonder why uncle brought six blankets when there are only two horses," said Nat.

"We'll see before we get home," said Dodo; "we always do."

Next Olive filled the tea-kettle from a pail of water Nez brought from a spring on the hill above the cabin, and hung it on the crossbar over the fire.

"I know what that stick is for, anyway," said Nat.

"I've fixed sticks like that to hold a kettle, and I've roasted chestnuts and potatoes in hot ashes," said Rap; "but I can't think what those two logs are for, and why they are fixed wider apart at one end than at the other."

"That is easily explained," said Mr. Blake, beginning to untie his packages of groceries. "You see the bottom of the coffee-pot is smaller than the tin kettle, and the frying-pan is larger than either. Now, if we set the coffee-pot on the narrow end, it fits nicely, but the kettle would not get enough heat, so that stands where the logs are wider apart, and the frying-pan further along; and if we wanted to cook something in a wire broiler, it could go at the very end. Isn't this log stove a great invention?"

"Y-e-s," said the children; "but what are you going to cook?"

"Roast the potatoes in the ashes, boil the coffee, fry the ham and eggs in this pan, tie strings to the stems of these apples and hang them on the rod by the tea-kettle.

"We will begin with the potatoes and apples," said Mr. Blake, "for they take the longest to cook. How is it for game about here, Nez? I brought my gun, thinking I might get a few Quail; but it's taken us so long to come up that there is not time."

"Quail and Grouse, plenty, and some Woodcock, if you know where to go. The woman is takin' a bunch now to trade over the mountain, and Stubble, my dog, has gone with her, or I'd send him out with you. Here's a pair o' Grouse that have hung since day before yesterday; they'll roast first-rate, if you'll have 'em."

Nez went to the shed and brought back a pair of Partridges, or Ruffed Grouse, as they should be called, both males, with ruffs of lustrous green feathers.

"How pretty!" said Dodo, stroking them; "would it be any harm for me to wear those wings in my hat after we have eaten the birds?"

"It is no harm to use the wings of food birds for ornament; the only danger is that people, who do not care or know the

difference, or understand about Citizen Bird, may wear the wings of Song Birds by mistake."

"How can we roast them without an oven?" asked Rap, as they watched Nez pulling off the wing and tail feathers, but not otherwise plucking the Grouse. "Hang them with a string over the fire?"

"In the ashes along o' the potatoes," replied Nez, at the same time going near the spring and bringing a spadeful of pliable, clayey earth, which, by wetting, he kneaded into two sheets a little thicker than pie crust.

"What can he be doing?" whispered Dodo to Olive; "do you suppose he really eats mud pies?"

"No, dear; of course not. Watch!"

Nez laid a bird in the centre of each sheet of clay dough, after wetting its feathers, which he wrapped all around it as if it were an apple in a little dumpling. Then he dug out a small oven-like hole under the broadest part of the fire, into which he put the Grouse, covered them with ashes, and raked the live coals back over the spot.

"Won't they be all burned and dirty?" whispered Dodo to Olive.

"Wait and see," was her answer.

While the dinner was cooking, Nez led the party, all except the cook, about his clearing, as he called it.

At first the cabin seemed very dark, but they soon saw that it had two rooms separated by a great chimney piled up of broad rough stones. One room was the kitchen and living room, and the other the bedroom. This had berths nailed to the wall, not unlike those in a ship or sleeping car. The bedding consisted of coarse gray blankets, spread over fresh hemlock boughs and straw.

The fireplace was open and wide, and on the living-room side some long logs were piled one on top of the other, with smaller sticks and kindlings in front.

"We keep er sort uv campfire in here cold nights, yer see, Doctor. When once you've been uster sleepin' by a fire, you miss it dredful. I've got a stove in here," he said, pointing to the kitchen; "but in warm weather we cook outside on the logs. When you've spent twenty or thirty years sleepin' mostly under the sky, any kind uv a roof seems crampy, so in summer season I lie out yet."

"Did you ever sleep all night outdoors, like daddy and uncle, with no tent or anything?" asked Dodo, in an awe-struck tone, leaving the boys, who were looking at the strange assortment of things that hung from the rafters of the cabin, stood in corners, or were stuck in the little cracks between the logs.—Fishing-poles, a Winchester rifle, a double-barrel shotgun, bunches of herbs, the furry skins of several kinds of small beasts, a Fox tail fastened to a stick for a duster, and many other fascinating objects.

"Sleep out all night, missy?" said Nez in astonishment; "why, o' course, that wuz always the kind of campin' I did when I wuz trappin'."

"Why didn't wild beasts eat you, and why didn't you get all damp and mouldy?" persisted Dodo.

"Mostly on account of the dry air in those places, and campfires, I reckon, and sleepin' with one eye open," said Nez, laughing. "Here comes Renny, he wants his supper, I guess."

"Why, it's a Fox! Won't he bite? I thought Foxes were wild beasts," said Nat, as a young Fox, looking something like a small collie dog, trotted up to the cabin, sniffing about and eyeing the strangers suspiciously.

"That Fox won't bite, he's a pet of the young uns. His mother was killed for chicken stealin', I reckon, along in May; and Stubble nosed out the hole on the other side of the mountain, and I found two pups in it. One died, and we raised this. We've got a young Coon, too, somewhere about."

"He is just as pretty as a dog. Will he never run away and try to find his mother?" asked Rap. "I had a tame Coon once, and it stayed round all right, but along in the second spring it ran away."

"I reckon the Fox will too, when he gits old enough to take a mate and set up house for himself. They all do,—birds and beasts and folks too,—everybody likes to have a place of his own. Don't he, Doctor? Here I was a-roamin' all over creation, no idea uv stayin' put anywhere, and here I am settled down and what they call civilized."

The Doctor laughed and walked off with Nez to see his charcoal pit and bit of cleared land, where he raised potatoes and beans, while the children still looked wonderingly about the cabin.

"I wonder why the leaves are swept away so clean all about here?" said Dodo. "It looks so much prettier to have leaves and pine needles on the ground."

"On account of fire," said Olive. "When you camp out, you have to be very careful about fire, especially in places where there are many evergreen trees. Nez cooks out of doors and works often under that shed, and has a log fire to warm him; and if the ground were covered with dry leaves, the fire might spread all through the woods."

"I'm so *very* hungry," said Dodo, presently; "suppose we go over and see how daddy is getting along with his cooking."

"There must be Coons living around here," said Rap, looking eagerly into some old trees. "I see lots of likely holes, and there's a splendid lot of brush down hill there for Rabbits. Say, Nat, I wonder when we learn to shoot if Nez wouldn't let us come here and get something to eat and then cook it? It would be great sport!"

"We can ask him, anyhow. There, daddy is beckoning to us, and I smell ham. C-o-m-i-n-g, c-o-m-i-n-g," Nat shouted.

"It's all ready," said Dodo, who had gone ahead, "only Uncle Roy and Nez have wandered away, and daddy says we must not dig out the roast birds until they come back. Can't you moo-oo to call them, daddy, the same way that Nez did?"

"I can try, girlie. Nat, go over to the cabin and see if you can find a great cone-shaped thing made of bark."

Nat soon returned breathless, but with the desired article. "It was hanging by the chimney on an old pair of some kind of queer flat spiked Deer horns."

"Antlers, Nat; we don't call those things horns when they belong to Deer. They must be the antlers of Nez' famous Moose. You must ask him to tell you about it some day. Let me have the horn."

"It's like a little megaphone, you know," said Nat; "the thing they called out the programme with at the circus, only that was tin and this is old dry bark."

"So it is, and that, like many other things, had its beginning in some simple invention of a woodsman. Let me have it—Moo-oo-oo-o! Wher! Moo-oo-oo-o!"

"Oh, what a queer foggy noise!" cried Dodo, stopping up her ears.

"I'm afraid, Uncle Jack," said Olive, "if I were a Moose I should run away from a mate with such a voice."

"May I try?" said Rap.

"Certainty. I never was a good Moose caller, it always gave me a sore throat."

Rap took the cone and called gently at first, raising the horn and then lowering it to the ground, making a very good imitation of Nez' call.

"Bravo!" cried Mr. Blake; "some one must have taught you that, my boy."

"I've seen the lumbermen do it over at the far mountain."

"Are there Moose anywhere near here?" asked Olive.

"Oh, no; but the men had worked in North Maine and Canada, and they used to sit round the fire and tell boast stories of what they had done, and showed how they called Moose."

"Boast stories, what are those?" asked Olive.

"Stories about animals they had hunted so long ago that every time they told about the beast it got bigger and bigger, until it wouldn't have known itself."

Mr. Blake laughed heartily at Rap's description, as if he thoroughly appreciated his meaning.

"When we sit by the campfire thinking of past days that have pleased us, we often see them through the firelight as we do things in dreams, which are part imagination and part memory. Always remember, boys, that the adventures we have under the open sky and the friends we make around the campfires and in the silence of strange places—open prairie or trackless wood—are different from the doings and acquaintances of every day, and the account of them must always seem unreal to those who have not been there."

"You called fust rate the second time," said Nez to Mr. Blake, returning from showing his farm, as he called it. "It was a little onsertin at fust—"

"Praise Rap; the call I gave was called a 'foggy noise' by Dodo."

"Was that you, little chap? Want to know! Was you raised in the North Woods?"

"No, but I've always wanted to live in the woods the way you do; but you see woods are too far away from people for mother to get any washing to do."

"Never you mind," said Nez, "after the first snow you come up and stop with me a spell, and I'll show you how to git some Rabbits and a Grouse or two for your mammy, when I've got my Muskrat and Mink traps set. There's no big game hereabouts, at least none bigger than a Fox or a Porkipine, a Coon or maybe a couple o' Wild Cats strayin' about. But you can see how the night comes in the woods, and I'd learn you the tracks of some o' the fur beasts. If we get good deep snow down along the river medders, I'll show you how to walk on snow-shoes, too; maybe it'll come in handy some day."

"I couldn't learn that on account of my leg, but Nat could, and he'd love it," said Rap, cheerfully.

"Dinner, dinner," called the Doctor, "and stories afterward. Dodo is very anxious to see you open the mud pies, Nez."

"Come and sit on the cushions under this nice wind break," said Olive, going to the lean-to that Nez had made of the hemlock boughs. "Here are your plates and cups,—you be waiter, Nat, and take them to Uncle Jack."

"What do you call your camp, Nez?" asked Mr. Blake.

"Settledown," said Nez, laughing, "'cause we've settled here nigh two years."

"Bill of Fare for Dinner at Camp Settledown, served by Chef Jacque," called Mr. Blake. "Ham and eggs, potatoes in jackets, frying-pan bread, roast Grouse with clay pastry. Dessert—roast apples on strings, ginger cookies, and"—as Nez came from the cabin with a jar—"wild plum jam, and coffee with condensed cream!"

The first course was eaten with much relish, and then they gathered around the fire to see Nez uncover his famous pies. The first one being opened disclosed a mass of blackened feathers.

"I knew it wouldn't be any good," whispered Dodo to Nat.

"You know too soon then," he replied, as Nez with a skilful pull took feathers, skin, and all from the bird, showing its smoking, nicely cooked body all ready to be eaten.

"Oh!" said the children, as they cut it, or, I should say more truthfully, pulled it apart.

"It's terribly good with a little salt on it," said Dodo; "here's a dear little wish-bone for you, Olive, and both top legs." And for the next half hour the conversation was nearly extinguished by the food.

"Please, are you going to tell us a story now?" asked Dodo of Nez, as he began collecting the tin plates, cups, pots, and pans.



"Wash up yer kit first, then campfire and talking. You see, missy, in the woods it don't do to let yer vittles cool on the dishes; it's too hard to clean 'em. Got a kittle? Yes?" and he filled the largest tin with water, which he set on the fire to heat for dish-washing.

"Any dish-rag?" and Nez carefully put the good scraps in a pail to feed to Stubble when he should return, wiped each article out with a handful of leaves which he carefully burned as soon as soiled,—then the dish-washing was an easy matter.

"You see," he explained, "if you are camping in any one place for a spell, it gets dreadful mussy if you don't keep cleaned up, and then you may want yer duds in a hurry. Always keep yer kit ready, whether it's guns, or harness, or kittles; that's camp law."

So the children strayed about for an hour or so until Nez and their father had finished their work and smoked their after-dinner pipes.

"Now we'll have a campfire, though it's the wrong time o' day," continued Nez, piling some logs from his shed against a couple of charred tree trunks that stood side by side about four feet apart; he put sticks and kindling in front of the logs, arranging the heap so that the wind blew from the front to the back.

"Why don't you put the sticks in a stack, like corn stalks?" asked Nat. "That is the way we do when Uncle Roy lets us make bonfires in the gravel-bank lot; it burns up as quick as a flash, only it eats a great lot of wood."

"That's the reason we *don't* do it," said Nez, "just 'cause it *does* burn up quick and eat the wood so fast and then slumps out. This isn't the real time o' day that in natur' a woodsman or a plainsman would stop to build a campfire, but it'll do to show you by."

"When do people generally build them?" asked Rap.

"Along about dark," said Nez, "after supper, when the day's work is done, if it's a cattle round-up, or a huntin' or a lumber camp. In the north and northwest country the air is dry and fine enough in the daytime, but as soon as the sun goes down—down goes the weather, too. If you go to sleep with no fire, or let your fire go out, you'll get up with stumblin' feet and hands all thumbs in the morning. That's why we pile the logs this way, so that the fire gets a good hold and creeps up slowly, and lasts long.

"Then you'll lie under yer bush shanty, or lean-to, or canvas, or whatever kind of a shelter you have, or stretch out on the ground in yer blanket, and yer so glad of rest that yer wouldn't change with any one in a castle. Some one throws on the logs, and the camp settles down for the night to smoke and talk and then sleep. Wolves may bark in the distance, and Wildcats yowl and sneeze; as long as the fire blazes they'll keep away."

"Please tell us about all the sorts of tents you've slept in," said Olive.

"And about the wild beasts that sneezed at you," added Nat, as they all watched the fire dreamily in the comfortable silence brought by a day in the open air and a good meal.

"My furst reglar campin' was in a lumber camp in Canada, the Saskatchewan country they call it. All day long we were out in the woods cutting trees, trimming them down and branding the logs to be hauled over the snow in the winter to the river, so that the spring freshets would wash them down. I don't think I ever struck a camp that had more game, big and little, come about it. Maybe it was 'cause I was young then, and everything seemed wonderful.

"The camp was clear out in the wilderness, in a sort of holler between a marshy place all brushed over and a woody hill; it was just half dugout, half log-cabin, like my own yonder. In fact, I made this as like as I could to the remembrance of that one. Only, like most camps thereabouts, it had a pair uv Moose horns over the door to bring good huntin'.

"It was the furst winter that I was there I learned from the Indians and half-breeds how to read signs; to know by the footprints jest what animal had been that way, and by the way young twigs were nibbled and torn whether it was a Moose,—if it was a bull with antlers or the smaller cow without them. Then I learnt the footmarks of all the fur beasts, and their toothmarks on the bark, and when there were scratches on the trees I knew how big a B'ar had sharpened his

claws there, and how tall he was."

"Oh, uncle, don't you remember how you said the Wise Men made animals into classes by looking at their feet and teeth, but I didn't know people could tell them only by their footprints.

"Please, Nez, can you tell by smell where all the different animals are, as uncle says they can tell about each other?" asked Nat.

"Not quite," said Nez, laughing, "though there are a few I can nose out besides Skunks. I did some tall huntin' and trappin' then for a season or two, before the game got too skary, and folks came that killed just for getting the antlers of the bulls and leavin' the meat to rot,—folks that took a fawn or doe just the same as a buck. Hunting Wolves, I call them, for a Wolf is a wasteful beast in his killin'."

"That's what daddy calls such people, too. Tell us the names of some of the beasts you saw," coaxed Nat.

"It would be easier to name those I didn't," said Nez, hesitating; "but of a moonlight night after an early snow, when all of the outfit but me was away, I've seen a Moose come from the windward side of the cabin, while a Fox sulked in the shade of some firs watching the Skunks fighting over the scrap-pail, and a Lynx crouched, grinning, on a log, taking it all in. Meanwhile white northern Hares and Ermines nosed about dreadful careless, not knowing when they might make food for Owls, and Meadow Mice squealed among the logs and left their little tracks like birds' claws in the snow. When they think there's nobody round, beasts have their playtime, just like folks."



THE LUMBER CAMP.

"Oh!" sighed Rap and Nat in chorus, "all those beasts you saw are four-footed Americans; if we could only live in a camp and see them."

"It was a nice place to see the animals, but pshaw, some folks would find the camp smoky in winter and full o' black flies in summer. Don't I remember the time I shot my big Moose? I'll tell you that story some day, and about another time out in Montana how your dad was huntin' for Sheep and met a Grizzly B'ar. That is, if he don't."

"And did you ever see a great white Polar Bear, or find Seals swimming on the ice?" asked Dodo.

"No, I never was so far north. There is a friend of mine, a Finlander, who follows the sea, who has been as far north as most men go and get back again, and he knows those beasts and their ways. He's comin' to stop with me a spell this snowfall, and he's been fishin' and keepin' a light down on the shore two summers. I thought maybe you'd met him, his name is—"

"Olaf!" cried the children and Olive in chorus.

"Want to know!" said Nez, looking pleased, and puffing vigorously at his pipe.

"Oh, uncle! Oh, daddy!" cried Nat and Dodo, rolling off the blankets in their excitement. "Nez knows Olaf and he's coming here! Don't you see how much we could learn about the fourfoots if we could only live up here in a log house?"

"Doubtless you could, and you would perhaps enjoy it vastly for a while, but how about school? You must begin by being fitted for your lives as House People; few of us can live the wild life, except now and then for pleasure and as a rest from too much tameness. Don't look so blue, Nat. Dodo, cheer up, even if you may not live in a log house you are not going to be shut up in a prison this winter. Listen, and I will tell you the whole of the surprise that you partly learned yesterday."

Four heads crowded together, and eight wide-open eyes gazed at Dr. Roy, for Olive was as much in the dark as the others.

"Must we guess?" asked Dodo, clapping her hands.

"You may all try, if you like, but I do not think you can possibly guess the whole of the secret."

"We are coming up here on Saturdays to learn to shoot and hear Nez tell stories," ventured Nat.

"No," said Olive, "it can't be that, because it would be too far and too cold in winter. Perhaps you will ask Nez to come down some time and tell us stories," said Olive.

"It takes too long to guess," cried Dodo, wriggling about in her impatience, "please tell us now!"

"Very well; the surprise has three parts to it. Sit still, Dodo, and remember that you are not to jump up and down or hug me until I have quite finished.

"You all remember the old summer kitchen at the farm that is filled with boxes, tools, and rubbish,—the long, low room back of the dairy, with the brick floor and wide fireplace?"

"Oh, yes," said Nat, "I've looked in there trying to find Bats that I've seen go through a place where the glass was broken, but it was stuffed so full of everything that I couldn't get in at the door."

"Now," continued the Doctor, "this very day Rod is clearing out all the rubbish, and I am going to let you fit up that old room like a log-cabin camp. The fireplace is large enough to hold a fine campfire. This is part first.

"Part second.—Every Saturday afternoon that it is pleasant your father or I will teach you to shoot at a target.

"Part third.—When it is dark you shall go into 'camp' and cook your own supper, after the same fashion as you have seen the dinner cooked to-day, then after supper we will have stories about the four-footed Americans. Nez has promised to tell some of them, and Olaf others. Rap can tell what he knows of the nearby beasts, while your father and I will fill in the chinks."

"How did you ever think of anything so lovely?" exclaimed Olive.

"I can hug you now," said Dodo, immediately doing it vigorously.

"Hurrah! Moo-oo-o!" was Nat's response, trying to blow a joyful blast on the Moose horn, and failing utterly, while Rap sat in silence, but with a beaming face.

"Let's go home and begin right away," said Dodo.

"It is high time to go home," said Mr. Blake, jumping up. "Who would think it was nearly five o'clock? The sun sets in a hurry these days, and we shall have to ask the moon to escort us, I think. Cold ham and cookies must do for supper."

"Somebody is coming," said Rap, pointing to the path that wound around the steep, wooded crest, where his quick ears detected a rustling in the dead leaves. At the same time a ginger-colored setter dog came in sight, followed by two sturdy little boys, who, on seeing strangers, dodged into the cabin like frightened Rabbits.

"That's Toinette and the young uns," said Nez. Then added by way of apology, "The young uns don't see many folk and they are skary. Here, Toinette," speaking to a rather pretty, dark-haired, black-eyed young woman, who came up carrying a basket on her head, "make you acquainted with some old tent mates o' mine."

The woman gravely held out her hand to each with a pretty gesture of welcome that said more than words.

"She's half French, you see," explained Nez, "and she isn't much on talkin' American."

But the moment Mr. Blake spoke to her in the soft slurring French of the Canadian woods, she answered readily, and her face was wreathed with smiles.

"You must bring your wife and children down to visit us, Nez," said the Doctor; "it will do them good to see other young folks."

"I reckon it would. The boys go to school now, over the mountain; book learnin' is some good even to woodsmen, I say, and by the time they've grown up there won't be much of a livin' left in the woods, anyhow."

"But it's more than five miles over to the Ridge school by the road."

"Yes, but that's nothin' fine days, and when snow comes I calkerlate ter put on snow-shoes and ride 'em, one on each shoulder, across country; they don't weigh much compared to camp kits and Deer I've carried."

"Dodo, how would you like to go ten miles a day through the woods to school?" asked her father, for Dodo sometimes grumbled at walking the smooth mile that lay between the farm and schoolhouse.

"At first, for about a week, it would be fun, and then perfectly dreadful," she answered promptly.

They left Nez' camp reluctantly, and returned to where they had left the wagon and horses, who greeted them with neighs of pleasure. Tom had walked so many times around the tree to which he was tethered that he was wound up tight to the trunk, while Jerry had nibbled his rope loose and was having a fine time rolling on the ground, though his thick coat, long mane, and tail were knotted with burrs which would give Rod a good hour's work to comb out.

"Never mind," he neighed, as the Doctor said "Look at what a pickle Jerry is in,"—"I've had my fun to-day as well as you."

The sun disappeared exactly at the moment that the wagon turned into the lane again, and every one waved good-by to Nez, who watched them out of sight.

"I know what all the extra blankets and things were put in for," said Dodo, as her father made her sit on a blanket which he folded over her knees and drew about her shoulders like a shawl, so that only her head peeped out, while the others arranged theirs to match. "It's like being in a bag. How nice and warm it feels," she said, nestling down. "I didn't know just one blanket could be so comfortable."

"Just one skin robe or wool blanket is all that the Indian hunter, or plainsman, has to stand between him and the bitter cold night," said the Doctor; "so that many people who are living the out-door life continually, have their blankets sewed into this shape and lined with fur, and they are called sleeping bags."

"That is what Dodo's blanket will be long before we get home," said Olive, as Dodo nodded and swayed on the seat.

"No, I'm going to stay awake so as to see everything," said she, suddenly stiffening up and opening her eyes very wide.

"Look at the mist coming up out of the river and lowlands," said Rap; "it's just as if they had gone to sleep and it was their breath."

"We shall save three miles by following the river lane," said the Doctor to Mr. Blake, who was driving.

By this time the light that guided them came from the great full hunter's moon, and all that was left of daylight was a few dull red shadows in the west.

"There are lots of little beasts out to-night," said Rap, his eyes being almost as keen in the darkness as a cat's. "Oh, Doctor, do you hear that barking down the river bank? I'm as sure as anything that it's a dog that has treed a Coon, for the noise keeps coming from the same place. Can't we stop and see?"

Mr. Blake drew in the horses, and they all listened for several minutes. The barking turned to a yelp and then a baying, and almost at the same time a good-sized beast, bigger than the largest Angora cat, with a full tail, sprang from the bushes into the road, stopped to listen, and then scenting the horses continued on its way through the bushes and disappeared among the rocks, while the barking dog seemed to be taking a zig-zag course in the opposite direction.

"We have seen the Coon without leaving the wagon," said Mr. Blake, whipping up again. "He evidently sprang from the tree across one of the brooks that feed the river, and the dog has lost the scent."

"It is a very queer animal," said Olive. "Father, did you notice when it sat up to listen it looked like a little Bear, in spite of its long tail?"

"That is not strange, considering that it is a cousin of Bears," said the Doctor.

"Coons are real clever," said Rap. "The one I had could do ever so many tricks, and used its paws as if they were hands."

"What are Coons good for—to eat or wear?" asked Dodo.

"Both," said the Doctor. "Their fur is soft and prettily brindled, and if they are young, the flesh is not unlike Rabbit."

"Mammy Bun says they used to have Coons down where she lived, but their fur wasn't good for much."

"The fur of an animal living in the South is never as good as the fur of the same species living in the North."

"Why is that?" asked Nat.

"Because fur is given animals to protect them from the cold; the summer coat of a fur beast is thin, as you see the summer coat of a horse is short, compared to the thick coat that grows out at the first cold weather. (Look at Tom and Jerry and see how woolly they are now.) As it is never very cold in the South, the fur animals do not need such thick, soft coats as they do here, while in Canada and northward, where the winter is far longer and colder than with us, the fur is heavier yet."

"There is a word I've heard hunters use for the fur of animals, the same as plumage means the feathers of birds, only I've forgotten it," said Rap.

"Pelage, is it not? It comes from *peau* (pelt), which means furry skin, a skin used for the leather instead of fur is called a hide."

Two men stepped across the road, with what looked like Rabbits and Grouse hanging over their shoulders, but slunk into the shadow of some bushes when they saw the wagon.

"Pot hunters, I know," said Mr. Blake, "snaring and trapping, as usual."

"How do you know they trapped the birds, daddy?" said Nat.

"Because they had no guns and hid when they saw us. If you watch wood life much, my boy, you will soon learn to see the *reason why* for things, and it is very often the reason that helps you to see the thing itself."

"Hoo-hoo-hoooo!" came a cry from over a very dark bit of road through which they were going.

"Nat, there is one of your friends,—the Great Horned Owl," said the Doctor.

"What is that—a Skunk?" asked Olive, as something black and white ran across the road. "It is striped so that it hardly shows in the moonlight."

"Yes; a Skunk, or rather what Tommy Anne calls a 'Scent Cat.' There is a great deal of argument as to whether its black and white coat protects it or not."

"I should say that it certainly did protect it on moonlight nights, but not on very dark nights," said Mr. Blake.

"I shouldn't think that would count; on dark nights you couldn't see it at all—only smell it," said Dodo, and then every one laughed at her matter-of-fact way of looking at things.

Between talking and listening to the strange sounds of night, it seemed but a short drive home. They left Rap at his gate, and soon the lamp on the porch at the farm was making their eyes blink, and when the children were unwrapped from their blankets, Dodo was really asleep in her bag.

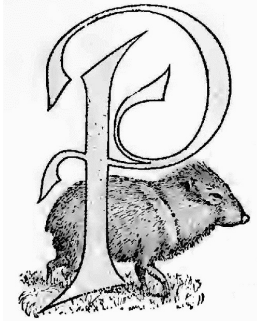
"I might as well be sleepy now as not," she murmured, as her father lifted her down, "because we can't begin to fix our camp until next Saturday, can we?"

"Neigh, n-e-i-g-h!" snorted Tom and Jerry, knowing their supper was waiting for them at the barn, but Dodo was so sleepy that she thought they were answering her.

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## VII

### CAMP SATURDAY



PERHAPS you expect that the children immediately began to tease the Doctor about their indoor camp; but more than a week passed, after their visit to Nez, before they had time even to think about their uncle's promise. The next Saturday they went chestnutting, and so it was the first part of November when a cold, cloudy day drove the children indoors and made them knock on the door of the wonder room in quest of their uncle, much as they had done six months before, when they were disputing as to whether or not a bird was an animal.

"We've been trying to get into the old kitchen, but the door is locked, and there are great tight shutters at all the windows," said Dodo, before she had fairly crossed the threshold.

"Which means, I suppose," said the Doctor, "that you are ready to make camp and wish me to help you. I had been wondering how long it would be before you asked me to keep my promise. Go and find Olive, while I get the key."

This old summer kitchen was joined on one side to the main house by a covered passageway, and was quite like a separate building. When the Doctor unlocked the door, the light was so dim that all the children could see was the outline of an enormous chimney, that seemed to be quite in the centre of the room. In a moment, however, Rod came in and threw open the shutters.

"Why, father," said Olive, "I never saw such a chimney anywhere before. How did it come here? Was it put up first and then the room built around it?"

Indeed, the chimney was almost as large as a small room; the open fireplace on one side would allow half a dozen people to sit around the fire, while on the opposite part there was a little iron door.

"What is this?" asked Dodo, promptly opening it.

"That was the brick oven where the pies and bread used to be baked in the olden time."

"But it has a stone floor and is so far from the fire I should think it would have taken most forever for the heat to have gone through; and it's very big."

"The heat didn't come from the fireplace," said Olive. "People used to fill the oven with wood, a great many hours before they wanted to bake, and then when the stones were very hot they would sweep out all the cinders and ashes and pop in the bread and things. The oven was made large so that they might save trouble by baking a quantity of food at once."

"Why, then, in those old times living was something like camping out, wasn't it, Uncle Roy?" said Nat.

"Very much, but it made the people quick-witted, hardy, and self-reliant, ready for any emergency that might happen, just as the wild out-door life does."

"Oh, look at the floor!" exclaimed Dodo; "it's made of bricks set in a wiggly pattern, with sand in the cracks; and the beams show overhead, and there's no plaster on the walls."

"I think we could make a really wild-looking place of this, if we only had some skins, and antlers, and guns, and such things," said Olive, walking about the room quite as much excited as her little cousins.

Rod had taken all the rubbish away and made the room clean, but the Doctor wished the young people to have the pleasure of fitting it up themselves.

"Come up in the attic and out in the lumber room in the barn, and I think we shall find what we need; meanwhile Rod will start a fire."

In half an hour or so the procession returned, every one carrying something, while Mr. Blake and the Doctor brought in an old-fashioned settle—a sort of table with a top that tips back and a box underneath, making a very comfortable seat. This they placed in the middle of the room facing the fire, and then went back for two long benches, such as were once used in country schools.

"May we have one chair with a back for mother to use when she comes?" asked Dodo, who had been told that in a real camp there was little or no furniture.

"Aren't there to be any bunks?" pleaded Nat. "Rap and I thought we should like to try sleeping out here some time."

"Not so fast," said the Doctor. "Here, Olive, I will drive some nails in the chimney cracks and you can hang up the pots and pans and tin cups, for you will use the same kit that we took to the woods. Now for the skins," and the Doctor began to unroll several bundles that smelt of camphor, which had filled the biggest cedar chest in the attic.

"Beast skins!" said Nat, "all kinds, shaggy, and bushy, and hairy. Oh, do tell us what they belong to, uncle?"

"Not now; we will hang them up around our camp, and you shall learn about each in turn, for though some are but fragments, every one has a story."

"Do those horns that papa is bringing belong with the skins?" asked Dodo, as Mr. Blake brought in a pair of smooth, curved horns, like those of some enormous bull, and also a pair of branching antlers that ended in little twig-like points.

"The smooth horns belong with this shaggy skin," said the Doctor. "I will fasten them up over the fireplace. Have you ever seen a beast with such a coat and horns?"

"They might belong to a big wild cow," said Nat.

"I know," said Dodo. "Oh, Nat, Why didn't you guess the Wild West Show and the Buffaloes?"

"Here are a lot of little skins, like Squirrels' without much tail, and one like a big, striped pussy cat. Oh, how can we wait to hear about them all! I shall keep wondering and guessing. It's worse than the puzzles in *St. Nicholas*. What a glorious fire, too,—as big as the one Nez made in the wood; and there is a hook that swings out to hold the kettle, so when we want to cook, we only have to fix two logs to hold the pots the same as Nez did. But there are not enough ashes to bury potatoes."

"We can save the ashes," said Olive, "until we have a great heap of them."

"So we can, and these benches go into the chimney on each side, so we can sit in there if it grows cold, or if we need to watch the cooking."

"Now some hooks and nails in that corner for your mop, dish-rags, and dish-pan, and you are ready for housekeeping," said the Doctor.

"All except the broom," said Olive. "Nez had fresh hemlock twigs tied to a stick; but the hemlocks are too scarce here to be used in that way."

"I will tell Rod to tie you a birch broom. That is what Grandma Hunter always used on this sanded brick floor. If there is anything else wanting, you can look for it yourselves."

Long before they had finished admiring their camp the dinner bell rang, and they hurried to tidy themselves, wondering how the morning had galloped away. Nat, who could hardly finish his pudding before going back to camp, came running in, his eyes ablaze with questions.

"Daddy! daddy! Rod has taken your gun rack from the back entry into camp, and there is a little rifle in it that I've never seen before; and when I asked him what it was for, he said, 'For you and Rap to hunt big game with.' I told him that there wasn't any big game near here, and he said: 'Yes, there's a Deer down between the birches in the long pasture. I saw it there just now.' Won't you please come and see, quick, before it gets away; though I don't think it would be nice to shoot it, for it's company, and there's only one, and we can't even pretend that we need it for food. Please hurry, or it may run



away."

"I don't think it will go, and I am quite willing that you should shoot it," said the Doctor.

Olive looked at her father in surprise, but his face told nothing. Dodo suspected something, and ventured, "I think it must be a tame Deer you have brought to teach us with."

"No, it can't be," said Nat. "Uncle would never be so cruel as to shut up a tame Deer to be shot."

"Don't you think we had better go and see, instead of talking?" said Mr. Blake. "There goes Rod down the hill now. Who knows but what he will get the first shot."

"I see it!" cried Nat; "a real big Deer with curly horns, I mean antlers, and a skin about the color of a donkey's. See, Olive, it stands between the birches right against the side hill."

"Oh, it's moving," wailed Dodo.

"It has gone. Rod has frightened it," shouted Nat.

"Yes, it has disappeared, surely," said the Doctor. "We might go and see what Rod has to say for himself."

"It is behind the trees, I can see its legs," said Olive, as they reached the pasture. "It's backing in between the trees again. Why, father, it's a big target shaped like a Deer!"

So it was. The animal was first sawed out of wood, then fastened together with movable legs, after the fashion of a jumping Jack. Then it was padded a little and covered with stout sail-cloth, which was painted so that at a short distance it really looked like the animal itself. The cleverest thing about it was the way in which it hung by cords, from a pole fastened between the trees, in such a way that it could be pulled to and fro, so that the marksman could have the excitement of shooting at a moving object.

"Who made it?" asked Dodo, after they had recovered from their surprise. "It looks very like one of the animals in my Noah's Ark, only bigger."

"I did," said Mr. Blake; "and it is the common American Deer, though I suspected your uncle would ask if it was a Rhinoceros."

"Oh, no, daddy; it isn't as queer as that," said Nat, wondering why his uncle laughed so. "It will be bully—no, I mean jolly—to shoot at; and when we've plunked it all to pieces, perhaps you would make us a Bear or a Wild Cat, so that we can tell where to shoot each one. Please, could I have the little gun and try now?"

"Yes; Rod will bring it. There, isn't it a beauty? A Ballard repeater! See how the lock drops, and you put in the cartridges so. Stop! that will never do; you were pointing the barrel almost at Dodo. The first thing you must remember about a gun is *never to point it at any one*, even if you are *sure* it is *not loaded*; and the second thing is *always to drop the lock and make sure it is empty before you put it away*.

"Now watch me put in the cartridges. So, now close the lock and pull the trigger back half-way, put the butt against your right shoulder, so, bring that little pinhole sight, on your gun barrel, in a straight line between your eye and the Deer back of its shoulder. Now, hold fast and pull the trigger."

Bang! Dodo screamed and put her fingers in her ears. Nat looked eagerly, fully expecting to have blown the Deer to bits, but he had not touched it.

"You shut your eyes tight and fired almost straight up into the sky," laughed Olive, who was quite a clever shot herself.

"I don't like a gun," said Dodo. "Is there any kind of anything that I could shoot at an animal target, that wouldn't make such a noise?"

"A good bow and some arrows are what you need, missy," said her father; "and I'll make you a beautiful, fat pig for a target. Come up to the barn and I'll do it now."

In a few minutes Mr. Blake had filled a feed bag hard with cut hay, tied up one of the lower corners to make a curly tail, made ears of corn husks, a face of a huge beet, and legs of corn-cobs.

"Now, Dodo, I'll put this in a nice place against the stone fence, where it can't fall over if it gets tired of standing, and you may shoot to your heart's content. You can play that it is a Peccary,—the wild American cousin of Sausage and all other farm pigs."

"Are there any about here?"

"Oh, no; fortunately for us, they live now in small herds down on the southeast plains of Texas and westward along the Mexican border, for they are ugly, savage, slab-sided little wild pigs, with a light collar around the neck like a rope mark, sly, keen eyes, and a pair of small tusks sharp enough to cut a man's leg in the thickest part, or rip the throat of any poor dog who is forced to hunt them. Once they were plentiful enough to be of value for their hides and bristles, and hunting them is still considered good sport by some people.

"The Peccary looks innocent enough as it walks along on the points of its hoofs, or wallows in the shady marshes of the river bottoms, its mouth gaping in a foolish fashion; but if it sees you—watch out. If your gun misses, you had better run, even if you have to take to a cactus patch, for, appropriately enough, prickles and Peccaries grow in the same places, and they are both painful things to encounter."

Dodo was delighted to think her target was a wild cousin of Sausage's, and flew into the house to tell her mother and promise her the first shot at the Peccary, as soon as she should have her bow and arrows. Then she flew out again to coax her father to make her a good tight bow, which he soon did out of a hickory sapling and some of his pet fish-line. Nat, who meanwhile disappeared, soon returned with Rap, and everything had to be shown and explained once more.

Rap handled the rifle very carefully, as one having had experience, and then took up the other small gun which Nat had overlooked.

"How is it different from the other?" asked Nat.

"It has two barrels instead of one," said Rap, "and the cartridges hold a lot of shot instead of bullets. It is for shooting little things."

"Why is a lot of shot better than a good bullet?" asked Nat.

"Shot spreads out, and is more likely to hit a small object than a bullet that only strikes in one place. If we ever go up to see Nez and hunt Rabbits, this is the gun we shall need," said the Doctor.



After they had practised awhile, Rap had succeeded in hitting the Deer twice, but it now began to rain in earnest, and they returned to the camp.

"Hush!" said Dodo, as they were coming through the corner door toward the fireplace. "See, we have company! Look at that Mouse sitting by the edge of the hearth; it's as friendly as anything, and it isn't a common mouse-trap Mouse, either. Look what big eyes it has, and a lovely brown back, and its feet are white, like clean stockings."



WHITE-FOOTED OR DEER MOUSE.

The Mouse sat up and began to clean its paws and wash its face daintily, while the children watched it and Olive tiptoed out to call her father.

"It is a White-footed or Deer Mouse," said the Doctor, "so called because it has a tawny back. Dodo is right, it is not a 'common mouse-trap Mouse,' though in some places it does often live in our houses. It also makes its nests under tree roots and sometimes in old birds' nests. I will set a trap for it, and then we can look at it closely."

"Yes, uncle, but please not a choke trap; it's too pretty. We could look at it ever so much better if we caught it in one of those little house-traps, with a wheel for it to run around in—that they sell at the store. I can shake enough money out of my bank to buy one, because I haven't shaken it for nearly two months."

"No need of that; there are some old traps up garret that Rod may clean for you, and a Squirrel cage too, I think. I am willing for you to have a few such winter pets here in camp, if you care for them properly. It is no harm to keep a Squirrel or a Coon as a well-fed captive in the hungry winter season, if you let them go again before they pine for freedom. Remember, this camp is to be the place for your treasures, summer and winter.

"There is plenty of room in those empty dresser shelves for all the sticks and stones and empty nests you find, that would only be in the way and make a litter in the house."

"Mousey has gone down between the bricks!" exclaimed Dodo. "Is the Deer Mouse a four-footed American, Uncle Roy?"

"Yes, a true native, but the common, brown House Mouse and Rat are the children of foreign parents, who sneaked over here like stowaways, in bales of merchandise, and have now spread from the seaports, like tramps, all over the land.

"By the way, young folks, what shall we call our camp? It should certainly have a name. You shall have first choice,

Olive, as Dodo named the wonder room."

"We might call it after some animal that lives around here," suggested Nat, as Olive hesitated.

"Woodchuck or Fox or Skunk aren't nice names," said Dodo, "though we might call it after the Squirrels."

"What is the very wisest, cleverest fourfoot in our America?" asked Nat.

"The Beaver," said the Doctor; "he thinks, plans, and works, and his house is quite worthy of the skill of a two-handed engineer."

"Then Beaver would be a good name for the camp, only there are none hereabout."

"It would be if it was a go-to-school, working, woodcutter's camp," said Mr. Blake; "but it is too solemn a name for a jolly holiday affair like this."

"I have it," said Olive, the idea coming to her as Mr. Blake spoke; "call it Camp Saturday!"

A clapping of hands followed, that made the room echo and the little Deer Mouse shiver in his hole.

"Let's begin now! We've had our shooting—now let us cook supper and tell stories!" cried Dodo, eagerly.

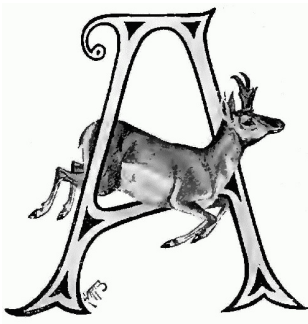
"Not to-day," said the Doctor; "your mother has still some preparations to make; but instead of waiting for the first snow, as I once said, we will have a big game hunt a week from to-day at two o'clock, and at six we will have our first supper in Camp Saturday."

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# VIII

## EXPLANATION NIGHT

### *The Brotherhood of Beasts*



N afternoon spent in what they called hunting—shooting at the targets in the long pasture—had given them wonderful appetites for supper, or probably Dodo would have noticed that she had scorched the cream toast a little, and that there were lumps in the cocoa; but Olive's omelet, with its seasoning of herbs, was as delicious as an omelet can only be when eaten directly from the fire.

Camp Saturday was fairly opened, the first supper eaten, the dishes all washed and put away, and the spider and kettles hung on their nails behind the chimney. The boys did the dish-washing and fed the fire, as division of labor is one of the first rules of camp living.

"I wonder how long it will be before I can hit the Deer when it is moving?" said Nat, who was looking into the fire and thinking of the afternoon's sport.

"Not before spring," said Dodo, positively; "for you only hit it once, way back where it didn't hurt it, when it stood still," speaking as if the target was a live thing; "but I shot my Peccary pretty nearly in the head."

This remark made the others laugh, as Dodo had only succeeded in *missing* the Peccary's nose by an inch or so.

"I don't see how you can shoot so well lying on the ground, Rap," she continued. "I should think it would squeeze you all up; but you hit the Deer twice."

"I suppose it's because I've tried before, with a bigger gun that kicked when it went off, so the little one seemed very easy, and, even if you have two legs, you can keep steadier lying down than standing up."

"Who is going to tell the story to-night—you, father, or Uncle Jack?" asked Olive, hanging up her big apron and taking her place in the chimney nook; for though the campfire was roaring and glowing, the far-away parts of the old room were too cold for sitting still, and the young people wore long coats which Mrs. Blake had made from rough red and blue blankets—a cross between toboggan suits and blanket wrappers, which served not only to keep them very warm, but prevented the wood sparks from setting fire to their lighter clothes.

"We shall not have any stories to-night," said her father; "this will be Explanation Night—the explanation of the Mammal tree, where we shall find our four-footed Americans. You must learn and remember some things about this tree before we begin to climb it, for when Nez and Olaf tell you stories, they may not like to be interrupted by too many questions.

"Do you remember the two great divisions of the animal kingdom or tree, as we call it?"

"Yes," shouted Rap and Nat, "trunk and branches. The first animal was the trunk that separated it from the vegetable world. Animals without backbones were the lower branches and animals with backbones the top branches."

"And what class of animals live on the highest branch?"

"M—mammals, that give m—milk," said Dodo, so quickly that the others had no time to answer.

"Because this top Mammal branch is so large, I told you that I would make a tree of it all by itself. Here it is: now you can see how man and his blood brothers are related." So saying, the Doctor unrolled a long sheet of paper and fastened it to a door, where the firelight shone brightly on it.

"This tree has several more branches when it grows in warmer countries. You can see where they belong: two very low down by the trunk, and one up near the top where the Monkeys live. This winter you must be content to study the tree as it grows north of the Gulf of Mexico and the Rio Grande, up to the land of snow and the northern lights. Nat, go to the



"The earth was once a fiery ball of gases like the sun. The time came when it was needed by the Mind that plans and sets everything in motion, and He began to develop it by degrees as He does everything; for in His realm there is no trickery or magic, nothing without a reason, nothing sudden or unforeseen. So this growth of our planet from a fiery ball to the earth we know took millions of what we call years, and, at first, there was no plant life, but only a molten mass which, when it cooled, turned to rock, making a crust.

"After a long time, when the first animals were needed, they were made to suit the earth as it was then; but the surface of the earth was constantly changing—heating and cooling as the top of a cake changes and cracks in the baking. Land came where water had been; forests where all was barren; then the animal life was changed and changed again and adapted, always growing of a higher kind, until the earth was ready as a home for man himself, who is the King of Animals,—living on the top branch of the same animal tree to be sure, but separated and raised above his blood brothers by wearing the image of God, which is the soul.

"The different periods through which the earth and its vegetable and animal life has passed can be seen by digging down through the earth's crust as you would cut through a layer cake. Some day we will study about this, but now we must return to Man, the two-handed, two-legged King, and look at what he sees from the top of his tree, as he looks down on his subjects and blood brothers, most of whom have four legs, though some, as you will see, have none at all."

"But, father," asked Olive, "do you think there will ever be any higher sort of animal than man?"

"There may be a more perfect race of men than those we know; for of the living races some are more elevated and spiritual than others, and everything in the great Plan moves upward."

"You have made a picture of an Indian on the top branch of our Mammal tree, but there aren't so many of them alive now as of us, are there?" asked Nat.

"No, my boy, I put him there because, speaking correctly, he is a native American like the fourfoots; but a great change is coming over the tree. Some of its lower branches are dying off, as well as the top branch, and of these changes and their reasons I hope you will learn from our campfire stories."

The children looked at the map for some time, reading the names on the branches, tracing with their fingers the different twigs and the outlines of the animals in which they ended.

Finally Nat asked, "Is there anything else in which Mammals are alike except that they have warm red blood and nurse their young?"

"If you should look at the skeleton of a cat, a bear, a horse, and a man, you would see that in the skeletons of all these Mammals the plan is much the same, different parts being developed to suit the way in which the members of each family move or get their food.

"The Gnawers have strong, square teeth, the diggers powerful fore paws, the Leapers strong, long hind legs, the Swimmers webbed hind feet and tails like paddles, and so on, and remember that all Mammals are more or less covered with hair."

"Covered with hair? I never thought of that. Is fur, hair?" asked Rap.

"Fur, hair, and wool are really all the same things, developed in different ways, though they look unlike. The hair of a horse is harsh, of a cat soft, of a Muskrat the longer hair is stiff and wiry and the under-coat soft, and what we call furry. You know that the hair on a baby's head is soft and downy, and not sharp as it grows to be later on.

"There are quite a number of other things that the Mammals have in common with King Man. They have intelligence, as well as instinct, and they can think and reason also."

"I don't quite understand about instinct and all that," said Rap. "I know what thinking is, of course; but I thought that only House People could think and talk."

"Ah, there is where older heads than yours make a mistake," said the Doctor, stooping to pile up the fire that was settling

forward, adding a few pine cones to make it blaze.

"Animals talk, though not in our words, and they have also a language of signs and smells that we but poorly understand, although the savage races and people who live much outdoors have similar ways, and can read many things by this sign language that would puzzle very intelligent House People.

"Let me see if I can explain the difference between intelligence and instinct. Eating comes by instinct; a baby eats without thinking, as well as other young animals. An animal may help itself to the kind of food that its family is in the habit of eating, and that, too, is an act of instinct.

"Now listen, an animal sees a bit of meat hanging in the air; it is bait tied by a string to a trap set to kill him. He does not know this by instinct, for this perhaps is the first time man and their traps have ever been near one of his tribe. He takes the meat and is caught, but succeeds in getting free again. Some animals are so clever that once having been caught, or having seen a brother beast caught, they set to work to think out a way of cutting the string and getting the meat without being caught in the trap. This shows reason and intelligence, does it not?"

"Why, of course it does. Please, what fourfoots are clever enough for that except Foxes? They are smarter than some people," said Rap.

"You will learn of these clever ones branch by branch and twig by twig. I am only trying to tell you how to start up the tree to-night. One thing more about intelligence," said the Doctor. "You all of you have dreamed sometimes; can you tell of what dreams are made?"

No one was in a hurry to answer, and Olive said: "They are a jumble of something that has happened and lots of things that never have, but that seem quite real."

"Yes, that is a good answer; for dreams are a blending of memory—the remembrance of something that has happened—and imagination, which is creating something."

"Making it up, do you mean?" asked Dodo.

"Yes, making up—inventing; so any one who dreams must have more or less intelligence, and many Mammals dream."

"I *know* they do!" exclaimed Nat. "Mr. Wolf dreams and growls away like everything, and the other night Quick was sleeping by my bed and he gave a lot of little sharp barks like those he gives at cats and Woodchucks, and all the hair over his backbone ruffled up; but when I looked at him his eyes were shut tight."

"Mammals are of a good many sizes, and move about in a great many different ways,—run and lope and jump,—but they almost all have four legs, don't they?" asked Rap.

"They are of all sizes, from a Mouse of a few inches to the great Whales that measure seventy or eighty feet in length, but they are not by any means all provided with four legs. Mammals are often called Quadrupeds, or four-footed animals, and the greater number do have four feet; but one has two feet, while others like the Whale have no feet.

"The majority of Mammals live on the surface of the earth, and their limbs are formed for walking. They never have more than two pairs of legs, and may lack hind limbs; but you will never see them with hind legs and no fore limbs."

"There are lots of useful Mammals, too, besides all the little nuisance ones, aren't there, Uncle Roy?" asked Dodo.

"Yes, surely; Mammals are the most useful of all animals. They supply us with meat, milk, hides, wool, fur, horn, and ivory. The Whale gives oil, whalebone, and spermaceti; the hoofed Mammals—horses, oxen, etc.—are draught animals. I want you to look at your tree and I will show you the ladder I have made to go with it. You remember the way in which the Bird Families all walked together in a procession, each wearing his Latin name, that the Wise Men gave him, in addition to his English one. This ladder is arranged so that when you hear a story of an animal, you can look at it and see in what family he belongs, in what guild he works, and his place in the tree. If we ever make our stories into a book we will put this ladder at the end to help little people who might not be able to climb our tree without it."

"Are those fourfoots all made into families and guilds? How is it done, by watching their claws and mouths, what they



eat, and the way they work, the same as with the birds?"

"Partly," said the Doctor, laughing, "only it is teeth and feet with Mammals, instead of bills and claws.

"The Wise Men, by measuring, comparing, and studying the bones of these Mammals, have divided them into groups or classes, keeping those the most like together. This is called *classification*, and is very important. If they had not done this, you would never guess, by looking at pictures or at stuffed animals in a Museum, that a Whale is one of your blood brothers and not a great fish; or that the Bat, that you see flitting about at twilight, is not a bird."

"I'm sure it takes a lot of believing to know that a Whale isn't a fish anyway," said Nat. "Do Mammals have tools to work with the same as birds have chisel and hooked bills and all that?"

"Yes, every Mammal has either a tool or weapon, and sometimes the same thing answers for both, as you will see."

"You need not trouble yourself with learning your ladder by heart all at once; but when you have heard a story about an animal, go to the ladder and it will help you to find on which branch of the tree and to what guild it belongs."

"Shall we make tables as we did about the birds? I love to write them," said Dodo.

"Color, size, and all the guilds to which they belong? I think not," said the Doctor; "for you will not be able to see as many of these fourfoots for yourselves as you did of the birds, and that is the reason why I have made the ladder with a step in it for each animal, plainly marked with its size and color."

"Couldn't we write down the names of the guilds, then?" coaxed Dodo.

"Certainly; if you like, you can end the evening by writing a list of the guilds and groups to which our four-footed, no-footed, and wing-handed Americans belong."

"How many Mammals shall we learn about—one hundred, like the Birds?"

"Seventy-five; I think that will cover all the most interesting, and I have in my portfolio the pictures of about that number to show you.

"We may divide our Mammals into eight chief guilds, though the larger ones have several societies or branches, and I will give you the name of an animal belonging to each guild to help you remember."

- |                         |  |
|-------------------------|--|
| I. <b>Pouch Wearers</b> | The females of this guild carry their young in a pocket. (The Opossum belongs here.)   |
| II. <b>Sea Cows</b>     | Clumsy water animals, who feed upon water plants, helping themselves with their flipper-like fore legs. Hind legs wanting. (Manatee.)  |
| III. <b>Rollers</b>     | Salt-water Mammals, whose fore limbs are hidden in skin mittens. They roll through the water and are helpless on land. (Whale.)  |
| IV. <b>Hoof Wearers</b> | Swift-moving Mammals, with toes compacted into small feet, called hoofs, and having their horns in pairs.<br><br>(a) <i>Rooters</i> . With two upper tusks like a Pig. (Peccary.)<br>(b) <i>Solid-horned Cud-chewers</i> . Hard, branching, bony horns like a Deer. (Moose.)<br>(c) <i>Hollow-horned Cud-chewers</i> . Hollow, curved horns like a Cow. (Buffalo.) |
| V. <b>Gnawers</b>       | The largest guild among fourfoots. Animals with four sharp, front-cutting teeth. All eat vegetable food, though some prefer animal. <i>All the nuisance animals are Gnawers</i> .<br><br>(a) <i>Shadow-tailed Gnawers</i> . Having upright, plummy tails. (Gray Squirrel.)<br>(b) <i>Burrowing Gnawers</i> . Those who make their homes under ground. (Woodchuck.) |

(c) *Swimming Gnawers*. Those who spend part of their time in the water and usually live near it. (Muskrat.)

(d) *Long-eared, Short-tailed Gnawers*. Having Rabbit-like ears. (Wood Hare.)

## VI. **Flesh Eaters**

Mammals with four, long-pointed dog-like teeth for tearing meat.

(a) *Claw-handed Flesh Eaters*. Toes ending in movable claws like the house cats. (Wildcat.)

(b) *Dog-nosed Flesh Eaters*. With pointed muzzles and barking calls. (Fox.)

(c) *The Greedy Growlers*. Beasts who eat both meat, fruit, and vegetables. (Bear.)

(d) *Little Fur Bearers*. Who all yield fur of more or less value. (Mink.)

(e) *Water People*. Great Mammals with flipper-like limbs, living chiefly in the water. (Seal.)

## VII. **Bug Biters**

Burrowers, who kill harmful insects. (Moles.)

## VIII. **Winged Hunters**

Mammals who have membranes between the fingers of their hands or fore limbs that form wings. (Bats.)

"These guilds will perhaps be harder for you to remember in the beginning than the Bird Guilds, for there are more of them, and they have longer names; but if you look at the tree and pictures, and try to remember one animal that belongs to each guild, all the rest will follow."

"Uncle," said Nat, "do our Mammals make long spring and fall journeys as the birds do, and can we divide them into citizens, and summer citizens, and visitors?"

"Oh, yes! and do they pay taxes and work for their living like Citizen Bird?" asked Dodo.

"Nat, your question is easier to answer than Dodo's. Mammals do not travel as birds do, and few, if any, have a regular time for moving except to shift their feeding grounds for various reasons. Of course, if parts of the country are settled by House People, and woods are cut down and wild pasture ploughed up, or waterways drained, the animals who have lived there will move on to new homes; but this is not a regular migration.

"Then, again, grass-eating animals, who spend the summer in the mountains, come down into sheltered valleys for the winter, and so on; but in spite of this we cannot call our Mammals travellers. It is difficult to say which of them are useful citizens, some undoubtedly are, and pay taxes by killing nuisance animals, and yielding fur or food, but in a very different way from Citizen Bird, who works *with* us to raise the crops.

"They were undoubtedly, in the true sense, *all* once useful citizens of the Republic of Nature, when every spoke was in place in the great balance-wheel, and man had only the things that were created for his use, had not invented anything for himself, and was called uncivilized; but all that was long ago. This is changed now, and you will find, when you hear the stories, that guns have driven away animals that arrows could not kill, and some beasts, missing their natural food, have taken to eating things that were not intended for them, and have become beasts of prey and nuisance animals.

"One thing I want you to remember. The skins of these Mammals were the very first prizes that America offered to the white people when they came here—the first wealth of the land. The trappers were of an earlier tribe than the miners. The pelts of the fur beasts brought money while the treasures of gold, silver, copper, and coal were still hidden deep under ground. But man, by killing these Mammals wastefully and even during their breeding seasons, has made them now exceedingly rare. One by one they are growing fewer and shyer, and the animals that came over seas, as we did, in the long ago, are filling their places as far as they are able. The long-horned cattle feed on the prairies in place of the Bison, just as our houses stand on the ground once occupied by the red-man's wigwam."

"But it is better to have House People and cows in America than savages and Bison, isn't it?" asked Olive, who saw that the children looked puzzled.

"Yes, it means progress, and one of Heart of Nature's laws is that nothing shall stand still. When a tree can no longer grow, it must decay and turn into earth, that some other tree may grow in its place; but we should never have killed the wild men and beasts as we did, merely to show our superior strength and for the greed of killing. It is only about four

hundred years since white men set foot on this soil, and yet it seems as if in a hundred more there may be no more *real* two or four-footed Americans left."

"There is the Deer Mouse again," whispered Dodo, who was growing tired, pointing to the hearth corner. The Mouse gathered up some crumbs and licked up a few drops of water that had fallen on the stones, then whisked away again.

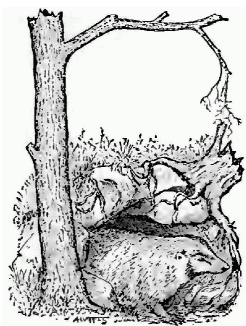
"He likes supper before he goes to bed. Please can we roast some chestnuts, Uncle Roy?"

Every one laughed; no more *reasons why* were asked, and Explanation Night ended merrily to the sound of chestnuts snapping vigorously in a wire corn-popper that the children took turns in shaking over the hot coals.



## IX

### AN INVITATION



BEFORE the excitement of moving into camp had passed away, the children had another treat in the shape of a pair of holidays,—Thanksgiving and the day after. For as the day of Saint Turkey always comes on Thursday, teachers and children agree that it is not worth while to light school fires on Friday, only to put them out again the next day.

"We can begin the stories and have the campfire every night and shoot every afternoon. It's begun to snow already, and perhaps Nez will come down and show us how to make snow-shoes," chattered Dodo, happily, on Monday, as she looked out of the window in the wonder room, into the sky at dusk, and saw the mysterious flakes of the first snow-storm fluttering down.

"Yes, it will be jolly!" said Nat, looking up from the book he was studying; "but I want to do some real shooting, too. Rod says there's lots of Rabbit signs over along the edge of the wood lot, where he was hauling logs yesterday, and he found three forms beside. Then there are fresh scratches on the big chestnut tree up by the hole where the branch broke, and on the earth by the little rock caves, and Rod says that means Coons. Do you think that Quick would make a good Coon dog, daddy? He has an everlasting bark, and that's what Rod says you need in a Coon dog."

Nat came and stood with his back to the fire, spreading his hands between imaginary coat tails, speaking so earnestly and wearing such a sportsman-like air, that his father and uncle laughed outright.

"What kind of forms did Rod find in the pasture, and what have they to do with Rabbits?" asked Dodo, looking puzzled. "I thought forms were the other names for the moulds Mammy Bun puts the jelly and blanc-mange in to harden, so when it's stiff and turns out it is in a pretty shape instead of looking mussy and wobbling all over the dish."

"You are right there," said her father; "but a Rabbit's form is quite different. It is its favorite bed,—the hollow made by it when it lies down in the grass, or among leaves and litter,—which after being used a few times takes the *form* of the Rabbit's body."

"Oh, I understand that," said Dodo, eagerly; "it's a Rabbit mould, only instead of the mould making the Rabbit the way it does with jelly, the jelly—no, I mean the Rabbit—makes the mould. But please, uncle, don't let the boys shoot the little nearby animals on the farm, because I want to make friends with them, and Rabbits are as funny and cunning as kittens, so I'm sure they can't do any harm."

When the laughter had subsided, Dr. Roy took a letter from a strange, dirty envelope he had been holding in his hand, and spread it on the desk before him.

"Here is something that will interest you, Nat, and provide you with real shooting without disturbing Dodo's 'home Rabbits.' In fact, that sheet of paper contains the most tempting invitation I've had for a year. Come here and read it to us, Olive."

Olive looked puzzled at first, as, sitting on the arm of her father's chair, she read:—

FRIEND DR HUNTER: toinette thinks to have a party for three days to begin on thrsday olaf and part of his outfit is coming over she would think it prowdf if you would come to it also friend Jack blake and his boy and the other boy with the one leg which will find coons first rait also fox trails and rabbits which are to many as well as skunks she will make the best cookin of the french which she is half you know you need not answer only come

NEZ—~~~

"What does that mean?" asked Olive, after she had spelled out this remarkable letter, which had neither commas, periods, nor capitals, pointing to three marks like little zig-zags of lightning after his name.

"Why, that's Nez' blaze!" said Mr. Blake, looking at the letter attentively. "Don't you remember, Roy, the mark he put upon his logs so that he would know them among those of other choppers, and the sign he cut on trees when we hewed a path so that we should know the trail for our own? I suppose Nez has never written such a long letter as this before, and he adds his blaze marks to assure us that he wrote it himself and means all he says."

"I call that a fine letter," said Nat, beaming with satisfaction. "Three days in the woods, hooray! It isn't late, may I run down and tell Rap? I suppose, of course, we will go," he added anxiously.

"There is nothing about girls in the letter," said Dodo, "and it will be a dreadfully unthankful Thanksgiving Day with only mother and Olive and me at home, and Mammy Bun may say it is wasteful to kill Mr. Gobble only for *us*, and he is so fat I don't think he will live till Christmas. You will all be so tired when you get home Saturday, and proud with going hunting, that you won't care to cook supper and tell stories in our camp."

Here Dodo's voice broke into a wail, and in spite of brave blinking, a large round tear perched itself on her nose in a position where it commanded attention.

"Oh, Dodo," said her uncle, taking her on his knee, "it is a very poor sportsman that cries not only before he is hurt, but before the gun that might possibly hurt him is even loaded. Cheer up, did you ever know any one at the farm to make a good time for themselves by hurting somebody else?"

"No-oo, but I shouldn't want to be piggy and keep you all at home, either," murmured Dodo, with her face hidden under her uncle's coat-collar.

"There is a useful word in our language that is a very good plaster to cure the ills of reasonable people who wish to do different things, it is *compromise*. Do you know what that means?"

"No-oo," quavered Dodo.

"Each agree and do a *part* of what they want," said Olive.

"Oh, I know now," said Nat; "it's what Rod calls 'split-the-difference.'"

"Exactly, and we will 'split the difference' by staying at home with the ladies on Thursday and having Mr. Gobble for dinner and our story in the evening. Then Friday we will start for Nez' camp, going by rail to Chestnut Ridge Station, and driving over from there, so as to lose as little time as possible on the way."

Dodo's face came from under the coat-collar, and her arms tightened around Dr. Roy's neck so suddenly that he coughed.

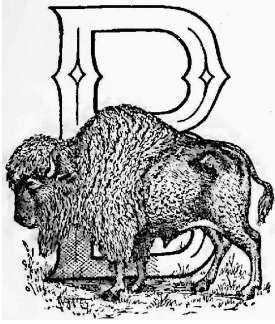
"Wait a minute, that is not all. I think we must have a party ourselves before long and invite all the camp people to come down here. What do you say to a Christmas party, sister Cherry, with a tree and songs and Santa Claus? Will it be too much trouble? No? Then talk it over with Olive and Dodo while we are away, and decide what you want to do and how to do it, and you may put your hand in my pocket for a real Christmas at Camp Saturday."

"My pockets have something in them, too," said Mr. Blake.

"Our bank is choking," chimed in Nat and Dodo.



## MONARCHS IN EXILE



BEFORE dusk, on Thanksgiving Day, dinner was over, and the family had all gathered in Camp Saturday. Mr. Gobble, with his chestnut stuffing, proved so tempting that two small people even begged for a third piece, and every one agreed to have only a light supper before bedtime, and tell stories first.

"Is Turkey a real American, or did he come over with House People?" asked Dodo. "I suppose he did, because he's a farm bird and very cranky to raise, Rod says."

"Turkey is not only a true American, and the emblem of Thanksgiving Day, but our native wild Turkey is the great-grandfather of all the other Turkeys that live everywhere on farms."

The camp was quite in order now, for Dr. Roy had sent to various places for chests of odds and ends that had been stored away and almost forgotten. The board floor was nearly covered by the furry pelts of various beasts, while others were fastened against the walls, where some fine Deer's heads spread their pronged and forked antlers, and seemed to wink their glass eyes as the fire flickered, casting startling shadows.

"Let's make mother a throne by the fire," said Nat, drawing out the settle.

"This old woolly cow skin will mostly cover it," said Dodo, tugging at a bundle that lay partly unfolded in the corner.

"Gently, gently," called the Doctor, coming to her aid. "That 'old cow skin' is something that belongs to the past which I could hardly replace. It once belonged to a Buffalo—that one whose head is over the window. Nat, take the other corner and we will spread the skin carefully."

"It's a pretty big skin—bigger than any of the beasts we saw at the circus; but I didn't know that Buffaloes were rare," said Nat. "I thought the wild West was full of them, and all the Indians did when they wanted meat or a coat was to go out and kill one."

"So they did once, my boy, and not so very long ago."

"There is a picture of some in your animal portfolio," said Dodo, "and in it there are lots and lots of Buffaloes all over everywhere, more than all the cows in the pasture down at the milk farm."

"What shall you tell us about to-night, father?" asked Olive, coming in, followed by the dogs. "How will you manage about the stories; take the animals by families as you did the birds?"

"No, I have another plan. In this portfolio are portraits of our most famous American Mammals, from 'big game,' as it is called, down to the smallest nuisance animal. You shall all take turns in choosing the picture you like, and then I will tell you its story, or, if I do not know it myself, you shall hear Nez, Uncle Jack, or Olaf for a change. Then when each story is finished, you must find the animal on the ladder, and see to what family and guild he belongs. Is it a bargain?"

"Dodo may choose to-night, as she is the youngest. I will turn the pictures, for the portfolio is heavy."

"Did you draw all these pictures?" Dodo asked, as she took her place by her uncle, hardly knowing what to choose from among so many.

"No, indeed, the man who drew these knew the beast brotherhood as well as we know each other. In fact, they are so true that I think Heart of Nature must have stood beside him and touched his brush and pencil."

"There is a Gray Squirrel in here," chattered Dodo, "that looks so funny and real, just like the one in our hickory, that I knew it right away. All these animals seem to be doing something, too, not sitting round looking uncomfortable, waiting to have their pictures taken like some beasts in my reader. I can't choose, uncle; I like them all. Here are three cats' heads

with no bodies; they must have as nice a story as the Cheshire Cat. I think I'll shut my eyes and take the first I touch," she said finally, and her choice fell on the Buffalo, or Bison as the Wise Men call it.

"You could not have chosen better, for from this story you will learn why I value that 'old cow skin' so much. I think, if we name our stories, they will seem more interesting. Let us call this one 'Monarchs in Exile,'" said the Doctor, as he fastened the picture with thumb pins beside the map on the wall, "and I will tell you why the Buffalo was a king, where his kingdom was, and how he comes now to be exiled."

"My!" said Dodo, studying the picture, "he looks like a great, wild, hump-backed bull gone to fur. Doesn't the Buffalo belong to the cow family?"

Nat laughed, but the Doctor said: "Both the imported race of cows and this wild American belong to the *Bovidae*, which we may call the meat family for short, because all the members of it are good for food. The members of this meat family have their toes arranged in cloven hoofs, and wear pairs of hollow horns which, when once grown, last for life. They all chew the cud and are therefore vegetable eaters. You can easily remember that all of the meat family belong to the guild of Hoofed, Hollow-horned Cud-chewers."

"Are not the horns of all animals hollow, and don't they last for life, unless something breaks them?" asked Rap.

"No, the meat family have hollow, curving, rather smooth horns, that begin to sprout when the animal is a few months old, and continue growing until the wearer is fully grown. In the Deer family of cud-chewers these horns, or antlers as they are then called, are of solid bone, pronged, tined, or spreading. They are shed and grown anew every year, and the reason for this is very interesting—horns, prongs, and antlers being a whole story by itself. Now let me return to our Buffalo. First look at the head and hide, then at the complete animal in the picture. Can you imagine a more powerful or fierce beast?"



THE BISON.

"No," said Nat and Dodo, promptly; but Rap hesitated a little and answered shyly:—

"He must be very big and strong, yet somehow he looks rather stupid, too, as if he wasn't thinking about much of anything. But then," he added, as if fearing to be unjust, "perhaps it is the glass eyes that make the head look so sleepy."

"You are perfectly right, Rap; stupidity was the chief fault, or rather misfortune, of the Buffalo. The foremost Buffalo in the picture is an old male; these males were often six feet high at the shoulder, and measured ten feet from the tip of the nose to the root of the tail, eight feet around the body just behind the fore legs, and weighed from fifteen to seventeen hundred pounds. Those we saw at the circus were born in captivity, and were much smaller. The ponderous head is shaggy, with a tufted crown between the curved horns that match the hoofs in blackness. The nose and lips are bare, but the chin is bearded. The shoulders and fore legs down to the knees are covered, as you see, with thick woolly hair, while the hair on the back parts of the body is shorter and more wavy. The hair varies in color and length on the different parts of the animal, ranging from yellowish brown to nearly black, and being from four to ten inches in length. Under the long hair and wool is a thick under-fur, which grows on the approach of cold weather and is shed, or moulted, again before summer."

"Oh, what a mess the poor thing must get into when he moults," said Dodo, stroking the Buffalo robe. "He has nobody to comb him, and I should think he would all stick together and tangle. How does he manage, uncle? Does he scrape through the bushes the way a snake does to pull off its old skin?"

"You have judged rightly; the Buffalo has a hard time with his coat, and only looks really respectable a very small part of the year. During four months he is well dressed, for the other eight he appears in various stages of rags and tatters. In October he is quite a gentleman, wearing a new suit of beautifully shaded brown and buff which he manages to keep fresh and bright until after Christmas. Soon after this the effect of wear and tear, storm and snow, appear in a general fading. You can easily see, however, that the Buffalo with his winter coat added to a thick hide, could defy the weather even of the most open, windswept country, and must be one of the hardiest of our fourfoots.

"All this tells you how the animal looked. Next you must know why he was king of American fourfoots: it was because of his usefulness to the two-footed Americans—the Indians who lived with him in wood, plain, and prairie, but chiefly in the open plains. In the long ago every part of the Buffalo was of service to the wild people who had never seen a white face, a horse, or a gun. In fact, it is strange that this shaggy brown monster of the plain was not worshipped by the savages as a god; for during the last three hundred years of their liberty it was the Buffalo chiefly that made it possible for them to live. As long as the Indian had the Buffalo to supply his needs, he was independent and unconquerable.

"In the far back time, of which there is no written history, man had no other instruments of killing than did the beast brotherhood, not even the stone axe, or bow and arrow, being closely akin to the wild beasts themselves, who were armed only with teeth, claws, and cunning. Man must have lived originally on fruits or animals weaker and less sure-footed than himself. In this struggle for a living the mind in man began to develop, and he shaped a club or a stone axe, made traps and then caught animals that gave him material for better weapons. What animal could give him more than the Buffalo?

"The hairy skin made warm robes and other garments, the hairless hides furnished tent coverings, bags for carrying food, and, later, when horses came, saddles, also boats, shields, rawhide ropes, etc. The sinews made the thread to sew the robes, the lattice for snow-shoes and strings for bows; from the bones were fashioned many articles of use and ornament; the hoofs and horns gave drinking cups and spoons, as well as the glue with which the Indian fastened his stone arrow-heads to their wooden shafts. Even the droppings of the Buffalo, when dried, were precious for fuel. These parts of the Buffalo would alone have made him valuable; but we have not mentioned the meat, the rich, nourishing, wild beef of North America. Think of the hundreds of pounds of food one beast would yield!"

"Wasn't it rather tough meat?" asked Nat. "That old fellow there on the wall looks as if he would have needed as much chewing as the gum Rod gave me from the old cherry tree."

"The meat of an old Buffalo bull certainly was tough, as the meat of any other old animal is likely to be; but the beef of the three-year-old, or the cows, is as delicious as our best roast beef.

"Only a part of the meat was eaten fresh, the rest was dried in various ways and kept for further use; for the whole thought of the savage was given to self-preservation from two ghosts that crossed his path at every step,—his human



enemies and starvation. Often the last was the more cruel of the two. So the Buffalo tongues were smoked and dried, the marrow from the bones packed away in skins, while all the titbits were pounded fine, mixed with melted fat, and sometimes berries also, to make a sort of hash more nearly like sausage-meat than anything else, which was called *pemmican*. When we think of the Buffalo, we must think of the Indian also, and if the Indian did much at last to send this beast brother into exile, he also has shared it with him."

"Have Indians and Buffaloes always lived in North America," asked Olive, "and if they did not, where did they come from?"

"Always is a long time, for when the earth was very young there were no people anywhere. I suppose you mean were the Indians the first people *known* to live here. Yes, and they may have been the very first people to live on this soil—a race by themselves. At any rate one of the first European discoverers to set foot on the North American continent found the Indian here and also the Buffalo. Strangely enough the first Buffalo described did not appear as a king of the plains, but a captive in a Menagerie.

"It was nearly four hundred years ago, when Montezuma II was Emperor of Aztec Mexico, that a Menagerie stood in the square of the Capitol. Among the other beasts in it was one called by an early writer a 'Mexican Bull, resembling many animals combined in one, having a humped back like a Camel, a Lion's mane, horns like a Bull, a long tail, and cloven hoofs,'—this beast was the American Buffalo.

"How he came to be there no one knows, for they were not afterward found to range so far south, but he was probably captured by some of the Mexicans on their northward expeditions.

"Between this first Buffalo of the Mexican Menagerie and the last (which one of you young people may live to see) stretches the history of this tribe that exceeded in numbers any other of the greater beasts of the earth. It reads like some wild legend or impossible fairy tale, yet it is all true and took place in the western half of our own country, and when the west wind blows fiercely around the farm, it has often swept over the very plains that were the Buffalo's kingdom. Whole books have been written, and yet have not told half the tale, which is in a way the history of the killing of all the great American fourfoots as well.

"The Buffalo's history is in three acts and many scenes. First, the golden days of peace and plenty, the rightful killing for food, with laborious hunting, a fair fight between man and beast. 'Take what ye need to eat,' said Heart of Nature to man and beast alike.

"Then the white and red men joined in the pursuit; fleet horses were used in the chase instead of men's feet, bullets killing from afar replaced the arrows shot at close range. Not merely meat to eat or hides for covering, or reasonable trade, but waste and butchery. Skins traded for whiskey,—the skins too of cows and their young.

"Last of all came the railroads, bringing the white hunter with his deadly aim into the last retreat of the herds. These three acts will show you the living, the hunting, and the butchering of the Buffalo.

"At first the Buffaloes ranged over all parts of North America where they could find suitable pasture. See, I have made lines on the map to show you how it was found in two-thirds of what are now the United States, living in western prairies, forest-park land, the plains, and far up on mountain sides, being found in the Northwest up to the land of snow. Buffaloes, as you know, are cud-chewers and, of course, grass-eaters, though when pushed to it they will eat sage brush, and for this reason they were obliged to move about during the year more than any other fourfoots, except one kind of deer; those in the south going north as summer dried the grass, and the northerly herds leaving their summer pasture before heavy snow falls. Buffaloes usually moved several hundred miles south as winter came on, and in these annual migrations great numbers lost their lives; for often the vast herds would make this journey on the full run,—stampeding, it is called. Pushing blindly along, masses of them fell into quicksand and over cliffs, or broke through river and lake ice."

"What made them stampede? Was not that very stupid of them?" said Nat.

"Yes, but like most animals who live in flocks or herds, and people who live in thick communities, they were both curious and stupid—what one did they all did. You know if Nanny Baa starts to run all the other sheep follow her,—

where, it does not matter to them."

"Yes, and I've noticed that they all try to get through the same hole in the wall, or pack tight into some little corner."

"The grass was best in the valleys along the watercourses, and you would expect the Buffaloes to stay in such places; but they were stupid even in their search for food, and wandered out on the dry plains where the grass that bore their name was turned to standing hay by drought and heat.

"The Buffalo had no private life; his time was spent in a crowd from the time in spring, when as an awkward calf he found it difficult to keep up with the herd in its march, until his life was ended either by rushing with the stampeding herd into an engulfing bog, or, if straggling from the herd, wounded or feeble he fell a victim to the grim gray Wolves who were as the Buffaloes' shadows, following them ceaselessly.

"The fact that the Buffaloes grazed far and wide made their daily march to the watercourses a ceremony of great importance, and their kingdom was furrowed deeply by these trails worn by innumerable feet as they all followed their leader to the chosen watering-place."

"How did they choose their leader?" asked Dodo.

"Why, the strongest bull, of course," said Nat.

"No, on the contrary, the leader whom they trusted was often some wise old cow. When she gave the signal, the feeding stopped, off they all marched, perhaps miles across country until water was reached, always, in spite of their stupidity, choosing the safest and most direct route to the desired spot."

"How did people find that out, by watching them?" asked Rap.

"Partly, but their paths or trails were cut so deep, sometimes two feet, in the clayey ground, that they remain to this day. You see in the picture the Buffaloes are coming down a trail, and with them is another king of the plains,—the sand-colored sluggish prairie Rattlesnake. Big as the Buffalo is, he does not care to pull the leaves from a tuft of curly grass if he sees one of these snakes near it. Nature evidently whispers to the Buffalo very early in life: 'The little horny knobs on your head will surely grow, a lap for each year: at three you will carry sharp spikes; at ten polished black curved horns; at twenty, if you live so long, gnarled, furrowed stubs,—yet do not be proud, remember that gray Rattlesnake coiled in the dust carries in his mouth two fangs as deadly as your fiercest charge. Be friends; do not dispute, but share your kingdom with him.' So they lived together, but the snake has outlasted his brother king."

"I shouldn't think then that plains would be nice places to stay," said Dodo.

"They are not," said Olive, decidedly.

"You are thinking of my story about the time I was belated, twenty years ago, and had to camp on the ground instead of coming on to your mother at the ranch," said the Doctor, laughing.

"Did snakes chase you?" asked Nat.

"No, but the spot where we were obliged to make camp was full of their holes, and our horses knew it and were uneasy; yet they were utterly spent, so we had no choice but to rest and picket them. We stopped up the snake holes with hot ashes from our fire, which by the way was made of Buffalo chips or droppings, spread a hair rope or lariat in a circle inside, while we put ourselves *on* rather than in our blankets."

"Why did you make a circle with the rope?" asked Rap.

"Because one of our party, a scout, said a Rattlesnake would never cross a hair rope, so we put it there to please the man."

"Did they cross it?" asked all the children together.

"No, we started in the morning on our search for water before a single evil-eyed snake had wiggled out, but I thanked the ashes, not the magic rope."

"Isn't the water rather warm and stale in these water holes? It usually is in such places here," said Rap, looking at the picture again.

"Of course it is! Dearie me!!" exclaimed the Doctor. "You youngsters would not even know it for water. Wetness is the only thing it has in common with the poorest puddle on the farm. Much of the water of prairie and Bad Lands is a cross between green whitewash and pea soup. Sometimes the lime, of which it is full, shows white and crusty round the pool edges as early ice does here. But to return to our Buffalo procession.

"If it was a warm day they would often take a roll in the pools after drinking, and you can imagine what a spectacle a woolly Buffalo would be after such a bath in a mud puddle."

"How could they like to be so dirty?" said Olive, who, in spite of her love of everything wild, was as dainty as a white kid glove.

"They had a practical reason: the mud dried into a crust that kept the insects from driving them wild. From doing this frequently, and turning round and round as they wallowed and splashed, many of these pools were shaped into sort of deep, round bath tubs, as a potter shapes a clay vessel with his thumb. In fact, Buffaloes were so fond of rolling to scratch themselves, that they also rolled head first in earth and sand, as well as water, and in time their horns came, in this way, to be worn and stubby. An English traveller, early in this century, wrote that in Pennsylvania, before the Buffaloes had learned to fear people, a man built a log house near a salt spring where many Buffaloes came to drink. The Buffaloes evidently thought the house would make a delightful place to rub and scratch, for history says they actually rubbed it down!

"Before they learned the dread of House People, and the necessity of keeping constantly on the watch, the Buffalo's life was much like that of the great herds of domestic cattle that now range the same prairie pastures. The calves frisked and played, the herds had their times of rest, of plenty and of scarcity, though the Buffalo was a difficult animal to starve, and faced out blizzards before which the domestic cattle would turn tail and perish. This was one great reason why he should have been protected, and this magnificent monarch kept in his kingdom and developed to suit present need. The Buffalo was able to withstand all the natural dangers, of cold, hunger, and prowling Wolves, to which he was exposed, and still increase and multiply. They made good fathers, too, taking the young calves under their protection, sometimes hustling them along through the Wolf packs with horns lowered and tails raised, keeping the calves well inside the flying wedge. Their vitality was so great that, if in falling over a precipice after some foolish run, a leg was broken, its owner was quite able to go about on the other three until it knit again. This is the first scene,—the golden days of the Buffaloes,—when they swarmed by hundreds of thousands like mosquitoes over a marsh. These were the days when the red men had no weapons sufficient to kill them.

"Listen to what came upon the Buffalo in the second scene, in the days of fair hunting, this time beginning we do not know when and lasting until threescore years ago."

"How many is a score, more than a dozen?" interrupted Dodo.

"A score is twenty."

"Are there two kinds of scores?" persisted Dodo, "for you know, Uncle Roy, a baker's dozen is thirteen, and a dozen postage stamps is twelve, and down at the store they sell sticks of candy by postage-stamp measure."

"A score is no more nor less than twenty," laughed the Doctor; "but do not lead me away from our second scene. When the Indian had no weapons, he could slay only small game, and even when he had only a club and stone axe to help him the killing of the thick-skinned, wool-clad Buffalo must have been a difficult task. Do the best he could, the red man had to work desperately hard for every pound of flesh or hide he captured.

"Then the mind of man began to develop and aid him. The Indian, knowing the Buffalo's habit of stampeding from fright, laid stones, sticks, and brush on either side of some open space to make a sort of driveway, wide apart at first, but gradually narrowing until it ended either in a sort of pen or at the edge of a precipice.

"After a herd was located, and this in itself was not always easy, a disturbance was made to start it running in the right

direction. Perhaps a man went out and waved his arms, retreating down the driveway as the first of the herd came near to look at him. The curious animal would quicken his pace, and as soon as he was fairly started the Indian slipped behind the barricade and joined with his comrades in shouting to frighten the herd that were now following their leader at full gallop.

"On the mad throng rushed, crowding and trampling each other as the track narrowed, until, when they arrived in the pen, they were giving each other mortal wounds, the calves tossed on the horns of the old bulls and the weaker trampled to death. Then, amid great personal danger, the Indians rushed in and killed those not already wounded, with stone axes, or in later days shot them with their flint arrows. You can see that it must have taken a strong arm to send a clumsy stone arrow through the thick Buffalo hide. If the animals were driven over a cliff and fell crippled at the bottom, the killing took place there in the same manner as in the pen. After the slaughter, the men discussed various scenes of the affair as if it had been a battle between tribes, and the women came in, skinned the animals, cut up the meat, packed it on their wheel-less dog-carts, and took it to camp."

"How can there possibly be a cart without wheels? It would only be a box that would bump and spill," said Dodo, who had kept quiet an unusually long time for her.

"This Indian cart, as wheel-less as the Eskimo sledge, is called a *travois*, and is still in use among the scattered tribes, except that now it is dragged by horses. Can you imagine how it was made?"

"Oh, I know what it is; we saw it at the Wild West Show! Don't you remember?" shouted Nat. "The thing like a pair of cross-legged shafts fastened to the horse's back, with the big ends trailing on the ground, and braces across right behind the horse's back knees, to keep it together and make a place to hold things!"

"Yes, that was a travois, and it is possible to drag it over ground that would quickly break cart wheels. Some time after, when the civilized races or House People came to America and settled along the coasts, the horse found its way among the Indians. He came with the Spanish through Mexico in the South, and from the Canadian French in the North. Soon an Indian's wealth began to be measured by horses, as we measure ours by dollars. Indians mounted on half-breed horses followed the Buffalo over the plains, with greater success, for, as the old range of these animals in the East and South was being peopled and cultivated, the Buffalo crowded westward, as the Indians themselves were soon to be crowded from their hunting-grounds. This was the beginning of the end, though it took many years yet to drive the monarch from his kingdom.

"Act third came, passed rapidly and with it the Buffalo. Firearms, from musket to pistol, were plentiful, and then followed the deadly, long-range rifle. Stupid greed fell upon the Indian and white settler alike. No one listened to the warning cry, 'Take what ye need to eat.' It was not only flesh for food and hides for covering, but hides for sale, and cow hides at that, with no respect of season. The Indian found that much deadly fire-water could be bought for Buffalo skins, and also that the hides of the females and calves were the softest and most valuable.

"So then the massacre began; for it was outright murder to kill the females and young. Whites and Indians went out to kill, as an army prepared to manoeuvre, surprise, trap, and give no quarter. The Buffaloes were chased by men on horseback, who shot with pistols, as more easily used with one hand, and were also shot at from ambush with the long-range rifle, so that the poor bewildered things, often seeing no enemy, did not know in what direction to escape, and huddled together helpless victims. Still they held their own and increased until the last scene of all took place; and it seems to me that it was only yesterday.

"A railroad stretched its iron arm across the country,—it was the Union Pacific. Have you ever seen the ants rush out of a great hill that has been disturbed? Could you count them?"

"Oh," said Rap, "I've seen them often, and you could no more count them than you could drops of water in a hurry."

"Well, so it was with the Buffaloes; there were never any large fourfoots on earth to equal them in numbers, and even in my day we have true records of a single herd of no less than 4,000,000 head. A friend of mine once, riding on a train, passed for more than one hundred miles through a single herd. It was dangerous, I can tell you, for the trains, and they often had to stop to let the Buffaloes pass by. At this time the Buffaloes were then in two great herds, the northern and the southern. Then these began to melt away as great snowballs do in the sun. Railroads meant an easy way to reach the

Buffaloes, an easy way to transport the skins; for it was the skin more than the meat that was desired. The engine whistle sounded the exile of this monarch, and for ten years his kingdom, shrinking and shifting, was a battlefield strewn with skinned carcasses. Next, the horns were gathered, and finally the bleached bones themselves were carried away to be ground into fertilizer, and thus make the obliteration complete.

"During a few years more there were stragglers here and there, and, in 1890, when I was going westward from the Black Hills in Wyoming, I shot the beast whose head and skin we have here now. I said, 'I will take this eastward when I have a home again, that my grandchildren may believe that such beasts lived, and that their grandfather knew them on their native plains, for by that time this king will be in exile.' It has all happened sooner than I thought.

"Now a few, a mere handful, twenty-four perhaps in all, live wild in the Yellowstone Park. A hundred more are scattered here and there in kind captivity, where they may live for some time, but lose their type and spirits like the captive Indians. Now you may travel the plains from New Mexico north and see no other trace of the Buffalo than a weather-beaten skull,—the perch for a burrowing Owl, or the retreat of the other king, the Rattlesnake.

"As the Buffalo vanished, the Indian as a freeman vanished also; his wild beef is gone and he is given rations in begrudged charity. Once both Buffalo and Indian might have been developed to useful citizens; now, if we succeed in preserving either race, it will be only as captives. The kingdom of each is destroyed, and the people of this land are not blameless."

"It's a very sad story, and I'm afraid the left-over Buffaloes won't like it very well even in the new Zoölogy Garden," said Dodo, attacking the word bravely, but missing it. "Any sort of land with a fence around it must seem crampy for them. I'm very glad, anyhow, that I saw those at the circus."

"I'm sorry for the Indians and the Buffaloes both," said Rap, solemnly, after a long pause when every one sat silently looking at the fire; "but I s'pose if white people wanted the land, it had to be because of what the first selectman calls 'progress'!"

The elder people laughed heartily at this, and Nat said, "I don't see what he has to do with Indians and Buffaloes; he's old Mr. Hodder down by the bridge, and he's never been anywhere."

"Perhaps not," said Olive, "but I know what Rap means. This is the way it happened. You know Widow Hull that has the little house beyond East Village by the tollgate?"

"I do," said Dodo. "She makes lovely taffy and jumbles and ginger pop!"

"Well, she won't any more; they are going to take away the tollgate and her house, to make the road wider to run trolley cars on. Mrs. Hull has to move, and she feels dreadfully, and says she'll starve. I heard her talking about it to Mr. Hodder.

"'The town'll give yer a lot and move yer house across lots down to the next corner,' said he. 'Yer can sell yer truck there.'

"'But,' said Mrs. Hull, 'the trolley cars go by downhill there and nobody'll stop to buy. They all *had* to stop at the tollgate!'

"'I know that, marm,' said he, getting cross, 'but it's progress; progress always hurts somebody, marm.'"

"Won't yer please hand in dis yer tray, Massa Blake," said Mammy Bun's cheery voice at the door. "I doan like walkin' on dem skins and tings, dey slipped me down yesterday, dey did; good rag carpet tacked tight am fine 'nough for dis ole 'oman. Lan' sakes, how can dey take pleasure sittin' in dat barn room, like dey had no good home all fixed nice," she muttered, as the door closed behind her.

The tray held a light supper, because after dinner the children said they could not possibly eat a real supper; but after Dodo and Nat had made three trips to the kitchen for fresh supplies of toast and biscuits, they decided that it was never safe to say immediately after dinner that you would not be hungry for tea.

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"Poor old Buffalo," said Dodo, sitting on the settle by her mother and stroking the wavy hair of the robe, "you were one of the biggest of our fourfoots, and now all that is left of you is a skin and a stuffed face. Please, Uncle Roy, don't you think the skin would feel more at home over there on the wall by its head than in being sat on?"

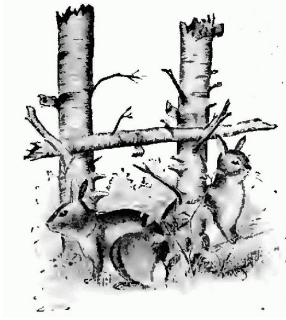
Amid the general laugh that followed, Nat went to the window, rubbed the frost from the pane, and looked out.

"Oh, daddy! Oh, Uncle Roy!" he cried, "the moon is out, and the snow looks smooth and crisp! Could anything be jollier for to-morrow? Rod says we can learn to tell animal tracks quick as anything in new snow. Suppose I should shoot a Rabbit to bring home to mother, and we may even see a Coon! Only I think it will be much harder to hit a real running Rabbit than our Deer target, even with the little shot-gun."

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## XI

### RABBIT TRACKS



OW dark it was the next morning when the four boys gathered in the kitchen for their breakfast at 6.30. But then you know what is late in summer is early in winter: it all depends upon when the sun chooses to get up and make day.

You may also wonder who the two boys were beside Nat and Rap. If you had been there, you would have seen that they were the Doctor and Mr. Blake, who were in as high spirits as the children, and played so many pranks that Mammy Bun could hardly pour out the coffee for trying to hide her laughter.

"Where is the little shot-gun?" had been Nat's first question on coming down. "Is it loaded?"

"I think not, but I will look to make sure," said Mr. Blake. "Ah, don't do that," he added quickly, as Nat tried to look down the gun barrel. "Never do that. What did I tell you the first day you shot at the target? Open the gun here at the breech by pulling down the lever so, always being careful not to point it at anybody or thing. Never take it for granted that a gun is not loaded, and never trifle with it under any circumstances. It depends entirely upon how you behave toward this little gun whether your uncle ever gives it to you for your own or not; but for the present you must be content never to even handle it except when one of us is with you."

"Aren't you going to take any nighties?" asked Dodo, who had come down dressed in a rather confused mass of the warmest clothes she could find, half hoping that, in spite of everything, she might be allowed to go at the last moment.

"No, missy, the only way we could use nighties at Nez' camp would be to put them on over our clothes. A good blanket apiece will be much more useful."

"The stage-driver from Chestnut Ridge way allowed, when he came down last night, they had a big fall er snow there yesterday, that is, big fer the season," said Rod, as he drove up with Tom and Jerry in the farm wagon, deep with straw to keep feet from chilling.

"Why didn't you bring the sleigh?" called Olive from the window, where she stood in the dusk to watch them off, wrapped in a down quilt.

"Snow's too soft; be all cut up down by the daypo."

"There's an old sled in the barn, may I take it with me? If there's thick snow at the Ridge, there may be some at Nez' camp," said Nat, eagerly.

"We have as much as we can carry now, my boy," said the Doctor, "and you may be very sure if there is enough snow for coasting, Nez will have some sort of a contrivance for you to do it with."

"Oh, look!" cried Rap, pointing toward the southeast. The turnpike stretched a pure white pathway between the purplish gray arch of bare maple branches, and where it seemed to touch the sky, the sun was sauntering out from a purple and gold gateway.

"Good morning! Are you all washed and dressed?" called Dodo, kissing her hands to the sun in particular and then stretching out her arms to the beautiful world in general.

"Which reminds me, speaking of washing," said her father, kissing her and setting her down inside the door, "that I do not believe you have been on speaking terms with your own particular cake of soap this morning." Dodo laughed and went upstairs "to," as she said, "unbuild her clothes and begin all over again."

"Let's run," said Tom to Jerry, as they turned out of the gate; "I feel so very fly that I should like to fly. Why don't you laugh? That's a joke," he continued, jogging Jerry with his shoulder and nearly upsetting him.

"Better not try it," said Jerry, settling his gait again, "or we may be put to haul logs, or in the threshing-machine, instead of dragging a sleigh, by and by, and hearing House People tell funny stories."

"Look at the tracks all over the snow everywhere, I didn't see any yesterday," said Nat, as they drove down the turnpike; "some big and some little and some tiny. What do they all belong to, daddy?"

"Rabbits chiefly,—they are almost all pad-footed prints. I see one trail that belongs to a Skunk; and another, those sharp clean jumps by the stone fence, tells of a Mink; the smallest, like a bird track, probably belongs to a Meadow Mouse. You did not see them yesterday because the little beasts seldom come out until the second day after a snowstorm. We haven't time to stop for you to look for them, but we shall find plenty more at the mountain."

"Rabbits are rather common everywhere in America, aren't they?" asked Rap.

"Yes, some member of the family is to be found everywhere, from the Polar Hare of the Barren Grounds to the Jack Rabbit of the hot sand-deserts of Texas and the southern half of the entire West."

"You call some Rabbits and others Hares. What is the difference between a Rabbit and a Hare? Don't they belong to the same family?" asked Nat.

"Perhaps they work in different guilds," ventured Rap.

"No," said the Doctor, "they all belong to the long-eared, short-tailed gnawers, with the patent-jumping hind legs. The difference is, beside size, that little Hares are born in grassy nests with fur on and their eyes open; while little Rabbits are naked and blind and are born in burrows. All *our* species are Hares. The Rabbits that House People keep sometimes as pets, are true Rabbits, children of European parents, and not American fourfoots, though we still continue to call our Hares, Rabbits, the same as we call Bisons, Buffaloes."

"See, there goes a common Rabbit now!" cried Rap. "How he bobs along and then stops and sits up; do stop a second, Rod. He's looking at something by that tree and doesn't hear our wheels, because of the snow!"



WOOD HARE.



"What queer tracks he makes," said Nat. "I thought the two big marks were made by his fore feet; they look as if he hopped backward, but he doesn't. How are these tracks made, uncle, do you know?"

"Yes, but I am going to let you and Rap find that out for yourselves."

"I know," said Rap; "he swings his hind feet around his fore paws. I've often watched one do it."

"There is a Downy Woodpecker tapping on the tree," said Mr. Blake. "Now Bunny sees it, and his nose twitches as if he were saying, 'Hello! is it only you making all that noise?'"

"I wonder what makes Rabbits so very scarey," said Nat; "they always seem to be afraid of something, and their ears never stop jerking and twitching."

"It's because everybody and everything is always chasing them," said Rap.

"Precisely! If you could spend a single day inside one of their leaf-brown skins, you would very soon see why poor brother Rabbit is so timid. Half of the year he is hunted by man; all the year, in wild places, he is the daily meat of the Fox, Skunk, Mink, Wildcat, and the larger birds of prey, and when he comes near villages or farms the house cats and dogs take their turn at chasing him."

"There's an everlastin' sight too many on 'em anyway," put in Rod; "if they wasn't kep' down somehow, there'd be no use farmin'. If you mean to grow turnips and mangels nex' year, Doctor, yer'll have ter clear some on 'em out o' the long wood."

"I don't see why there are any left at all," said Nat; "how is it, uncle?"

"Heart of Nature gives the smaller, feeblar animals many ways of hiding and a great many children, to make up for the dangers they run, as we found he did with the birds. You remember that the Hawks and Owls, with their strong beaks and claws, who nest in far-away lonely places, laid fewer eggs than the birds who were weaker, or more exposed to danger. You know that the Ruffed Grouse and Bob-white, whose nests are on the ground, have a great many eggs, and are protected beside by the likeness in color of their feathers to the leaves and rocks. Color protection, it is called."

"Oh, yes, I remember," said Nat. "Then do the fourfoots have this color protection too, and do they moult their fur as birds do feathers and change color?"

"Don't you remember the Buffalo moulted his hair every spring, and looked as miserable and ragged as any old rooster?" said Rap.

"Yes, of course, but he didn't change color very much, only sort of faded, and then plenty of birds like Sparrows and Thrushes don't change much either."

"Several of our fourfoots change color as completely every year as the Bobolink or Tanager," said the Doctor.

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They reached the station not a minute too soon. After settling themselves in the passenger car,—for there was only one and one baggage truck,—as the frost was too thick on the windows for them to look out, they continued their talk about Rabbits.

"How long must we stay in these cars? They are dreadfully stuffy," said Nat, as he took off his cap and scarf and helped Rap to unwind his.

"Less than an hour," said the Doctor. "We go around the hills and the mountain and stop the other side, instead of going through and over as we did when we drove there last month."

"How many children do Rabbits have every year, daddy, and where do they live,—in holes like Woodchucks, or haystack houses like Muskrats?"

"Our Gray Rabbit, or Wood Hare, as the Wise Men wish him called, hides in holes or burrows, generally made by some

other animal, sleeps or rests often in a *form* made by its body in the grass, and cares for its young in a ground nest, lined with grasses and its own soft fur, which hides the little Bunnies from sight. Three times a year a single pair of Hares may have a nestful of young to care for, so you can easily see why there are plenty of them. But the Wolf, the Bear, and the Wildcat, who have protecting teeth and claws, do not have so many young. In fact, the Bear and Wildcat have to be content with only three or four."

"Are there many other kinds of Rabbits in this country beside the Wood Hare?" asked Rap.

"Twelve or more, though four or five are all that will interest you."

"Do tell us about them now," begged Nat, "it won't make it seem so long in getting to Chestnut Ridge, and these cars are so slow!"

"Yet the way seemed long before him,  
And his heart outran his footsteps!"

hummed the Doctor.

"What does that mean? It's poetry," said Rap, "but I don't understand it."

"It means that when you want to get to a place *very* much, you wish yourself there so much faster than you can possibly travel, that the journey seems about four times as long as it really is!"

"If we hear about Rabbits now, won't Dodo be disappointed?" asked kind-hearted Rap.

"I have pictures of them in my portfolio, and you boys must remember and tell her all about them.

"Of these four Rabbits the Wood Hare, the smallest and prettiest, is something less than a foot and a half long from the tip of his nose to the root of his cunning little turned-up white tail."

"Is that the way you measure fourfoots, to the *beginning* of their tails?" asked Rap. "We measure birds to the *end* of the tail."

"Yes, but a bird's tail where it joins the body is so overlaid with feathers that it is difficult to tell where it begins and the body ends; with fourfoots it is different. If I should tell you, for instance, that a Red Fox was four feet long, you would think him much longer than he is, and not understand his size as well as if I said his body was two and a half and his tail one and a half feet long."

"Yes, I see; if the tail was measured in, he would seem a giant."

"The Wood Hare has large eyes, long ears, the long hind legs of the family, also fur snow-shoes on the soles of his feet."

"What good are such long back legs?" asked Nat.

"To jump with; every animal family has some particular way of moving,—locomotion it is called,—and Hares are leapers, which is told in the Latin name *lepus* the Wise Men give them."

"Does this Hare ever change color and moult?"

"He keeps very much the same color all the year,—a grayish brown top coat with bits of yellow and a whitish vest. As to moulting, all fur-bearing animals moult spring and fall, and have a long hairy covering that they wear all the year, and a short soft under-fur that grows thick to keep them warm in winter and thins out in spring. Animals from the North need most protection and have the thickest under-fur, so are of more value than the same sort of animal who lives in the South and has little need of under-fur. All the old hair has its time of breaking and shedding like the hair of our own heads. This Hare likes to live near woods where he can find tender shoots to nibble, when gardens are empty and meadows covered with snow; but he spends most of his time in brush lots where there is thick shelter, and he lives in every state in the Union that can yield him food. Pretty and gentle he is, yet no one can deny that he is a mischief-maker, and while he must not be allowed to eat our lettuce, cabbages, or field roots, we must also be careful not to exterminate him."

"What good does he do? Can he earn his living and pay his taxes?"

"Yes, he does, in a roundabout way, by being food for some other animal, who would eat more valuable things if it were not for poor little Bunny.

"Another Hare which might be mistaken for the Gray Rabbit is his swamp-loving cousin, the Marsh Hare who lives south of North Carolina, taking to the water like a rat. This Marsh Hare has a large head, short ears and legs, and little or no hair on its soles, so that its footprints show the mark of the toe-nails. Its coat is darker in winter than in summer, and is always a deeper brown than the Wood Hare's, and its tail is a mere scrap lined with gray."

"Why do they have shorter ears and legs than the Wood Hare, and no fur under their feet?" asked Nat.



MARSH HARE.

"Mammals, like birds, are all adapted to the places in which they live. A Hare living in open woods and fields must have long legs to give him speed to run to cover and long ears to catch the least sound of danger. The openings of their ears are sidewise, though they can move them forward and back when they are listening. The sense of smell and hearing in the gnawing fourfoots seems to be chiefly used to tell them where their enemies are; while the ears and noses of the flesh eaters serve to guide them to the animal food they hunt. The ears of the cannibal beasts open forward, and have little pockets in their outside edges, like sounding boards, to catch the sounds coming from behind them."

"Why, Mr. Wolf and Quick have those things in their ears. I've often wondered whether they were tears or bites, or made so on purpose," said Nat.

"To return to our Marsh Hare, who lives in soft ground, hiding by dense bushes and often hides in the water itself with his ears flattened back and only his eyes and nose peeping above it, what use would long legs be to him? He does not go into farms and gardens for his food, but browses on twigs and marsh roots. He could not leap about in such places, and hairy soles would make his feet heavy and soggy when he swims, and he slinks along close to the ground when on land. His greatest danger is from great water snakes and alligators. His nest, made of chewed-up reeds sometimes nicely arched like a Meadowlark's, is often placed on so small a hummock that it seems to float like that of a marsh bird, and the very young Marsh Hares have funny, chubby little heads quite unlike the little Wood Hare.

"You must go quite across country if you expect to find the third Hare of the group. If you move west to Texas in a straight line from the Marsh Hare's haunts, you will find the most astonishing member of the Hare family. Anywhere from

Texas to Montana, or from Missouri to the Pacific, if you see a cloud of dust following the ground in the open, or a miniature cyclone part the grass, stop a bit and watch. What is it going by? A blown-away windmill, a Kangaroo turning somersaults, a mechanical flail escaped from its inventor? No, only a Jackass Rabbit (called Jack for short), the largest and best known of this southern group. When Jack pauses, you will find him a curious combination of Donkey's ears joined to long legs by a skinny bit of a body about two feet long, covered above with light brown hairs tipped and striped with black, and a black tail three inches long, all this standing on large pad feet. Jack looks as stupid as his hoofed namesake, but as he whirls along to spread ruin to field, garden, and orchard, with his endless appetite, you cannot but admire the muscle and endurance of this prince of Gnawers. Jack Rabbits swarm over their range in vast troops. Ten, fifteen, or even twenty thousand at one time have been surrounded and driven into pens and slaughtered, very much after the same fashion that the Indians trapped the Buffaloes. Though this sounds cruel, it seems to be necessary, if the great crops, that mean bread to the country, are to be saved. Now, instead of merely killing the Rabbits and letting the flesh go to waste, thoughtful sportsmen have made a plan to send them to nearby cities to be food for the poor who can buy but little meat."



JACK RABBIT.

"Aren't there any other fourfoots out there to help keep the Jacks down?" asked Rap.

"Yes, the Coyotes, or Prairie Wolves, used to feed on them, but people found that these little Wolves stole young calves and sheep, and they turned about and killed so many of them that the Jack Rabbits laughed, shook their ears, and said, 'We are good things, let us eat more and raise a great many children,' and off they whirled again. No other beast can run like a Jack Rabbit; the swiftest horse cannot overtake him in a fair chase, and there is a famous race recorded between a Jack and a greyhound, where the Hare distanced his pursuer for two miles and a half and then hid in a log, leaving the hound quite spent.

"The result of the Jack Rabbits living as they pleased and holding high carnival was a series of hunts in which thousands were killed; then the Coyotes in that particular spot, having no Jacks to eat, took calves, sheep, and poultry boldly, and so trouble for the farmer and cattle raisers rolls along between the two animals. What suits the ranchman does not suit the farmer, and the end of the war is not yet in sight."

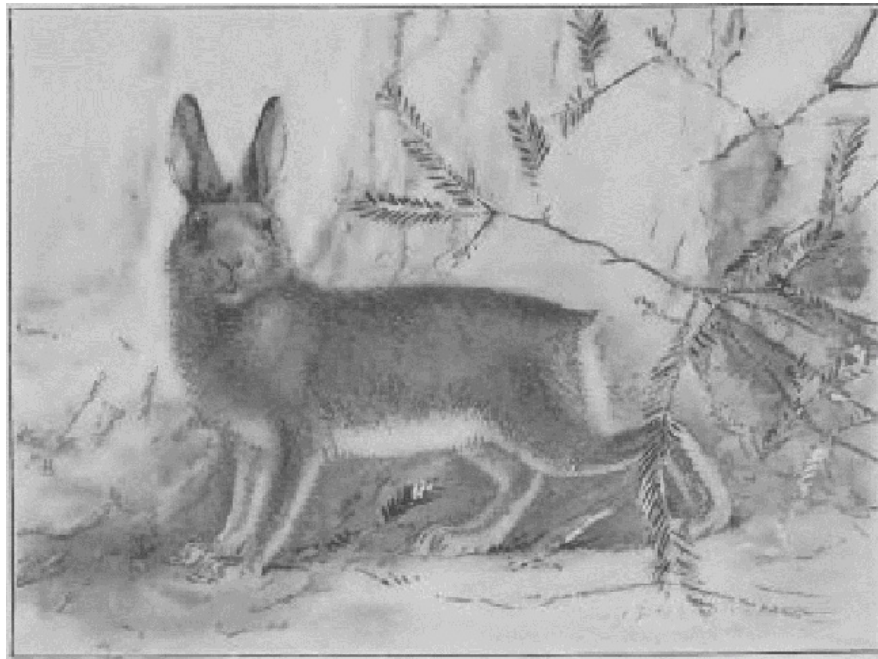
"Perhaps an earthquake may swallow them all,—Jacks and Coyotes," said Nat, cheerfully. "No one would mind, would they, uncle?"

"I am quite sure they would not," said the Doctor, laughing; "and it would be one less thing for animal lovers to worry about."

"We are quite lucky to have such a nice sort of Rabbit living here, even if it does eat a little more than we can spare," said Nat. "But you haven't told us about the kind that changes his color every year. What is it called, and does that live in the North or South?"

"It is named the Varying Hare and lives northward from the state of New York, up to Canada and the northwestern parts of British America. In fact, its haunts in the Northwest touch and overlap those of the Polar Hare, who lives as far north as man has been, and is the companion of the Musk Ox and Polar Bear. In that far-away home this Hare always stays the color of the surrounding snow.

"In size this Varying Hare comes between the Jack Rabbit and Marsh Hare; it has much of Jack's length of limbs, ears, and power of running, though it is, fortunately, not as destructive. It has furry feet like our Wood Hare, and the feeding and living habits of the two are very much alike, except that the Varying Hare is more rarely seen about in full daylight and prefers to feed toward evening, or in the night, like so many of our fourfoots. The change of color is what calls our attention to it. In summer its general hue is reddish brown, many of the long hairs having black tips. Its underparts are white and yellowish and its little turned-up tail is white and fluffy, so that the name Cotton Tail applies to it as well as to our Wood Hare. This dress is worn from April to November, or a trifle earlier or later according to location. During autumn or early winter, in its most northern haunts, it becomes almost white with the exception of a few dark hairs that fringe the ears. How is this done?"



VARYING HARE.

"Moulting!" said the boys together. "Moulting the dark summer hair, and getting new white hair for winter."

"That is the way that I believe the change is made, but the Wise Men have disagreed about this for some time. Some of them think that the brown summer fur grows longer and changes white at the approach of winter. Others that the new winter coat comes in brown and then blanches, while others confess that they have not yet decided.

"You know I told you a few minutes ago that our fur animals have a soft under-fur beside the long hairs. Some Wise Men say these, in the Varying Hare, are quite black in summer, but as soon as very cold weather touches them they begin to grow white at the tips. As the cold continues the white spreads down, until in very cold climates the whole hair grows white, and the thick under-fur also comes in white. They say that in spring, when the cold is over, the little white tips

break off the long hairs and the color comes back to the lower parts until such times as they are pushed out by new hair; but animals like the Arctic Fox, Polar Hare, and Bear always stay in the cold and snow and so are always protected by a white coat."

"Why do *you* think this Hare moults and grows new white fur, uncle?" asked Nat.

"Because I have examined many specimens shot at different seasons, and I found that the white fur is much finer and softer than the brown summer coat,—a fact very easily seen on the nose and ear tips, where the change begins; in fact, the white winter fur seems to me to be of an entirely different texture, without the grain and stiffness of the summer coat. Perhaps one of you boys will, some day in the future, be the very one who will settle this matter—who knows? But whether this Hare changes by moulting or not, in places where it is not so cold only the tips of the outer fur are white, and he looks merely snow sprinkled. So you see *varying* is a very good name for the Hare, as he even varies according to the place where he lives."

"I suppose there is some reason for that too," said Rap.

"All through with the Rabbits?" asked Mr. Blake, who had been in the baggage car. "We shall be at the Ridge in a few minutes, and I think you'll find a surprise waiting for you. No, I won't tell; no use in asking.

"Did the Doctor say anything about the Little Chief Hare, a sort of a cousin to Cotton Tails, who stands up, puts his hands in his pockets, and whistles?" asked Mr. Blake, quickly, to divert the boys' attention. "Yes, I'm not joking, for I've seen them stand up and heard them whistle, though I won't be positive about the pockets."

"Do they live near here?" asked Rap.

"No, miles and miles away. The first one I ever saw was when I was prospecting with our survey in autumn, along a cliff beyond the Missouri divide. I heard a queer little noise, something between a cry, a squeal, and a whistle, coming from a pile of slide rock. I waited a minute, and the sound came again and seemed to either echo or be repeated from several places. Presently out hopped or rather hobbled, for they move slowly, a couple of queer little beasts not eight inches long, with wavy brown and black fur, small round ears, real Guinea Pig faces, and nothing but a sort of bump for a tail. I said to myself, 'You look something like a Gopher, but you're not; you look as if you had tried to be a Guinea Pig, but failed on account of the climate. Who are you?'

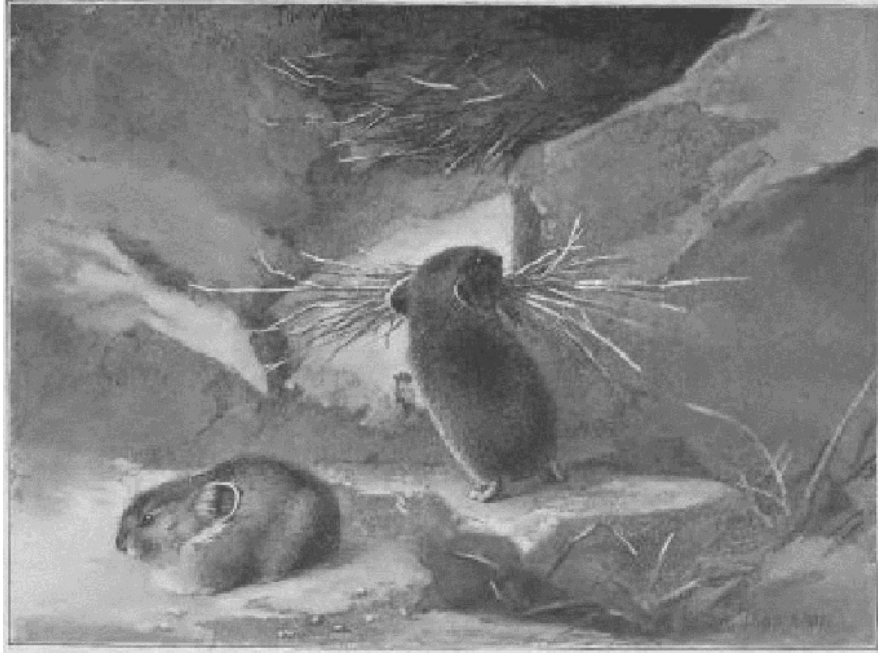
"One of our party told me all its names,—Pika, Little Chief, or Whistling Hare, and before I left that region I saw a Pika household, inside a little loose tower of flat slide rock. What do you think, but the little fellows had a regular hay loft in there where they had cut stout grass and brought it in bundles in their mouths, packing it away on the stone shelves as neat as you please, to have it ready for winter food. I knew the hillside was full of these little beasts, for they kept squealing like a colony of singing mice."

"Who would think that there is so much difference between Rabbit cousins," sighed Rap, as if he was oppressed by the amount there was to learn even about the simplest fourfoots. "Different lengths of ears and legs; even their scraps of tails are different."

"Speaking of tails," said the Doctor, "there is a great deal more meaning in them than people usually think. When a Hare is running you may have a poor view of his head, but if you see his tail, it will give you a clew to his name, for each species wears his in a different way."

"Chestnut Ridge! Change for Saw Mills and the Junction!" called a brakeman, throwing open the car door.

Rap, who had kept his crutch ready during the last half of the journey, reached the door as soon as Nat. There was the surprise in front of them. Good sleighing, a big wood sled piled with blankets to drag them to Nez' camp, and Olaf for driver!

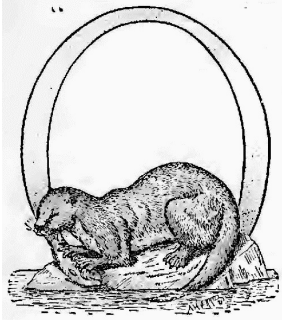


PIKA, LITTLE CHIEF, OR WHISTLING HARE.

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## XII

### THE WINTER WOODS



LAF! Olaf! How did you know we were coming this way? Nez wrote, 'Never mind accepting, but come,' and so we did!" cried Nat, before they had exchanged greetings with their old friend.

"Beside, I thought you lived too far off,—miles farther away than Nez."

"A Fox came to the lumber camp two nights ago and barked three times," replied Olaf, laughing shyly as he glanced at the Doctor. "The first bark said, 'Some one thinks of you.' The second bark, 'Go to the stopping-place of the iron horse two days hence.' The third bark said, 'You will find there those you greatly love,' so here I am."

"A Fox, how could he know about us; though I've heard they are very wise, and if he did know how could he tell you?" said Nat, very much puzzled.

"Wood people understand the sign language of the fourfoots," replied Olaf, "and to show that what this Fox said was true, next morning when I drove my team down to the Saw Mills, there I saw a yellow fire-letter from the good Doctor, telling me the same thing."

"What is a fire-letter?" asked Rap.

"The letter whose words come as lightning sparks," said Olaf, who, in trying to puzzle the boys, fell into the picture language so common in the north countries.

"Oh, a telegram, of course!" cried Rap.

"But the Fox," persisted Nat. "I don't understand about him."

"Hush, do not speak loud or he may hear you, for it was a very shy Fox that brought me the news,—a *Dream Fox*!"

"Oh, how you fooled us!" shouted Nat.

"No, I don't call it fooling," said Rap, quite seriously; "a Dream Fox may be cousin of a Nightmare!"

So they started on their sleigh-ride in a very jolly mood, and in a few minutes left behind the dozen houses and store that was called Chestnut Ridge, as they cut down into one of the narrow valley roads that finally zig-zagged up toward Nez camp.

"It takes more to make a mountain out in the far west country than it does here, doesn't it, daddy?" asked Nat.

"Yes, I rather think it does; but there is more comfort and beauty to the square inch in one of our mountains, even if they do seem only molehills compared to the Rockies."

"I see more Rabbit tracks," said Rap, "and dog tracks, too,—dogs that have been chasing them,—over by those rocks!"

"Not dog, but Fox tracks," said Olaf, "though the print itself might be of a dog."

"Then how do you know it isn't?"

"I will show you this thing that you may understand a little of the wood language," said Olaf, pulling up the horses. "You need not fear to stick in the snow; it is even, but not deep," he said to Rap, helping him down very gently. "Keep behind me, so that we may follow these tracks without trampling them down. Are the Fox tracks coming toward us or going away?"

"Coming toward us."

"We will follow them backward to see where they start."



So saying they tracked the footprints a couple of hundred feet around some hazel bushes, then on by a little knoll until they ended, or rather began, in a low opening between some rocks and a partly decayed log. Here the snow was trodden down and mixed with earth and several red splashes, while foot-prints returned to the hole from a different direction.

"Dogs do not live in ground burrows or between rocks; now you see it is a Fox. Here the Fox went out hungry, very early this morning, for the prints are clear. There at the other side he returned with food,—the blood stains are not more than three hours old. It was not a bird he brought, but something heavier that partly dragged on the ground, for there are marks here and there in the snow.

"Turn now and follow the outgoing prints and you will see what has happened. It is not a long course, for this Fox found his breakfast quickly, I'm thinking."

They turned about and retraced their steps until at last Olaf pointed to where Rabbit tracks came from under some bushes and went in the same direction as the Fox marks.

"Here came the Rabbit, but much earlier than the Fox, for his prints are crusted; now they run together."

"Was the Fox chasing the Rabbit? I should think Bunny could run the fastest," said Rap.

"No, not chasing, but following him by scent. See! here the Rabbit has stopped to nibble twigs and buds. Ah! now we have the battlefield: the Rabbit nestled in the snow, the Fox came here and crouched, waiting for Bunny to move before springing. The end was beyond in the open."

The boys looked and saw where the snow was beaten down and covered with little tufts of fur, and from there were no more Rabbit tracks, only a single trail leading back toward the den, brightened here and there by blood marks.

"The Fox family had a good breakfast, anyway," said Nat, cheerfully. "How I wish I could have peeped into their house. Can we?"

"I think we must hurry back; they will be cold, waiting in the sleigh."

Soon the road met and followed the river and was quite shut in on the north by hemlock woods.

"There is a very big mark,—a Woodchuck track," said Nat, pointing to a broad trail that came close to the road and went toward the wood again. "I didn't know they lived in such wild places."

"It can't be a Woodchuck, they hole up before it gets as cold as this, you know," said Rap.

"Hole up; no, I don't know. What do you mean?"

"Why, they don't like cold, and go into their holes and stay there until spring."



RED FOX.

"Oh, yes, and live on what they have stored up, like Mice and Squirrels."

"No," said the Doctor, "the Woodchuck lives without eating, and sleeps so soundly that he never even feels hungry; the Ground Squirrels that go into their holes for a time take care to fill their cupboards first."

"Why don't the Woodchucks starve before spring, or else freeze?"

"The fat they have gained in the summer by good living keeps them from doing either, and this fat serves them both for food and fire. Then, too, a Woodchuck is very particular how he puts himself to bed for this winter nap. He does not spread himself out like a windmill and kick off the clothes, as some House Children I know do, but curls himself up with his nose under his paws so that even his breath is not wasted, but warms his feet like a stove."

"Do any other fourfoots sleep this way?"

"The long winter sleep? Yes, Bears do in cold regions, sometimes not coming out until May. Their little cousins, the Coons, also go in for a while in early winter before there is a good crust on the snow, also the Chipmunk, and many others beside.

"Even the animals who live on flesh and hunt all through the winter are very particular how they go to sleep in cold weather, usually managing to put their noses on their legs, so that these parts that are thinnest and feel cold soonest shall have the warmth of their breath. The Fox does even more, he spreads his bushy tail to cover his nose, and as you can imagine makes a sort of respirator for himself, for by breathing through his thick tail he gets no icy air to give him a sore throat."

"Isn't it wonderful," said Rap, as if he could hardly understand it all. "I know by myself," he added, "that you can go longer without being hungry when you are asleep than when you're awake. Sometimes I've slept twelve hours, but when I'm awake I eat breakfast, dinner, and tea all in twelve hours."

"The streams are not frozen yet, even the little ones," said Mr. Blake; "it ought to be a good season for the Skunks, who are great drinkers. Does Nez do much trapping? Of course now there can be very little to take hereabouts."

"He catches Skunks, Rabbits, Minks, and a few Foxes and Otters," said Olaf. "Up to this week he has done well on Coons,—his place looks something like a fur-trading post. Nez is bound to catch something wherever he camps. There's

a Fox been eating up a lot of fowls that belonged to an old woman down in the hollow, and he has to be caught, or the poor old body will starve. This Fox is too cute to trap, so Nez planned to watch for it to-night. He has a good dog and thought you might like to go out, for old times' sake, though a Fox is small game after Panthers and Grizzlies."

"Full moon, too, nothing could be better," said the Doctor, adding with a boyish laugh, "it's a duty to kill a Fox that steals a poor woman's poultry, isn't it, Jack?"

"It's a poor sportsman who ever lacks an excuse for fair hunting." Then the men began discussing Foxes so earnestly that Nat had to speak twice before he was heard.

"If that wasn't a Woodchuck trail by the road, what sort of a broad, low-crawling beast made it?"

"A Porcupine, most likely," said Olaf. "There are a few straying about still, though it is rather far south for them."

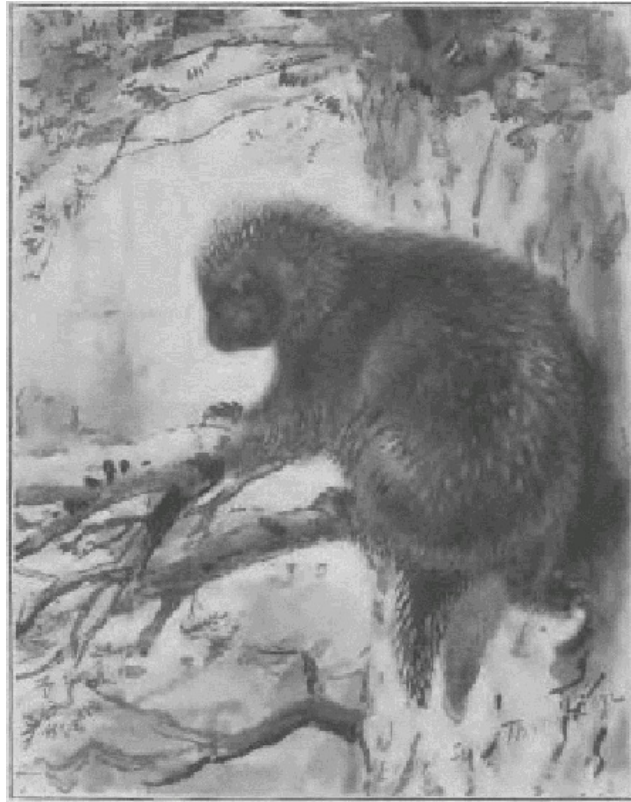
"Porcupines? I thought they were Menagerie animals,—very dangerous ones who chase people and shoot them all full of sharp spikes like arrows, that grow on their backs! I hope they won't come after us. Cactus prickles are awful, when they get in your hands, but Porcupine spikes must be worse."

"Nez has a Porcupine in a pen up at his camp, so you can see it. They do not *shoot* their quills. When a Porcupine is frightened, he humps his back and draws his head down between his fore paws like a Turtle trying to get into his shell. Then all the quills on his back stand out like a sort of shield, and if anything tries to grab or bite the Porcupine, that thing will surely get its mouth and paws full of spikes that hold on like fish-hooks. He has an ugly square sort of a tail, too, all covered with quills, that he uses for a club when he is angry, and a blow from it drives the barbed spikes far into the flesh of his enemy."

"Mighty queer things, these Porcupines," said Mr. Blake. "Sort of living pincushions with the pins put in point up. I meddled with one when I was a boy, and I haven't forgotten it yet,—the pins went in point first and stuck there heads down!"

"What good are they, daddy; do they have fur or make meat, or eat bad insects, or belong to a guild?"

"They seem to be of no particular use to House People, though the Indians are fond of their meat and weave their quills into belts and other ornaments and use them to trim their robes. In fact, Porcupines, though gentle and harmless personally, are rather mischievous animals belonging to the Gnawers, and eating vegetable food. In winter they gnaw the twigs and bark of trees, and as they do not sleep the winter sleep they destroy a great deal of valuable wood. People can tell how deep the snow has been by the naked bands on the evergreen trees where the Porcupine has gnawed away the bark, for they are very hungry beasts."



CANADA PORCUPINE.

"How big are they," asked Rap, "and do they live in dens like Foxes or in the earth?"

"They sometimes grow to be twice the size of a Woodchuck, and they look larger yet when their quills stick up. They live in dens, in the crevices between rocks and in tree holes. If you should look in one of these places, you would find it strewn with the quills that had fallen out from time to time."

"If something bit them so they lost some quills, would new quills grow in right away, or would they have to wait for a regular time?"

"They begin to grow immediately, but it would take three months before the quills would be ready to shed again."

"I should think if they ran through the bushes their quills would catch in everything and come off, and then any beast could kill them!"

"But they seldom run. Did you ever see a Porcupine run, Olaf?" asked Mr. Blake.

"They run, sir; but not so fast that a man may not overtake them: they are so slow and stupid that it is wonderful any yet live. Still in the north woods they increase more and more, while the good Deer and useful fur beasts are seen less and less."

"Do you remember a toy dog you once had, Nat, that could be wound up and would walk?"

"Oh, yes; only he didn't walk well, and after a minute or two he couldn't go straight,—then he went very slow and stopped."

"That is precisely the way a Porcupine moves, but even up in the pine trees where he spends most of his time, and is really quite an acrobat in his deliberate way, he goes from branch to branch in the same slow manner, as much as to say: 'Have I not a whole regiment of spearmen on my back to protect me? My time is my own!' So he continues to crawl about chiefly at night, sometimes stopping to croon or sing to himself, and is really a very unobjectionable object, unless you

happen to stumble over one in the dark; and people who have kept them in cages say they have a great many interesting ways."

"I see smoke; we are nearly at camp," said the Doctor; "and quite time, too, both my feet are fast asleep. What shall you do with the horses, Olaf? It is rather too chilly to pasture them in the snow."

"There is an old barn here below, where Nez keeps his cow and some hay; I'll put them there until I take you down again to-morrow."

Soon they turned in between the trees, the horses breaking the path. Everywhere about were the footprints of little beasts, and in a few minutes they came to Nez' clearing. There was no outside fire, but smoke and sometimes a few red sparks came from the stone chimney of the log house.

Nez was busy at his work in the shed, which he had wholly enclosed with boughs and bark; the boys saw at once why Olaf said he had a "regular fur shop." The place was lined with various kinds of skins, drying upon all sorts of stretchers, and more were stacked away under the roof.

"Want to know!" said Nez, heartily, coming to meet the party, followed by Stubble, the setter, the tame Fox, who now wore a collar, and the two little boys who had been told that they must speak up and be polite. They only succeeded far enough to peep and stare while they held tight, each to one of their father's legs, as if they thought their guests Grizzly Bears or Wildcats. They wore queer peaked homemade caps of undyed Muskrat fur, and short, lambskin jackets with the wool inside, looking very much like a pair of captive brownies.

Nez could have easily bought woollen caps and coats for them in the Ridge village, but he loved simple, wild ways and things, and understood the turning of a skin directly into a coat better than the indirect way of first changing it for money and then buying the needed garment.

"Step right in by the fire," said Nez, leading the way to the cabin. Then for the first time the boys realized that they were quite cold,—the excitement and novelty of their journey had kept them from feeling it before.

The cabin was very warm, for two fires were burning in a space that was scarcely more than one large room divided by the stone chimney. In one fireplace logs were blazing, in the other stood a small sheet-iron stove, upon which Toinette was preparing dinner, stirring something with a wooden spoon that yielded a delicious "have-some-more" odor.

"Last winter we had a regular campfire on the ground in the middle and just a roof draught for the smoke, but we get too much rain along spring and fall in these parts for that sort of chimney, though there's nothing like a fire where you can sit all the way around."

"Vill you now eat sometings, m'sieurs?" said Toinette, hospitably, making a gesture toward the plank table, which they then noticed was set with an idea of festivity. Ground pine hung in festoons about the edge and was arranged in a sort of mat in the centre, figured with bunches and sprays of red berries.

"Yes, better feed now," said Nez, "if you want a little sport this afternoon, 'cause 'long about dark we must get after that Fox. I've took a day off and Toinette's brother here is lookin' after my traps."

"Isn't it a holiday every day up here in the woods?" asked Nat, as they sat down and Toinette placed before each a bowl of smoking bean soup with little squares of fried bread bobbing about in it.

"I reckon not! What made you think that, sonny? No holidays in winter for a man who tries to git a livin' in the woods now'days. It's findin' tracks and settin' traps and gittin' the right bait; then goin' visitin' the traps to git yer property before a Fox or a Weasel helps hisself to it, or it spoils so the pelt is no good. If it snows hard, yer traps gets buried and sometimes froze in. Then there's the beasts to skin and the skins to cure, and the charcoal pit to mind, and the woodpile to keep well squared, and the fire to keep burnin'. No, siree, winter's a busy time!"

Rabbit stew followed the soup, then a sort of pudding made of wild apples and barberry jam sweetened with molasses, which the boys thought delicious.

"I cannot understand where you get so many pelts, Nez," said Mr. Blake. "I thought this part of the country was skinned out years ago."

"It was, and there's nothin' here for folks who want to get things by the lot; such kind did what they could to kill off the beasts. Now, I've read the signs hereabouts, and I say to myself, 'you may take so many Coons, and Minks, and Skunks, and Foxes every winter and not kill them out,' and when I get jest that many I stop and let 'em have fair play. I shall stop on Coons this week, with a hundred good pelts to the better; but I'm not done with Foxes yet, there's too many o' them for the health of the fowls in these parts."

"I shouldn't want to kill a pretty little beast like this; he seems quite like a dog," said Nat, stroking the pet Fox who was nosing about and begging for scraps.

He was indeed a beauty, with his fluffy, reddish yellow fur, fine dark brush, bright eyes, and intelligent face. He looked so innocent, too, not as if he could outwit the cleverest of House People, or behead the biggest gander in the flock with one bite of his little white teeth.

"I thought you didn't like Fox hunting, Uncle Roy, and thought it cruel, and yet you are going yourself to-night."

"The Fox hunting I think cruel is not the necessary and quick killing of a mischievous animal, but the habit of keeping Foxes in what you might call a tame state, encouraging them to breed on your ground, and then turning out and chasing them with dogs trained for the purpose, and when the poor Fox has run his best and is spent (the longer he is kept going the better the sportsmen like it), the dogs are allowed to tear him to pieces.

"The fashion of chasing any four-footed animal with dogs seems to me no *sport*. Teaching one fourfoot to tear another to bits is barbarous, according to my way of thinking. Even hunting the wild Fox with dogs seems a waste of time, since, if we really wish to destroy the beast, there are quicker ways of doing it without putting dogs to the pain of such tiresome runs, or the Fox through an agony of fear, which, to such an intelligent animal, is worse than even the lingering death of being torn to bits."

"But why does any one like to do so?" asked Rap.

"The excuse given for it in England is that it is an historic sport, a settled custom, that it makes use for a fine race of horses,—hunters as they are called,—and the exercise makes a strong race of people. We have an unfortunate habit of importing customs without sufficient reason. It was this spirit of borrowing that gave us the English Sparrow."

"Perhaps they will stop it now that there are such fine bicycles to exercise with. Don't you think bicycles would be nice things to make Dodo and me strong and tender-hearted?" said Nat, so innocently that he was very much surprised when his father asked if he thought his stocking would hold anything as large, and what *make* he preferred.

"I wasn't fishing for one," he hastened to explain, "only thinking how good it would be for me," at which his father and uncle burst out laughing.

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Presently it was agreed that Rap should stay at home with the little boys and Olaf, who was to finish a sort of toboggan, made from a long wide board which he had steamed and rolled up in front for a fender and fastened with hide thongs. It yet remained to be ornamented by a picture of Olaf's painting.

Mr. Blake was interested in trying on a pair of snow-shoes, that Nez had made partly for old times' sake, and partly in case the snow should be so deep during the winter that he might need them in visiting his traps.

The Doctor and Nez prepared to give Nat his first taste of Rabbit shooting, and soon these three, accompanied by Stubble, who was an all-round hunting dog, started down hill, Nat holding the little shot-gun in hands that trembled with excitement, being very careful that it was not pointing at any one, even though it was not yet loaded.

The afternoon wore away. The toboggan was decked with a picture of a large owl, which the youngest boy, Dominique, insisted should have a red ribbon painted about its neck, though his brother Phonse said owls *never* wore such things.

Once in a while they heard a shot, but it was very still otherwise, with no signs of animal life save the pranks of a pair of half-tame Gray Squirrels who came and went in their search for hidden food. The moon shone silver white before the sun had set, and the two exchanged greetings while they struggled with some clouds that promised more snow or possibly wind and rain. Presently by this mixed light they saw Nat coming up the slope empty handed and hurrying ahead of the others.

"Didn't you get anything?" called Rap. "Didn't you shoot a Rabbit? Where is your gun?"

"No, I didn't; but I nearly got one. It didn't see us a bit and was sitting up nibbling and I aimed as nice as could be,—just as Uncle Roy told me, with the gun against my shoulder and everything quite right,—when the Rabbit turned round and stared at me, and somehow it was so cunning and comfortable and seemed to trust me, that I didn't like to kill it. While I was thinking, it gave a couple of leaps and was gone! Then I felt dreadfully foolish!"

"You need not feel foolish," said his father. "I would much rather have you pity the Rabbit than bang away recklessly, with 'blood in your eyes,' as the saying goes. If you sometimes put yourself in the place of the game you hunt, you will never become a 'Hunting Wolf.' But what is that animal Nez is bringing?—it looks like a Fox,—and where is your gun?"

Nat hesitated and stammered: "It is a Fox, the bad Fox that ate the old woman's chickens,—the one that you were going to hunt to-night. I shot him, but it was an accident, and the gun bumped me dreadfully, and uncle is angry and took it away."

Then Dr. Hunter and Nez came up, the latter carrying an unusually large Fox over his shoulder, which he laid down on the snow, saying, with an air of satisfaction,—

"Thar, he'll give no more trouble with his tricks, though we are done out of a hunt, unless we go for Coons. Look at him, old and gray, trap marks on all four legs, and three toes off one foot; no wonder we couldn't snare him."

"Nat says that he shot him and that you are vexed. How did it happen?" asked Mr. Blake of the Doctor, while Olaf drew near, eying the Fox eagerly.

"Let Nat tell his own story," said the Doctor.

"It happened this way," began Nat. "I was getting tired and cold. Stubble didn't start many Rabbits, so uncle said for me to wait a little while by a bunch of hemlocks that kept the wind off, while he and Nez would go around the hill, and then if they found no better luck we would go home. Then—"

"Yes, but what else did I tell you?"

"You made me take both shells out of the gun, and told me to put them in my pocket, and—leave—them—there—until—you—came—back," said Nat, hesitating and looking very much as if he wanted to cry, which however was something he never did.

"Please don't make me tell any more," he begged, but the Doctor motioned for him to go on.

"Then—then I waited and it seemed very long, and I thought I would practise putting the shells into the gun and taking them out, to amuse myself. One time, when I had put them in I looked up, and beyond the hemlocks, only a little bit away, I saw something come out between the ground and some rocks. I couldn't tell exactly what sort of an animal it was, but I guessed it was a Rabbit, and I didn't want to wait until it looked at me, so I grabbed the gun and shot it off, both barrels, very quick, and the gun knocked me over." Here Nat stopped and drew a long breath, as if he wanted to make sure he could breathe again.

"Nez and uncle came running back and thought I was hurt, and that some one had shot me, because I fell over in the snow. Then they found the Fox not far from his den, and he was mostly dead."

"Why did the gun knock you over?" asked Rap.

"You see I was in such a hurry I couldn't think, and put the gun against the front of me where I breathe, instead of against my shoulder!"

"Oh! ho!" said Mr. Blake, "I begin to see why your uncle was vexed. But why didn't the Fox see or smell you, I wonder? The idea of an old timer like that escaping traps for a dozen years only to fall a victim of a small boy's mistake."

"The Fox was windward of Nat, who, as he says, must have shot in a great hurry!"

"It was fine!" shouted Rap. "Only think, Nattie, you've shot a very wicked Fox, and you can have the skin to make a rug for your mother, and perhaps she will hang it in Camp Saturday for a trophy! Please, why was it wrong, Dr. Hunter?"

"For this reason, Rap. I told Nat *not* to load his gun; he disobeyed. He shot at something without being sure what it was; it *happened* to be a Fox, but it might have been a dog, or a calf, or a man crawling in the brush. Every year dreadful accidents happen and people are killed and maimed for life because sportsmen become excited and mistake a man for a Deer, a Bear, or a Fox, and all the excuse they have is that it was a 'mistake.' People who can make such mistakes must not handle guns."

The boys looked so very sad that Mr. Blake said, "I think Nat has learned his lesson early and once for all; fortunately, by accident his accident wasn't an accident after all. Did you say your feet are cold? I think we had better all go into the cabin."

"They were very cold a while ago, daddy, for my leggins leaked a little and the snow got in, but now they feel better, or rather I don't feel as if I had any feet. I think it would be nice to put them by the fire."

"What! no feeling in them?" exclaimed the Doctor. "Nez, bring me a pan of snow into the cabin, and off with your leggins, my boy. No, don't go near the fire, if you do your feet will swell and you will have chilblains every winter for—I don't know how long."

"Oh, uncle! that will make my feet freeze hard!" cried Nat, as the Doctor began to rub them vigorously with handfuls of snow.

"No, it won't," said Rap, consolingly, "snow draws the cold out; the miller used often to rub my cheeks and ears with snow when I went out with him in winter."

In a few minutes Nat said the feeling was coming back, only that it tickled in spots, so his uncle rolled him in a blanket and dropped him into the bunk filled with hemlock boughs that was to be his bed later on. There he lay comfortably watching the people come to and fro, and the preparations for supper. He was wondering if his uncle would ever let him have the gun again, whether the men would go Coon hunting that evening, or stay at home and tell stories, and then he fell asleep.

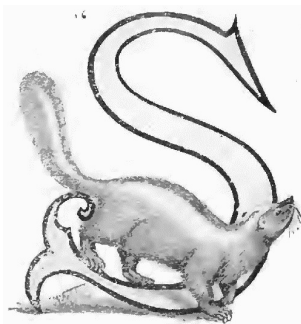
When he awoke he did not know where he was at first; then he saw the supper table spread by the firelight, and a man, Toinette's brother, by the open door, who called to Nez: "Returned am I in the good time; there was much fur in the traps, but the snow comes, dat vat you call blinds,—ze squall!" He heard the Doctor say: "We must make the best of it; no Coons to-night. It is a good chance for the boys to hear about the little fur beasts and see a few of them." Then Nat remembered where he was and scrambled up for supper.

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# XIII

## NEZ LONG'S MENAGERIE



KINNING so many animals about the camp makes a great many kinds of queer smells," whispered Nat to Rap, as they sat down to their supper of oatmeal porridge and coffee, while Toinette was busy frying something in a deep pan, which needed a great deal of turning.

"The smell belongs mostly to Skunks, for I noticed that Toinette's brother had four or five among the other fur beasts he took over to what Nez calls his 'Menagerie,' in the shed, and all those other animals have smells of their own beside. I wonder what Toinette is cooking? it looks something like chicken, but it isn't quite the right shape."

"Maybe it is frogs' legs; we used to have them often when we lived in the city."

Nez soon settled the question by calling, "Whoever wants squirrel-leg fry, hand up his dish and get it right from the pan," an invitation that was accepted at once.

"What becomes of the rest of the Squirrel?" asked Rap, "is it any good?"

"Ah, oui! it is, mon enfant, for potage,—ze stew you call him," said Toinette, putting a fresh supply of legs into the pan.

"Delicious!" said the Doctor. "I have eaten Squirrel before, but it never tasted like this."

"Spiled in the cookin'," said Nez; "easiest beast there is to spile, but," giving a glance full of pride at Toinette, "the woman knows jest how long to stew 'em first, jest how long to fry, and jest how to season, and that's the whole sense of cookin', I reck'n. Why, along four years ago up in Canada we was pushed for meat onct, and Toinette she cooked up a fat young Porkipine so you couldn't ha' told it from young lamb,—yes, siree!"

"Didn't you have an awful time picking the quills out? They must be as thick as feathers on a chicken," said Nat.

"They only grow quills on their backs," replied Nez, "and you can take the whole skin off to onct without prickin' a finger, if you slit it and begin underneath."

"Wasn't it a great deal of trouble to take off all the skins of the little fur beasts that are out in your shed? Dodo and I skinned two moles a while ago to make a muff for her doll, but the skins tore even after we had rubbed alum on them and waited two weeks for them to dry. Mole skins don't smell very good either, but not so bad as Skunks."

"It's easy enough to skin fur beasts if you don't wait too long, but some things hereabouts, Squirrels for instance, that have nice-lookin' fur, are of no account, because their skins are weak like your mole's. I'll bring in a few of to-day's batch so you can look at 'em."

"Uncle Roy," asked Nat, as soon as Nez went out, "why do the fourfoots smell so queerly, when birds do not?"

"Some birds do," said Rap. "Don't you remember the marsh where the Herons live?"

"The fourfoots all have odors that vary with each species. Heart of Nature has a use for them like everything else in his garden. Birds depend upon sight and do not need the power of scent to guide them like the fourfoots. These, though they all have voices and can make sounds of pleasure or of warning, also need a silent language by which to speak to one another, in order that they may leave messages where absent friends can find them in wood and runways, as House People use written words. It is for this purpose that the power of secreting these odors has been given the fourfoots.

"This arrangement has given these animals very keen noses, upon which they depend far more than on their eyes for recognizing either friends or enemies. It is this power that enables every animal to tell whether the beast who has gone over a trail before him is a friend or a foe, and it also serves as a weapon of defence, for some of the little Mammals taste so disagreeably that their cannibal brothers do not care to eat them. You know that the Skunk is as well able to

protect himself from his big brothers by his odor as if he had the claws and paws of a Grizzly Bear."

"Talkin' uv Skunks, here's a fine one," said Nez, coming in with half a dozen little animals in his arms, and holding the Skunk by the tail at arm's length.

"What are those others?" asked Rap, recognizing some unfamiliar animals in the heap.



COMMON SKUNK.

"There's a Mink, a Weasel, and, as luck turns, an Otter. We don't get many of them here, though they rove about so I'm never surprised to see a few. I've only found one of their coasts by the upper pond."

"Coasts! what do you mean?" asked Rap.

"Why, Otters are as fond of sliding down hill as you are, and mud makes as good a coast for them as snow. No, I'm not jokin', am I, Doctor?"

"What Nez says is perfectly true. Let me show that Otter to the boys and I will explain."

Nez picked up an animal that must have weighed twenty pounds, with handsome rich, shaded brown fur, and laid it on the floor by the Doctor. It was about two feet and a half long from its blunt nose to the root of its stout tapering tail. Its head was catlike, with small round ears and bristly mustaches, its legs were short and ended in furry, webbed feet with stout claws.

"What lovely soft under-fur," said Rap, parting the long glossy outer hairs gently with one hand, "and it's all over him, too, even on his tail."

"This Otter has the most desirable, also the finest, under-fur of almost any of our fourfoots," said the Doctor, "and like the Beaver and Muskrat he spends a great deal of his time in and about the water."

"Does living near the water have anything to do with making his under-fur so thick?" asked Rap.

"Very probably it does, the soft close fur being made to protect the body from becoming water soaked; for the Seal, who spends the greater part of his life in the water, has the same wonderful, close under-coat, and the rare Sea Otter also."

"Where do these Otters live, what kind of nests do they make, and do they belong to a guild?" asked Nat.

"They haunt wooded places near water; sometimes a mother Otter makes a home for her two or three young in a hollow stump, or else in a hole under a bank, scraping a few leaves together as a bed. It is always within easy distance of the water, where the fish, upon which they feed, can be caught, for they belong to the guild of Flesh Eaters and like variety in their animal food, sometimes helping themselves to chickens and small game. They also have hiding-places in river banks entered by a hole under the water.



OTTER AND FISHER.

"Otters when not busy hunting food are very playful animals, and one of their chief games is what Nez calls 'coasting.' In summer they choose a smooth bank stretching toward the water and deliberately lie on their stomachs, spread out their hind legs, give a push and slide down one after another, plunging into the water at the end, only to land again at a suitable spot, climb up hill and slide once more. You can imagine that a slippery mud-covered coast is soon formed, which is used by the Otter community. When the snow is deep, they make similar coasts through it down toward their feeding places, and they may then be easily tracked when on their excursions about home."

"Then they don't sleep the winter sleep?" said Rap. "How do they catch fish when the rivers freeze?"

"They are on the watch all winter, like the other members of the family of little fur bearers, or *Mustelidæ*, as the Wise Men call them. They keep their fishing holes open through the ice, and these holes, as well as their slides, guide people in trapping them. One of the most likely places to set a trap is in a slideway, or fastened securely to a pole under the Otter's favorite fishing-hole."

"Why do they catch them with traps, when Nez says it is so much trouble to bait them? Why isn't it easier to shoot them?" asked Nat.

"In the first place all these fur fourfoots prowl about mostly after dark, and are very wild and so keen of scent that it is difficult to get near them, while at best a hunter would have to shoot them one by one, and they might sink under the ice and be lost. If he uses traps, he can set a dozen or more on a single afternoon and leave them to do their own work in the night. There is another reason, too, why it is not best to shoot them. Can either of you guess it?"

Rap answered eagerly, "I think I know. It's because the shot might make a great many holes in the skin and spoil it."

"Yes, that is the reason. Now please show us the Skunk, Nez, and then he can go out in the shed and join his fellows; his room will be much better than his company."

"I think the smell of it is making my head ache," said Nat.

"We will hurry," said the Doctor, "for this Common Skunk is a very disagreeable animal in many ways. You see, he is a full foot shorter than the Otter, and though he has a tail as plummy as a fountain, glossy black fur with white head and back bands, his face is sly and narrow, wearing a snappish look, and people say that a bite from his pointed teeth may carry hydrophobia with it.

"He is a bold animal, too, and whether he goes to the chicken house to choose his supper, or prowls around the refuse pails outside some camp, he is not inclined to hurry. Full well he knows the power of the blinding, scalding liquid which is his weapon, and animals, that could tear him to bits without the least trouble, pretend not to see him and keep their distance. So fearless are Skunks that a pair often take up their abode under a barn or even a piazza, and the little Skunks play about and are sometimes petted as harmless kittens by the children, until one day the illusion is suddenly broken."

"I should think it would be better if they were all killed out," said Rap.



LITTLE STRIPED SKUNK.

"Remember their fur, and that they earn their living by eating mice and nuisance animals, as well as grasshoppers and other insects."

"I never heard of Skunk fur when I lived in the city," said Nat.

"No, but you have heard of Alaska Sable, which is the name it uses when it puts away its evil odor and goes in polite society."

"You called this one the Common Skunk. Are there any uncommon ones?" asked Rap.

"There are quite a number of species, but they are all common somewhere. The oddest of all is the Little Striped Skunk

who lives in the more southern parts of the country, from Florida across to the Plains. He is a weasel-shaped little piece of impudence, with a white spot on his forehead, all the rest of his body and tail plume being so striped that you can never say if he is black and white or white and black, or both; he might be a toy animal made of strips of black and white flannel. Black and white is a rare combination for the coat of a fourfoot. None of our fourfoots are bright-colored, and there are very few such in any country. Usually the color of an animal is arranged to blend with his surroundings and protect him from his enemies. Sometimes, however, Nature wishes to give an animal a striking coat that will be seen by others and warn them to keep away from him, and the Skunks wear coats of this kind. They prowls about chiefly at dusk or after dark. Have you ever noticed how clearly anything white, however small, shows at night?"

"Oh, yes, I have often," said Rap. "In spring when all the snow has gone, except little bits under the fences, you can see it ever so far away, and sometimes when the fine handkerchiefs mother washes blow away down the field, I can find them in the darkest night."

"Then you can understand that the Skunk, who is sufficiently protected by his evil odor, may wear this striped flag to warn other animals not to come upon him too suddenly. Here, Nez, kindly take this fur-covered sachet away; the boys will not forget how he looks, I'm sure."

"Skunks are full of play and tricks, if they do smell a bit rank," said Nez, as he returned, followed by Mr. Blake. "I've kept young uns round camps where I've been, and they're good eatin', too, if they are killed outright and skinned,—no, you needn't whistle, Mr. Blake, I've often broiled 'em like tender spring chickens. They are stupid, too, and if you put a trap in the runway from their holes to the water, they'll be sure to get into it, and seein' one caught doesn't prevent his neighbor from walkin' straight over him into another trap."

"Do they stay out all winter like the Otters?" asked Nat.

"That depends on the place and the weather. About here they keep lively right along, but further north they may den up for a bit the coldest part of the season. But take these other two, the Weasel and Mink, they are lively most of the time."

"What an ugly-looking little beast a Weasel is," said Nat, taking the slender animal, which was about a foot long, in his hand. "Rod caught ever so many around the chicken house last summer, but they were brown and not a sort of dirty white like this one, and it has a black tip to its tail. Do they moult out in autumn, Nez?"

"I reckon they do, for they get whitish all the same as the Northern Hare, and when they are real white folks calls 'em Ermines. When they come from far north countries, where it is cold enough to make them a good clear white, they are worth a lot of money for their fur. But down here they're no good. This one strayed into a trap I set for Mink; it's one of their bothersome tricks to push themselves into the place of their betters. See, this fur is a mussy color, and further south they don't change hardly any."





"Rod says Weasels are very bad things and no better than rats."

"They are much worse than rats," said the Doctor. "In fact, they are the most malicious, blood-thirsty, and wasteful of all our fourfoots. They are all the time breaking Heart of Nature's law, 'Take what ye need for food,' killing merely for the pleasure of it, and only taking a suck of blood here and a bite of flesh there.

"The Weasel twists and winds its supple body into holes where nothing but a snake could follow, now writhing along as if it had no legs, then stretching its neck and peering round with the wagging head and wicked eyes of a Cobra. He devours mice, and sharp-toothed rats tremble before him. If he could learn to forsake bird-nesting and chicken-killing and wreak his love of slaughter on the 'nuisance animals,' he might easily cease being the worst of nuisances himself."

"This Mink looks a good deal like the Weasel," said Rap, "except that it is longer and not half so snaky. It is a nice brown, too, like mother's muff that father brought her from New York long ago when I was a baby, and that she keeps done up in his silk handkerchief in a bandbox."

"It doesn't smell very nicely," said Nat, "though not so badly as the Skunk. Is it a fierce, wicked beast, too?"

"For steady-goin' mischief the Mink is only about two steps behind the Weasel," broke in Nez. "The Weasel is freaky; he'll do a lot of mischief in one place, and then take himself off for a long spell; but the Mink noses out a fine hen roost and then settles down under a shed near by to enjoy himself."

"If it's in May," added the Doctor, "half a dozen little Minks, hairless and blind at first, may be hidden in the feather-lined nest, and many a choice morsel will be brought them before they are fully grown in autumn, and leave their mother to start life for themselves. Day and night Minks go hunting and fishing too, sometimes catching animals twice their own size; now a Muskrat, then a Hare, a Grouse, or a fine Trout, for the Mink is as much at home in the water as a Muskrat, swimming and diving easily. Thus we find him everywhere, not only in all the temperate parts of the country, but in all sorts of places, from the banks of lonely watercourses to a burrow under the cow barn."



THE MINK.

"It seems very queer that mother's muff once went sneaking and tramping all over the country," said Rap.

"If Dodo knew about Minks, and how savage they are, I'm sure she would be afraid of her little tippet with the head and claws. I never thought before how all our fur things, caps and mittens and gloves, once walked about. I wish they could tell us stories about themselves."

"I know a story a sealskin jacket told me once upon a time," said Olaf, who had been sitting quietly by the fire smoking his pipe.

"A real true story, and will you tell it to us some day?"

"Surely, yes, and some day soon, for it is a winter story."

"Come, don't go floating up the Pacific to the fur islands after Seals yet awhile," said the Doctor. "There is one more important fur beast, almost as large as the Otter, but it is not found as far south as here. He loves the dark pine forests that furnish him good shelter, as well as a playground, for he spends most of his time in the trees, even making his nest in a tree hole in preference to the ground."

"What is he called?" asked Rap. "Is there a picture of one at home?"

"Yes, and you will find that he looks something like a cat, and something like a Fox. In the woods and in books his name is Pine Marten, or American Sable. When he is turned into muffs and collars, he has a grander name yet,—Hudson's Bay Sable. He has a very handsome coat, and, like most of his tribe, the fur is finest at the beginning of winter. He has not only under-fur, but two kinds of outer as well, and his back is a handsome mellow shade of brown, in contrast to his dark tail, which is especially valuable."

"Is the Pine Marten a chicken thief, too, like the Weasel and Mink?" asked Rap.



PINE MARTEN AND RED SQUIRREL.

"I dare say he would eat chickens if they came in his way, but he does not care to stay about farms, and lives on

Squirrels, birds, and many of the smaller nuisance animals, and when driven to it he will eat even beechnuts."

"My, though! if those Martins ain't got tempers!" said Nez. "And don't they jest fight fierce when once they start! I saw one kill a Rabbit; it wasn't satisfied with killin', but went on and tore and clawed and chawed it all to bits.

"You should see 'em try to ketch Squirrels," he continued. "Martins likes to git up in a tree and drop down suddent on their prey. That evenin' a nice, big Red Squirrel was setting on a pine branch with his back to the tree, takin' a nap, though I suspect he was more awake than he seemed. Along comes the Martin down from the tree-top, peerin' this way and that, lookin' to make an easy drop. There wuz a branch crosswise above the Squirrel and the Martin he couldn't manage the jump anyhow. Then he began to spit and cuss and snarl like mad, but the Squirrel never budged. He stopped still until the Martin went over to try another side, then opened his eyes, gave a big jump, and was off chatterin' like a watchman's rattle.

"There's another Martin I've trapped out in the Northwest, that's every bit as big as an Otter and swims and fishes like one, for which reason some folks calls it a Fisher, and some a Black Cat Martin, though they are as much gray as black, and their legs and tails are brown, and they looks something like a little, lanky, long-tailed Bear. This Fisher will eat any mortal thing, from one of its own family to a snake or a Porkipine. How it manages to kill that I never could see, though I found quills stuck all over a Fisher inside and out."

"People who know, say the Fisher has the knack of killing the Porcupine by biting him in the stomach, where he is poorly protected," said the Doctor. "I think he is quite clever enough to do this, for he manages to take the bait out of almost any trap, as you and Olaf must know by experience, and hides his nest high up in a tree hollow as wisely as an owl."

"For stealin' bait and traps, or makin' a general rumpus, I recommend the Wolf Martin!" said Nez, with feeling.

"I suppose you mean the Wolverine, or Glutton, names he gets for his fierceness and supposed endless appetite," said the Doctor.

"That's he every time," said Nez, striking his fist on his knee. "If yer can pack more wickedness and real thinkin' mischief into a beast not over three feet long, with paws and claws like a Bear, and a face like a Bear, a Fox, and a Wolf all mixed into one, show me that beast!"

"What kind of fur does he wear?" asked Nat.

"Brown, of as many different shades as the mottles on a horse-chestnut," said the Doctor; "the under-fur being short and very soft, and the outer about four inches long, wiry and shaggy. The soles of his feet even are so hairy that the footprints look almost like those of small Bears."

"Why do you call him such a wicked beast, Nez?" asked Rap.

"Well, I reckon I've good reason. In the first place he kills anything that comes along, from a mouse up to a Deer that's been wounded or gone lame. He gets most of his game by sneakin' or droppin' on it, for he isn't a fast runner. But what's worst about him is, he's the biggest meddler on four legs. If a pair of 'em gits around camp when the men are off, good-by to the outfit. Fust they'll eat everything they can hold, then they'll amuse themselves by clawin' the rest or carryin' things away and scatterin' 'em. As trap spoilers they beats the record,—deadfalls or spring traps are all the same, they'll get the bait without being caught, and most likely spoil the trap beside."





WOLVERINE.

"What is a deadfall?" asked Nat.

"A kind of a trap that is often made by digging a hole and putting bait in and then covering it up with sticks and logs, so when the beast you want to catch, smells the bait and hunts for it, he falls into the trap, or the log falls and shuts him in; they are used for all sorts of beasts from Martens to Bears," said the Doctor.

"Ah, I see! A deadfall is a place that if you fall into you die. Do House People ever fall into these things?"

"Yes, sometimes, unfortunately, and in his knack at keeping out of danger this Wolverine shows even more ingenuity than man himself."

"You have no Coons now? I'm sorry, I wanted Nat to see one so he would recognize it if he should come across it in the home woods."

"Nez! uncle! daddy! Look quick, one of the beasts has come to life and has climbed up that beam by the chimney," whispered Nat, suddenly jumping up and getting behind his father.

"Speaking of Coons, there is one now," said the Doctor. "Is that a camp pet or a visitor from the woods?"

"He's a pet," said Nez. "He belongs to Dom'nik and the Fox to Phonse; we took him last May from an old tree over by the pit, when we were cuttin' poplars for charcoal. Keep still and maybe he'll come down and play with Foxey—he does sometimes."

The boys watched quietly for a few minutes. At first the Coon, or Raccoon as he is really named, sat up with his paws folded like hairy hands and watched them. He was about two feet and a half high, his body was covered with wonderfully soft, deep, brindled Woodchuck-colored fur, and the round tail that hung nearly a foot below the beam was banded with gray and black. His bright eyes and pointed face wore an expression of innocence, and yet of great intelligence also, that closely resembled the Fox's who was sitting under the table looking up at him.

Presently Mr. Coon came deliberately down to the floor, ambled on all fours to the table with the awkward gait of his big cousin, the Bear, climbed on top and began tasting the various scraps of food that remained, using his fore paws exactly like hands.

The Fox came from under the table and sat up on the broad bench sniffing anxiously. The Coon paid no attention to him, but picked up a piece of bread, jumped off the table, dipped the bread in the water pail, ate it, took a scrap of meat,

washed it also and then gave it to the Fox, with all the quickness and intelligence of a monkey, and then began washing more bread for himself.

The boys could keep quiet no longer.

"Why does he wash the bread?" asked Nat aloud.

At this the Coon retired to his beam, pushing the last bit of bread into his mouth with one paw.

"Washing their food is a great habit of Raccoons," said Mr. Blake. "I've seen hundreds of them down about the southern lagoons, and they bathe and swim and paddle about the water, poking under stones for crayfish, mussels, and little crabs, half the night. In fact, the last half of the Latin name the Wise Men give them, *lотор*, refers to this washing habit of theirs.

"You should see them scampering round by moonlight, like a parcel of monkeys at play. Down they come from the high trees where they have their nest holes, splashing over the lily pads and sliding into the water. They are fond of everything eatable, from crabs to sweet corn, and often fall victims to this love of the cornfields. An autumn Coon hunt was one of the events of the year on the old plantations, and it is not yet out of style."

"Mammy Bun says Coon hunting is fine sport," interrupted Nat. "She says the men go out with dogs and axes and chase the Coons, and they generally run up a tree, and then if the men can't shake the Coon out of the tree, they cut it down and let the dogs fight the Coon and shake it to death. I think that is a cruel way to kill such a pretty fourfoot."

"I quite agree with you," said the Doctor; "it is even more unnecessary than allowing the Fox to be torn to bits after he has run his best; for though the Coon is very bright in some ways, he can be easily trapped and the Fox cannot."

"Every one is sleepy," said Rap, presently; "the Coon has gone to sleep, and the Fox too, all curled up like a dog, and Olaf will nod himself into the fire in another minute."

"I think you and Nat had better climb into your bunk in the corner and join them in dreamland," said the Doctor. "You see Toinette and the little boys have disappeared under their blankets in the other room."

"The snow has stopped falling and the wind is drifting it around at a great rate," said Mr. Blake, opening the door as he spoke, when a great whirl of snowflakes, like the branch of a fairy tree, slipped past him into the cabin and turned to drops of water on the boards. "Suppose we take a mouthful of air before we turn in. Nez, we will go with you to put the Fox and the Coon in their pens, and see if your fur shop is safe."

\* \* \* \* \*



THE RACCOON.

"We can't undress very much," said Nat, beginning and ending by taking off his shoes, "so it will be real easy dressing in the morning, and I want to see the Porcupine that is over in the shed the first thing. Don't go to sleep yet, Rap, I won't be a minute." Rap, however, was asleep the moment he sank between the new red blankets,—a present from Mrs. Blake to Toinette,—that covered the armful of hemlock branches that served as a mattress.

The men came back, went to bed and to sleep, and soon the wind outside was the only sound, while occasional flashes from the smouldering log fire kept the cabin cheerfully light.

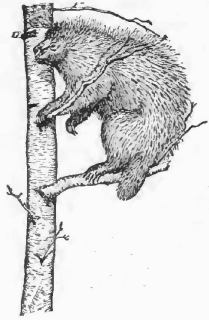
For some strange reason Nat could not sleep; he dozed a dozen times; then the wind whistled between the logs of the cabin and he started up again. Once he saw a couple of mice chasing each other about the hearth, then a shadow moved along the roof timbers. Was it the Coon? No, for both Coon and Fox had been taken to their sleeping-quarters in the shed.

Nat looked again; the shadow grew deeper, took a solid form, and dropped to the floor. An extra bright flash from the fire showed him what looked like a bundle of some white-tipped fur. The mysterious thing was nothing more nor less than an animal—a Porcupine! He could see its eyes glitter as it moved awkwardly across the floor to the very corner where he was lying.

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## XIV

### FOXES AND SNOW-SHOES



EERING out and very much frightened, at first Nat was going to call, then he thought that perhaps he might startle the Porcupine and make him angry, so he staid quite still waiting to see what would happen. Everything was painfully quiet; why did not one of the others wake up? Even a snore would have sounded companionable.

The Porcupine ambled toward the bunk, but stopped by one of the posts that supported it and began to gnaw with his strong, sharp-cutting teeth. Next he sampled all four legs of the table, then went to the water pail; he seemed to scent the tracks of the Coon and Fox and crouched in a heap with his quills bristling on his back and his tail ready to strike. Finding that he was not disturbed, he began walking about again, finally climbing up to a log that ran across the face of the chimney, quite near the roof.

In spite of feeling a trifle afraid, Nat could not help noticing how easily the Porcupine climbed and swung himself about, but when the animal had settled himself comfortably on the beam, something happened that was so strange that Nat first rubbed his eyes to be sure that he was really awake, and then managed to wake Rap to share in his astonishment. The Porcupine was singing!<sup>[1]</sup>

"What is it, and where did it come from?" whispered Rap, only dimly conscious of where he was.

Nat whispered back all he knew of the matter.

"It must be the tame Porcupine from the shed that crept out when Nez went to put back the Fox and the Coon," said Rap, who was quick to draw conclusions, "so I don't think he'll hurt us; but I never knew before that they could sing like that!"

The Porcupine's song was indeed very strange. At first it sounded like a particularly happy tea kettle, abrim with boiling water; then it began to rise and fall, having some quite musical notes, finally dying away, blending with the whistling of the wind.

By this time somebody stirred in the opposite corner. Nez tumbled up, with the instinct of a woodsman, to put more wood on the fire, so that Nat ventured to call his father.

"A Porcupine! Nonsense! Where?" shouted Mr. Blake, not over willing to come out of his blankets.

"The stories in your head and the fried Squirrel in your stomach have made a plan between them to give you some dreams!"

"Really no, daddy, Rap is awake and has seen it too, and we've heard it sing. Oh, be careful, it's coming down again!"

Every one was awake now. Toinette and the little boys peeped in from their part of the cabin, Nez lighted a lantern, the Doctor began pulling on his boots, while Olaf took a long pole belonging to an eel spear from the corner.

"What are you going to do, kill him?" asked Rap. "Oh, now he's up on the table!"

"No, put him in this bag," said Nez, taking an old meal sack from under his bunk. "The only way to catch one of these critters alive without wishin' him dead is to poke him off somewhere into something. So"—*Scratch, Push*, and after a short struggle the disturber, making queer faces all the while, was securely bagged and the cabin retired to sleep again, while the Porcupine spent the night under the table, too much disgusted by the small size of his quarters to give another concert.

\* \* \* \* \*

It was still dark the next morning when the boys smelled coffee boiling. Other things beside the early hour contributed to the darkness,—the windows were small and few at best, and the panes were turned into ground glass by the heavy

coating of frost. The pail of cold water did not make bathing seem attractive to Nat, who edged away from it, saying that he had not brought a sponge; but Rap, who was used to rough living, dipped his face in the water, shook off the big drops, and polished it with his handkerchief.

"I don't believe my hands will be clean for a month," said Nat, looking at his red, chapped, grimy paws.

"It's fun camping for a little while, but beds with sheets are so comfortable, and Rap,—don't you think in winter camping is pretty smelly?"

"Yes, I suppose it is; but then you know real camping in wild places is different from playing at it as we do; those people work all day and are too sleepy at night to notice smells. Nez is so busy all day long out in the cold, that when he comes in he's too sleepy to bother about little things. Toinette cooks things A 1 anyway. I wonder what we are going to have for breakfast? Something that's fried in a big pan of fat. Do you suppose it's doughnuts?"

"You supposed right," said Nat a few minutes later, as Nez called them to the table, where there was a flat willow basket piled high with the puffy brown balls. "Here comes ham, too, with funny lumpy sauce poured over it. I wonder what it is?"

"Sauce of ze chestnut, vary fine, m'sieurs; ze sauce of my countree. I mak also ze dish of ze countree of ma 'usband—ze doonut, but zat ting of his countree, ze pi, I mak not, bah! Shall it kill de red from the cheek *de mes garçons*? I name it not wiz ze pâte of ma countree whose top it shall fly away vile you bite."

The Doctor laughed heartily at Toinette's dislike of pie, saying: "You are right, Toinette, pie is very poor food for little boys; but I have hard work to make Nat think so. Though I do not believe in doughnuts for breakfast, yours are so light and free from grease that you must not expect to have one left."

"Ah, you are vary polite to zay it," replied Toinette, blushing and pouring a sort of porridge into the bowls that stood at the children's places. "Zis is ze plumb potage of Fête de Noël, but we did have it on ze fête day of ma 'usband's countree—ze T'anksgiving."

Nat and Rap were soon fishing the big raisins out of the hot porridge with their spoons, as eagerly as Dominique and Phonse.

"Isn't it good?" said Rap, as he neared the bottom of the bowl. "Scrape, scrape, scrape," said Nat's spoon for answer.

\* \* \* \* \*

The boys were very much disappointed at the condition of the snow that morning. The wind had blown all night and drifted it so badly that the hills were quite bare, and coasting was impossible, while some of the little hollows were full.

"In my day coasting never amounted to anything before Christmas," said the Doctor; "these early snow flurries seldom lie evenly. One thing, Nat, if Nez will lend you a pair of snow-shoes and show you how to use them, you can practise nicely down there at the foot of the slope."

"I should think I could walk on them without being taught how," said Nat. "The snow-shoes Toinette showed me yesterday looked something like tennis rackets with toe loops and ankle-ties to keep them on. Sliding along with them would be just as easy as anything."

"So you think. If you succeed in walking ten steps on them to-day, you shall have a pair of your own. We seldom have snow, down at the farm, deep enough to make such things necessary, though you might find them useful in going to school some morning after a storm before the roads are broken," said Mr. Blake, looking at the Doctor with a twinkle in his eye, which however Nat did not notice.

Soon they went out to the shed to have a more particular view of Nez' Menagerie, and look at Nat's Fox, which was to be skinned for him to take home.

"I wonder if the tame Fox knows that the old Fox may be one of his relations, perhaps his grandfather?" said Rap, as the

little beauty sniffed about the skin that Nez was peeling off as neatly as a glove turned wrong side out.

"I should not be surprised at anything a Fox may know," said the Doctor, "for in spite of the fact that they are continually hunted, they still manage to outwit House People, and increase and live even about our hen houses. This little Fox evidently recognizes one of his own family. I even fancy I can see a look of recognition in his eyes as he sniffs."

"Which do you think are the very cleverest American fourfoots?" asked Rap.

"The Beaver has a very special sort of intelligence in the way of building his home, damming up the water necessary to protect it and in storing up food; but for pure wit and cunning I think the dog family, or *Canidae*, must be given first place."

"The dog family! I didn't know there were any real American dogs," said Nat.

"Wolves, Foxes, and the Coyote of the plains are first cousins of the dogs we keep as companions. Don't you know that we have called our big dog Mr. Wolf because he is about the size and the shape, though not the color, of the Timber Wolf?"

"These Red Foxes look like dear little collie dogs, except that their tails are rounder," said Rap.

"You have often watched Mr. Wolf and Quick go hunting together, starting off as if they had a regular plan of campaign, working to and fro on a scent they have found, galloping, sneaking, and finally stalking their game?"

"Oh, yes!" cried Nat, "I've often seen them, and then when they come back if it's a Woodchuck or a Muskrat or a Skunk they have caught, Mr. Wolf brings it up to the back door and they both bark and bark until some one comes and tells them how clever they are. If their noses are much bitten, as they mostly are when they've caught a Woodchuck, they wait for Olive to put vaseline on them. Just plain vaseline; they don't like the kind with the carbolic smell, that you put on our hands when they are scratched; it makes them sneeze and cough and rub their noses in the grass. I wonder why?"

"Because the members of the dog family have such a keen sense of smell that every odor seems many times more powerful to them than to us. This is the reason that the Fox can smell the scent of human fingers on the trap set for him unless it is dipped in water, or smeared with the blood of a fowl, or some other means is taken to divert him, and even then he may have suspicions."

"I should think baby Foxes would be very pretty," said Rap. "What time of the year are they born? I mean to look for some next season."

"They are born hereabout in March or April. In May, when I was a boy, I used often to see half a dozen of these bright, sharp-nosed little pups playing about the entrance to their earth burrow, or creeping along the rocky ledge or at the base of the hollow tree that was home to them. But mamma was always sure to be near to warn them of danger, and they obeyed whatever signal she gave them and disappeared as quickly as the little grouse hide under the leaves."

"Are there as many kinds of Foxes as there are Rabbits, or only one kind?" asked Nat.

"There are about ten different kinds, or *species*, as the Wise Men say (I wish you to remember the word). Some of them are really the same animal, who wears somewhat different fur, according to the place where he lives. Take this Fox of Nat's for example. We call him the Red Fox, being in Latin *Vulpes fulvus*.<sup>[2]</sup> You see, he has a coat of rust color and yellow. He has two half brothers; one called the Cross Fox, not because he has a bad temper, but because his color is partly red and yellow and partly ashy brown, which makes a *cross* mark on his shoulders. He is also related to another half brother of our Red Fox, the Black or Silver Fox, whose coat varies from dark gray to black with a sprinkling of white-tipped hairs and a white tail tip. This condition of fur is prized because it is so very rare, and as much as one or two hundred dollars has been paid for a single skin. No one but the very Wise Men can tell these brothers apart half the time, and even one of the wisest of these calls our common animal the Red-Cross-Silver-Black Fox."

"Oh, dear, what a lot to remember, and after all, that is only one kind,—*species*, I mean."

"There are a couple of others, very distinct varieties that you can easily remember,—the Gray Fox and the beautiful



white Arctic Fox of the Polar regions.

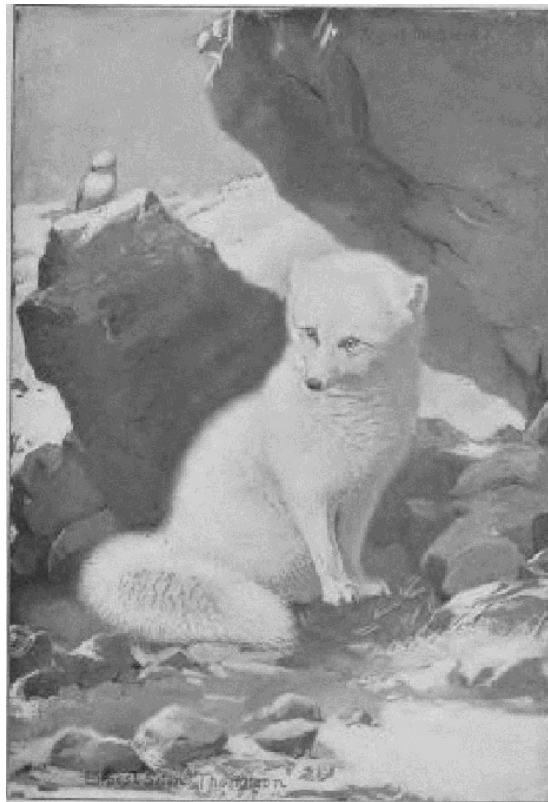
"The Gray is the common Fox of the southern parts of the country from the Atlantic to the Pacific. Its fur on the back is a 'pepper-and-salt' gray with a red and white wash on the throat, sides of neck, sides of body and legs. Its head is broad, and it is neither as graceful nor as finely furred as the Red Fox. This Gray Fox is a more snarling, disagreeable beast than his red brother, but does not seem to be a blood-thirsty hunter, and kills merely what he needs for food. Though he is fond of grouse, chickens, Rabbits, and the eggs and young of game birds and domestic fowls alike, he also eats Meadow Mice and several kinds of rats, which habit should be set down for a good mark beside his name.

"The Gray Fox can climb well, for he has strong curved nails that stick out beyond the furred toes, so he often escapes from his enemies by going up trees that may be quite branchless for twenty or thirty feet. He also prefers a hollow log or tree to an earth burrow as a nest for his puppies, which are not as numerous or as pretty as those of our Red Fox."

"I can remember about that," said Nat. "The Gray Fox belongs to the south; our Red-Cross-Silver-Black Fox to the middle and not too far north, and then there is a white one for the very far north."

"Yes, the Arctic Fox, who lives as near to the never-found North Pole as men have been able to go.

"He is bundled up and dressed in the very best style for an Arctic explorer, and for this reason he looks more like a cur dog, and has not the dapper, thoroughbred appearance of his sleek red cousin. This Arctic Fox has a bunchy body with short, round, fur-lined ears, and ruffs of fur which give his face a catlike expression. Summer and winter his coat is white, but by August the under-fur begins to thicken, and when this Fox wears his heavy winter coat and is all white, with the exception of his light brown eyes, black nose, and brown claws, he is indeed a beautiful animal. The under-fur is soft and thick, even the soles of the feet being well padded to give their owners a firm footing in travelling on ice, as well as for warmth. The tail is short and very bushy, while the longer fur is thicker on the back than underneath."



ARCTIC FOX.

"What does this Fox eat way up there, and does he make a home burrow in the snow?" asked Nat. "I should think he would be awfully wild, and he must work very hard for a living."

"There are no hen roosts to rob, but you must not forget the Arctic breeding birds and the Polar Hares. Many an anxious day this white Fox must give the Snowflake in its lowly nest, while the Eider Duck and Great Snow Goose must think this four-footed snow-drift a veritable spirit of evil. The little ground-burrowing Lemming also helps to fill up the chinks in Mr. Fox's stomach. Then there are the bits of flesh and fat that the Polar Bear leaves behind when he has captured a fat Seal, and fish are to be had for the catching or often the picking up. In such a place the Fox does not have to look for a refrigerator in which to stow away spare scraps for the next meal. I've often wondered how he manages to get his meat into the over-ripe state that all the dog family consider so delicious."

"Please, uncle," interrupted Nat, "why do dogs like spoiled meat so much better than fresh? Quick always rolls and rubs his head on any old fish or dead bird he finds, and Olive has to keep two collars for him; as she says, 'one to wear and one to air.'"

"It is an unsettled question why this rolling is done; but it is a fact that the dog family, with a few exceptions, are as fond of rolling in carrion as a cat is of catnip. The Arctic Fox is more clean and particular than his cousins, perhaps because he has less chance of having spoiled meat left on his hands, and his odor is far less disagreeable than that of the Red Fox.

"The Arctic Foxes live in burrows between earth and rocks," continued the Doctor, "very much like their more southern cousins; but instead of being wilder they are much less sly and suspicious than other Foxes. It is easy to see the reason of this. They live beyond the usual reach of civilized man, and the Eskimo who hunts them seldom uses firearms, so these Foxes stop to look at pursuers or bark at them from the doors of their dens very much like half-wild dogs. They fall into the simplest kinds of traps and count their worst enemies the Polar Bear and ever-hungry Wolf, who vie with them in hardness. Then, too, they enjoy the safety of color protection,—snow-white fur to blend with the snow itself."

"Talking of Foxes," said Mr. Blake, coming across the shed where he had been helping Nez fold the Fox skin, fur in, so that it could be carried back to the farm to be cured, "do you know how Foxes defend themselves when they fight each other?"

"No," said Rap, "unless they bite and scratch!"

"They stand at a little distance apart growling and snapping; when one springs, the other brings round his bushy tail to act like a shield to his head and throat, so that all that his adversary gets is a mouthful of fur."

"Isn't that clever! Have you ever *seen* them do it, daddy?" said Nat.

"No, but a friend of mine—the man who made all the pictures in your uncle's portfolio and knows so much of the ways of this family of Wolves and Foxes that he is called 'Wolf' by his friends—says it is so."

"You know," said the Doctor, "I told you long ago that every animal has something that serves either as a tool or a weapon, and if you listen to all there is to hear about the tails of our fourfoots, you will find that they are even more useful than ornamental. The big tail, or brush, of the Fox, as hunters call the prize they seek, may be a trap to catch burrs and a dead weight to carry when it is water soaked; but you see it is a shield both in battle and to keep paws and nose warm during winter naps."

"Can Foxes swim?" asked Nat.

"As easily as dogs," said Mr. Blake. "I know a story about a very clever Fox, whose fur, one summer, was full of fleas who bit him so cruelly that he went in swimming to cool himself. The fleas, not wishing to be drowned, climbed up on his head, which was the only dry part of him.

"The Fox felt very comfortable for a while, but when he went ashore and shook himself dry, the fleas quickly went back to their old hiding-places. This bothered the Fox a good deal, and he thought about the matter for a great many days, when he lay in his den hiding from the bright light, in which you know very few of our fourfoots care to be seen.

"'I have it!' he said to himself. That night there was a full moon. The Fox went down to the river where the light came in beautiful silver stripes between the trees. He pulled several bunches of old, worn fur from his tail, and made them into a ball which he held between his front teeth, so that the fur rested against the end of his nose, then he walked slowly and carefully into the water and began swimming up and down.



"Soon the fleas collected on top of his head, as usual. Then he let himself sink lower and lower until only the tip of his nose and the ball of hair remained dry; the fleas crawled to his very nose tip. When he drew that under water also, they took refuge in the ball of fur. Quick as a flash the Fox let go the ball, and, diving, swam back to shore, where he stood laughing as the ball became water soaked and the fleas were drowned!"

"Oh, daddy, is that a real true story? Did your Wolf friend tell it to you?"

"I don't remember that he did, but until we meet the clever Fox who drowned the fleas, and hear what he has to say about it, no one can prove the story untrue."

\* \* \* \* \*

"If you reckon on tryin' these snow-shoes, you had better come down in the holler before it gits any softer," said Nez, bringing out the shoes. This particular pair was very simple, made of a hickory strip, bent in an oblong until the ends met. These ends were fastened firmly together, and bridged in the centre by a cross-piece. This frame, which really looked something between a lacrosse bat and a tennis racquet, was latticed with strips of rawhide cut thinner than shoe laces. In front of the cross-bar was a little opening, to let the toes move when the foot was fastened to the bar, by slipping through a stirrup-like loop. These shoes were a trifle less than four feet long, and a foot and a half across at the broadest part.

"You stick to the regular model, I see," said the Doctor.

"Yes, I do; the mighty long ones and the round ones may have their uses in places and spots, but I don't want none of 'em," said Nez.

On arriving at the hollow, Nez slipped his feet into the loops, and went across the drift with slow, even strides, swinging one foot over and past the other, his hands in his pockets, his body bending slightly forward. The boys were surprised to see that the shoes sunk several inches into the snow.

"I thought they would help you keep on top," said Nat; "I don't think they are much better than boots."

"For a small snow like this, they are not," said Olaf, who had come up from the direction of the river. "But fancy to yourself a snow eight feet deep or ten, without a crust to hold you up. How should one walk on it? At the first step one sinks, at the second one would fall and smother. With snow-shoes one may go on, sinking but a little, and if many men walk one after the other, soon a good trail is made. Beneath this trail may be the frozen sea or the deep ravine, but the snow-shoe will not let the wearer sink to it. The snow-shoe means food and life in the far northlands. There Nature gives it to the fourfoots themselves—from the fur foot-pad of the Fox to the widening hoof of the Caribou."

Meanwhile Nez walked across several times in the same tracks, to make an easier path for Nat, who was impatient to try his luck.

"Now be careful," called Mr. Blake and the Doctor together, as Nat balanced himself on the shoes, feeling that his feet were unnaturally far apart. One step, another, and Nat's feet had collided, his left shoe stepping on the heel of the right, making him nearly turn a somersault and land head down in the snow, gasping and struggling.

The party laughed heartily, for Nat had been so very confident of success.

"If that were big snow he were lost!" said Olaf. "If you feel to slip, stoop down, that you do not come off, so—" and Olaf squatted to show his meaning.

Nat was picked up and tried again, but this time he spread his legs so far apart to keep from interfering that he could not bring them together again, and stood still laughing, his arms crossed to keep him from sprawling, as if he were a model for a fancy letter A.

"Never mind," said the Doctor, "you will learn by practice if we have much snow this winter, for I am going to ask Nez and Olaf if, between them, they cannot rig us up half a dozen pairs of snow-shoes, so that all the household at the farm can have walks over the fields when the roads are choked and impassable."

"How jolly!" cried Nat, and then stopped as he saw the wistful look on Rap's face and remembered that snow-shoes would be of no use to him.

"We must have one of those flat toboggan sleds, too, uncle," he added quickly, smiling at Rap, "and then we can take turns in dragging Dodo and mother, for they would be sure to be tired, and Rap can ride on it, too, whenever he wants to come."

"I'm glad to have you introduced to snow-shoes," said Mr. Blake, "because they hold an important part in the life-history and hunting of some of our biggest game, as well as furnish the 'reason why' some of our noblest animals, like the Moose, are following the Buffalo to the Happy Hunting Grounds."

Olaf, Nez, Toinette's brother, and the Doctor were talking earnestly together as Mr. Blake turned toward them, and the boys heard the words, "deer," "sharp tracks," "fine buck," "last night," ending with Nez' usual exclamation of surprise, "Want to know!"

"Jacque has seen a Deer two miles below here," said Olaf, "in a cleared bit in the woods. He saw him in the snow last night, but was not quite sure because of the drift. Early to-day he saw the sure prints, and later the Deer himself browsing with two does, where the wind had bared the grass."

"Deer were plenty all along here and over toward the farm in my father's day," said the Doctor; "it will be wonderful if they are straying back again from some overcrowded feeding ground."

"Perhaps they have run away from a Menagerie," suggested Nat.

"I think not," said the Doctor; "it is evidently a little family party starting off to explore for itself. At any rate we will not welcome them with bullets in the usual fashion, but after making sure of their whereabouts leave them in peace."

"Who knows, Nez, but we may be able to turn your bit of woods here into a place for preserving and protecting some of our fourfoots, and make you chief gamekeeper and forester general."

"I'm willin', Doc, but I must get a peep at 'em to make sure," said Nez, his sporting blood throbbing.

"Yes," added Olaf, "we will go down this afternoon to make sure that the Dream Fox has not been showing his picture book to the good Jacque."

"If you will keep me, I will stay and go with you; I must," said Mr. Blake, capering about as gleefully as Nat or Dodo when they suspected a surprise.

"I shall take the others to the Ridge then and come back and wait here one, two, three days more then, until you are ready," said Olaf, looking pleased.

"Which reminds me that we must be starting homeward in less than an hour," said the Doctor, looking at his watch.

"Oh, I want to see the Deer too!" cried Nat.

"Sorry to say no to anything so tempting; but I promised to bring you both safely back to your mothers to-night. Who knows, however," said the Doctor, cheerfully, "but these same Deer may stray over to the farm woods and make a visit!"

They went back to the cabin for early dinner and to say "good-by" to Toinette and the boys and make them promise to return the visit by coming to the Christmas party at the farm. They found the boys waiting with a stout bag between them, in which was something that moved about a great deal.

"What have you there—the Porcupine?" asked the Doctor.

"Billy Coon," replied Phonse, plucking up courage to speak.

"They make a gift to you of the Coon to be your *ami*, your friend, to take *à la maison*, to your 'ouse," explained Toinette.

The boys were delighted, of course. "Mammy Bun will think we have brought her an old friend; but I'm not sure what

your mother and the dogs will say," said the Doctor in an undertone.

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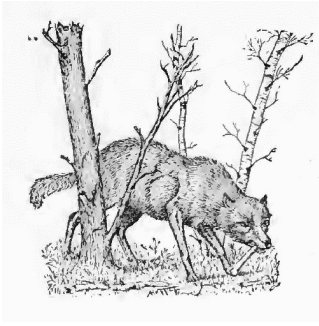
The journey home passed like a flash, and six o'clock saw Rap seated by the stove in his mother's little kitchen chattering of all the wonders of the trip, ending by telling her that her mink muff had once killed chickens, while she listened as eagerly as if he had made a voyage round the world.

Meanwhile the Doctor decided that the Coon was to go in the barn, and not be introduced to the family until next day. Dodo was being entertained by Nat, and was so interested that she almost forgot to eat her supper, and afterward coaxed her uncle into bringing the portfolio of pictures into the wonder room, that she might look at all the Foxes and other little fur bearers. But when she came to the picture of the Porcupine and heard its story, she gave a little shiver and exclaimed, "I'm glad now I stayed at home, for if I had seen him in the dark, I should have jumped up and screamed, and then you wouldn't have heard him sing, and most likely he would have stuck me so full of prickles that I couldn't sew my Christmas presents!"

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## XV

### WOLF!



"WILL you please choose one of the dog family?" asked Rap the next Saturday, when it was Nat's turn to select a picture for the story.

"Yes, I meant to choose this one—the Wolf," said Nat; "and the picture looks as if a story really belonged to it."

"'A Trap' is printed on the picture," said Dodo, "but I don't see any trap, unless the Wolf is caught in one and can't move."

"Wrong, quite wrong, missy," said the Doctor, settling himself by the fire, after taking a couple of skins from those hanging about the walls and spreading them before him on the floor.

"Listen, and I will tell you the story of the great Gray Wolf, whose picture you have here, and also about his little barking brother, the Coyote."

"It is sure to be a good fierce story," said Dodo, "because Wolves gobble people, you know. When you lived far away, were you good friends with Wolves, uncle?"



TIMBER WOLF.

"Our American Wolves are not man-eaters as some of their Old World brothers are thought to be, but saying that I am a friend of Wolves and know all about them—that is quite a different matter.

"A Wolf has no friends; he is hated by twofoots and fourfoots alike. As for *knowing* all about Wolves we may know some things and think we know others, but the comings and goings of a Wolf are as mysterious as the track of the wind

itself. They move from place to place so suddenly and so swiftly that it would be easy to believe they flew on the storm, as witches were said to do on broomsticks."

"Why do you say that some Wolves in other countries are *thought* to eat people—don't you believe they do?" asked Nat.

"They may sometimes, but it is best not to believe all that is *said* about animals; for there are a great many of what Rap calls 'boast stories' floating around, especially about Wolves. The Wolf is one of the easiest animals to see doubled and hear quadrupled. One may believe that a whole pack is outside the tent, bent on tearing you limb from limb, or swallowing you, sleeping blanket and all, when it is really only one mangy starveling, sniffing about for scraps of bacon or a bit of venison you have cached a little carelessly."

"Cached!" said Nat. "I thought cash was money. How could you make money out of meat, uncle?"

"Cached, with a *c*, means hidden. It's a word that came from the French, round by way of the Canadian voyageurs. It is in common use in camp talk; a cache is a hiding-place. The Gray Squirrel, instead of *caching* his nuts all in one place as a Red Squirrel does, puts each one in a separate *cache*."

"Oh, yes, I can understand that," said Dodo.

"When the Squirrel goes to find a nut, he plays *câche-câche* then, for that is what French children call hide-and-seek," said Olive, laughing.

"Wolves all over the world bear very much the same character. The Wolf is an emblem of deceit and cunning. A Wolf, in the legend, ate Red Riding Hood's grandmother and tried to trick the child herself. When it is said of people, 'They have hard work to keep the Wolf from the door,' it means that want, or some trouble as cruel and cunning as a Wolf, is threatening them. The Gray Wolf, whose skin (the larger of the two) lies there on the floor, is, next to the Grizzly Bear, the most cruel and desperate of our fourfoots. Yet he is a coward; if he were not he would have given battle to the death to thousands of the pioneers who, as it was, struggled inch by inch in face of desperate dangers to settle this country. Why the Wolf is such a coward no one knows; but, fortunately, he is, or his race would not yet have been driven back until even the sight of a Wolf, except in a part of the West from Texas to North Dakota, is a great rarity.

"If this old Wolf skin could only tell what it knows, the story would not be a dull one. Look at it there, with its long bristling gray and black hair, brindled with traces of an under-color of yellowish brown at its base. The under-fur is soft brown, while on the belly both hair and fur are white. There is a bit of buff also about its face, ears, and flanks. See its black whiskers, the slantwise eye holes, pointed ears, and straight, bushy tail.

"The body and head are both long. This Wolf must have been four feet and a half from nose tip to root of tail. Ah, yes, you handle the empty skin freely enough; but give it life, let the strong white dog teeth snap in its jaws, the bright eyes gleam, and its long-drawn howl come from the black lips, and you would not stay near it long. If it only could speak!" said the Doctor, pausing and looking at the fire.

"Wough-ow-ow owou-ough," sounded a weird voice outside the door. "Wough-oble-oble-oble-ough-o-u-gooow!"

"Horrors, what is that?" cried Olive, startled from her usual calmness.

"It's Wolves!" screamed Nat and Rap.

"A whole pack, but they've come for bacon scraps, they don't want us," shivered Dodo, trying to seem brave.

Even the Doctor was a little startled, but the suspense only lasted a moment. It was broken by a ringing laugh which, even before he came in, they all knew belonged to Mr. Blake.

"Oh, daddy! daddy!" said Dodo, "I didn't know! How can you be such an intimate friend of Wolves that you could cry their cry, when uncle says they have no friends?"

"I'm not sure that I am a friend of theirs either," said Mr. Blake, throwing himself down on the wolf-skin rug; "but I've been among them where they live, and have heard their talk, and have seen their work."

"Tell them your story of this Wolf skin, then," said the Doctor; so after thinking for a few moments, Mr. Blake began:—

"Every one knows the name of Wolf. This animal is sometimes called Gray Wolf, and the Wise Men now say Timber Wolf; but the simple word *Wolf* stands for both cruelty and cunning. His family history, from the time the white men came to settle in this land, is full of dark deeds and darker punishments. The Indians repeat many tales about him, and tell how that long ago the Wolf ate of the meat of knowledge. This meat was the flesh of the great wide-eared, hornless Deer who is no longer living, but who was so wise in his day that he taught the winds how to blow. Whoever among the fourfoots should take one of these Deer by fair hunting, and eat its flesh, won great wisdom for his race, with keen eyes to read hidden sign languages and a nose to scent every message of the wind.

"The Bear only licked a bit of this magical meat; this brought it cunning and stupidity. The Fox, being too small to hunt it, nibbled at a piece he did not kill; this gave him cunning, together with the penalty that he should be hunted by the beasts of his own tribe. The Puma seized a piece of flesh another beast had hidden, and so was given cunning and a sure, swift leap, but heavy paws that weigh in running. Then a Wolf slew the last wing-eared Deer of all, not by fair chase, but by trap and treachery, so that the Deer in dying branded the Wolf a coward.

"'Hunt and be ever hunted,' he shrieked. 'Hunt with hanging head and tail; hunt treacherously with wile and snare, for you will have great need of cunning. An enemy comes from far across the seas, who walks upright as Bears walk, having a moon-white face, in one hand carrying fire, and in the other the fine white earth that kills,<sup>[3]</sup> and he shall likewise devise magic wands to spring and hold you fast.

"'You will wage war together, this man and you, but he will conquer. And as a punishment for your way of killing me, you shall fear to kill him, for your real name is Coward!'

"So after many years the white men came from over seas and settled, though at first there were but few, and the Wolves still roamed at will about the country—from the land where the snow never melts, down through the woods and plains to where the Rio Grande runs slantwise through the country and the prickly Peccaries and cacti live. The northern Wolves were large and grizzly; but those in the hot south were smaller and had thinner fur. Wolves wore handsome robes in those days, and had as many names as Bobolinks. They were called White Wolves and Black in the northwest, Red Wolves in the cactus country, and Gray Wolves everywhere.

"There were some smaller Wolves, who were less savage and less swift of foot than their brothers, more doglike and talkative, who babbled the secrets of the tribe and liked to hang about the homes of House People, rather than live in woods or caves. The larger Wolves disliked them, because they were afraid lest they should tell tribe secrets; so they turned these small ones out to be a tribe apart, to feed on meaner game, and snatch and steal in open places.

"These small Wolves were given charge over sheep, Jack Rabbits, and such timid things, and men called them Coyotes (ground burrowers). But the Coyote is also a cunning huntsman, and lays his own traps and chases Antelope on the plains; yet to-day there is hatred between the two tribes, and, if a hungry Timber Wolf meets his little brother, he will often eat him!

"Look at that Coyote skin on the settle; you can see it is of a finer texture than this Gray Wolf robe. It is softly furred, a dark ripple running from head to tail and across the brindled shoulders, it has white lips, a rusty face, and a black tip to the tail, and measures a full tail length shorter than this Gray Wolf's pelt. The Coyote is little more than a vagabond wild dog, who barks and howls around the edges of settlements, licking his lips when a lamb bleats or a cock crows.

"When the Buffalo herds blackened the plains, the Gray Wolves lived by following them, snatching the calves or killing the wounded and feeble old ones. Then great bands of Deer, Elk, Antelope, furnished them with food at all seasons; for Wolves with their spreading feet could follow these heavy, sharp-hoofed beasts over the deep snow, through which they sank, and, spent and overcome, soon became the Wolves' prey.

"As the country was settled, the Wolves crept back; for whether the Indian's tale was true or not, a spell seemed to prevent their killing men. Gun, trap, and poison were all turned at the Wolves, who were also chased with dogs; but still they worked mischief among horses, flocks, and herds, and still the cry among the frontiersmen was 'Wolf! Wolf! How shall we destroy him?'

"Wolves have another fault besides sneak hunting, they break Nature's law, 'Take what ye need to eat,' and kill in times of plenty as if for the mere greed of killing, snatching a bite here, a fragment there, then wasting all the rest. They also have one virtue, which is common enough among the birds, but rare in fourfoots,—they love their mates; and a friend of mine who knows Wolves as well as we know people, tells a story of the fiercest, slyest Wolf of all the southwest, who, in despair at having lost his mate, rushed headlong into a trap.

"The home life of the Wolf is very short. His house is only a hole under some roots, or a sheltering cave, which covers half a dozen little woolly puppies in the late spring. Then the Wolves are happy, for it is the season when the Deer are fattening on the young grass and wear soft new horns. From this time follows six months of good living, then half a year that is a war with famine. Wolves do not sleep the lazy winter sleep like Bears, but hunt in packs, plotting to make a living like human thieves. If it had not been that long ago they ate the meat of knowledge, they would be gone and no one would understand the cry of Wolf! As it is, there are still many of them in the northwest grazing country, and they increase here and there mysteriously from Texas to North Dakota even if men continually hunt and harry them and Deer are few; for if bread fails them, they relish cake, by which I mean to say that, if they can't find venison, they are quite content with veal and mutton.

"All fourfoots understand the speech of scent, more or less, but Wolves certainly are wise with uncommon wisdom and have a wonderful sign and scent language. If one of the tribe dies of poison, the others will not eat food scraps in that place. Does a Wolf of some other tribe run by, driven by fear; he may not be even seen, but he writes in his track and stopping-places the message that he wishes other Wolves to know. Every hair that bristles on a Wolf's back has its own meaning.

"Now listen to the story of this Wolf, whose skin is on the floor. He and his mate hunted together, often dashing at a horse or Deer, tearing its running sinews from behind, with their sharp teeth, or sometimes picking up a calf that ran beside its mother, always having good eating. Often they would find a Deer's trail, running from its day cover to a spring, or to its dainty wood pasturage. The Wolves did not wish to run together openly, for Deer are very swift, and would lead them a weary race, so they would sniff the night wind and get before it so that it might not tell their doings to the Deer. The wind is fickle, an enemy to all hunters, always carrying along the latest gossip. Then one wolf would lie hidden by the runway, while his mate would show herself openly, and drive the Deer, at first gently, then fiercely, until it would run blindly in a circle (a habit of the family) to its first cover, past the very spot where the other Wolf lay like a living trap; one spring brought down the Deer and then the pair feasted at leisure."

"Oh, then that is what 'A Trap' means on this picture. The Wolf was a trap for the Deer," said Dodo. "But how did the Wolf come to die and be made into this rug?"

"Bad days came soon after to the pair. The she-wolf vanished, House People cleared the timber from that place and shot most of the Deer to feed themselves. The next winter was bitter cold, and yet the snow was not deep enough for our Wolf to chase and overcome what Deer remained. So he prowled too recklessly about a camp, and one night stepped into a trap that gripped his leg, that hind leg that you see now wears no foot. The Wolf struggled in vain to pull himself away, and then with awful bites gnawed himself free, leaving his foot fast in the trap.

"Soon he grew hungrier and hungrier; he could find no food. Then, being desperate, he said, 'I would even kill a man!'

"Early the next night he stole down to the camping place, but he found no one there, and the campfire was nearly out. Wolves do not like fire—and he thought, 'Surely this is my chance, perhaps they have left some food,' so he stalked in as boldly as his mangled leg allowed. Then he stopped, for he scented man! Soon he went on again, for stretched in the corner lay a bundle in a blanket,—a man, but hurt and helpless.

"The signs said, 'This man went out hunting with his friends, he lost their track, he fell and broke his leg, his gun is buried in the snow, he crawled back alone to shelter.' Then again the signs whispered to the Wolf as he hesitated, 'Kill him! He is yours. He set the trap that robbed you of your foot.'

"The Wolf growled defiantly and crouched beside the bundle, waiting until it should give some sign of life to give the rending bite. The bundle moved and raised itself, fixing its eyes upon the Wolf, look for look!

"The Wolf glared, but saw in those two human eyes a light that never is in the eyes of beasts. His breath blew coldly

back to him, he shivered, for in his heart he was a coward. He longed to bite, and yet he did not dare.

"The sleeping fire outside, that marked the camp, shot out a flaming tongue. The Wolf started, crouched, fearing to pass it. Then scenting on the wind that other men were coming, he slunk out and, not stopping to read the signs, seized a lump of meat, bolted it, and ran until he reached the wood edge.

"The tramp of many feet bent the ice crust, hurried words came from the camp, mingled with the cry of Wolf! and the crash of logs. The fire leaped high. Fire also burned within the Wolf; then came the end—the scrap of meat that he had swallowed held the fine white earth that kills!"

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"Oh! I was so afraid the poor man would be eaten," said Dodo, with a sigh of satisfaction. "Who was the man, daddy—for there must have really been a man, or the skin of the Wolf with one foot gone wouldn't have been found."

"Was it yourself?" asked Olive.

\* \* \* \* \*

At that moment a scream from the kitchen turned their thoughts in another direction, so they hurried out to find the cause.

It was easily seen. Billy Coon, who had escaped unnoticed from the camp while the Wolf story was in progress, in attempting to help himself to some bread dough that was rising by the fire, had fallen into the soft mass, and at Mammy's scream climbed to the top shelf of the dresser, where he sat, streaming dough.

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## XVI

### COUSINS OF CATS



ACCOONS have the reputation of being as mischievous as monkeys, as well as playful as kittens. Billy Coon did all in his power to keep up the reputation of his family, as well as to make life interesting to the children at the farm, often succeeding only too well, and was threatened with banishment by Rod, Dr. Hunter, and Mammy Bun in turn.

Billy was supposed to live at the stable, except on Saturdays, when he was brought to camp, "to make it seem more like outdoors," as Dodo said. The children watched eagerly to see if he would go to the hay loft and curl up for the winter sleep, after the custom of his family. But no, Billy did not propose to waste his time in this way, and indeed why should he? Was he not comfortable and well fed? He had no need to tighten his belt and go to bed to keep warm. To be sure, he did sleep nearly all day curled up in the hay rack over Comet's stall, waking up before dark each night to devise fresh mischief.

The feed and oats were kept in bins above the stable, connected by a long, wooden shoot with the stalls below. One night Billy pulled open the little slot over Comet's manger, and when Rod arrived in the morning he found the trotter standing in a pond of oats, having eaten so much that he had to take a dose of medicine and have his stomach rubbed with a broom handle to cure his colic. For the stomach of a horse is so built that when colic once gets inside it is very difficult to get it out again.

Another evening Billy escaped unnoticed, before Rod closed the barn, and went into the house cellar. There he feasted and revelled all night, only to frighten Mammy Bun nearly out of her wits, when she went down to get the potatoes to bake for breakfast, by ambling out at her, dripping with molasses from the jug which he had overturned. This particular evening he had engaged in a slight difference of opinion with Quick over a plate of scraps, and so kept prudently upon the camp rafters, while Quick and Mr. Wolf eyed him in a way that meant trouble for his ringtailed Furship.

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"Won't you please choose the three Cats with no bodies?" said Dodo to Olive, whose turn it was to select the picture for the story.

"I was thinking of choosing the Cats," replied Olive. "There are a couple more pictures beside those. Ah, here they are! The spotted Ocelot, lying in wait in a tree, and the Puma, hunting Elk."

"There is another a little further over," said Rap, "a lean, weaselly-looking beast with a thick tail. It is called Civet Cat, though it has a Fox face and a Coon tail."

"You may take out the pictures with the others, though it is not a Cat at all, but it is a good chance to tell you why it is not," said the Doctor.



CIVET CAT.

"This Northern Civet Cat, or Cacomistle (Bush Cat) as the Wise Men call it, though it belongs in the southwest part of the country, has more names than there are days in the week, and all because in appearance and habits it is a sort of patchwork resembling, from different points of view, Coon, Fox, Cat, and Squirrel.

"In killing birds and robbing nests it follows the House Cat, and like it prowls at night and makes an amusing pet. Its body, covered with Coon-gray fur, is about eighteen inches long and ends in such a thick, ringed tail, that you say Coon at once, and it does belong in the Raccoon family, and is the very least cousin of the Bear, in spite of its catlike ears, whiskers, and slender, lithe body. The Civet Cat also makes its home in hollow branches or stumps like the Coon, and as it climbs and dodges about, it might easily be taken for a wide-eared Squirrel, except for its tail. You see, here is another case where the tail tells!"

After placing the pictures carefully in a row below the map, animal tree, and ladder for climbing it, the children came back to the fire, near which, on the settle, Dr. Roy had thrown three skins—plain, spotted, and streaked.

"How many species of Cats are there in North America?" asked Olive.

"Nine: five with high shoulders, short fur, and long tails, like those of their cousins the Lion, Tiger, and House Cat, and four of the Lynx variety, with short or bobtails, long fluffy fur, high back legs, and sharply pointed ears. All but one of the long-tailed varieties belong to the southwest, being much more at home in Central and tropical America than near the United States border. Beginning with the largest, they are called the Jaguar, the Puma, the Ocelot, the Yaguarundi Cat, and the Eyra Cat, the last two being comparatively unknown. The Puma and the Ocelot are the only ones that concern us.

"Of the four bobtail Cats, or Lynxes, the Canada Lynx belongs to the north. The Spotted and Plateau Lynx belong to the southwest, leaving us in the middle and southeast states the Bay Lynx, or Wildcat, as he is everywhere called. They all have four toes on the hind feet and five on the front, and their tongues are covered with backward-pointed prickles."

"There are long-tailed Wildcats in our woods! Rod says so, and I saw them, for they come down to the barnyard to get swill, and they took some of the squabs from the pigeon house," said Nat. "They are dark brown and black striped, and

have fat, bunched cheeks, and crawl low down in the grass, as if they tried to hide."

"You are both right and wrong," laughed Doctor Roy. "These cats are wild in one sense, because they live in the woods, hunt for a living, and are fierce and shy; but they are the children of tame house or barn cats and no more like the real *Lynx rufus*, than we should be like Indians if we went to the woods, dressed in moccasins and blankets, and painted our faces.

"In speaking of the Rabbits, I think I told you how much help the length and shape of their tails give in naming them."

"Yes, I remember," said Rap; "the Jack had the longest tail, and the Wood Hare a turned-up cotton tail, and the Pika not much of a tail at all."

"It is the same with members of the cat family. The tail will give you a clue to the family, for as all these North American Cats are more prone to run away than to face you, the tail will be more familiar than the face, so if you see a Wildcat with a bobtail, you will know him for the real kind.

"Having chosen three from this group of ten cats, let us look at them. Two of the three—the Puma and Wildcat—once ranged over a considerable part of the United States, touching even the northern border, while the Ocelot always kept well to the south, having once been found in Arkansas and Louisiana, but now in our limits has retreated to or beyond the Rio Grande. The Ocelot is a spotted beauty, plucky, and a real game animal, with his skin as vari-colored and bright as a Leopard's, one of our few richly colored Mammals. He is also, as it says on this picture, a 'spotted disaster' to birds and smaller beasts who venture in or under the tree where he chooses a branch for a divan whereon to take his noontime rest. Mottles of light and shadow playing upon the tree bark and nestling in the moving leaves, help hide his ten sharp claws sheathed between elastic foot-pads. His four cruel dog teeth, covered by the tightly shut whiskered lips, tell no tales of the bristle-covered tongue within, that licks and licks the skin of its prey, until it is filed away, and the bleeding flesh made ready for the meal.

"When he hunts by stalking, he prefers the dark hours, his eyes shining like lanterns. In truth, the Ocelot wears a coat of many colors, in which orange, brown, and yellow blend and mingle as a groundwork for tawny, black-edged spots, stripes and streaks which cover two and a half feet of body and fifteen inches of tail. In habits, he is more of a tree cat than the others; he too, like them, is no carrion eater, only feeding upon prey that he catches himself. See the crouching figure with ears well up, back feet braced, and tail lashing. It is in the exact position of a House Cat watching a Mouse. In a moment, if the birds pass under the tree, there will be a spring, a flutter, and a mass of feathers borne to the ground, and a meal for the Ocelot.



THE OCELOT.

"In spite of its climbing propensities, the Ocelot is a swift runner, and leads the dogs, with whom it was formerly always hunted, a wild chase, crossing and doubling among the waterways of its haunts in a manner to throw the keenest hound off the scent."

"Now my three grinning heads," said Dodo, gazing at her favorite picture; "are they three kinds of cats, or a mother, father, and child? I think they look like a family."



HOUSE CAT.

"Three different species," said Dr. Roy; "and the heads are drawn in exact proportion, so that you may judge of their size. The smallest is the House Cat, an emigrant like ourselves. The next in size is the Wildcat, or Bay Lynx, and the largest with the hairy ear tufts is the savage Canada Lynx, called *Loup Cervier* by the early travellers."



WILDCAT.

"You all know the House Cat and its habits: how it purrs when it is going to sleep or feels pleased; how it sharpens its claws on carpet or wood, drawing them in and out at will; how rough its tongue is when it licks your finger. You have seen its eyes shine in the dark, and how the pupil (the little dark spot in the centre that lets in the light to make it see) can be made large or small. You have watched it steal along softly on its hunting trips as cautiously as a man, and you have seen it give a mouse or bird the fatal blow with its heavy paw, that both stuns and holds like a trap. It is a cat's skill as a bird hunter that made me banish it years ago from the farm, for a terrier will keep the rats and mice in order quite as well."

"You also know, or at least I am sure that Olive does, how a cat steals away to find some very private place for a nest for her little blind kittens, and how much pride she takes in cuddling them in her arms and suckling them until they can lap milk or catch mice for themselves."

"Indeed I do, for a cat once made a nest on a shelf in a box where I kept my best hat all trimmed with ostrich feathers and velvet!" said Olive.



CANADA LYNX.

"Our Wildcats seek out the most inaccessible places in rock ledges and tree hollows as homes for their kittens. When I was a boy I found a Wildcat's nest in an old chestnut log, in the wood by the grazing pasture at the other side of the farm. No, you need not look worried, Dodo, there are none about now!"

"It was the early part of May, and a party of us had gone out to look for arbutus, which made masses of fragrant pink among the dead leaves. People all about had been complaining of the Foxes and saying that they were very bold, visiting some farm every night and yet leaving no tracks. We lost chickens and ducks, quite a good-sized little pig, and finally a pair of tame white, pink-eyed rabbits that were my special pride.

"In going flower hunting this day I strayed away from the others to look for the thousand and one things that always made the woods a fairy picture book to me. I should not have been surprised to have found the entrance to the palace of the sleeping beauty between the rocks, but instead of Beauty I found a Beast!"

"Oh, uncle, you are joking; all those were dream stories that never really happened," said Dodo, solemnly.

"I said a Beast, not *the* Beast, and it happened in this way. I was resting on the edge of a moss-covered rock under the edge of which lay the trunk of an enormous chestnut that had been blown over and gone mostly to decay. As I swung my heels down and kicked this trunk, three little furry heads appeared at the hollow in the end. I took them for the kittens of some stray cat, and stooping over tried to catch one, but they gave a cry in concert, something between a spit and a yowl, and disappeared in the tree. Then I noticed that the mossy ground by the stump was dug up and there was the partly covered remains of one of my rabbits!

"Before I could think or put two and two together, I heard the snapping of some twigs behind me on the rocks, and as I turned a most weird and unpleasant 'meau-ll-ll' greeted me, and there stood a Wildcat, ears back, jaws snarling, its long legs braced for a spring! I did not know that the American members of this family will not, any more than Wolves, attack man unless driven to bay, that they never hunt in packs, or that the cat was fully as much frightened as I was, and that she had merely returned home in a hurry in answer to the call of her kittens. I saw only a strange monster spitting fire, ready to spring at me, and imagined I heard the cries of a hundred more in the trees. Under these circumstances it was not strange that I ran back to my companions, with such a tale of horror that the whole party hurried home as fast as possible to spread the news, not daring to look behind them, and spilling arbutus blossoms like a paper chase trail over three miles of road.

"Our parents wisely decided that I must have seen one Wildcat, if not a whole army, and concluding that the missing poultry could only have been taken by a beast that climbed, organized a hunting party composed of six mixed dogs, who understood the Coon trade, five men and as many rifles, while I was allowed to follow. The mother Cat was easily treed and quickly shot owing to her unwillingness to leave the neighborhood of her log house. I had begged for the kittens to tame for pets, so they were poked out of the log and put in a bag.

"All of a sudden, as we turned toward a path to leave the wood by a different way, our old hound Trumpeter put his nose to the ground and started off like a shot, the less well-bred pack following at his heels.

"'Go home with your bag of kittens,' said my father, in a tone that brooked no argument, as he dashed after the dogs. Though it was a lonely walk, the bag was heavy, and the kittens clawed and quarrelled, there was nothing for me to do but go.

"Sundown came, no father; the moon rose, and the wives of the four other hunters gathered at our house, and sat solemnly in the sitting-room (now my wonder room), where, Dodo, your mother, then a small baby, was asleep in her cradle. At ten o'clock they went to their homes, while I peeped at them from the hall window, and finally went to bed, dreaming of Wolves, Indians, and Lions.

"About half-past seven the next morning the party returned, father carrying Trumpeter over his shoulder, and our neighbors the pair of Wildcats. They had followed the trail upon which our hound had started nearly all night, in and out of brush, marsh, and wood. When the male cat was finally brought to bay, Trumpeter, not distinguishing between this savage beast and the usual Coon, had attacked him, only to be painfully wounded, and then a bullet had killed the second of this pair of robbers.

"I can remember now exactly how the Wildcat looked, as it lay on the door stone, for they gave the female to me because I first saw it. It was nearly three feet long from nose to root of tail, which was, perhaps, a little over six inches. It had a round head and large pointed ears, from which the long winter hairs were not completely shed. Its long body was covered with brindled, barred, and mottled fur, of light and dark brown, rusty and gray. Its legs and feet seemed long and

large compared to its lean muscular body. My father kept the skin of this cat and tanned it, and, old and worn, there it is now on the settle!"

"Only think," said Nat, as the children began to handle the pelt and stroke it eagerly, "this old skin once lived in our woods and frightened Uncle Roy!"

"Did Trumpeter get well, and what became of the kittens?" asked Dodo.

"Trumpeter was bandaged up and cured after a while, but it was months before he would go near the cat skin, which lay on the back of the parlor sofa. The kittens soon grew very sly and vicious, and father gave them to a travelling showman who came to East Village."

"Where do Wildcats live now?" asked Rap.

"They are scattered quite evenly over the wilder parts of the middle country from the south up, haunting places where small Mammals or game birds can be had, but they are nowhere common enough to cause trouble."

"Now the nicest cat picture of all," said Rap, "the Puma and the Elk. The Puma doesn't look much like a Cat—is more like the postmaster's old lean mastiff."

"You make a good comparison there, my boy," said the Doctor; "except that it has shorter legs and larger feet, and a tuft on the end of its tail, this Puma is very much the same size and color as that dog."

"Imagine an animal like old Max weighing from 150 to 200 pounds, with the spring and strength of a bundle of steel springs, feet heavy enough to fell a man with a blow, and armed with the most powerful movable claws. Having more leaping agility than any American fourfoot, clearing twenty feet easily on a level, and in a downward leap able to cover sixty feet, and you will have a picture of the Puma, as the Wise Men prefer to call him, though he is known in different parts of the country as Panther, Mountain Lion, and Cougar. The Puma varies very much in size, those found in the south being larger than their northerly brothers."

"Why is that?" asked Rap. "Among Wolves the northerly ones were the biggest."

"The dog family likes a cool climate and the cats prefer a warm one. Even though the Puma is hardy, and can live in all climates, one of the Wise Men says that an animal always grows the largest in the climate that best suits him."

"The Puma sharpens its claws on the bark of trees or the earth, and purrs when pleased; both these instincts are found in his tame cousin, the House Cat, who provokes her owners often by scratching the carpet. Their fur changes color somewhat according to season, and the young wear mottled coats at first, like young Deer."

"I suppose he only lives in very far-away wild places," said Rap.

"Now his haunts are almost altogether confined to the rocky and wooded parts of the west and southwest; but not so many years ago he ranged within a few miles of the eastern coast and was plentiful in the Adirondacks, in places where people now have camps and cottages."

"The Puma is feared by all other beasts except a Bear or a Deer with fully grown antlers, for it both attacks the throat and gives killing blows with its heavy paws. But the Puma keeps to the wildest places and where it was plentiful the Wildcat was usually rare."

"If they lived in such lonely places, how did they come to be killed out?" asked Olive.

"Because, wherever they were seen, they frightened people so much that they were killed whenever possible. Then they had but two, or at most four, little ones in their rocky lair every other year, and these took two or three years to become fully grown, so the race increased very slowly. The only wonder is that there are so many left, for they are not long-lived animals, seldom living more than fifteen years."

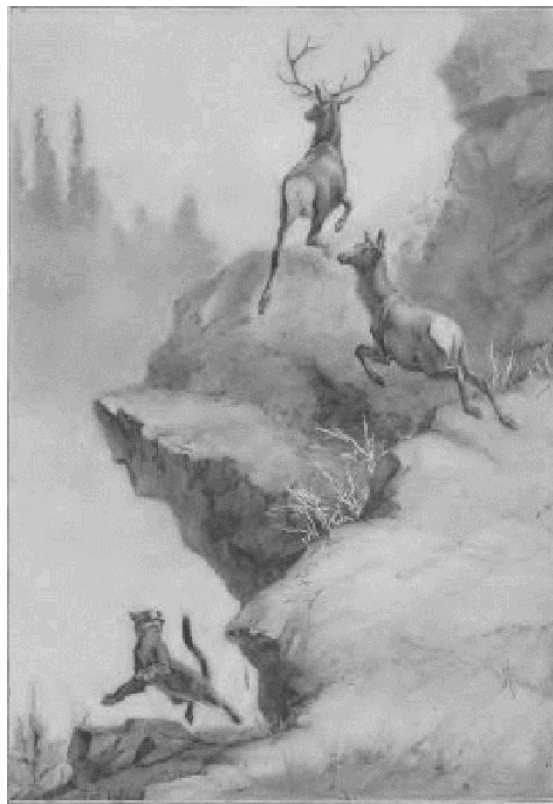
"Didn't they eat a great many people?" asked Dodo.

"No, like the Wolves they dread firearms and seldom or never attack man in spite of all the wonderful stories you will



hear to the contrary. The greatest harm they did was to kill food animals upon which man depended. Deer, young Elk, and also calves, they destroyed easily, as well as sheep and pigs, and they have been known to capture, kill, and drag away to a private feeding spot a beast almost twice their own size. The Puma has one good quality,—it is not a wasteful feeder, never taking new prey while it has a supply of food on hand.

"It is as a hunter that the Puma shows the most intelligence. He is a fair hunter, watching signs, waiting until he can get to windward of his prey, then creeping slowly upon it and preparing for the spring, as the human hunter stalks and waits for the right moment to shoot. It is upon his wonderful leap that the Puma depends for his success; he is too heavy of paw and too short of breath to be a fast runner. He may trust to one, two, or three springs to catch up with his flying prey, then if he does not overtake it he does not follow it further. It is this lack of speed which allows dogs and men afoot to drive him to cover, though of course he has the advantage of being able to cross chasms on logs and to descend steeply by means of trees. Young Deer are perhaps the Puma's favorite food, though he does not despise any animal food, and often makes a meal of that four-legged cactus, the Porcupine. Do you remember how Wolves trapped the Deer, one chasing it in a circle while the other lay hidden in the runway to pull it down as it passed?"



PUMA HUNTING ELK.

"Yes, yes, we all do!" chorused the children.

"The Puma hunts singly more than in couples, so instead of driving the Deer or Elk (it never tries a fully grown Moose) it notes the runway and waits for the Deer to pass the spot where it is crouching. A successful spring will land the Puma on the haunches of his victim, where he fastens his claws until he can give the killing throat bite. But oftentimes the Deer starts quickly and the Puma is 'too late,' and the Elk escapes, like those in the picture.

"In snow time alone, the Puma seems to hunt by chasing as well as by the stalk and leap. He can spread his broad paws so as to make snow-shoes of them, keeping on the surface while the small, sharp hoofs of the Deer cause them to sink. In this again he hunts like some sportsmen, who take a mean advantage of the heavy Moose and Elk ploughing wearily through deep snow, to follow them on snow-shoes without having the Puma's rightful excuse of hunger."

The children laid the Ocelot, Wildcat, and Puma skins on the floor, comparing and talking about them, while Olive went

for the crackers to toast.

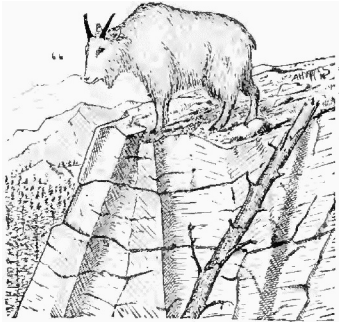
Finally Dodo folded her arms, looked up with a sigh, and said solemnly, "Even if Pumas do not eat people, I'm very much relieved to know that they have retreated a long way inland," being perfectly unconscious that she was imitating Dr. Roy's speech and deliberate manner, and not understanding why he laughed so heartily that his "near to" eye-glasses bounced into the fire.

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## XVII

### THREE HARDY MOUNTAINEERS



"AY I choose that deer with the smoke coming out of his nose?" said Dodo to Rap, as he was turning over the pictures the next Saturday evening. "I don't understand one bit about the different horns,—the cow's that stay on and the Deer's horns that fall off."

"Doctor Roy says we must ask Nez for the story to that picture. I am looking to see if I can find any cousins of the farm animals; it seems as if there must be some. Yes, here are two,—a Sheep with monstrous horns and a white Goat!"

"Oh, uncle! daddy!" called Dodo, "we have found wild relations of Nanny Baa and Corney!"

"Yes," added Rap, "and beside in the Sheep picture there is Billy Coon's cousin, a great fat Bear."

"So you have come to three of our famous 'big game' fourfoots in a bunch," said Mr. Blake, "and I suppose you want me to take you hunting to-night. Very well, we will go, only you must put on stout clothes, thick, easy shoes, or moccasins, bring a pair of skees apiece, and be prepared for climbing up hill for miles and sleeping out doors many nights."

"What are skees?" asked Nat.

"They are foot gear; an Old-World invention, half skate, half snow-shoe, like a pair of small foot-toboggans, that Rocky Mountain hunters use in icy weather."

"Then these 'big game' animals live 'way out west in the Rocky Mountains! I know those mountains," said Dodo; "they hump up all the way from Alaska down to Mexico. But people need not walk; couldn't they go there by train, daddy?"

"You can go for a week or more by train. Then at the end of a week of horseback riding and walking mixed, you will be lucky if you see the plump, round body, and the great curved horns that give the name of Bighorn to this Mountain Sheep, the shyest of all our fourfoots.

"Some day, if I do not grow too old and stiff, and if the wasteful Wolf Hunters have not dragged dynamite guns up the mountains and bombarded them all out, I hope to take Nat to see this Bighorn and the Mountain Goat at home. For to-night you must be content with a story."

"The big Bear, does he live as far up and away as the others?"

"He lives in and also below their ranges, but nowadays one must usually look much further for a Grizzly, such as the one who is peering at the Bighorn in the picture, than for either the Sheep or Goats. The Grizzly is a flesh eater, with an enormous appetite for everything else eatable—from wild berries to honeycomb. He is sometimes tempted to come near farms, camps, and houses, to pick up dainty titbits, while the Sheep and Goats, being hollow-horned cud-chewers, belonging to the meat family, like the Bison, are not often tempted from their lofty grazing grounds; but his foot leaves no sound and he comes and goes unseen.

"In the great National Park of the Yellowstone River, where the Government, by offering protection, is trying to coax the 'big game' to make itself into a Zoölogical Garden,—there is a hotel where people may stay who wish to see the wonders of the country without too much trouble. The waste food and refuse of this house is carried to a heap not far away."

"A swill heap, you mean, don't you, daddy?" asked Dodo. "I shouldn't think the Government would allow a swill heap in a Park. Uncle won't have one on the farm; he says 'they are perfectly barbarous things, that make pestilence and flies,' so the pigs have the clean scraps and everything else is buried!"

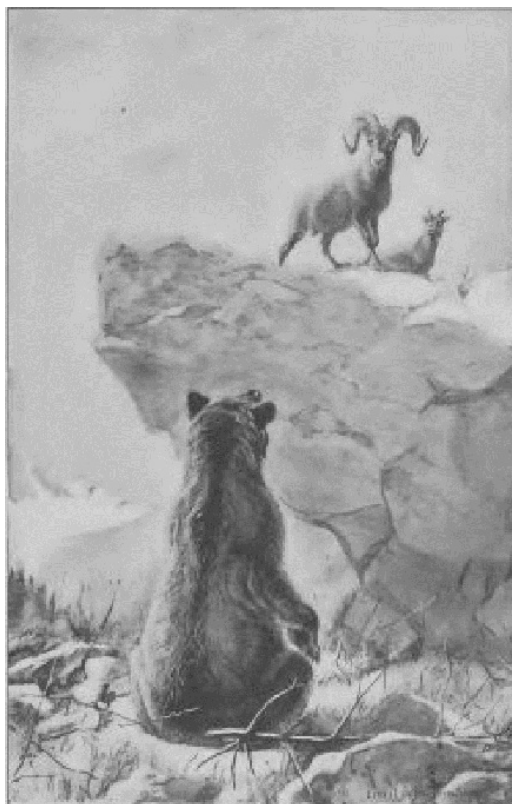
"You are right there," laughed Mr. Blake, "and it is nothing more nor less than the odor of this swill heap, attractive at

least from their point of view, that lures the Bears, both Black and Grizzly, from their rocky dens to come and feast within eye-shot of House People."

"Then I should think the people could shoot them," said Nat.

"No guns are allowed in the Park, that is one reason why the Bears are so fearless."

"But I should think the Bears and Panthers and little nuisance animals would grow to be too many, and eat up the Deer and other fourfoots."



GRIZZLY BEAR AND BIGHORN SHEEP.

"They may in time, but the idea, I believe, is to trap the larger beasts if they increase too freely and send them to Zoölogical Gardens where people may see them."

"How long do wild animals live?" asked Dodo.

"That depends upon the species. House Cats and Dogs, you know, are considered quite old at twelve, and seldom live longer than fifteen years. Horses will average twenty-five, while on the other hand Squirrels and Rabbits are old at seven or eight."

"How long do Bears live?"

"Perhaps twenty or twenty-five years, but it is very difficult to judge about wild animals. It is impossible to keep track of them out of doors. In confinement they are seldom perfectly healthy, and so do not live out their natural lives. In fact, among these flesh-eating four-foots, every one eats some one else, and it is probable that very few live to die of old age."

"Do Grizzly Bears and Bighorns and Goats live nowhere but in the Rockies?"

"Grizzlies were once found in all the mountains and foothills of the west from Mexico north to the Barren Grounds. They did not always stay in the mountains either, but came across open country, poking their noses most unpleasantly into the

affairs of prairie travellers, and carrying consternation into the very glare of the campfire.

"Now 'old Ephraim,' as the Grizzly is nicknamed, has been driven from his more southerly haunts only to increase and thrive mightily in the cold northwest territory, where the largest are found. When a Grizzly Bear undertakes to grow as large as he can, then take warning, sheep, range cattle, and huntsmen! Of all the ferocious, [unstoppable](#), persistent, disagreeable beasts of North America, this Bear is the chief! Compared to him the Polar Bear is a cat and the Black Bear a kitten; small wonder then that the Wise Men named him '*horribilis*'!"

"I think you must have met a Grizzly out walking," said Dodo, "so you can tell us about him. How big was he and how did he look?"

"He *looked* as big as a load of hay ambling along, but he *measured*, after our battle was over, about nine feet from nose to tail, and stood four feet high at the shoulder. As he could not have changed in size during an hour, it proves what I have always said, that going either hunting or fishing turns human eyes into magnifying glasses, making them see double at the very least.

"The rough hairy fur of the Grizzly varies so much in color that hunters, judging by sight alone, often insist that he is several kinds of bear instead of one. You all know that you cannot judge by appearances in studying animals; if you did, you would call the Whale a big fish, never guessing that it is just as much a Mammal as a cow.

"The Grizzly's summer coat is short, brindled brown, and his winter, long, heavy, and a buffy brown, not grizzled gray as some people think. Grizzly, a Wise Man says, means horrible, and should be spelled g-r-i-s-l-y. A faded brown will be the color of those you are likely to see in menageries. This Bear has a heavy head, a rather wolflike face, with full cheek tufts of fur bushing out well up to the ears, and eyes that express the deep cunning that *looks* like stupidity. He walks usually on all fours, but can also charge standing upright, looking like some giant or ogre in a fairy tale.

"His broad footprints, for he is a sole walker, also have something strangely human about them, and hunters, fancying that they looked like moccasin tracks, dubbed the Grizzly 'Moccasin Joe.' But the likeness to a foot disappears when you see the long, cruel claws that end the toes—claws that are both weapons for tearing and tools for digging roots, hollowing out a den for the winter sleep, or burying the food he cannot eat at once."

"Do big Bears like this have to sleep in winter? I should think they could keep warm enough to stay awake with such a thick coat," said Nat.

"In the cooler parts of the country they 'den up,'—the length of time they stay in varying from a few weeks to six months, and depending upon the weather. When a Bear makes up his mind to go to sleep, he is generally very fat and his fur is at its best. I'm quite sure a thin Bear would have sense enough not to risk curling up until he had collected some fat about his bones to feed his winter life fire.

"Now you must imagine a picture of Moccasin Joe in addition to the drawing, then take a good look at the Bighorn and Mountain Goat, for it was in hunting for one of these two that I met a Grizzly 'out walking,' as Dodo says.

"The Bighorn is a shapely, well-built fourfoot, about the size of a year-old heifer (or in round numbers three and a half feet to the shoulder), with all the firm plumpness of a sheep, having the poise and swiftness of a Deer, and wearing such wonderful horns that he would be a marked animal in any country. So heavy are these horns that nature does not oblige the female to carry them, giving her a much smaller pair. It is sufficient for the males, who wage war with each other and upon beasts of prey, to have such weapons. Then, too, the small horns of the female tell the hunter who she is, and if he is a true sportsman he will never shoot her or her young, unless he is either starving or needs her *very* badly to complete some family group in a museum.

"The coat of the Bighorn is of a bluish dirt gray, the rump is whitish, thick and fleecy beneath, thicker on the neck and shoulders than on the flanks, and thatched with a brittle, strawlike outer coat. In fact, at a distance, if he is standing, the whole animal looks white, but in lying down seems to melt suddenly into his surroundings. He is not only a gamey, alert animal, but looks it; he has the air of a mountain lover, whose greatest joy is to climb a high peak and turn his straw-colored eyes toward the view. This habit of course makes him doubly hard to kill, for the hunter not only has to climb, but the Sheep can see everything from his rocky outpost, and the chances are that, unless the sportsman crawls on the

ground for miles from cover to cover, making himself as flat as a Woodchuck, when he arrives within shooting distance of where the Sheep was, he will see it calmly watching him from another pinnacle a mile further up."

"I suppose they can jump just like Panthers and get over places that people couldn't cross," said Rap.

"They are agile and quick runners and can jump moderately, but when they wish to go down a steep place, they set their feet and coast, for the shock of jumping so far would kill them, even if their bones were not all broken.

"So hardy is the Bighorn and family that the lambs born in the early spring go slipping over the ice after their parents as soon as their legs can bear them, never dreaming of feeling cold."

"If they are hardy and live so far away, I shouldn't think there would be any danger of their dying out," said Rap.

"You would not think so, and yet they yield such delicious mutton that they are persecuted by all the flesh-eating animals who are able to take them, in addition to man.

"The Mountain Goat, on the contrary, is said, by those who know, to be holding his own better. His flesh is tough and strong-flavored, and his heavy coat of thick under-fur and rough white hair, that makes him look as clumsy as a miniature Bison, is of little value as a pelt. The Indians, who used to make robes of it, prefer the woven blankets obtained at the trading stations, and so leave him comparatively alone in his dizzy pastures."

"The Goat doesn't look as if he would be a good climber," said Rap, studying the picture. "He is short-legged and clumsy and has a humpy neck like a Bison, and his head pokes so far forward that I shouldn't think he could see behind him. He looks as if he would like a nice, comfortable pasture like farm cattle!"

"His looks belie him, sure enough! He is a foot less tall than the Bighorn, and his smooth black horns do not look powerful, but if I could show you one of his hoofs, you would see how he manages to cling to the face of almost upright rocks.

"This hoof has a soft clinging cushion in the middle and an edge sharp as a skate; the foot of one of the few animals who in bitterest weather declines all shelter, and often lies down in the middle of a frozen pool in face of cutting wind, acting as if he enjoyed it."

"Why doesn't he freeze to the ice and die?" asked Dodo.

"That is a question I cannot answer. He and his cousin, the Musk Ox, have the secret of keeping warm that nature taught their race in the bygone age of ice. But you can understand how interesting the Bighorn and Mountain Goat are, and see why, being within a few hundred miles of their haunts, I determined to find them, crossing the Bad Lands to the mountains where I had friends, without desiring to meet the Grizzly, who introduced himself to me quite unexpectedly."

"What are Bad Lands?" asked Nat. "Places full of robbers?"

"No; Bad Lands are the parts of the country, beautiful to see from the distance, but where there is so little moisture that few things better than cacti and such like plants will thrive. The lime-filled, parti-colored soil being filled with cracks and cañons, it is a region good for game but *bad* for the farmer, *bad* for the cattle raiser and very bad for the sportsman who, if overtaken by darkness, must make his camp where he is, for there are no tree signs to guide him on his way."



MOUNTAIN GOATS.

"Are these Bad Lands all in one place?" asked Nat. "I should think, if they are, the Government could put a fence around them to keep people from straying in."

"That would be a fine piece of work," said Mr. Blake, laughing. "Imagine putting a fence around an irregular strip, that runs east of the Rockies, making all sorts of side excursions, from Canada to Mexico, and containing more than a million square miles! It would take all the trees in Canada for fence posts, and the first post would be old and decayed before the last was put in. But let us return to our story.

"It was in early summer, and the party I had joined was fairly located for making a railway survey across the Cascade Mountains, not far southeast of Seattle, in what is now the state of Washington. Look at your map and you will find that these mountains, named from the streams of clear, cold water dashing down their slopes, lie between the Rockies and the Pacific coast, and are about as far west as any mountains except the Olympic group.

"While the camp was waiting for some instruments that had not arrived, three or four of us determined to do a little surveying for Sheep and Goats on our own account. After keeping together for two days and nights, until we had worked our way well up, we decided to divide, three of the party to continue on above timber-line after the Goats, while I, accompanied by *Crawling Joe*, a typical mountaineer engaged by our camp as a guide, meat provider, and useful man, was to go southward along the ledges toward some woodlands and plateaus where Bighorns were likely to graze."

"Why was the man called *Crawling Joe*?" asked Dodo.

"Because of his way of hunting Indian-fashion. No matter which way the wind blew, when he had once located an animal, whether it was Bighorn, Moose, or Elk, he would manage to crawl and tack up against the wind within shooting distance of it. In doing this for years he had acquired the cunning of a snake, and would often appear by the campfire as suddenly as if he had come through the ground.

"This particular day he insisted that we should leave the horses behind and go on foot, as the rolling of stones and other like sounds, made even by the most sure-footed horses, might prevent our getting a sight of our game. I carried nothing

but my pet Winchester, but Joe shouldered a small pack sufficient for a night's camping. After climbing pretty steadily for four hours, we sat down to rest and eat our dinner of cold food. Finding shelter at the edge of a belt of spruces, where there was also water, we resolved to camp there that night and so left the pack in a tree until our return, out of the reach of inquisitive Bears, if any should pass that way.

"Our stalk for Bighorns began about one o'clock; Joe took the lead, directing me by signs. In an hour we were well clear of the woods, and skirting a cliff full of springs and caverns. Suddenly Joe dropped to his knees, motioning me to do the same, then raised his head and gave it an upward jerk. I looked, and half a mile away, on a jutting rock that stood clean against the sky, like a headland against blue sea, was a Bighorn ram, as immovable as if he were a part of the blue gray stone itself. A little back of him were some ewes, lambs, and another ram, though as they were lying down it was doubly easy to mistake them for stones. The peak where they stood was like an island. The wind was blowing in our faces, and Joe signalled me to take the left route while he turned to the right, thus lessening the chance of the sheep's escape, at least *down* the mountain. Already I tasted the rich roast mutton with which I had promised to feast the boys of our camp, who had grown tired of salt meat and venison.

"I dropped on my hands and knees and began to crawl in a very poor imitation of Joe, for it seemed to me that every stone I touched was either sharp as a knife, or took particular pleasure in rolling down hill. After a quarter of a mile of this sort of work, the ledge around which I was passing was high enough to shield me if I walked upright, and this allowed me to rest my strained knees and elbows.

"As I paused a moment to look about, a few bones caught my eye; the meat was picked from them, but the gristle was quite fresh. 'Ah, ha,' thought I, 'a Bear must have been enjoying some spring lamb!' I *thought* Bear, and instantly I *saw* a Bear! Lurching down the steep and stopping directly in my path was a full-sized Grizzly, who was evidently as surprised as I, but not so frightened. The Bear rose on its hind legs, waving its paws, and looked at me slantwise. I returned the stare glance for glance, not knowing what else to do, half expecting the beast to run, as most fourfoots will, and feeling backward at the same time for a footing that would give me range enough to use my rifle.

"As I took a step backward the Bear stepped forward growling. I had made a mistake; a female Grizzly with two or three hungry cubs in her den does not run that she may live to fight, she stays to kill that she may eat. Oh! for a tree! If there had been one in sight I would have risked running for it, as Grizzlies are not good climbers like the Black Bear; but there I was, I could neither run nor shoot. My enemy gave a grin and a growl and took another step forward, clawing at me. I dared not lift my rifle to my shoulder, lest she should grab the muzzle, but I managed to grasp the barrel, and swinging it round brought the butt down on the Grizzly's nose with a heavy blow. She was only enraged by it, not stunned, and gave a growl, gnashing her teeth with a horrible noise. For a moment I expected no other fate than to become the supper for the little Bears!

"Something cold slipped along my shoulder and touched my cheek. Fortunately I had sufficient nerve not to turn—there was a sharp report close to my head that made me deaf and kept my ears ringing for months afterward, but the Bear pitched forward, just clearing me, and rolled down the rocks to a ledge below, shot through her wicked eye.

"Then I turned. Joe was behind me, calm and cool as if he had merely shot a Squirrel.

"'I saw her a-comin' from the open yonder, and I reckoned you'd be wantin' me 'bout now. Never mind skinnin' her until we get our Bighorn—she'll stay down thar till we call fer her! I reckoned that shot would scare the Bighorns, but it hasn't; they must be a green bunch that haven't ever been hunted,' he said, looking around the corner.

"Sure enough; the rocks screened us, and the ram had merely shifted his position, while the whole bunch were now picking at the tufts of grass back of the rocks. I was in no mood for hunting; but Joe took it for granted that we should go on, and the excitement soon put the Bear out of mind.

"Before dusk we had killed our ram, but as he rolled and fell for some distance down the cliffs one horn was broken off and the other, that lies there on the mantelshelf, is the only trophy you can have of the day when your father was nearly turned into Bear meat!"

"Oh, daddy! daddy!" cried Dodo, jumping on his knee and hugging him, "what should we have done if the Bear had eaten you?"

"It was before you and Nat had come to live with me. I haven't taken so many risks since I have had two little bears of my own to care for."

"Was the mutton good, and did you get it back to camp, and did the other men get any Goats?" asked Nat.

"Yes, we took the best parts of the ram back to the main camp, also the skin of the Grizzly. Our comrades did not get anything that day, though they did later on, and I also have a single Goat horn as a souvenir to match my ram's horn. Hand them to me, Nat."

Nat stood on a chair and reached the two horns from the shelf. One was fifteen and one-half inches around at the base and three feet long on the outside of the curve, rough and yellowish gray, while the Goat's horn was smooth, black, and only eight inches in length.

"You see that these two horns are hollow, from a little way above their base to the tip, like the horns of a Buffalo or cow. These are true horns and are worn by the animal for life, unless accident breaks them off. They are made from a fibrous material akin to hair, and cannot be separated from the head without making a bleeding wound; as a straight branch grows from a tree, if it is broken a scar is left and the sap runs out.

"The antlers of Deer are not made of this fibre, but of solid bone. They sprout from the head of the male Deer in the spring, as a leaf bud does from a twig. At first they are soft and tender as the young leaf is. Then they grow and expand in different shapes, each according to its kind, some being simple and others many-pointed, like ferns. All the summer they grow harder and harder, until in autumn and early winter they are ripe and fall off as the leaves do, leaving a little scar through which the next year's antlers sprout.

"There is one animal that you will hear about soon, whose horns are stepping-stones between the hollow horns and the solid antlers. This is the Antelope, who belongs to the Deer branch of the meat family, and like other Deer sheds its pronged horns, which are still partly hollow like those of a cow."

"What do you call them if they are half horn and half antlers?" asked Rap.

"The Wise Men call them prongs, and sportsmen give the Antelope the name of Pronghorn."

Meanwhile Mr. Blake was unfastening a little ornament that hung to his watch-chain, which he handed to Dodo, saying,

"Here is something I found the other day that I thought was lost. Guess what that is, little daughter."

"It's a long, very big dog tooth," said Dodo, looking carefully at the yellow bit of gold-capped ivory in her pink palm.

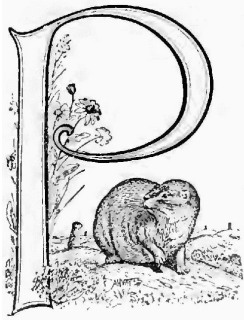
"Wrong; it is a tooth of the Grizzly that *didn't* bite me!"

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## XVIII

### ON THE PLAINS



REPARATIONS for the Christmas party were keeping everybody busy at the farm. Many mysterious boxes and bundles kept arriving from the city, but Dr. Roy had insisted that the young folks should make some of the gifts with their own hands. Olive, who was very deft with her fingers, had little trouble in devising pretty and useful things, but with Dodo and Nat it was a different matter.

A fine, warm flannel gown was under construction for Rap's mother; a like one, only of a gayer pattern, was already finished for Mammy Bun—that is, all but sewing on the buttons. Mrs. Blake had cut out the various garments, Olive doing the making, assisted in straight seams and easy places by Dodo, to whom sewing was a very solemn business. In fact, she held her needle as tight as if she expected it to jump out of her fingers, and tugged at the thread as if it had the strength of a clothes-line,—a habit that caused many knots, broken ends, and, I must confess, tears.

"I think Nat ought to sew and help us; he isn't making anything," she had said one day after putting her mother's patience, and a seam that would pucker, to a severe trial.

"Phoof! men never sew," he said contemptuous, "they leave such easy work to girls!"

"What is that I hear?" said the Doctor from behind his newspaper. "Men never sew? That is a great mistake, young man. Men are not ordinarily obliged to cut and make their clothes, but a man should most certainly know how to use a needle. If he is a doctor, he must be able to sew up wounds and fasten bandages neatly. In any profession he is apt to find buttons missing, even if modern shirts are put together with studs; while as a woodsman, traveller, or engineer, such as you wish to be, he is in constant need of a stout needle and thread; a tent cover rips, a gun case is torn, thorns cut the clothing. A man may not sit down in the wilderness and wait for a woman to come by with thimble and scissors.

"I think it will be an excellent thing, Nat, for you to learn to sew, and you can begin at once by putting the various buttons on these wrappers and aprons. I will teach you how myself." "Very well, I will," said Nat, remembering that he and Rap were planning to make a tent in the spring; "but you needn't *teach* me, uncle, any one can sew on buttons."

"Very *few* people can sew on buttons properly," corrected the Doctor, "that is, buttons on men's clothing that will button and stay buttoned. I know a charming young lady who sews beautifully, but when it comes to buttons she fastens them down so flat and tight to the cloth, that the poor button-holes gape and make faces in trying to swallow them, and often do not succeed at all. One of the button-holes in my overcoat is suffering from a strained jaw now!"

Olive laughed and blushed at this, saying that it really was not so *very* easy to give the button a nice little neck of thread to hold it and yet make it strong and fast.

"Double thread, four times through, and wind four times round the neck is my receipt," said Dr. Roy.

So this is how it came about that Nat was sitting tailor fashion on the wolf skin facing the campfire, sewing on buttons, the Saturday before Christmas, having borrowed Mammy Bun's thimble, which he wore on his thumb.

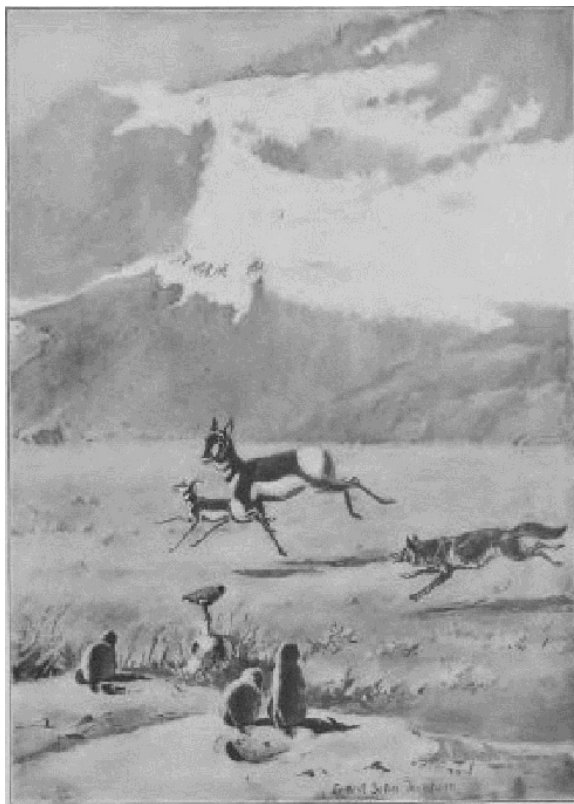
"It's my turn again to choose," said Dodo, going to the portfolio; "but won't you please help me, Uncle Roy? I want to find one of those animals with the between horns, that are hollow like a cow's and yet fall off like a Deer's!"

"The Antelope, you mean. Turn a little further over—there is a head of a Prongbuck<sup>[4]</sup> (as the males are called), showing the horns, and here is a picture with the doe and fawn being chased across the plain by a Coyote, while the Prairie Dogs watch nervously from the doors of their holes, wondering when this little brother of the Wolf will turn his attention to them. This picture is quite a drama in itself, and we only need add one more character to have a group of plainsmen about whom books of stories could be written. Stop, there is the picture that I wish,—the Badger.

"If you think a moment about the animals of our stories, you will remember that they have almost all lived in or about



woods or thickets of some nature, and that they have been chiefly lovers of darkness—night hunters—the Buffalo and Jack Rabbit being the great exceptions. Now we have come to some fourfoots who, like those two, also prefer the open plains. Naming them in order of size they are the Antelope or Pronghorn, the Coyote, the Badger, and the Prairie Dog, who even to-day carry on the drama of the plains in spite of the onward march of two-footed settlers.



DRAMA OF THE PLAINS.

"Three of these four animals live and feed in the open light of day, the Badger alone being a night prowler. Two, the Badger and the Prairie Dog, sleep the winter sleep, having homes deep under the ground. Two, the Pronghorn and Coyote, are always watching and awake, always alert, living wherever their food is to be found. This drama is not a comedy, it is a tragic grand chain, hands-all-round.

"The Pronghorn is a cud-chewer, therefore a vegetable eater and no cannibal; but the Coyote eats the Pronghorn, Prairie Dog, and Badger (when he can catch him), as well as our old friend, the Jack Rabbit. The Badger also eats the Prairie Dog, as well as Rats, Mice, Gophers, and other nuisance animals, yet the Prairie Dog is the only one of the four who increases beyond the possibility of counting, and stretches his villages from the home of the Peccary in Texas to the land of the Varying Hare."

"Do they build houses?" asked Dodo. "These in the picture seem to be sitting by little holes on top of ant-hills, that look exactly like the tips of the volcanoes on your raised map in the wonder room."

"They do not build," said the Doctor; "they dig houses in the ground, after the fashion of their cousin, the Woodchuck. But the Prairie Dogs are very sociable, living in great underground villages, sometimes twenty or thirty miles long. We may see the doors of their homes easily enough, where they sit hunched like little old women, with their arms wrapped in shawls, yet quite alert, like all of the Squirrel family to which they belong. But they never invite us inside, or even give us a glimpse of the miles and miles of underground passages that run so deep, that I have often wondered if this little beast might not sometimes burrow down to water, for though they often live near creeks and in river bottoms, they also seem to be content quite out of reach of visible water at least.

"Deep as the passages may be, the Badger knows how to dig down to them, and readily captures this Prairie Squirrel,

with its grizzled brown coat and Marmot's face. Though called *Prairie Dog*, there is not a point of resemblance between this vegetable eater and the meat-eating dog, except it is in its cry,—'Yap—yap—yap!'—which is between a yelp and a bark.

"Cleanly in its habits and rather prettily furred, this fourfoot is a prince among mischief makers, and is a fine illustration of an animal who is becoming not only a nuisance, but a real danger to crops, because of the necessary disturbance of the great balance wheel."

"What wheel was that? I forget about it," said Dodo.

"I remember," said Nat; "the balance wheel is what Uncle Roy called 'The Plan of the World,' where things were arranged so that every animal and plant should be food to some other one, and there shouldn't be too much of anything. But by and by House People had to meddle, and without thinking much about it killed off some things, and then the others grew too many, because there was no one to eat them!"

"That is rather a mixed way of putting it," laughed Dr. Roy, "but we understand what you mean, which is something.

"The *Prairie Dog* eats not only grass, but grass roots also, and as soon as they have eaten all within a certain distance of their homes, they move on, burrowing fresh villages, leaving bare, barren ground behind them, only to lay waste fresh grazing ground.

"Before the Buffaloes had left and farm cattle roamed over the plains, and wheat fields made green seas of the prairies, the natural enemies of the *Prairie Dogs* held them in check. But the farmer was more angry with the Coyote, Fox, and Badger than with the seemingly harmless *Prairie Dog*, and turned his attention to them, until he found that it was much worse to have his pasture eaten than to lose a few calves and lambs—and now the war wages fiercely in the grazing and wheat lands.

"You may take a rifle and play 'catch as catch can, until the gunpowder runs out of the heels of your boots,' like the people in the nursery jingle; but it is more often 'catch as catch *can't*' when you undertake to rout a *Prairie Dog* town.

"I have often sauntered through one of their villages, stick in hand, merely to see what they would do. They were as usual on the watch, each one close to his door. Very likely a Burrowing Owl, living in some abandoned hole of the dogs, would drop me a quaint bobbing courtesy as I passed, after a fashion of its own. Perhaps I would see a sand-colored rattlesnake disappear in one of the mounds, probably to make a meal and a visit at the same time.

"As I drew near every eye was upon me. If I raised my arms or stick, amid a chorus of yelps, down the *Prairie Dogs* would go into their holes, only to bob up the next moment Jack-in-the-box fashion. It does not seem to matter how they enter the holes. They can turn a somersault down the slope that leads from the door to the first gallery, and disappear backward, staring all the while.

"Curiosity is often as fatal to them as to big game. Coyote knows this failing and avails himself of it in hunting them. You remember how the great Gray Timber Wolves hunt in couples or in packs. Coyote also follows this family habit. Two start out from a den or lounging spot in the side of a butte or coulie."

"What is a butte?" asked Dodo.

"A butte is a sort of cliff of sandstone, that rises sharply from level ground. They are the landmarks of the plains and often take beautiful or fantastic shapes, like church spires or castles. Some buttes are bare and arid, some are dotted with clusters of pine trees. A coulie is a cut made by creek or river.

"As I said before," continued the Doctor, "two Coyotes start out to see what they can pick up, sniffing about here and there like the vagabond wild dogs they are. If they find the carcass of some large animal, left by Wolves or human hunters, they will gorge themselves contentedly upon it, for they are the Jackals of our country and revel in carrion. If, however, they meet with nothing of this sort, they sit down like a couple of House People deciding upon a plan of action, and look about the country in all directions."

"Do they *look* for what they want? I thought all fourfoots followed scent the most," said Rap.

"With the beasts of woods and thickets, smell is the keener sense of the two; but with the animals who have been adapted to living in the open, sight is better developed."

"Of course," said Olive, "I can understand that, for you cannot *see* far in the woods, while there are fewer things in the open country to hold the scent."

"Our Coyotes see in the distance some Prairie Dogs sitting at the mouths of their caves; they interchange signals. One Coyote starts off on a lazy trot; the other remains sitting. The first Coyote does not hurry, however, but goes in a careless way toward the village, and soon his companion may be seen following him. Singling out a particular dog, the leader passes it slowly, but without pausing. Down drops the Prairie Dog into its hole as if shot. In a moment his curiosity overcomes his fear. He peeps out, sees the Coyote moving off, and so resumes his doorstep watch, still eying the enemy.

"The moment he takes his place he is snapped up by Coyote number two, who has followed, all unseen, in the footsteps of number one. This is of course if all goes well, and no neighborly Prairie Dog has given a warning 'Yap!'

"Some spring morning our Coyotes may fancy venison for breakfast, and think that nothing would taste better than a young Antelope. Again they scan the plain, slinking along cautiously behind such scant shelter as they can find, or lying flat on the ground if no cover offers. In the distance a bunch of Antelope are feeding, their pronged horns showing them to be chiefly males, who would run too swiftly and fight too bravely if the single pair of Coyotes should follow them.

"While the Coyotes are planning and plotting, let us cross the plain and look at these Antelopes, who were once, next to the Buffalo, the most plentiful of our big game animals, even now holding out bravely against great persecution, which if it cannot be stopped will, in another ten years, surely drive them out of existence.

"The Buffalo may thrive for a time in confinement, but the Antelope does not, for he misses the Buffalo grass of his native plains.

"The Pronghorn is a compact animal, with more the shape of a Bighorn than of his cousin the Deer. He measures three feet to the shoulder, has a short body, and is very easy to identify, first by the black horns with double prongs that grow just above and between the large, deep brown eyes, next by the neck bands of brown and white, then by the white rump, the straw-like hair of the back being dun color, like the coat of a Jersey cow. The eyes of the Antelope are of wonderful size and brilliancy, and they are among the keenest eyed of our fourfoots. The doe (as the female is usually called in the Deer family) does not wear horns.

"The twin horns of the little male fawns begin to grow when they are four months old, and are shed in midwinter or early spring, but the old bucks usually lose theirs in autumn, at the end of the year's growth and good grazing. When the time comes that the old horn is ripe it drops off. If you could look at it, you would find it hollow half-way up, and see how it fitted over the bony core from which it grew, and which is a part of the animal's skull. Then you would see the point of the soft new horn sprouting."

"Why do Deer have to shed their prongs and horns?" asked Nat. "What are they good for, and isn't the ground all prickly with them?"

"They are the weapons with which the males fight each other when they choose their mates. You have seen that birds often quarrel in the mating season and peck and fly at each other, and the fourfoots are much more jealous and disagreeable, the larger ones, like the Bears and Deer, often fighting terrible battles. Their mating season is in the autumn, and when it is over they have no further use for their weapons until the new ones are ripe the next season."

"Why don't they need them to fight people and other animals with?" asked Rap.

"They use them in self-protection sometimes, but in fighting other animals they usually strike with their hoofs and are able to deal very powerful blows. One of the ways in which the Deer family kills rattlesnakes is to spring suddenly upon them with their four feet close together.

"The Pronghorn has its winter and summer ranges like the Buffalo. In summer, unless drought turns the coarse grass into hay, they fare well; but in winter the poor Antelope huddle together in such shelter as they can find, and if snowed in, not having snow-shoe feet to travel toward better feeding grounds, they must freeze and starve if thoroughly snowbound.

Why we do not find more of the cast-off prongs or antlers on the grounds, is a hard question to answer. Indians say because sometimes the animals paw up dirt and bury them, but it is probably because the great army of nuisance animals gnaw them for food.

"The Antelope fawns, one or two in number, are born in middle or late spring, and stay in grassy nooks under slight shelter for a few days, after which they follow their mothers. This is a time of peril for both fawn and doe. While the fawns are too feeble to run about, they are comparatively safe, but as soon as they come out in plain sight the eyes of the Coyote world are upon them, and the does often lose their lives in striving to protect them. Then there are winged enemies also,—the great golden war Eagles, who swoop down and seize the fawns easily, and are often a match for fully grown bucks, disabling them first by picking out their eyes."

"Do Antelopes only live in the far West? Were there never any near here?" asked Dodo.

"They have never been found east of the Mississippi, but they once ranged all the way from the Saskatchewan country down to prickly Peccary land, both in the green prairie, foothills, and dry, cracked alkali plain, where rattlesnakes and horned toads were their companions. Now domestic sheep have taken their summer ranges on the bare slopes of the foothills, as the range cattle have replaced the Buffalo, and the great tribe is broken into detached groups, scattered here and there through half a dozen states."

"I should think the Coyotes and Foxes could surely find the baby Deer when they were hidden in the bushes," said Rap.

"So you would imagine, but when the fawns are very small they are said to have no odor by which they may be tracked, and if their mothers scent harm for them they give a bleating call, and the obedient children flatten themselves close to the earth and are hidden from sight, in the same manner that the little grouse disappear at their mother's cluck. As soon as they are old enough to have strength in their legs, the fawns cease hiding, taking to their heels when alarmed—and how a Pronghorn runs when it chooses! The fully grown Antelope can outrun a race horse for a certain distance, and though they cannot jump as far upward as other Deer, they can cross a great space on a level, and even the little ones bound over the ground as swiftly as Rabbits."

"I should think if they ran so fast and could see so far, hunters could never catch them," said Rap.

"It is a difficult matter in broken and treacherous ground, but their curiosity makes it possible. To chase Antelope on horseback at full speed over the plains is dangerous work; at any moment a horse may step into a Badger or Prairie Dog's hole, break his leg, and give the rider a bad fall. But sometimes a herd, on seeing a horseman, will run a little way, then all wheel round and gaze at him before starting once more, which lets him gain time.

"There was a way of attracting Antelope, called signalling, by waving a flag on a pole. On sight of the waving object, the curiosity of the animals was excited and they came up to look, but it only attracted Antelope who had not been hunted before, and they are now growing too shy to be deceived by it. Then, in addition to the protection of their coloring when lying down and their own wonderful eyesight, the Pronghorns have danger signals of their own, added to various cries. When alarmed, they can raise the hair on the rump until it looks like a huge white chrysanthemum, being visible from a great distance.

"Now while we have been talking about the habits of the Antelope, what have our pair of Coyotes planned?"

"They have sneaked along until they have discovered a doe, grazing alone and followed by a fair-sized fawn. After taking the lay of the land the Coyotes separate, one going over a bit of rising ground to the left and the other creeping directly towards its prey, for you must understand that Coyotes, though swift runners, cannot overtake an animal like the Antelope except by forming a partnership of two, three, or four, spreading out along the runway and chasing in relays—one starting when another gives out, until their victim is quite spent.

"The doe starts to run, the fawn keeping by her side, its legs striking out awkwardly. On they go for a mile or so gayly enough, the doe gradually turning to the left toward an accustomed track, her white back bristling in alarm, like a warning cry of 'Wolf' to any of her tribe who may heed. Now very soon the fawn begins to lag and the Coyote gains upon them. The doe is prepared for this, and gradually drops behind, keeping the fawn in front of her. One minute more and as the Coyote strives to pass and seize the kid, he will receive a stunning blow in the head from those rocklike hoofs. Then

the pair will be safe, unless they are too tired to escape the second Coyote who is waiting to head them off a little further on. But if the second Coyote should arrive on the scene before the first is disabled, struggling is useless, and the little Wolf brothers will have the venison breakfast that they coveted."

"You said the Badger holes were dangerous for horsemen. Do Badgers live with the Prairie Dogs?" asked Dodo. "The Badger in this picture is very funny—he looks very silly, and as if he wanted to sneeze and couldn't!"

"Badgers make their homes near Prairie Dog towns or at wood edges. These burrows are very curious affairs too. They go down fully six feet, then separate into galleries that lead to different rooms, the master of the house occupying the largest, deepest apartment all by himself. They are clean beasts, too, and keep their quarters very neat. Foolish as the Badger looks, he is a fierce foe, and it is a plucky dog or beast of any kind who can rout him from his hole.

"The Badger is about two feet from nose to tail, which is rather short; the body is broad and flat, the skin thick and tough, the back and fore legs as strong as iron. It has a pointed nose, keen black eyes, and a white stripe running from its nose over its head to the shoulders. The general color of its winter fur, which is three inches long, is a frosty gray. We say of a man who has peculiarly white-tipped hair, 'He is gray as a Badger.' The summer fur is less brilliant, being yellowish and faded. The Badger's chief claims to fame are his long, cruel claws, used both as tools and weapons, which, combined with his sharp teeth, make him an animal to be attacked cautiously. Both back and front feet have five strong toes set well in the flesh, armed with claws that make the Badger a veritable steam shovel for digging. Once give him ever so small a start and he can burrow faster than anything can follow him. Or let him back into his hole, bracing his hind feet, and any Dog, Fox, or Coyote who tries to draw him out will be torn, bitten, and most likely have his throat cut."



BADGER.

"Are Badgers good for anything but to keep down nuisance animals?" asked Rap, getting up reluctantly, for he was obliged to go home early that night.

"Yes, paint and shaving brushes are made from their stiffer tail-hairs, and their pelts have a small value in the fur market."

"I've finished my last button," said Nat, jumping up as Rap closed the door; "but my fingers are all cramped."

"I should think they would be," said Olive, "sitting all in a heap and pushing the needle with your thumb. The buttons look very nicely, though, don't they, father?"

"Yes, and you see they all have nice little necks, and the button-holes do not make faces when they swallow them," added Nat, proudly.

"The last present is finished—now comes Christmas and the tree!" cried Dodo, clapping her hands. "May we open our bank and see if we have enough money to buy the bird book for Rap? You said we might when the sewing was all done. Yes; here it is, I hid it in the wolf skin to have it all ready. Oh, what a lot of pennies, and a gold dollar! Who put that in, I wonder? It was you, daddy, I can tell by the way the end of your nose winks! Do count for me, Olive, the pennies slip so!"

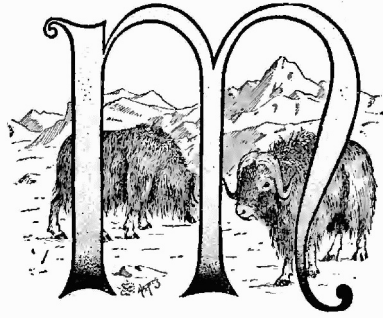
"Four dollars and fifty cents," said Olive, after counting twice over.

"Hurrah!" shouted Nat, "the book Rap wishes only costs three dollars and fifty cents, so we can buy him a big box of real city candy too!"

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# XIX

## UNDER THE POLAR STAR



UCH wind and threatening weather, then two days of falling snow that buried the fences, and at last the northwest wind sent the clouds scurrying, and bright sunshine returned with the day before Christmas.

"It is like the pictures in a fairy story; do look at the trees and the top of the rose arbor!" said Dodo that Friday morning, as she rubbed a peep-hole in the frost on the dining-room window. "Rod is breaking the road up the hill, and all you can see is the top of his head, and Tom and Jerry step in up to where their blankets are strapped. It's lucky we had the Christmas tree cut down and waiting in the shed before the snow came."

"It isn't in the shed," said Nat, mischievously, coming in with dancing eyes and a very red, cold nose, the only parts of his face that could be seen between his muffler and cap brim.

"Oh, where is it?" wailed Dodo. "Do you think any one has stolen it—was there any trail in the snow?"

"Yes, some one has dragged the tree out; I saw the footprints and marks of the branches!"

"Do let's go and tell Uncle Roy, or it will be too late to cut another."

"Nat is teasing you," said Olive. "Father and Uncle Jack are the thieves, for I see them dragging the tree round to the camp now."

Bang! went the door, and the dining room was empty.

\* \* \* \*

The tree touched the ceiling and was fastened to a beam with wire to keep the top steady, while the stand that held it was so prettily covered with moss and pine needles that it looked quite like the ground where the spruce grew. Pine knots would have been the proper lights for a camp Christmas tree, but Dr. Roy was so afraid of setting the old dry beams afire, that he objected even to candles, and so Mr. Blake had sent to the city for a number of tiny electric lights that would twinkle in safety.

Nat and Dodo helped twine the beams with evergreens and hang the decorations on the tree, but no more. They would not for worlds have peeped at even the corner of a present, they were so fond of being surprised. In spite of the temptation to go outdoors, they were too much excited to care for making snow houses, or throwing snowballs, and kept in a perfect fidget until three o'clock, the hour when Rod was to take the big sleigh to the depot to meet the party from the mountain.

\* \* \* \*

"They are coming, they are almost at the corner, for I can hear the bells!" cried Dodo. "Now they've stopped!"

"They are waiting for Rap and his mother, you know the sleigh was to call for them. Here they are!" shouted Nat, dashing down to the gate,— "that is, all but Toinette!"

Sure enough she had not come. "Got bashful at the last minit," said Nez; "allowed she'd better stay home and keep house along with her brother who's winterin' with us, but they're goin' over to the Ridge to-morrer to keep Christmas Canady style with some country folks o' theirn. Reckon they'll see their Christmas candles in church!"

This was a very long speech for Nez, and he immediately retired to the barn with Rod, looking as if he was afraid of a real house with carpets and curtains.

Olaf took some oddly shaped parcels from the bottom of the sleigh and carried them to the stoop, driving Phonse and

Dominique in front of him like a pair of balky geese; but they soon felt at home and began to talk when they had been introduced to the dogs and saw Mammy Bun preparing supper.

"I think those long bundles look as if they *might* hold show-shoes," said Nat to Olive; "but what is in that green bag, I wonder?"

"I have brought my fiddle," said Olaf, as if in answer to Nat's question. "Your father said to me: 'Olaf, I have a banjo; bring your fiddle and we will make music together.'"

Olaf often spoke slowly, as if he thought in his own tongue and turned the words to English as he said them, yet always using good language.

The children began the entertainment of their guests by showing them everything on the farm, from Sausage up, and had only half explained the wonder room when the bell rang for tea.

"The little boys have brought funny knit nighties and nightcaps with red tassels," whispered Nat to Dodo, as he returned from showing the Brownies—as Olive called them—their room and had helped unwind some of their wrappings.

Supper was a rather mixed, but very merry, meal. Olive had difficulty in keeping Dodo from asking the Brownies why they preferred fingers to forks, while Mr. Wolf and Quick saw instantly that something unusual was in the air and roved about the table trying to snatch scraps, something that they had never before dreamed of doing. But then if Christmas comes but once a year, having a party of two Brownies, a real live woodsman, and a Fin who knows a Dream Fox, is rarer yet.

The men went out in the clear starlight for a breath of air and to smoke their pipes. Rap's mother helped Mammy Bun in washing dishes and making the kitchen neat, so that by eight o'clock everything was in order for the march upon Camp Saturday.

"Isn't it nice?" said Dodo to the Brownies; "eight o'clock is go-to-bed-time on common nights, but Christmas eve it is the very beginning, for daddy says we may stay up until ten!"

The Brownies, however, did not understand much about time, for they usually went to bed whenever it grew dark. While they all stood waiting for the sign to be given for opening the camp door, a scream came from Mammy Bun, who was already inside.

"For de lan' sakes, Massa Doctor, come hyar right smart! Billy Coon, he am in der tree eatin' eberyting! I tink he hab bit one o' dem fancy lights, shor' nuff!"

The waiting procession immediately stampeded. Fortunately the tree was fastened at the top, or Billy's fat body would have overturned it and wrought dire mischief. As it was, he had only eaten a few lady apples and a candy cane, so he was driven into a far corner, where he sat devouring a string of popcorn that caught round his neck, for the Brownies were delighted to see their old friend, and the children all begged that he might not be banished.

The tree lights twinkled in earnest, and made such a blaze that the Brownies blinked, and an hour was spent in exploring the branches of the tree after the ground had been gleaned of the larger gifts. If this was not a story of fourfoots, I would tell you all about the presents,—the names of the bicycles that Olive, Nat, and Dodo received, of Rap's bird book, Mrs. Blake's soft sealskin jacket, the Brownies' toys, Olaf's carved pipe, and Nez' knife that had a blade for everything and one extra. I must not even whisper about these things, except to say that the snow-shoes were there; but hurry to the story that Olaf told as he gazed from the tree to the campfire, listening now and then, as if his words came from the wind outside.

"Who shall choose the pictures to-night?" asked Olive. "It is Dodo's turn to-morrow, but this is an extra evening."

"Let Olaf choose for himself," said the Doctor. "He has a story in mind and knows what he needs to illustrate it."

Olaf took six pictures from the portfolio; the first three were of a Polar Bear, a Caribou, and the Musk Ox, a shaggy, brown beast with drooping horns, that looked half sheep and half Buffalo. The other three were of Sea Lions, Seals, and



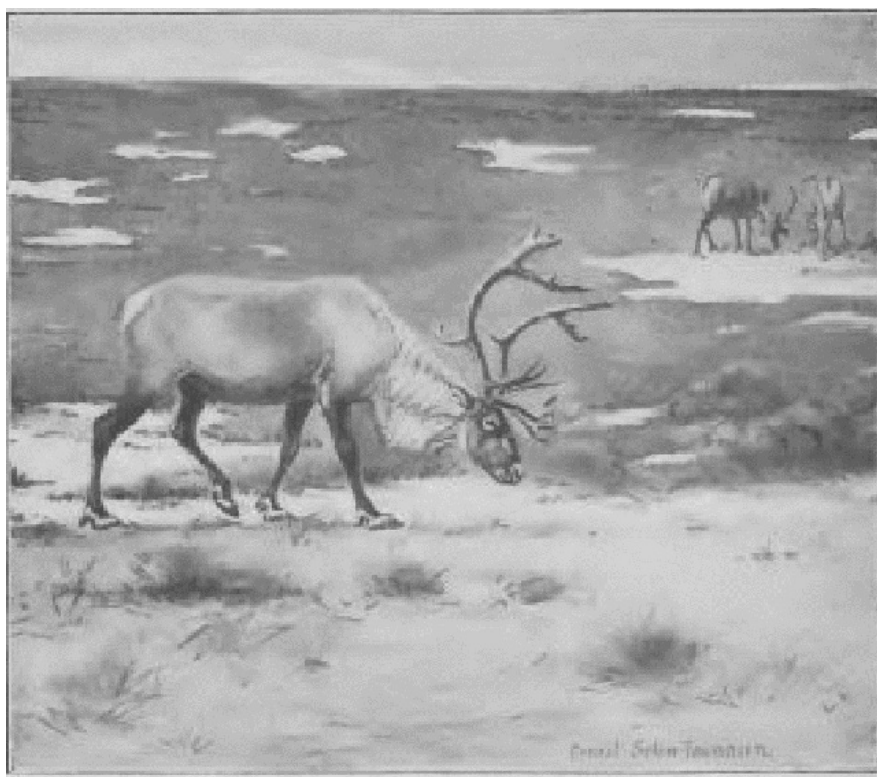
a Walrus.

"They are all strange, far-away, cold country animals," said Rap; "just the right sort for a winter story."

"Mine is a tale of ice and snow, long nights and short days, of a country whose north border sleeps in the twilight a third of the year,—if it were not so the people would be sightless from the snow blindness,—a land of hunger and cold, of sore famine, and then brutal hunting. We may call this place Fur Land, and it lies under the Polar star and is the place where the white Bear rug and sealskin jacket are at home."

"Please, Olaf," interrupted Dodo, "if you know about this far-away, cold country, can you tell if the Reindeer that Santa Claus drove have any American cousins, and why children never see him driving over the roofs or coming down the chimneys any more?"

"Yes," said Olaf, hesitating a moment; "those Reindeer have cousins living with us. They are called the Caribou, and grow of two varieties,—one short-legged and stunted, that tracks the treeless Barren Grounds, and the other here pictured, the Woodland Caribou. But 'why do children no longer see the good Santa Claus?' That question has a sad, sad answer, coming from unfair hunting, which drives so many fine things out of this land. Think you Saint Nicholas will bring his magic Deer here for men to shoot with their long-reaching guns? He knows their cruel hearts too well, and keeps away so that no man, pointing to a row of antlers over his chimney-piece, may say, 'Those are the horns of Santa Claus' Reindeer; I myself shot them *all* with a single bullet!"



WOODLAND CARIBOU.

"Come then, whistle to our Woodland Caribou to take us to this Fur Land, but do not be impatient; he has far to journey to us.

"He has his home in the woods, upon our northern borders and on into the British Kingdom, as far as trees grow to give him shelter. In summer he loves cool marshes, where he feeds on plant roots and fresh tree buds; in winter he journeys to high ground and paws the snow away to find grass, moss, or lichens, so he is always restless, moving about more than his stunted brother of the Barren Grounds, and we must often look far and wide to find him. Ah, he is a fourfoot built to stand the cold, and shod for snow striding! Look at his picture. See the strange antlers, both palmed and tined, branching

downward as gnarled old trees, no two pairs growing quite alike. Even the female Caribou, or, as she is called in this tribe, the cow, wears small, spiked horns. See his long, stout hair that makes a thatch like straw to keep the wet and cold out of his undercoat. He is not pretty, this Caribou; ah, no! his face and neck look faded, and he is at best a dingy sort of brown with a lighter colored rump. His tail is lined with white, and, when raised, becomes his signal flag of danger. See the foot gear he wears; is it not wonderful? Two hoofed, spreading toes, curved inward, with two more behind, all edged with stiff hairs. When he plants his feet his hind legs bend toward the ground, making long snow-shoes such as no other deer wears. The palm-horned Moose, the largest of our deer, sinks in the snow, and after much running, falls exhausted. The Elk, the king of all his tribe, has small, sharp-edged hoofs; but this, the third from the largest, the awkward Caribou, wears such snow-shoes that, if he were tamed and trained, he too, like his Reindeer cousin, would be a useful beast of burden in our bleak, north country.

"He does not come; whistling will not bring him; we must go without him, for we cannot wait. Perhaps, as he sheds his great antlers near Christmas time, he feels shy and helpless. I will call the 'Day-Dream Fox' to guide us. Look well at the map while we are travelling open eyed, for he leads the mind in minutes, where it would take the feet long months to follow.

"Go up through our plains to the British countries, where the great company of Hudson's Bay catches fur for half the world, and the Beaver, Otter, Sable, Mink, Wolverine, and Silver Fox still flourish,—on across Assiniboia and Saskatchewan. See, we find the names of fourfoots everywhere: Bear Lake and Reindeer Lake, while curving from the Rockies toward Hudson's Bay we cross the Caribou Mountains."

"Did you learn American geography when you went to school 'way up in Finland?" asked Dodo, "or did you learn it by walking over the country?"

"I learned a little even then, and much more afterward, and I have lived in this North Country for three years. Beyond the Caribou Mountains we come to Great Slave Lake, and from there up to the water's edge we are in the Barren Grounds. Barren of trees, of everything but fiercest Wolves, the White Fox, Musk Ox, Caribou, and a few grim Bears who wear changed faces from their grizzly mountain brothers, through living in this bare wilderness. This place is like a battle ground, where Wolf kills Ox, Caribou, and Fox, while the Indian, when he ventures up so far, kills all these in turn.

"There I can fancy the Musk Oxen standing in a herd of twenty or more, packed closely for defence, frightened by scent of blood, as if wild dogs or Wolves surrounded them. If it were spring, I should know that the young calves were there inside the protecting ring. What are they watching? One of their herd in terror sniffs and paws the ground where a Wolf has dragged some bleeding meat, like the ox in our picture. This beast, though called an ox, is really more like a great sheep, measuring over four feet at the shoulders."



MUSK OX.

"How is it more like a sheep?" asked Nat.

"The Wise Men say that its teeth are like a sheep's, and its feet like those of an ox," said Dr. Roy, to help Olaf, who knew what he had seen, but not so much about the bones and building material of animals. "He has, you see, an ox's nose, but his horns curve strangely downward. His brown robe is longer and thicker than the coat of any other of our fourfoots, quite covering his short sheep's tail. The hairy coat is almost two feet long, while underneath, packed closely to the body, is a fleece blanket that falls away in summer."

"I see his funny, turned-in, hairy, snow-shoe toes, and he has a bit of a Buffalo's hump," said Dodo, after looking at the picture. "How queer it is to find that such strange beasts belong in our America!"

"Yes," said Dr. Roy, "and, what is more, with the exception of Greenland they live nowhere else but in North America."

"Does the Musk Ox make good meat, like the Buffalo?" asked Rap.

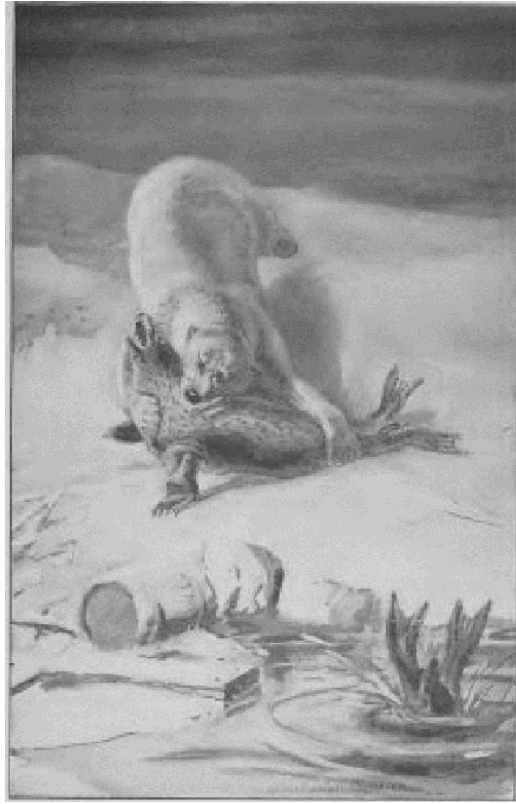
"Oh, no, very poor meat, coarse and tough, with the rank flavor of musk that gives this ox its name. Only Wolves and starving Indians care to eat it. The skin is tough and serviceable enough if you can get it off without tearing."

"What does the Musk Ox eat?" asked Nat.

"Moss, wiry grass, and lichens, a scanty living dug from beneath the snow with the hooked horns, or scraped up with the hoofs that do double service in digging and helping the ox climb rocks, and also to run swiftly over slippery ground. The cud-chewers fare poorly in the Northlands. Where the prowling flesh-eaters can feed upon each other, the grass-eaters often go hungry, and all the beasts of the Barren Grounds are flesh-eaters, save the Caribou and Musk Ox.

"Now we go further north and reach frozen sea edges. Round these ice-clad borders prowl the Polar Bears, following the ice downward as it creeps to open sea in winter, and going north again in summer, seldom coming twoscore miles inland, like the coast-loving Eskimo himself.

"What is he made of, this great, clumsy, half-ton mass of flesh, clothed in thick, yellow-white fur from nose tip to point of claws? Clothed?—no; padded is the better word, for his long neck and small head grow from a rolling bale of fur on legs. This White Bear sleeps on ice and soaks in ice water, never dreaming of the cold. Can he be warm-blooded flesh? But yes, he is. The she Bears bring forth their young in icy caves and harden their cubs to swim with them in icy seas, and to follow their parents while they track and hunt down their Seal and Walrus meat, or shuffle along the shores to feed upon dead Whales.



POLAR BEAR AND SEAL.

"A great hunter is this Bear, quick of tooth and claw; he stalks the Seals as men do, stealing behind them when they come upon land, seizing them when they turn to hide in their water-holes. Over all the lands and seas of ice this Bear is king of fourfoots. Of man, too, he *was* king, when man meant only the Eskimo armed with a knife and spear. Then Bear hunting was dangerous indeed,—blow for blow, tooth against knife-blade, arm of muscle tipped with long claws against brittle harpoon. Now a long-range rifle, keen eyes, and a steady hand, have turned the peril from man to Bear, and soon the great hungry beasts will have left the Arctic twilight as the Bison left the prairie. Snow may be her bed, but the she Bear's heart beats warm and lovingly for her cubs,—or rather cub, for she usually has but one,—and she will let herself be killed before man or beast may touch it.

"Tramp, tramp, tramp, go the Bear's feet through the snow, leaving the even-planted print of heel and toe, as a man's foot does. Now follow them round Hudson's Bay, across the north coast, turning southward down Alaska. Then crossing Behring Strait, go on to where ice floes go through the chains and dots of islands to the Pribilofs, where in summer there are no nights and in winter moonlight is daylight, the islands where the sealskin jacket lived when it was at home, for I can guess that this jacket was once the covering of three bachelor Seals!"

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## A SEALSKIN JACKET AT HOME



E now leave dry land, though when one follows the Polar Bear over the caked ice, who can tell if it is earth, rock, or frozen water that lies underneath.

"The tribe of fin-footed watermen (*Pinnipeds*) live on the frozen sea edges and islands from Labrador around the north coast to the Pacific Ocean. The Polar Bear spends the chief part of his time on the land, going in fishing and swimming for pleasure; but these watermen pass most of their time in the water where their food is, floating with drifting ice floes, and hauling up on the islands to rest for a time in summer when their cubs are born."

"Why do you say hauling up?" asked Nat. "Haven't these beasts legs, and can't they walk?"

In my spelling book it says haul means to pull or drag."

"It says rightly," answered Olaf, "for these beasts drag themselves when on land, and their legs are not as the limbs of Deer or Bear, but flippers set deep in the flesh, shaped half like the fins of a fish. To see them it seems impossible that they should move at all, either in water or on land. Four kinds of these fin-footed ones I know, for two of my three cold northern years I lived where they are killed. Pah! it was a cruel country, reeking with smells, and mine was a loathsome living.

"These four watermen are named the Walrus, the Sea Lion, the Sea Bear or Fur Seal, and the Harbor Seal. Of these the Walrus is king, if size and ancient name make royalty. Back in the legends of my country this 'Whale Horse,' as he was called, of the Atlantic coast is pictured, and one was taken to good King Alfred's court by Othere, the Viking. What they thought of it I do not know, but those were the days when men believed the sea peopled with monsters and saw mermaids riding on the waves, and fashioned the Unicorn upon their shields from memory of that spike-nosed Whale, the Narwhal, that they had doubtless seen stranded upon some northern beach. But no dream beast could match the Walrus in homeliness.

"Look at the picture of this lump of fat, flesh, and bones—it is the giant of the coast, those on the Pacific shore growing larger than their Atlantic brothers. Is he not monstrously ugly? Twelve feet and more from nose to rump, twelve feet and more in girth. The huge wrinkled neck supporting a small head with small eyes and two long tusk teeth, while the rough whiskers on the snout look like seaweeds clinging to a water-mossed rock. What has the beast to help him either swim or walk? Four limbs so deeply sunk in flesh and skin that you see only five-fingered hands, wearing skin mittens. These serve well for paddles, and their owner can rest almost upright in the water, floating easily, for all about his chest and neck are layers of oily fat or blubber, which make a life raft of him, while his thick, tough hide, scarred with wounds from rocks, harpoons, Bears' claws, and the tusks of rivals, keeps him from growing water soaked and chilly. He is warm blooded, and yet able to stay under water half an hour at a time without coming up to breathe.

"How does he feed this great body of his, and lay up the layers of fat that draw his hide in creases like seams in rocks? By digging clams and water roots, scraping mussels and other shell-fish from the kelp beds with his tusks, and he also uses these tusks as hooks to help in pulling himself over the rocks and shoals of the summer breeding-grounds."

"Why doesn't he eat seaweed?" said Dodo. "I should think it would be a great deal of trouble to open clams enough to feed such a 'mense thing!'"

"All of this tribe of *Pinnipeds*, as the Wise Men call them, live chiefly on animal food," said the Doctor, "their teeth showing them to be flesh eating or *car-niv-o-rous*, but Olaf will tell you that they do not stop to open the clams—they are not so dainty in their fishing as the Crows!"

"No, they swallow them by the bushel, shells and all," continued Olaf. "If it hurts them or not, who can say, for they tell no one their secrets, but it may be that they are complaining when they cry and roar, as they do at all times of the year, with a growling honk that might be the call of a wild goose goblin. Sometimes in the spring and early summer, the season

of cool fog on the northwest breeding islands, I have stood on a cliff and could not tell by sight alone if it was ocean all about me—then I would hear their honk below, different in key from the roar of the Sea Lion."



ATLANTIC WALRUS.

"Aren't they awfully fierce beasts to meet?" asked Rap.

"They *look* fierce, and when killed with spear or harpoon may give the whaler or Eskimo some scars or crush him by rolling their ton weight on him, in their terror to get back from land to sea. But that is all, and how can such a piece of clumsiness long escape extermination if he is hunted persistently with the rifle?"

"Are they good for much?" asked Nat. "Of course you couldn't use that ugly skin to make fur coats, and daddy says that the oil from wells in the ground is easier to get nowadays than animal oil."

"*We* could do without them well enough, but they mean food and clothes, heat, light, and life itself to the poor Eskimos. Even *with* the Walrus, life to them is not easy; without him it means awful, slow starvation. Listen to what the Walrus gives. First of all, his coarse meat is the Eskimos' beef, their only change from fish, for many of them live out of the range of Bear meat and dare not venture through the Barren Grounds for the Musk Ox. Walrus meat is eaten fresh and also packed away as food, for all the year. Its oil gives him light and fuel also in that treeless land."

"Oh, then the Eskimos have oil stoves, the same as we do!" cried Dodo. "I wonder if they make the choky, smoky smell that the one does in daddy's dressing room?"

"They burn the oil without the stove, and the smoky smell is very, very large," said Olaf, spreading his hands wide apart and wrinkling his face as if he remembered a very bad smell. "Next to the oil in value, comes the hide. When it is stretched and well dried it makes a fine cover for boats, that is stronger to stand the sharp-edged ice than any wood could be; the hide also serves to make harness for the Eskimo's sledge dogs. The strong sinews of the back make thongs for bird and fish nets, boot laces, and thread for sewing boat covers and clothes. The gullet or throat is used for boot legs, with the flipper bottoms fitted on for soles. The intestines, which are perhaps sixty feet long, are cut in strips, and when stretched and dried are sewn together to make the waterproof clothing that these people wear in their fishing and

hunting."

"Oh, dear, how much the poor Eskimo women must have to sew!" murmured Dodo, "and what long seams; I've seen Mammy Bun take those wormy looking insides out of a chicken, and even they were ever so long!"

"The tusks, though of a poor quality of ivory, serve many purposes, not the least of them being to trade away for such iron and steel articles as the Eskimo needs but cannot make. Now you can well understand how he could not live long without the beast that yields him so much. But greedy people, who have many other ways to make a living, do not think of this, and fit out steam vessels that can go everywhere, with guns that kill from far, and take from the Eskimo his all.

"This Walrus is a first cousin to the Sea Bear or Fur Seal of the jacket, and we must go down the Behring Straits to catch him in his home. Down past the St. Lawrence and St. Matthew Islands, the Walrus' summer haunts, we come to the Pribilof Islands,—St. Paul and St. George,—where I spent those two years of much disgust!"

"What does Pribilof mean?" asked Nat, "It sounds as if it might be the Indian for pretty-far-off"; whereupon Dodo laughed in great glee and said,—

"I shall always call those the Pretty-far-off Islands, for it is a true name for them and much easier to remember than the other. I missed that last week in my geography lesson!"

"Pribylov was the name of the Russian explorer who discovered this group which now belongs to us," said Dr. Hunter; "his ship the *St. George* giving the name to one of the islands. These islands were too far off shore for Indians to reach them, so that the Sea Bears and Sea Lions lived there in peace until the coming of civilized people a little more than one hundred years ago, but since then the cry has been, 'Kill! kill! kill!—bulls, cows, cubs, everything!'—the Buffalo's story again, but this time carried out to sea until the poor, persecuted water brothers are the cause of dispute between nations, and it seems that soon nothing will be left of them but the very *bones* of contention!"

"Wasn't it awfully cold on these islands, Olaf?" asked Rap.

"Not so cold as on the mainland, far less cold than you would think, for the warm Pacific current flows around them. In midwinter, it is true, ice floes come from the north and hush the song of the surf on the beaches, yet it is not so keenly cold as it is here. With June comes summer, for there are no half seasons like your spring and fall. In winter there are no days, in summer no nights."

"It seems quite right, too," said Nat, "for in a place like that there can't be many leaves to *spring* up and *fall* down again."

"Summer is the season of cool fogs and mists that shield the Seals from the sun and keep them comfortable while on land. In fact, the summer weather is like your autumn season."

"Then it is no wonder, as one story says, that the Seal tribe, ages ago, going from its Antarctic home on a swimming excursion, should have found these islands a pleasant camping spot and passed word of it to all their relations," added Dr. Roy.

"What do you call the people on these islands, Uncle Roy?" asked Nat—"Eskimos or Indians?"

"They are Aleuts, one of the lowest northwest tribes of Indians and akin to Eskimos."

"Now," continued Olaf, "picture to yourself a fine, full-grown male Fur Seal as he comes up on the land the last of May to select the square of shore he wishes for his summer home. He is not more than five or six years old, which is the prime of Seal life. He is more clever than the Walrus, moves more easily, and measures about seven feet from tip of nose to where his tail would be, if it had not forgotten to grow. At this time, fresh from the feeding-grounds, he is fat and should weigh five hundred pounds. His head is small, but the eyes large and speaking. He wears a long mustache, but it is of bristles and not like that of the Walrus, and he has a way of closing his nose and ears in swimming to keep water out. The neck is long and the shoulders are thick, and he is a better shape, not sloping so much aft as the Walrus. His fore limbs are merely a pair of black gloved hands, but his hind feet are wider, like a drawn-out human foot spread at right angles from its body. He uses these fore flippers in walking quite like legs, and, though he shuffles along, does not cling



and crawl like the Walrus. His hind flippers propel him through the water like paddles.



SEA BEAR OR FUR SEAL.

"The male wears two coats, like most fur beasts. One of shining, strawlike over-hair, the other the soft under-fur we see in jackets. At the first glance you would say that this Seal is dark brown in color, with some white or grizzly hairs. The female is much smaller, not measuring more than five feet. She is less clumsy and of more graceful shape. Her head is well formed and she has gentle, lustrous eyes. Her skin, when wet, varies in color from beautiful deep gray and whitish underneath, to an ashy brown mantle and buffy belly, when dry.

"From early May until the middle of June the Seals come from their winter feeding-grounds and haul upon land. The males come first, each striving for the place he likes best and fighting fierce battles with his rivals to secure it. Thus it happens that the strongest Seals keep the best places near the water's edge, and the weaker are driven further inland.

"When the females come in late June or early July, only a day or so before their cubs are born, there is fierce war, each male Seal seizing the mates he wishes to come and live in the square of ground he calls his house, lifting them as if they were only so many kittens. Thus it happens that those strong ones near the shore secure a houseful, while those far up have hard work to find even one mate. Then there is always a herd of roving bachelors, young Seals and those who have no homes or mates, who go together in a separate place to spend the summer. The law holds that these bachelors are the only ones that should be killed for fur, and that no guns or dogs shall aid in their killing. If this law had been kept, then would the tribe still hold its own.

"The fur of this Sea Bear must be taken in June or July, before the winter coat is shed, or in early autumn when the new coat is fresh, for the law says these animals may not be taken on American ground between October and June."

"But suppose people follow them and kill them in the water and shoot the females, too,—what happens then?" asked Rap.

"Trouble," said Dr. Roy. "Trouble between nations, unwise, angry words in the newspapers, and the killing out of Seals!"

"If Seals may not be chased with dogs or shot at, how are they caught?" asked Olive.

"They are driven up to the killing grounds, as pigs or cattle are driven to the slaughter house!" said Olaf, "and in this way it is done.

"The bachelor Seals, who are chiefly those under five or six years old, live by themselves, and lie near the water and



sleep soundly, but in the homes or rookeries there is noise and tumult all night. These bachelors sleep on the beach, one close to the other, like rows of tiles upon a roof top. Down go the drivers, native Islanders, and take their stand between the water and the Seals, who, being awakened and seeing the men between them and the water, start landward, thinking to escape, and so are driven up to the killing places near the villages, where the Seal families will not be disturbed by them."

"Isn't it very slow walking?" asked Dodo.

"Yes, very; for though a Seal can run a few yards, he can walk safely only half a mile an hour, and the drivers must be careful not to hurry the Seals, or the heat makes their fur drop off and spoils the pelt."

"If a Seal is driven too fast he gasps and has to stop and fan himself, for Seals have no sweat glands to cool off the blood, and can only perspire by panting, like dogs," said Dr. Roy.

"Care must be taken not to kill very young Seals also. A Seal's skin is best when it is three or four years old, after that it grows uneven and ragged. The pelt is taken quickly, as soon as the animal is dead, lest it heat and the fur loosens. Is it ready then to make a coat? Ah, no; it must be dried and sent away for skilful hands to pluck out the long rough hairs that cover the soft fur, and then they dye this under-fur to the soft color that you know, the color of that jacket that has in it the pelts of three Seal bachelors. Of the killing of the Seal I will not speak, only to say that I could not harden myself to it and so I came away.

"Meanwhile what happens in the rookeries? The male Seals roar and fight among themselves, the young are born, and the cows go daily to the sea for food, sometimes staying all night and leaving the sucklings hungry, for the cows are poor mothers, not caring much for their cubs. The males are brave, however, and fight most fiercely to defend their homes. So jealously are these homes guarded, lest any rival should touch their families, that the males will not leave to go down to the sea for their food, and so they stay on land and starve all summer. In the autumn, when housekeeping is over, they are thin and wretched, having used up all their fat, like the Bears at the end of winter."

"How strange," said Olive, "the Bear goes without eating in winter and the Seal in summer!"

"They suffer greatly in hot weather," continued Olaf; "you may see them lying on their sides fanning themselves with their hind flippers, or find the females, as soon as the young have learned to swim, sleeping in the water with only their nostrils out. This habit of floating and sleeping makes them an easy prey for Sharks and the fierce Killer Whales. Even on land the Seal sleeps so soundly that I have crept up and pulled his whiskers before he awoke. In August the homes break up, all is in an uproar, and the 'choo-choo-choo' call of the female sounds loud above the surf, though it is December before the last male has left for the winter feeding-grounds.

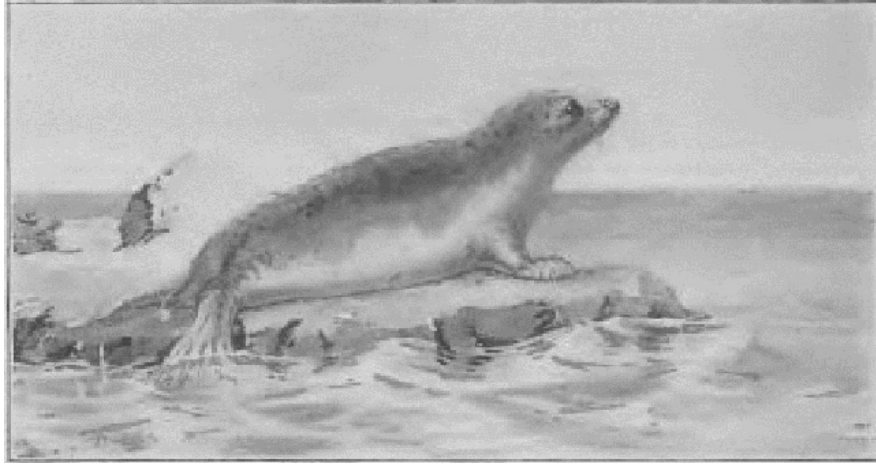
"The Fur Seal's brother, the Sea Lion, haunts these same islands, though he is hunted elsewhere with Otter spears and guns. He is useful chiefly to the natives of the Aleutian Islands, giving them all that the Walrus yields the Eskimo.

"The California Sea Lion looks much like a male Seal, but his neck is straight and thinner and his front flippers are cased in mittens without even a thumb, while the Seal, you see by the picture, wears short-fingered gloves. This Sea Lion wears no fur, but is covered with short hair, which varies in color with the season from yellow to dark brown. His voice is a deep lion's roar that can be heard above the storm, and his food is almost like the Seal's,—fish, shell-fish, crabs, and a few sea-birds. His flesh is not bad eating, and the fat and blubber are without the evil smell that makes the Seal so sickening to handle.

"This Sea Lion is shy, keener of eye and ear than the Sea Bear, and must be hunted by moonlight, the driving season being early autumn. When the Lions awake suddenly, like the Seals they start to escape the way they happen to face, some going seaward, the others being slowly driven up to the villages, for they can only creep and hobble along, and they have none of the cleverness of the Fur Seal. These also we will leave at the killing grounds; to follow them would only sadden you. But we know at best they are useless to us, and trouble the Fur Seals by worrying them and disputing their breeding grounds, so the Aleuts are welcome to them.

"Another waterman there is that, even now, you may see for yourselves some day about a rocky harbor or river mouth. He wears hair and no fur, and he is the true Seal, not the Sea Bear. He is, or was, common to all coasts, and has many

names,—Sea Dog, Hair Seal, Common Seal, or Harbor Seal."



HARBOR SEAL.

"Harbor Seal is the name that Wise Men prefer," said Dr. Roy; "and when my father was a young man these Seals haunted the rocks of New York harbor in great numbers. Robbins Reef, that we have so often passed, Olive, was called after these Seals by Dutch sailors, robyn meaning Seal in their language."

"I knew not that," said Olaf; "but in spring they herd about Newfoundland, having their young in May and June, but going to the warmer sea islands in winter. They are beautiful little Seals, with dull yellow skins, often handsomely mottled with black, such as they cover trunks with in my country; and among the Greenlanders it is said the women love the skin above all others for making trousers."

"Do savage women there wear trousers, the same as some women do here when they ride bicycles?" asked Dodo, much to her uncle's amusement.

"I have not seen those savages here," said Olaf; "but up in the north land women must dress much like men, or they would surely freeze."

"The Harbor Seal cow has a gentle, half-human face, and a better heart than the Fur Seal. She is a kind mother also to her single cub, protecting and loving it, and grieving if it dies. These seals are shy beasts, too, and are never caught in great numbers, even though their flesh makes the best seal beef. They lead lonely but happy lives, catching sea-birds and fishing and sporting in the water with their families."

"Now we will leave these watermen and hurry back home across country lest the 'Day-Dream Fox' grows sleepy and the real Dream Fox finds us far from home, and we have to lie out in the snow like the Polar Bear."

Then Olaf blushed and looked down, as there was a clapping of hands and everybody thanked him for his story.

"It will be my turn to clap at you to-morrow night," he said bashfully to Nez.

"I didn't think the watermen would be half so interesting," said Rap; "and it's almost ten o'clock already."

"We must light the tree once more, have our supper and songs, then to bed, and see who will wake first to say 'Merry Christmas' in the morning," said the Doctor.

Mr. Blake began to pick at his banjo and play a lively jig, accompanied by Olaf with his fiddle. Instantly Nat, Dodo, and the Brownies began to skip about, Nez keeping time by slapping his knees.

"Let me have your violin, Olaf," said Mrs. Blake. "I can play that tune, and I am sure that you can dance a sailor's hornpipe."

Blushing up to the roots of his light yellow hair, Olaf stepped into the space cleared for him, and danced all the intricate in-and-out steps with a will. As he finished, a slight noise turned all eyes toward the passageway, and there was Mammy Bun doing side steps and a double shuffle all by herself, in spite of rheumatism. So the music ended in a shout of laughter, and Mammy waddled off to bring some light supper, followed by Nez and Olaf as waiters, while Mr. Blake threw a basketful of pine cones on the fire to make a final blaze.

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"Now for our Christmas hymn," said the Doctor, when the dishes had been cleared away, the tree stood in darkness, and only the firelight danced along the walls and on the strange mixture of faces,—white, black, and bronze.

Mrs. Blake went to the window and threw back the curtains; the warmth had melted the frost on the panes, and the starlight shone in clear and bright. Mr. Blake took Olaf's violin and drew a few notes from it, and then the hymn rang out, Mrs. Blake, Mammy, Olive, Dodo, and the boys beginning, the Doctor and Mr. Blake answering:—

"Watchman! tell us of the night,  
What its signs of promise are.  
Traveller! o'er yon mountain's height  
See that glory beaming star!"

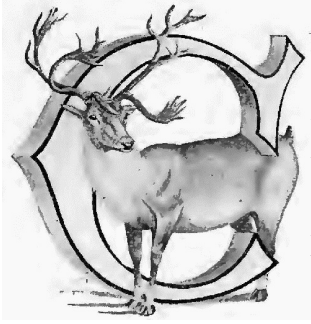
The children's voices warbled as sweet and fresh as the notes of birds; even the Brownies caught up the tune, though the words were unknown to them. As they finished the last verse, Olive opened the long window softly and the snowy hills showed clearly in the piercing starlight. Then she whispered, "Wish the stars a 'Merry Christmas,' and let peace and happiness in at the window! Mother taught me to do it when I was a little girl."

"Merry Christmus! Bress de chile! *I* remembers!" cried Mammy Bun.

Then they went to bed, and Billy Coon, who had been crouching behind the chimney and was entirely forgotten, came out to forage for more popcorn.

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## HORNS, PRONGS, AND ANTLERS



CHRISTMAS was a perfect winter's day, with no wind and no thawing; a day for sleigh, sled, or snow-shoes. Snow-shoeing being the very newest amusement, Olive, Nat, and Dodo practised walking for so long that at night their feet were quite tired and swollen with their efforts to keep up and the cutting of the thongs; so they were glad to hobble to their places by the campfire as soon as supper was over. As to the Brownies, the novelty and excitement of seeing so many people quite overcame them, and they stumbled from the supper table to bed.

"What pictures will you choose?" said Dodo to Nez; "because you promised to tell us a story to-night."

"A picture of a Moose! A good, big Moose on the rampage will about do for my story," answered Nez.

"Here is one running very hard, with steam blowing out of his nose," said Rap; "but please, Nez, before you begin the story, won't you tell us about the different kinds of antlers that the Deer wear, and why, if they are shed every year, some pairs are so much bigger than others. I always used to think that the antlers staid on, and grew bigger and bigger every year."

"You've caught me there," said Nez. "I know the game I've shot and how I got it, and that Deer do shed their horns; but you'll hev to ask the Doctor all those reasons why."

"This is as good a time as any to make a procession of horns, prongs, and antlers, and look at them carefully as they go by," said Dr. Roy. "Olive, please take out the pictures of heads, horns, and antlers; also the drawings of the Moose and the American Deer, and the group of the Elks chased by the Cougar, that we had several weeks ago, and also the Caribou picture that we had last night."

"You remember that the first division of the meat family wore hollow horns like a cow's, which were made of hairy fibre and grew around a solid core, and that, though they were of many sizes and curved in different ways, they were never branched or divided. Nat, can you tell me the names of our four wearers of horns, without looking at the pictures?"

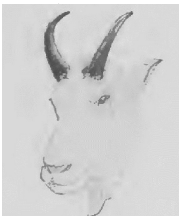
"Yes, I remember them all,—the Bison, Bighorn, Mountain Goat, and the Musk Ox."

"Now, Dodo, do you remember the one which, though it belonged with the Deer to the second division of the meat family, had pronged, hollow horns, and shed them every year?"

"Oh, yes; the one that you stepped on when you went from one part of the family to the other—stepping-stone you called it; Antelope or Pronghorn is its name. See, I can put my finger on the picture without looking at the printing!"



"Bravo! Now we come to the Deer family itself; all of its members wear antlers of solid bone—bone with no hollows in it, or marrow like the other bones of the Deer. See how many different shapes we find among these antlers. Look first at one thing—the enlarged knot or burr where the antler branches from the head."



"Yes, I see," said Olive; "it is rough, and swells out something like a joint. It looks as if the antler were fastened on there."

"This is the place where the old one separates when it ripens and falls off, and where the new antler sprouts."

MOUNTAIN GOAT.

"Does it bleed and hurt the Deer, the way it does to have a tooth out?" asked Dodo, who had recently shed her two upper front teeth.



MUSK OX.

"That depends upon how ready the antlers are to fall. If they are quite dry and ripe, they separate easily and bleed very little; but if they are knocked off by a blow, or torn from their sockets when the Deer lock and entangle their antlers in fighting, as they often do, then the stump bleeds profusely and causes pain. In either case a sort of plaster of veins and thick skin soon grows over the wound."

"These antlers are the same as teeth, then," said Dodo, solemnly; "one of mine tipped over itself and scarcely bled at all or hurt, but the other had to be jerked with a string, and it bled lots!"

"Or more like leaves," said Olive. "Don't you remember the great leaves on the magnolia; in the summer, they held fast to the branch and sap came out of the socket, but after the first frost they dropped off themselves, leaving a little dry scar?"

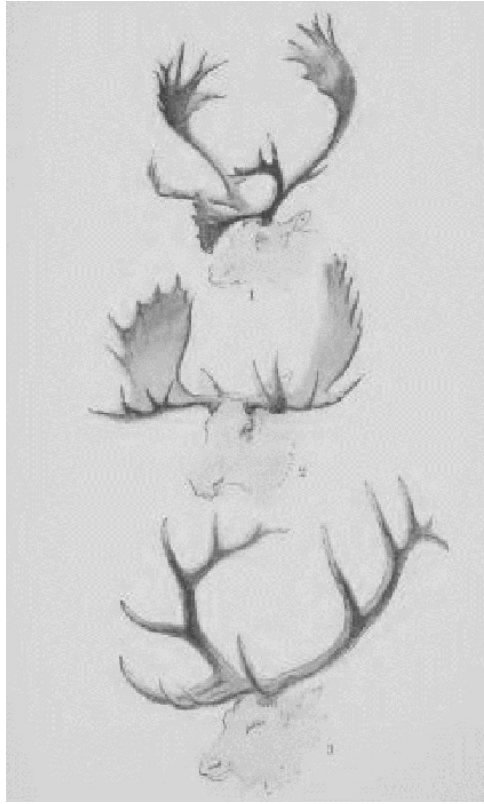
"Oh, yes, I do," said Rap. "How soon after the old antler is shed does the new one grow, Doctor? You said the Antelope's new horn was sprouting under the old one when it fell off."

"With the true Deer there is a time of rest as there is with trees, and the antler does not begin to sprout until spring, when the Deer finds fresh green food once more. Then the veins and skin, which covered the scar that the old antlers left, begin to swell like a dark-colored bubble, the straight beam of the antler appears, and after a time begins to branch at the top. It goes on growing until midsummer, time after time developing, according to the age of the animal. As yet the whole antler is covered by the film of skin-covered veins that have enlarged with it and aid the inside veins in supplying the bone food needed for such rapid growth. Up to this time the outside of the antler is rough and has a furred feeling to the touch; 'being in the velvet' this is called.

"The antlers are now hardening fast, and the Deer rub them against tree trunks and on the ground until this velvet, being no longer needed, peels off in strips and dries away, leaving the smooth polished bone in early autumn, when the antler has attained its complete growth.

"Now comes the answer to your question, Rap, about the various sizes of antlers. The first pair on a young Deer are usually straight beams with few tines, but they increase in size each year, the wonderful pairs we hear of belonging to very strong Deer upward of six or seven years old, the size depending both on strength and age. The end and aim of this wonderful growth seems to be to furnish the jealous, quarrelsome stags with weapons for fighting each other during their courting season, which is in autumn; for shortly after this mating time the shedding begins, though some Deer keep the antlers much longer than others, and Moose usually shed theirs some time before Elk. As you look at the various heads, you will see that the antlers differ in shape. Those of the American Deer and Elk are the most alike, both being tined, but the beam of the American Deer's branches outward and forward, and the beam of the Elk's outward and backward. These two Deer also have compact, trim feet, with the hind toes, called dew claws, set well up; but these cloven hoofs cut through the snow and make them very helpless in seasons of deep drifts.

"The Moose and the Woodland Caribou are also somewhat evenly paired. The Caribou, as you have seen, wears curious antlers, curving and bending every which way, forward and back, with both tined and leaf-shaped (or as the Wise Men say *palmate*) ends, while the Moose wears his wholly palmate, standing out wide behind his ears like sounding boards, and sometimes spreading six feet from tip to tip and having forty points. The foot of the Moose, too, is more loose and shuffling, like the Caribou, though it does not form a complete snow-shoe. The greatest point of difference in these two is in their ears, the Caribou having very small and the Moose very large ones.



1. WOODLAND CARIBOU. 2. MOOSE. 3. ELK.

"Look again at these four Deer: two, the Elk and American Deer, are always beautiful when at rest and graceful in motion; while the other two, the Moose and Caribou, are interesting and curious, but ponderous and awkward. Your first thought regarding a Moose must always be of wonder as to why his ears are so long, how he came by his swollen, overhanging nose, called the *muffle*, and the hairy 'bell' hanging from his throat, for which no one has discovered the use; while the Caribou's legs seem uneven and you wonder if his antlers grew on his head, or whether they were made of pieces picked up and glued together at random. Again the four may be divided into pairs according to the haunts they seek. The American Deer and the Elk or Wapiti, love park land and woods with running water and high shade; the Moose and Caribou seek low ground, marshy thickets, and the neighborhood of lakes and ponds, enduring cold better than their graceful brothers.

"The Moose is the largest Deer in the world, and quite as homely as he is large; he stands six feet at the shoulders, his head is long like a donkey's, and his large ears are far down, back of the small eyes. His body is short and set on four long legs; the front legs being longer than the back, give it a sort of hump at the shoulders. The winter coat is dark brown above, with thick under-fur of a lighter color, and the hair hangs loose and manelike about the neck; the summer coat, however, is soft and fine. As to the female, imagine a very large, long-legged donkey cut out of faded, weather-beaten, brown Canton flannel, and stuffed rather scantily with straw, and you will have an idea of Madam Moose; but her mate finds her beautiful, fights for her, and is very fond of her.

"This grotesque beast once ranged through all the northern states and territories of this country, from the Atlantic to the Pacific, between the frontier states and territories up to the land of the Polar Bear. Now its range has shrunk on every side; there are a few in the Northeast, and others in the big game country from the Yellowstone Park northward. They are vanishing fast, however, and their solitary habits and haunts alone have saved them, for they feed ever in sheltered places, their food being coarse grass and water plants, while in winter they browse on tree buds and even evergreen branches, which their height allows them to reach easily. Moose hide was the Indians' favorite leather for moccasins, and Moose meat their standby next to Buffalo beef.

"Next in size to the Moose comes the Elk, or Wapiti as the Wise Men say. If the Moose must be compared to a donkey in

looks and voice, the male Elk has certainly all the grace and poise of a beautiful horse. His head is delicate and shapely, the antlers evenly balanced and carried high, the eyes full and restless, the shaded brown body round, shapely, and set firmly on the legs. The bull Elk stands five feet at the shoulders and often grows to weigh half a ton, though the females are far lighter. The Elk has a thick skin and heavy winter under-coat of fur. His flesh yields fine, rich, satisfying meat, and his tallow is prized in wood cookery. But when we praise his personal beauty, we have said our best word for the bull Elk, at least. His temper is extremely disagreeable, and he is selfish and at times cruel, both to his mate and the young fawns, driving them away from the best fodder and playing the tyrant in every way.

"The Elk once ranged in almost every part of the United States, and half-way up through the British Provinces; but wild, shy, hating the sight and sound of man, they retreated westward very quickly as the country settled, and, leaving the plains and prairies to the Bison and Antelope, settled in the mountain parks where the water supply was good. In and about the Yellowstone Park there are many herds of Elk, perhaps numbering 50,000, and their cast-off antlers are so plentiful in that region that long lines of fences are made of them. But as they often seek winter food and shelter out of the bleak park in a place called Jackson's Hole, pot hunters have a chance to capture them almost in sight of Government protection. Ready as they are to eat any kind of vegetable food, even to gnawing bark from trees, they fare poorly in winter, since their range has been shut in on every side, and, weakened by lack of food, they often starve and freeze in considerable numbers, their skeletons being found where they have lain down in a group and been too weak ever to rise.

"Our last Deer, the Virginia Common, or, as it is now to be called, American Deer, is the daintiest and most lovable of all. Each one—stag, doe, or fawn—is equally beautiful whether lying in some vine-shaded haunt, sauntering toward a brook, standing in a clear pool, as if looking at its own image, or, when startled, flying over the fallen logs and underbrush, as if its little feet scarcely touched the ground.

"Its home is North America at large, if we leave out the far north, so that its name is very suitable. Even to-day, in spite of persecution, there are but few states which have not a family or two of these gentle creatures hidden away in some wood or valley. To me this Deer, fine as its flesh is, has always seemed more of a pet than a game animal—more like some intelligent though shy friend than a creature to be hunted.

"I have never shot one, even under bitter stress of hunger, without regret, and if I stopped to think of its appealing eyes and sensitive, quivering nose, the morsel of venison for which I had worked so hard would fairly choke me. To adapt a famous verse,—'Its beauty gives it the right to live.' Hunger, desperate hunger, is the only excuse for killing such animals as these, and as hunger makes man a savage, we must then expect to find savage instincts in him.

"Three feet high at the shoulder is this little American Deer, and the best runner among our fourfoots. It is quite hardy, and may be seen in its high winter haunts feeding as cheerfully on buds, moss, or beechnuts, pawed laboriously from under deep snow, as when in its rich, summer, river pasturage of marsh grass, water plants, and berries. Almost all wild animals love water in warm weather, and the Moose and American Deer revel in it, taking to bathing and swimming like small boys.

"This little Deer has slim legs, a slender body, and a wedge-shaped, white-lined tail for its danger signal. Its summer coat is rich and varies from rust color to buff, while with its winter coat its ruddy beauty changes to sombre grays and browns, like the moulting of its meadow mate, the Bobolink.

"The does, who wear no antlers, are devoted to their young, and if you ever see one of the soft-eyed mothers tending one or two tiny spotted fawns, either in the wild country, or in a Deer park, I'm sure, boys, that you would never wish to point your gun at them. You think a calf or a colt, a puppy or a kitten amusing in its gambols, but for pretty ways no animals are so attractive as these spotted fawns."

"Do Deer sleep the winter sleep?" asked Dodo, who was growing tired of what she called "plain facts," and wished the story part to come; "and do these pretty Deer fight for their mates like the others?"

"They do not sleep, neither do any of the family; but I must confess that they fight, and sometimes fiercely to the death. Several times their skeletons have been found with antlers locked so tightly that the Deer could not part or feed, and must have died of hunger, and I have read of three heads being found locked thus together. Now that you have had your facts, we will beg Nez for his story."

"Only one more question please, Doctor," said Rap. "Will Deer ever chase House People or toss them on their antlers?"

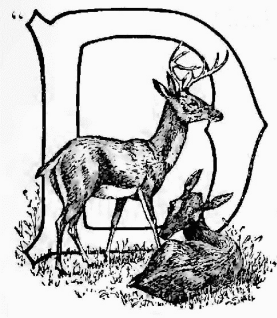
"A wounded Deer brought to bay will sometimes hurt his pursuer, but there is no real danger to be feared at any time of the year except during their mating season in autumn. Then with their powerful full-grown antlers and quick tempers they are not only equipped and ready to fight each other, but anything else that crosses their path, using their feet as well to strike and trample. But even then, they have such a dread of the scent of man and gunpowder that they seldom interfere with him."

"Come, Nez, it is your turn now!"





## NEZ' BIG MOOSE



"ARE say yer won't like my story," said Nez, shyly, as he leaned forward toward the fire, tipping up the bench on which he was seated, and began whittling a miniature tent-pin from a scrap of pine kindling that had fallen on the hearth; for, in spite of his years of tramping, he had never conquered the nervous Yankee habit of keeping his hands busy. He did not raise his head as he spoke, but seemed to be talking to the fire more than to the people, his words being such a dialect mixture that the children had to listen well to understand him, and I am sure if they were to be spelled quite as they sounded, you would never be able to read them.

"I've seen enough Deer in my day and tried heaps of ways of huntin', some fair, some ornery, some mean, and some meaner; but, lookin' back on it, there's only one way of huntin' and one beast worth huntin',—that way is stalkin' and follerin', and that beast is Moose! Of course I don't mean huntin' to feed yer camp or yerself. Feed huntin' is different,—anything yer can eat and anyway to get it goes then.

"Long about ten years ago, when I was raound out Montana way, Elk huntin' was good 'nough fer me. I didn't mind chasin' over rough, bust-up ground then, or climbin' mount'ins as high as trees grew. Elk weren't so hard to git, winter or summer, for they go in sort of flocks, and when you'd see one you'd likely strike a bunch, but Moose are lonesomer and only travel in slim families. In summer all you needed for Elk was a little know-how and a long-range gun, for though they're scary beasts they are kind of stupid 'bout some things, and don't put two and two together as quick as some others. While they are a figurin', in comes yer shot. Of course if a stag sees yer, he's likely to give a whistle and set the bunch runnin', but anyway you can't expect fourfoots to wait for yer to come up and sprinkle salt on 'em, any more than birds.

"Elks don't have an easy life. In winter the poor things come down to git in warm hollers where they could paw the snow away and find grass, and if the snow was deep they'd gnaw bark and flounder araound, so it was easy gittin' them. Deer's fine huntin' too, if yer go at it right, and good sport; but there's too many short cuts through sneak trails that folks has got in ther habit er takin', and then braggin' of their kill,—it jest about sickens real sportsmen!"

"Please, Nez," said Rap, "you say Moose, Elk, and Deer; aren't Moose and Elk both Deer?"

"Yes, o' course they air by rights,—it's only a way o' speakin'. Anywhere I've been, if yer say jest Deer, without any other handle, it means common Deer, Virginny Deer, or what Doc calls American Deer, because it's the one best known from Canady to the Gulf. A woodsman nor an Injun never says Deer if he means Moose, Elk, or Caribou, Mule or Blacktail, or any o' the others."

"What do you mean by the short cuts that people sneak through?" asked Olive.

"The ways o' killin' that don't give the beast fair play, and are more like butcherin' than huntin',—fire-huntin', houndin', jackin', and all sorts of water killin', runnin' 'em down on snow-shoes, waitin' at the salt licks, and 'callin' for Moose.

"Fire-huntin' is creepin' out in the dark where you think there are Deer by a pond or marsh, and flashin' a torch. If there's any Deer about they'll stop still and look at the light, and their eyes ketch the shine of it so you can see 'em and get good aim and shoot 'em in the head, for they don't see anything but the light.

"Jackin' is 'most worse, and folks use it on Deer and Moose. You take a boat, and sneak at night in the shadders raound a pond where they wade in to feed on water-lilies. You have a covered 'Jack' lamp on your cap, and when yer hear a splash, yer turn and flash yer light that way. Half likely yer'll see two stars close over the water, and they'll be Moose eyes. Then yer can shoot, or if yer feel real mean and ugly and can git the canoe between the Moose and shore, you'll make him swim fer it until he's tired, and then kill him."

"I think those are mean, horrid ways," cried Dodo; "but I suppose of course only wild, savage sort of people do it?"

"You're mistaken there, young lady. My! don't I mind down home in Maine, when I was a little shaver, how the fellers

used ter come from the cities all rigged up, and calkerlatin' to git jest so many Deer and a Moose or two in jest so many days. Nothin' would do but some one must guide them to the Deer, and guide the Deer to 'em, and introduce 'em with a gun and fire and tricks,—the quicker all the better for those 'sports.'

"I do hear this guidin' is a perfession now up that way. But land alive, Doc! what would the fellers West call that kind o' guidin'?—the ones we knew that lived at Bed Ranch. When we and they went huntin' we all pitched in and tramped and starved alike." And Nez looked into the fire as if he saw something miles away.

"But your first big Moose,—tell us how you caught him," reminded Nat.

"Yes, I'm workin' raound to him. It was that fust season that I was lumberin' in the Saskatchewan country, and we'd been workin' hard gittin' logs ready to haul when snow come, and as it come about we had an off spell fer a week, waitin' fer orders. A light snowfall come 'long the last of September, and old Dom'nick Pardeau and me allowed to git a Moose, for we were 'bout tired o' beans and bacon in camp, and most of the outfit was too fresh with guns to do better than scare game away. So we allowed to go on a reg'lar Injun still hunt, trackin' and watchin' signs, which wasn't hard then, on account of the snow that took the footprints. If you want huntin' that only an Injun can do right, try to follow Moose signs in plain ground with jest moss and leaves to show the longish prints. Of course we had to hunt this way in day time and try to trail the Moose to his bed, for they feed and rove night times, and hide away to sleep somewhere soon after light. It was the season for callin', but that was night work and I hadn't caught well on to that then, though I did it seasons after when it wuz my turn to keep the camp in meat."

"Is there a season for calling? Why can't you do it any time, day or night?" asked Rap.

"Because Moose only talk and shout and make a noise in the mating season. You have to 'call' in the night, because if it was light the Moose would see you was a man and not its mate. My sakes! aren't Moose keen, though! Nothing but Wolves can beat 'em at smellin' and hearin'; but then, look at the size of their ears!"

"Yes, and their noses, too; I guess they were made to hold extra big smell boxes," said Dodo.

"They can smell anything. If yer reckless with a campfire, or let the wind carry a whiff of tobacco even, you'll see no Moose that day. Then, in spite of their big bodies and horns, they can steal off on those long legs o' theirs as soft as a Wildcat, and they've got human sense enuff to lie down facin' their tracks to see what is follerin'."

"They have very long legs, to be sure," said Rap.

"The longest of any beast in *this* country anyhow. They air jest made handy to pasture on trees and bush tops and keep above decent snow, and if they want a mouthful of short grass they've got to duck for it. Now the Moose is a bog trotter, except in dead of winter, and Dom'nick and me allowed to go down to the pine swamps, for, though it was cold and there was some ice, the Moose hadn't left their water feedin' and made up parties to yard for the winter."

"Do they live in barnyards in winter?" asked Dodo; "and if they do who feeds them?"

"Not much they don't. Yards are places where there are food trees and bushes growing handy so that two or three Moose families can live there all winter, treadin' trails through the snow to the trees to feed, and when they've eat up everything they can reach, bark and all, they move on. This time when Dom'nick and me started out, the Moose were reckless, as they are at this time o' year. We'd heard them crashin' through the woods, beatin' their horns in the bushes, and callin' in the night araound the clearin', for they don't seem to mind the noise of axes choppin' so long as no one fires a gun.

"We tied on our heaviest moccasins, made out o' the hind-leg skin o' Moose, took our rifles and small packs, and started down toward the ma'sh land. I tell you it was cold! The fog was thick as smoke too, but it let up after a spell and then began to snow again. After crossin' raound about for some time and tryin' to keep headed to the wind, which wasn't easy, for sometimes it wouldn't blow at all, and then it would whisk up squally from anywhere.

"Tracks soon be covaired! See here Moose vas been! Big Moose vary angry, tore tree, here him eat," said Dom'nick, who was a Canady Frenchy, but talked choppy like a half-breed.

"Yes, but all that wasn't sense last night when the snow come," said I. Jest at this minit we struck a trail comin' from over

across a deep, black ma'sh, makin' toward the higher wood. Dom'nick stooped down and looked careful.

"Two bull Moose, von cow. Big Moose found mate, gone over wood, home to big marsh. We follow; maybe hev bad time, maybe get big Moose. Not talk now—creep.' So then we crawled on and on. It stopped snowin' after a spell, and nigh about noon I signed to Dom'nick that we'd better halt and eat. I wasn't as used to the snow and cold as I got to be later, and I'd twisted my ankle in an old stump and was feelin' pretty mean.

"Can eat walkin',' was all he said, makin' off.

"Pretty soon we come to a place where there had been a Moose fight. Bushes were all torn up and tramped raound about, but from the signs it must have been the night before too.

"You see? You want stop to eat now?" sneered Dom'nick, forgettin' I was young in the bizness.

"I tramped and stumbled on another half hour and then I sez, sez I, 'I'm goin' to stop right here and eat and make a fire too; if you don't like it you can go along.' He didn't say a word, and he didn't stop, nor even look araound. I bunched some dry branches and started up a little blaze, warmed my hands and eat my chunk o' bread and bacon. Then I stamped out the fire and looked araound wonderin' if I'd foller Dom'nick or turn about.

"I was jest standin' between some pine balsams, givin' my gun a wipe, when I heard a crashin' far off, as if a storm was tearin' down trees; but there wasn't any wind then, and the snow had cleared, yet I couldn't see anythin' comin'. Crash! crash! crash! nearer and nearer. I grabbed my gun and waited. I could hear hard breathin', but I couldn't tell first if it was my own or somethin' else's. You often git that feelin' when yer fresh to huntin' and hear big game comin'. Pretty soon I knew the breathin' belonged to both of us, me *and* the other feller, who was the biggest Moose I'd ever seen, comin' dashin' along over old logs, snortin' and blowin' like a sawmill engine. I up with my gun and shot for behind the shoulder, but he didn't stop, and came straight on, and I thought sure I hadn't teched him and my aim had gone over 'cause he was comin' so fast. I couldn't fire again; he was too close, and makin' fer me furius. I looked to git behind a tree, but jest then he fell over not twenty yards from where I wuz.

"I come out, when I saw he was dead for sure, and took a look. He was shot through the heart, and as fine a moose as anybody could want. I didn't know then how tough his meat'd be, or about measurin' horns and countin' spikes in those times, but you can measure that pair now, over to my camp, and though they're old and shabby, they'll tell you five foot eight and thirty-five points. Then I saw there was blood on the front of his horns, that couldn't have come from himself, and I began to wonder what had become er Dom'nick. I couldn't lift or skin the Moose myself, so, kind er set up by my kill, I followed Dom'nick's trail.

"I must have kept on four or five miles, when the woods sagged down to swampy, thick-covered ground again. The Moose trail was clear enough, but Dom'nick walked to head him off, not in the trail. Then I come to a place that puzzled me; the snow was melted by a warm spring, and I had to pick up the trail again on the other side. While I was thinkin', I heard another great crashin' and thrashin' in the bushes a little way ahead. I listened; the animal that made it wasn't runnin', but seemed to be beatin' around in one place. I crawled along careful, lookin' fer trees big 'nough to climb if a big Moose charged at me, for I'd been hearin' tall stories of how skeery they are most of the year; they'll fight anythin' or anybody they think is chasin' their mate. I didn't have to look long. Down the gap I saw a Moose, near as big as the one I'd shot, bangin' and batterin' away with his horns at an old spruce, and up the tree, sittin' on a rotten old branch not a foot above the Moose's reach, was Dom'nick, without his gun!



THE MOOSE.

"I hurried along then with my rifle ready, for I reckoned the branch he was holt to wouldn't last long, and I couldn't git an aim on the Moose where I was. The Moose didn't notice me a bit, though I made some noise, but kept poundin' at the tree. Then I fired, but my hand shook and the Moose swung his head araound, give one snort, and started off into the bog. I had clean missed him.

"'You vary poor shot!' said Dom'nick, tumblin' out of the tree, for the limb broke clean off jest then.

"I was mad, but I'd seen enough o' Injun manners to keep cool, so I sez, sez I, 'We've got 'nough Moose meat five miles better to camp than here. I jest wasted a shot to let you out o' that fix! Where's yer own gun?'

"Dom'nick looked at me, and then he laughed and clapped me on the back, and said, 'You hav' ze good luck, I hav' ze bad, so I tell you. I walk long way, find two bull Moose fightin', makin' each odder bleed wiz horns; cow track run away home to marsh. I creep vary near—they not see me. I aim, fire, bang! Only hit one in horns because movin' so much. I move quick to get anodere shot; one Moose run away, one vary mad—him run at me. I hit gun 'gainst tree, he jumps out of hand, den I run! Angry Moose awful! Can break chest in wiz horns, can kick like horse. I get up tree, bad tree, little few branches. Moose vary mad. Bang, smash! I feel branch crack, then you come. Can smoke now. Good! Both smoke pipes.'

"I reckon we were glad enough to git back to camp with a couple o' Moose steaks we hacked off, and the boys went out with horses and brought the carcass back afore the Wolves scented it. I wasn't goin' to say a word, but Dom'nick he told, and let the laugh on himself!

"'Nez will be big hunter some day,' said he, 'he has ze luck. Ze luck and good gun are great t'ing in woods.'"

"Is that all?" said Nat, as Nez stopped. "I wish there was more."

"Want to know! I reckon that's all 'bout the Moose, but part of the story is goin' on yet. Dom'nick he took a shine to me, and nine years ago when I come back East from Montana, I found he'd jest died and left me his traps, fixin's, and good will. Also his darter (that was a bit of a gal when I went West), if she'd hev me,—and she did. She's Toinette, my wife; so you see that Moose story ain't ended."

"Oh, I understand," said Dodo, after thinking a moment, "and she speaks a kind of French like Dominique! But what kind of language do you speak, Nez?"

"Want to know! Why, American, for sartin, jest like you do!"

Dodo opened her mouth to exclaim at this, but her father broke in:—

"Certainly, north woods American. There are almost as many kinds of American spoken here as there are states in the Union, but you see, Dodo, there are only a very few people in each state who speak pure American or English, and the others doubtless think it a very strange language."

"Jest so!" exclaimed Nez.

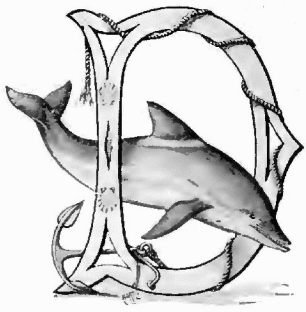
"Are there a great many fences built of Moose horns?" asked Rap.

"Nope, I've never seen one," said Nez, "nor found more'n an odd horn here and there. The Injuns allow the Moose claws earth and snow over 'em to hide 'em, as soon as they're shed. Seems likely, too, and then it stands to reason that the horns mould, and rats and mice gnaws 'em away."



## XXIII

### FISH OR FLESH



URING the holidays the children spent most of their indoor hours in Camp Saturday, and New Year's night found them preparing to make candy from the kettle of molasses that Olive was watching anxiously, waiting for the exact moment to take it off the fire, which is so important when you are going to "pull" molasses candy in the proper old-fashioned way.

"I am going to choose all these footless animals that look like fishes, but are Mammals," said Nat, selecting some pictures. "I wonder why Mammals look so very different from [each other](#), and if the Wise Men are *sure* that these Whales and things are not fishes."

"Many animals, of even the same species, are adapted to live in widely different places," said the Doctor. "If you look at the lower branches of the animal tree, you will see that of these animals without backbones, some live on land and some in water. Then look higher among those having backbones: the fishes live in water; frogs live in water and toads on land; alligators in water and snakes on land, while with birds some live wholly on land and a few mostly on the water.

"Of course when we speak of the milk-giving, warm-blooded order of Mammals, we usually think only of animals with four legs, quadrupeds as they are called. But an Alligator is a quadruped without being a Mammal, and a Whale is a Mammal without being a quadruped."

"It's a kind of a puzzle how it can be, isn't it?" said Nat.

"Not if you remember m—mammals, m—milk," said Dodo, quickly.

"You must have often heard the saying that 'the exception proves the rule,'" continued the Doctor; "so the story of these footless ones is the exception to prove that four feet are the rule among Mammals. Look at your Mammal tree. What is the lowest branch of all?"

"Pouch wearers," said Nat, "are on the lowest branch that grows with us, though there are two others lower that are only stumps. Opossum is the pouch wearer, but there is a picture of him in the portfolio, and he has four legs and a curly tail. Why is he lower than no-legged beasts?"

"I will tell you that when we come to him. What is the next branch?"

"Sea Cows; and the ladder says there is only one species in North America and its name is Manatee, and that it is eight or ten feet long. Isn't it ugly, though! Its face looks like one of those big tomato worms."

"We thought the Walrus hideous and grotesque, and the Sea Lion awkward," said the Doctor; "but what can be said of this Manatee, who is almost helpless on land, being unable to raise his solid, sloping body on his flippers, though when he is in the water his fat acts as a life-buoy, and his wide, round tail makes him an expert swimmer. If you could see his skeleton you would notice that his flippers are really arms coming from flat shoulder blades, and ending in five-fingered hands which the flesh hides. Also, that instead of strong teeth for eating flesh, he has small weak teeth fit only for chewing vegetable food. Uncouth as the Manatee is, he yields three valuable things,—good oil, good meat, and good leather, and, if protected, would have been of great use to the people of the coast streams of Florida, where he lives.

"Though the Manatee spends its life *in* water, it cannot stay *under* water more than five or six minutes at a time, and when it comes up to breathe it gives people a chance to shoot it. Sometimes, however, it is caught in heavy nets spread across the rivers that are its favorite feeding grounds. While eating, the Manatee floats, using his flippers like fans to guide the long sea grasses and water plants, among which he often hides, to his mouth. People think that early mariners, in looking down through clear southern waters, saw this monster floating upright and waving its flippers, as it looked up through the swaying grasses that surrounded it like long hair. Being surprised and very much frightened, they lost no time, on going back to shore, in spreading tales of the beautiful mermaids they had seen combing their hair and riding under

water on the backs of Dolphins, while they sang sweet luring music. We can see for ourselves how much mistaken they were, but nevertheless one of the Manatee's family names is Sirenia, or Siren, which does not seem as suitable as Sea Cow. No less a personage than Christopher Columbus believed that these Manatees were mermaids, but confessed himself disappointed in their beauty. In an account of his second voyage we read: 'The Admiral [Columbus] affirmed he had seen thereabouts three mermaids that raised themselves far above the water, and that they are not as handsome as they are painted, and that they wore something like a human face,' which I believe is the first mention of our Sea Cow in history.



THE MANATEE.

"The Manatee is slate-gray on top, with a few scattered hairs; the belly is whitish. Though it has only fore limbs, in resting on the river bottom as is its custom, it curves its tail fins to support its back, after the fashion of legs, and balances by resting also on the tips of its flippers. One or two calves are born each year, to whom the Cow is most affectionate, being said even to shed tears if she is separated from them. One would think that there need be no fear of such a useful, harmless animal becoming extinct; but man kills on water as well as on land, and the Manatee, if it does not possess the 'fatal gift of beauty,' has a gift that exposes him to even greater danger from the half-wild people of his haunts: he is wonderfully good eating, the meat being compared by different people to young pig, veal, and lamb. So it will not be long before we shall have to say 'good day' to the Manatee. He may change his skin, as he does every year; men will not change their habits, but keep on killing the geese that lay the golden eggs, like the people in the fairy story."

\* \* \* \* \*

"Olive, quick! the molasses is boiling over," cried Dodo. And Mr. Blake had barely time to snatch off the pot and prevent a great spill.

"It's ready to pour out," said Olive, trying a little of the mixture on a spoon; "then as soon as it is ropy, we can begin to pull. Don't put it out on the snow, Nat; we want it to grow tough, not brittle, this time."

\* \* \* \* \*

"The next branch on the Mammal tree is a very deep water one, the Whale branch, and the Dolphins and Porpoises are sort of twigs on it," said Rap, studying the picture. "The ladder says that Whale comes from two words, meaning roller, and that they can't move on land, and they live on animal food."

"Yes," said the Doctor, "the Whales are all rollers and the Porpoises too, though the Dolphins are quite graceful and sportive, varying their rolling motions by wonderful leaps, so that I do not wonder the mariners chose them to be the mermaids' horses.

"When this Whale tribe was developed, Nature set out to build some Mammals like swimming oil-tanks, to furnish light and heat to man until he should have learned to bore into the earth and draw oil from wells. As usual, Nature succeeded very well, and among these Whales are numbered the largest living Mammals, some species reaching eighty feet in length. All of this order yield more or less oil, but the two most valuable species are the great Sperm Whale, or Cachelot, and the Bowhead. The Sperm Whale has, in a hollow in his head, a lardy substance called spermaceti, from which candles are made; also yields a perfume called ambergris, and is entirely covered, under the skin, with a layer of fat blubber, which not only keeps him afloat, but when tried out yields barrels of sperm oil. This Whale is of a curious shape, being obliged to turn on his back when he wishes to take anything in his mouth. If you could see the skeleton of a Whale you would find that he has five finger bones hidden in his front fins, the same as the Manatee. It is impossible to realize his immense size when seen in the water, but if by chance one is stranded on a beach, men seem but pigmies beside him. The nostrils of the Whale are high on the top of its head so as to be as far out of water as possible. People used to think that Whales took water into their mouths and blew it out through their nostrils, a proceeding which is called *spouting* in Sea Stories. But the truth of the matter is, that, breathing slowly as water animals must, but with great force, the warm breath turns to a fountain of spray when it comes in contact with the cold air, and so the mistake arose.



SPERM WHALE.

"Hunting these Whales was once the great industry of the New England coast, and many stories and books have been written about it; but those days have passed with all other times of good hunting, and for the same cause.

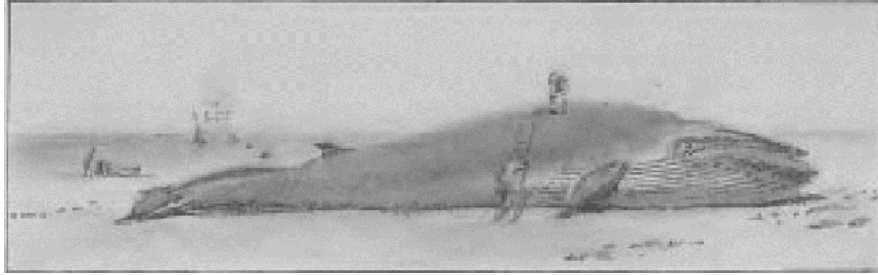
"The cow Whales are exceedingly fond of their young, sporting and playing with them in the water, pausing frequently, and floating on their sides to give the calves a chance to take their milk food. If a young Whale is caught or wounded, its mother usually gives her own life rather than leave it.

"As the whalers paid no respect to the season when the calves were young and helpless, but even followed the cows into the only homes they had,—the bays where the calves are born and are nursed,—it is little wonder that a hundred years or more of such work has thinned out these sea giants. Now Whale fishing is chiefly done in the Northwest, where Behring Strait joins the Arctic Ocean, and steam craft with long-range guns and dynamite bombs are hastening the extinction of, at least, the useful members of the order.

"Man may get oil from the ground, but there is something yielded by a few species of Whale, like the Bowhead and Finback, for which no substitute has been found. I mean whalebone, which is really no more true bone than is a cow's horn. The Whales who give this substance have no teeth, and large, broad mouths, so that if they open them to take in a mass of mollusks (the shell-fish upon which they feed), they would either have to swallow a great quantity of water, or



risk losing their meal. Nature made a provision for this, just as the grooved saw-tooth bill was arranged to strain the water from the food of the duck. Plates of horny fibre were developed from the part of the Whale's mouth called the palate, so as to make both a gate and a sieve to strain the water off, and allow only the food to be swallowed. This gate is arranged in such a way that it lifts up like a drawbridge when the mouth opens, and closes at the exact moment when it is needed. You can well imagine that any substance at once strong and yet pliable enough to close inside a Whale's mouth, must be very durable and flexible.



FINBACK WHALE.

"This whalebone, made into strips, is used as the foundation for many articles, chief among them being the best driving whips and the 'bones' for corsets and dress waists. But the *real* whalebone is growing rarer and more costly each year. The Arctic Bowhead yields the finest, longest *baleen*, as the Wise Men call this whalebone. The Finback Whale, such as you see in the picture, also grows baleen, but it is of a poorer sort."

"Why are they digging a hole in this Whale with a shovel?" asked Dodo.

"That is the old-fashioned blubber shovel with which they used to cut the blocks of solid blubber from the Whale, just as you have seen turf cut, in order that the fat may be boiled down to extract the oil."

"I wish you would tell us all the ways of catching Whales, and all the places they live," said Nat.

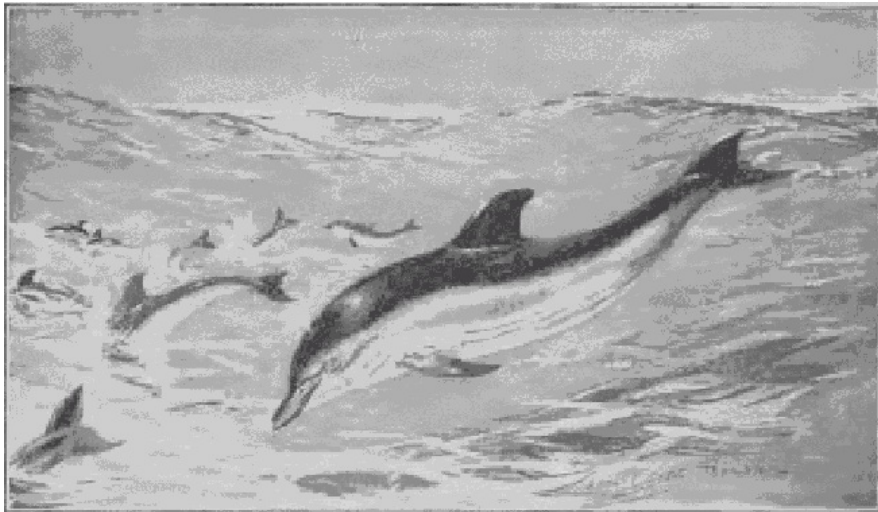
"That would take too long now, and your candy would grow quite hard; but some evening I will show you pictures of all the Whales, and read you about the fisheries from one of the great black-covered Government books in my study. I only wished to show you now that they really are branches of our Mammal tree, even though these branches trail in the Atlantic, Pacific, and Arctic oceans.



THE PORPOISE.

"The common Porpoise that we see rolling about the sounds and harbors, and his brother the Dolphin, seem mere babies in size compared to these true Whales. The Porpoise travels in parties of various sizes, and makes a terrible fuss in getting through the water, rolling, snuffling, and grunting like a pig, from which noise, together with the small piglike eyes, it took the name of Sea Hog and Herring Hog. Every time a Porpoise rolls he shows the long fin on his back, and this violent effort is made to allow him to get his nose sufficiently out of water to breathe. Porpoises are of very little use to man, which accounts for the numbers constantly seen. They often do positive harm in our home waters by eating quantities of fish that travel in schools, like harbor blues, herring, menhaden, etc. They are said to be good fighters and, when in a herd, able to surround quite large prey and drive it in any direction they choose. The young are curious creatures, looking, when a few days old, like black bottles about two feet long. Porpoises very seldom spring wholly from the water like Dolphins, though they have been known to do so, even leaping over boats when badly frightened.

"Of Dolphins there are many species, found in all salt waters, and ranging in size from five to fifteen feet. They seem to be made for beauty rather than use, and are as swift as the Porpoises are clumsy. We hear of them everywhere, in mid-ocean chasing fishes or each other with dash and vigor, or sporting and leaping from the water in a spirit of pure fun. They seem to be the gentlemen-of-leisure of the ocean, a sort of literary fish playing a much more important part in poetry and history than in reports of the fishing industries. When is old Neptune ever pictured as taking a ride through his watery kingdom armed with his trident, that he is not driving Dolphins? When he is carved in stone to play king and sit beside a fountain, who are his gentlemen-in-waiting? Dolphins. If a Prince in a fairy tale wishes to send a magic ring to his Princess, imprisoned in a coral cave, who but a Dolphin does he choose to carry it?



DOLPHINS.

"Yes, Dodo, I know the molasses is ready to pull. Butter your fingers, then dip them in flour, or I shall be asked to dress blisters to-morrow. Meanwhile remember that if any one asks you how you *know* that Whales are Mammals and not fishes, remember to tell them that the Wise Men say,—

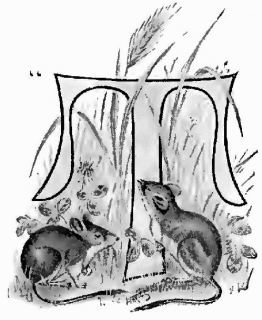
"A fish has cold blood, breathes through gills, and lays eggs;  
A Whale has warm blood, breathes with lungs, and cares for its young as a cow does.  
A fish has tail fins that run up and down, lying flat with its body;  
A Whale's tail is set crosswise and it is moved in swimming like the blades of a propeller,  
while both tail and front fins do not look unlike the hind feet and flippers of its blood  
brother, the Seal."

"Quick, Nat!" cried Olive, "your lump of candy will fall if you pull so slowly. Now, one, two,—pull; three, four,—double it over." Then, for the next half hour, Camp Saturday was enveloped in sticky silence.

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## XXIV

### RATS AND MICE



"THREE blind mice! Three Blind mice! See how they run! see how they run!" sang Dodo. "That is, how they would run if they could," cried Nat, as they rushed into the wonder room a little before tea time, carrying a long cage rat-trap between them. "Look! five of such queer little things. They are not house mice nor moles, nor like the pretty White-footed Mouse that comes from under the hearth in camp. See what blunt faces they have! What do you think they are?"

"Meadow Mice," said the Doctor, "and a fine, healthy lot of them, too. Where were they caught?"

"Rod set the trap in Olive's pansy frame, because the plants were bitten and he had seen a rat or two about that side of the barn, and this morning when he looked all these were in it. You can catch 'most anything in one of these traps. Big or little, if it steps on the platform it falls in," said Nat. "Stop fussing, and keep still, so we can see what color you are."

"A brownish-gray coat, a light vest, short tail, small ears, and only pin-head eyes," said Olive, looking over his shoulder. "It's a very stout Mouse, is it not, father? More like a Prairie Dog or Woodchuck in shape than like one of its own family."



MEADOW MOUSE.

"It is a chunky Mouse, but in the great Order of Gnawers to which it belongs, we have many variations of a general plan, and striking contrasts are to be seen, particularly in heads and tails. If you wish to be introduced to some of the four-footed nuisance animals now is the time, for these Meadow Mice are as troublesome about the garden and orchard as the rats in the granary, or the House Mouse in the pantry; and rats and mice are largely responsible for the bad name worn by the entire Order.

"Rats!

They fought the dogs and killed the cats,  
And bit the babies in the cradles;  
And ate the cheeses out of the vats,

And licked the soup from the cook's own ladles!"

"Do you remember how anxious the Mayor of Hamelin was to get rid of the rats, and what a mean trick he played on the Pied Piper? Also, how the blind mice chased the farmer's wife until, in self-defence, 'She cut off their tails with a carving knife!' And they've been in mischief ever since."

"I wonder why the first farmer's wife didn't kill them instead of cutting off their tails," said Dodo. "I think she was cruel."

"Perhaps they all hid in a crack and their tails hung out, and so she cut them off to punish them, and remind them not to chase her again," suggested Olive.

"This Meadow Mouse is one of the tribe who ate the lily bulbs last spring," continued the Doctor, "and who, following in the Mole's tunnel, gnawed the juicy roots of the geraniums so that they broke off a little below the ground. I have often seen their runways twisting in and out among the grass tufts in the old meadow, and between the stumps or fence posts, under which they have winter lodgings. In summer they live almost wholly on the surface of the ground, making nests among the grass, and at that season, of course, they destroy a certain amount of corn and damage stacked grain by nibbling it from the straw, but above all they are garden pests. These mice do not sleep the winter sleep; and if there is no snow to protect the roots of shrubs and fruit trees, they are sure to suffer severe gnawing. Early in the season I saw a number of them in the new peach orchard, but I think this deep snow will save the trees this year."

"Are they common mice?" asked Olive. "It seems strange that I have never seen any before."

"Yes, they are very common, at least, through the half of the country east of the Mississippi. They feed chiefly at night, which is probably the reason you have not noticed them."

"Then people who live the other side of the Mississippi are not bothered with them?" said Nat.

"They may not have this particular Meadow Mouse, but there is sure to be a near cousin for every part of the country, and one for every day in the year too. Why, aside from all the other gnawers, there are two hundred species in the family of Rats and Mice alone."

"What makes a species?" asked Nat.

"One fine day, long ago, some Meadow Mice from a certain place might have been accidentally carried far away from home to a place where the food and country and climate were entirely different from where they were born. They had to change their habits a little to suit their new home, and after many generations this change of habit made a change in their looks. Their feet might be larger, or they might have grown a new pattern in coats. Then some Wise Man noticed this and said, 'Here is a new species.' So the Wise Men who are trying to draw the family tree of these nuisance animals cannot finish it yet, because, no matter how each one works on his tree, someone else is always going out and finding new species that must be added as twigs."

"Then I guess we can't learn all the names of that family," said Dodo.

"No, indeed. There are about ten species, however, belonging in different parts of the country, whose pictures I can show you and whose names you must try to remember, for you may very likely see them all in their homes sooner or later. Take your trap with you to the camp, for it is nearly time for supper, and this evening I will give you the list."

\* \* \* \* \*

Doctor Roy brought an old blackboard from his store closet, and setting it by the animal tree told Nat that he might write the names of the ten nuisance animals, together with the parts of the country they inhabit, and a few facts about them.

Quick and Mr. Wolf were lying before the fire, and took a great interest in the mice which Dodo was vainly trying to feed with crumbs.

"You'd like to give them a shaking, Quick, wouldn't you? But you can't, for I'm going to collect a menagerie and begin it

with these and Billy Coon."

"I'll give you a Gray Squirrel. I caught one a week ago to-day. It was so hungry it came right in our woodshed, and it's a beauty," said Rap; "only you'll have to be careful, for the dogs don't understand about wild pets, and I'm pretty sure they are watching out to shake Billy Coon."

"See how nicely that mouse is sitting up and washing his face, just like a cat, and what pretty little paws he has! Even if mice are nuisance animals I like them, and I think they are much more fun to play with than dolls," said Dodo.

"I wonder how you will like it in the spring if you find they have eaten the tulips that you planted so carefully," said the Doctor.

"I shall be very, very much disappointed, and m-a-d," said Dodo, decidedly.

"Our nuisance animals belong to four different groups, so we will begin with the best known,—the family circle of Rats and Mice.

"The *White Lemming* comes first on my list. It is a rather wicked destroyer of grass and roots, belonging to the cold north country with the Caribou, Musk Ox, and Polar Bear. It furnishes many meals for the Arctic Fox and the Snowy Owl, who evidently intend that Lemmings shall not become *too* plenty. It is short and thick-set, about the size of a Mole, with small ears, what Olive calls 'pin-head' eyes, and a scrap of a tail like a Rabbit. In common with many of the northern animals it wears 'protective coloring' in its coat, being covered, feet and all, with white fur in winter, changing to shaded browns in summer, the season that it burrows in the ground. Its winter nests are of moss above ground or in little snow caves.

"The next is that swimming, burrowing gnawer the *Muskrat*, who is every inch a rat as far down as his flattened tail and scaly, webbed hind legs, where he suggests the shape of his burrowing and mud-pie-making brother, the Beaver. He is a heavy animal, with short neck and long, sharp hind claws for digging, and fore paws like hands, with four fingers and a thumb. He secretes a musky odor that gives him his name.

"The Muskrat is certainly the aristocrat of his family, for he wears a most beautiful soft fur coat that neither mud nor water can destroy. (Your father, you remember, has a cap made of it.) He finds places suitable for his home in the greater part of North America, and there are few ponds and sluggish streams that do not tell tales of him. He lives and finds his food in the water, and seems out of his element when on land. He prefers to attend to his affairs at night, when the sun cannot spy upon him, and he is sociable as well as shy, preferring village life to solitude, so that many of the domed winter houses, built of reeds, sticks, and mud, are usually found near together. These homes are built in shallow water and are entered from below; there is a comfortable living-room inside, just above the water level, with many passages from it where the family can hide in times of danger. The doorway being under water, allows the Muskrat to go out in winter, when the surface is frozen, and secure marsh roots and the other vegetable food that he needs. So he does not sleep the winter sleep, nor yet store up food like the Beaver.





MUSKRAT.

"The objection which classes the Muskrat among nuisance animals, is not because they eat valuable things, but because of their burrowing habits; they cause river and pond banks to cave in, and undermine mill-dams. I know of a large and valuable tract of marsh, the draining of which has been twice abandoned because myriads of Muskrats kept burrowing through the dikes. The Muskrat's summer home is in a bank burrow, and at this season he varies his vegetable food with fresh-water mussels. He is a great fighter, and has been known to attack people on slight provocation, and without being cornered.

"The true Rats and Mice have bright eyes, large ears, soft fur, and naked, scaly tails. They eat both animal and vegetable food, which habit is called being *omnivorous*. The *Meadow Mouse* we have been discussing comes first among these, and next the graceful *White-footed* or *Deer Mouse*, that you have made friends with at the fireside. This mouse must feel quite at home here in camp, or he would not show himself so freely, for they are very shy by nature, feeding at night, and preferring the shelter of wheat stacks and outbuildings to houses, though I believe they are the common House Mice of some districts. This mouse is a great climber and jumper, placing its nests in all sorts of nooks; now in a bird or Squirrel's nest high up in a tree, then again neatly weaving a round home of its own in some bush a few feet above ground. They *cache* grass seeds and grain underground, and altogether this little Deer Mouse is so pretty and dainty, with its white feet and vest and ruddy brown back, bright eyes, and long black whiskers, that I am glad to say that it does little harm.



COTTON RAT.

"Now you must jump from a mouse a little over three inches long to the great *Cotton Rat*, who is as big as a Chipmunk and equally mischievous. Fortunately we do not have him here, but he is common from Virginia southward. His body is about six inches long, with a medium tail. He has round ears, and wears a rusty brown coat and gray vest. Though he usually is kind enough to keep out of gardens, he riddles fields and meadows with his underground galleries, and you can see his footpaths winding through brush lots and woods. He does much harm by sucking the eggs of game birds, besides eating grass and vegetables. This is one of the nuisance animals that the Gray Fox helps to keep down, and it should be remembered to his credit. The Cotton Rat was so named because he was the familiar species of cotton fields, and was supposed always to line his nest with cotton that he had collected and stored, but he as frequently uses leaves and grass.

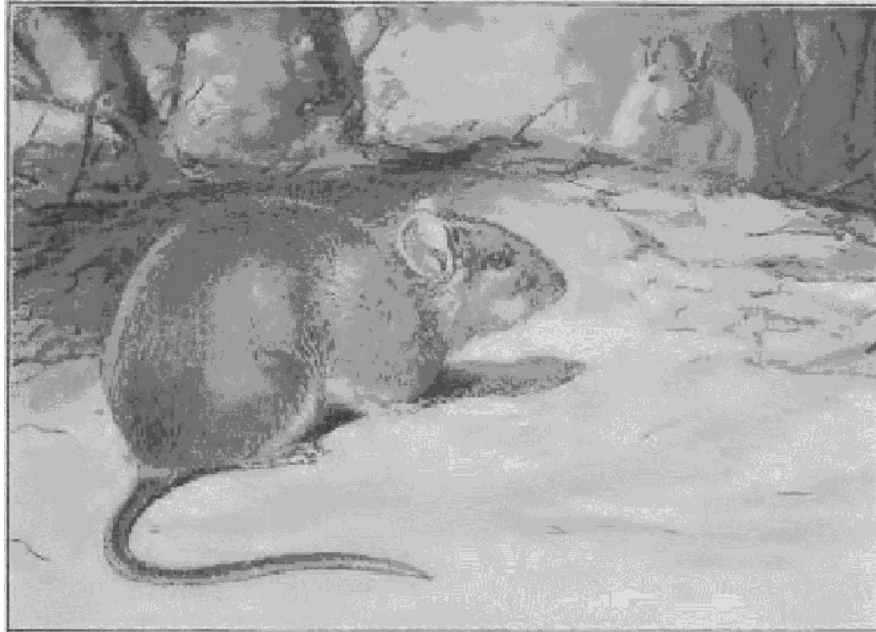


MARSH RAT.

"Another one of the family about the size of the last is the Marsh Rat, who is so fond of swimming that he seems almost



like a link between the true Rats and the Muskrat. He makes his nest at the foot of a stump or sometimes in the centre of a little island of reeds as the Grebe does, jumping directly from the nest into the water and swimming away.



WOOD OR PACK RAT.

"The *Wood, Trade, or Pack Rat* is quite a character. His personal appearance is extremely handsome; he wears a coat of tawny gray fur with white vest and boots; he has big mild eyes, while his face wears more of the Rabbit's gentle expression than the cruel, greedy look of a rat. His gnawing habits do not seem to get him into very deep disgrace with the farmers; it is his ambition that leads him into trouble, he wishes to be an architect, bric-à-brac collector, and pedler all in one. If he and his wife make their home in an outbuilding or attic you will think the house full of evil spirits. This Rat comes, sees, takes, hides, and sometimes returns, articles with lightning rapidity. What for, no Wise Man that I know is able to tell. Do the Rats decide to make a nest under a bush, immediately they set to work to stack up a heap of outdoor rubbish as high as a Muskrat's lodge; paper, shavings, corncobs, clothes pins, old straps and buckles from the stable, ends of rope, newspapers, a kid glove, all having been found stored away inside one of these strange homes. Once in my Colorado camping days a pair of these Rats turned our 'dugout' camp topsy-turvy during a two days' absence. They filled the tea kettle from a heap of shavings and splint wood that had been cut for kindling, mixed a quantity of fish hooks in a sack of flour that was up on the roof logs, emptied a case of shot on the hearth, and made away with every tin spoon our outfit could boast. In return, they filled the frying pan with a lot of sticky cones that they must have brought from half a mile away. When we returned they seemed to think they had improved the camp and made it more homelike, and peeped at us proudly from between the boughs.

"Rats, however, who cannot keep their hands off the property of others, may be interesting, but even if they are bric-à-brac collectors, they never should be allowed a foothold inside one's home. Meddlesome House People, hear, and take warning!"

\* \* \* \* \*

"Be careful, Dodo," said Olive; "if you keep moving that trap, the first thing you know the door will come unhooked and all those mice will get out, and Quick will tear everything to bits trying to get them."

"Our second group, the Gopher family, contains upwards of thirty members, two of which are fairly common.



POUCHED OR MOLE GOPHER.

"The Gophers are stout burrowing animals, seven or eight inches long, with outside cheek pouches for carrying home their provisions; strong, long, gnawing teeth, and powerful fore limbs armed with desperate claws for digging out their homes. Happily they do not live very near us, but they are a scourge in the prairie regions of the middle West. Gophers not only destroy grain and the roots of forage plants, turnips, mangels, etc., but they waste the land itself, making it a network of burrows and pitfalls and throwing up the dirt from their lairs, not carrying it through the main entrance but bringing it out of side ways, and heaping it until it makes great mounds that cover and destroy acres of sprouting crops. Then they are restless animals, moving constantly and making new homes, so that the Gopher plague goes on the list of farming miseries, side by side with grasshoppers, seven-year locusts, and blizzards. Yet the farmer seldom thanks the Hawks and Owls for their missionary work in the Gopher community, and wages war on the Coyote who, in Gopher Land at least, does farming more good than harm. The Gophers are tedious though easy animals to trap, for they only live in families during a very short time in the year, each individual preferring a nest to himself. Poison is dangerous to domestic animals, when scattered about freely as it would have to be in such cases, so that much honor is waiting for some one who shall invent a cure for the Gopher plague, but it must be a cure that is not worse than the disease."



GRAY POCKET GOPHER.

"Perhaps you will find it out, Rap," said Dodo, smiling confidently at him.

"The well-known *Red, Pouched* or *Mole Gopher*, the chief species of the middle West, has a clumsy reddish-brown body as long as a Chipmunk's, a large head, and very wide, hair-lined, cheek pouches reaching to the shoulders; small ears, small eyes, and long gnawing teeth that overhang the lips. It sleeps the winter sleep, which I wish you to remember the Wise Men call *hi-ber-na-ting*.

"The *Gray Pocket* or *Northern Gopher* is found further north than any of its kin, touching his Red brother's haunts, and ranging from Montana to the plains of the Saskatchewan country where Nez shot his Moose. This species is smaller than the Red Pouched Gopher, and has hoary, brownish-gray fur; otherwise it does not greatly differ from it.



KANGAROO RAT.

"Now come two lighter, more graceful fourfoots belonging to the Family of Pouched Rats and Mice,—the Kangaroo Rat and the Pocket Mouse.

"The *Kangaroo Rat* looks like a joke on legs. To begin at the opposite end from usual, he has a tail six and three quarter inches long, while his body only measures five inches and a half. This tail ends in a sort of brush, and he can use it as a rudder or turn and twist it like a snake. Next come wide hips and a very high pair of legs, particularly long from foot to knee like the Jack Rabbit's; after this the Rat slopes rapidly toward short arms, a pointed head, trimmed with outside cheek pouches, fur-lined round ears, bright eyes, and long whiskers. His coat is of soft shaded brown. These Rats are rarely seen, for they feed at night, but I have watched them by moonlight, and they hop about on their hind legs like some mechanical toy, holding their tiny paws together across their chests, as if they did not know what to do with them. They are southerly Rats, enduring great heat, and they make large lodges or houses, sometimes two and three feet high, among the Spanish Bayonet plants and aloes, which serve as hotels to several families.

"The *Pocket Mouse* also belongs to the south, and is an inch smaller than the Kangaroo Rat. It, too, has a long tail, long back legs, and outside cheek pouches. Its coat is a lighter brown than that of the Deer Mouse, and it also wears a white vest.



POCKET MOUSE.

"Last, least, but most interesting of all is the *Jumping Mouse*, with brown coat, white vest, three inches of body, and five inches of tail; and surely a three-inch Mouse who can jump ten feet is entitled to give his name to a family. It is a gentle Mouse, too, and does little harm to the farmer in the northern half of North America, where it belongs, being content with seeds, the softer nuts, and berries. It stores up food in ground burrows, but makes its nest in a variety of places. Usually it is a careful, well-lined affair only a few inches underground, but frequently it creeps into a hollow post or makes its home in the chinks of a woodpile, from which it steals toward dusk when the Bats come out. It hibernates in the most thorough manner, one Wise Man believing that it stays in longer than that sleepyhead, the Woodchuck. It usually goes deep into the ground or to some out-of-the-way corner for its long nap. The waking hours of the Jumping Mouse are the most interesting to us, when it moves among the waving hay fields, creeping slowly on its uneven legs, filling its pockets with provisions, and then, suddenly folding its arms, takes to the air. Bounding along without seeming to touch ground after the first leap, it is the perfect picture of free motion."

"Oh, the trap is coming open and the mice are getting out! Hold Quick, Nat, do!" screamed Dodo. There was a scuffle, a few shrill barks, a confused spectacle of Dodo falling over the trap, Mr. Wolf tumbling over Dodo and putting his heavy paw on a running mouse, while Quick disappeared under the Wolfskin rug. When Dodo untangled herself, four Meadow Mice, killed by a single shake each from Quick, were scattered about the camp, while Mr. Wolf still held his prize under

his paw.

"Its my fault, I know, but my menagerie is all dead!" quavered Dodo.

"Never mind," said the Doctor; "it is rather soon, but that is what usually happens to private menageries."



JUMPING MOUSE.

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## MISCHIEF MAKERS



"RIDAY will be Nat's birthday," said Dodo to Olive one Thursday afternoon, "and uncle says we can have a camp party; but the village children that we like, mostly have the measles now, so we mustn't invite them, and we can't have a party without people and ice cream."

"But you can have a party without *House* People, a sausage party is great fun, with dogs for the company. I often had such parties when I was little, and I should enjoy one now, I'm sure."

"Oh, how lovely! We can cook the sausages ourselves, and I know three dogs besides our own that could come, and Billy Coon, too, if we are careful to keep him up on the beams. Dogs are simply crazy about sausages. Ours always sniff and lick their lips whenever Mammy Bun cooks any. I'll go and invite Rod's brother's dogs and Rap's little terrier,—they are acquainted with Quick and Mr. Wolf, so there won't be any fighting,—while you go and ask Mammy if she has plenty of sausages."

So this is how Camp Saturday came to be full of the smell of frying one Friday evening, and the reason, also, why Quick and Mr. Wolf shared their rug with a mongrel terrier, a collie, and a setter pup,—six pounds of sausages, divided between five dogs of mixed sizes and a coon, having produced good nature and a desire to go to sleep in Dogville.

Rap had brought his Gray Squirrel as a gift to Nat, and an old wheel cage having been found in the attic, Frisk, as they named him, was safely housed in it and became an object of great interest.

"He is ever so much bigger than the Red Squirrels and Chipmunks we have here at the farm," said Nat, "and he has the finest tail I ever saw."

"The plumy tail is an important feature in the Squirrel family. *Sciuridae*, the name the Wise Men give it, means 'those who sit in the shadow of the tail,' and you can see when Frisk jerks his tail over his back that it makes quite a good umbrella."

"Chipmunks haven't such nice tails, though," said Rap; "theirs are quite thin and not a bit plumy."

"They belong to the striped-backed Ground Squirrels, who are of a lighter build in every way."

"Are there any Ground Squirrels? I thought they all lived in trees. Do Squirrels gnaw things, and are they nuisance animals like the mice and rats?" asked Nat.

"The Ground Squirrels are all more or less mischievous, as you will realize when you remember that in climbing the ladder to look for the Woodchuck and Prairie Dog you found them on the general branch belonging to the Ground Squirrel family."

"So we did," said Olive; "but I hardly realized that they were related to Squirrels except in the fact that they are all gnawers."

"Perhaps, daughter, you will write the list on the blackboard for us, so that we shall see the connection more plainly. There are sixty or seventy North American species of Tree and Ground Squirrels, but if I tell you of seven or eight, besides the Woodchuck and Prairie Dog, which you already know, it will be as much as you can remember."

### Tree Squirrels.

Medium-sized ears. Cheeks with inside pouches for carrying food. Clawed feet suitable for climbing. Plumy tails.

Here belong, beginning with the smallest, the Flying, Red, Gray, and Fox Squirrels.

## Ground Squirrels.

Smaller, with cheek pouches, living in ground, but spending some time in the trees. The best known of this group is the Chipmunk.

Next come the heavy, ground burrowers, the Prairie Dog and Woodchuck, whom certainly nobody would ever accuse of trying to climb trees, and then follow two *Spermophiles*, the mischievous Ground Squirrels (so called) of the plains, who seem to bear a resemblance to both the tree and ground varieties, some having large and others small tails.

"You know something about our Common Squirrels, Rap; suppose you tell us what you have noticed," said the Doctor, "and I will help you over hard places."

"I've watched Squirrels a good deal, but I shouldn't like to say that I *know* them," said Rap, hesitating; "for when you think you've seen all their ways, you find you've only just begun. There are plenty of Squirrels hereabout, and they seem to live in a great many different places. The Gray Squirrels and the Flying ones seem to like the Miller's far woods best, where there are oaks, hickories, and beech trees, but the Red Squirrels live farther over toward our house, where the trees mostly have cones and berries like spruces and cedars, with choke cherries and hazel bushes growing along the stone fences, and the Chipmunks live right in the stone fence and under our woodshed.

"I think the Flying Squirrel is the prettiest of them all," continued Rap, pausing as if he did not know exactly where to begin. "It has a dear little face with very black eyes and a few long whiskers. It is a sort of mousy gray on top and white underneath, and its paws look like tiny bits of hands, with the tops of the fingers swelled out, and it has long nails that are covered up by the fur."

"Good!" exclaimed the Doctor; "how did you see so much in the dark, which is the only time this Squirrel is out?"

"I had one in a cage last winter; the Miller's boy gave it to me. It grew very tame, and I let it out in the spring so it could go and find a mate and not be lonely, but it came back to the house last summer and crawled in my window. At first I thought it was a bat that had flown in, and then I saw that it had a tail and no wings."

"If it has no wings, how can it fly?" asked Dodo.

"The skin of its back reaches down on its legs, the same as if I put a blanket over my back and fastened it to my wrists and ankles. It runs up to the top of a tree, or out to the end of a branch, and gives a big jump down or across to another tree. It doesn't really fly or flap its arms as if they were wings, but spreads them to keep from falling and catches the wind like a flat kite."





FLYING SQUIRRELS.

"Why doesn't it go crooked and spin around?" asked Nat; "a kite would if it hadn't a string to hold it and a long tail."

"You must remember," said the Doctor, "that a Squirrel is alive and springs in the direction he wishes to go; the skin flaps help him to remain in the air, and his tail, which spreads flatly and is not thick like other Squirrels', both balances and steers him. Olive, dear, look in the portfolio and give me the picture of the Flying Squirrel. There, now you can see at a glance how he goes!"

"Then they can only fly down or across, but not up," said Olive.

"They can rise very slightly, but not much higher than a Gray Squirrel can by leaping. Tell us what else you have noticed about them, Rap."

"The first time I ever saw them was three years ago in spring. The Miller's boy said there was a hickory tree with a hole in it, back of their pond, where a lot of long-tailed Bats lived. He was looking for Woodpeckers' eggs late one afternoon, and he saw the hole but he couldn't quite reach it, so he knocked on the bark to see if a bird would come out, and instead out popped one of these Squirrels, but the light seemed to hurt its eyes and it hurried in again.

"A couple of weeks after, when the moon was full, we went up to the woods about Bat time and climbed way up in an oak tree that stood close to the hickory, and waited for the long-tailed Bats to come out.

"The Nighthawks were out, and the Whip-poor-wills and a couple of kinds of Bats came along pretty soon, and we saw a Skunk sneaking across to the pond, but nothing came out of the hole in the hickory. I thought the Miller's boy had mistaken the tree, when all of a sudden he gave me a pinch. I looked over, and there were the things coming out of the hole and running and scrambling up the tree like Mice. I knew as soon as I saw them they were some kind of Squirrels, but I didn't know they could fly, until one got to the top of the tree and put right off into the air to another tree twenty feet away, all the others after him as if they were playing, for there were a couple more holes further up in the tree that we didn't see at first.



"We couldn't make out about the way they flew that night, so we kept going there all summer and up to snow time we found out a good many things. The Squirrels didn't mind us a bit after they saw we wouldn't touch them. They had sort of playhouse nests made of leaves and stuff up in the tree branches that they used in summer, but in spring when the little ones are born, and when it grows cold in the fall, they stay in the holes."

"Do they *hi-ber-nate*?" asked Dodo, who was taking great pains to learn the word.

"I don't know whether they *sleep* all the time in winter like Woodchucks, but they pack away food, because we saw them, and they stay in their holes anyway. There's another real cute thing they do,—the mothers take their little ones and fly away with them if they are frightened.

"Last June one of the oldest Squirrel trees was partly blown over against another, and though it was day time, a Squirrel ran out of her home with a good-sized young one sort of tucked up between her arms and her chin. She sailed right off to an oak tree with it and went back to get another, but when she saw that the tree was jammed, she seemed to know that it couldn't fall any further and so she went over and brought the young one back. Do you know she held it and steadied it with her mouth, and it had its arms tight round her neck as if it were a real child!"

"I'm going up to see them next spring," said Nat. "Are they good or bad Squirrels, and what do they eat?"

"They are harmless little creatures," said the Doctor, "and trouble the farmer very little. Their chief food, beside nuts, consists of seeds of various kinds, insects, beetles, and, I am sorry to say, a few birds' eggs and birds that their night-prowling habits and flying leaps make it very easy for them to take. All the Tree Squirrels do some harm, if there are too many about, as well as their ground cousins, but they are so jolly and companionable, adding to the beauty of woods and byways and the pleasure of our walks, that I am inclined to excuse the tribe as heedless mischief makers, rather than condemn them as evil-doers."

"Red Squirrels are pretty bad to have near the garden," said Rap, feelingly. "This year they split up half of our seckel pears to eat the seeds, and they stole lots of the red pie-cherries to get the pits. They think that cherry stones are some early sort of nuts, I guess, and half of July they sat up in that tree twirling them round in their paws while they gnawed into the meat. I wouldn't mind that so much, but they suck birds' eggs and bite little birds, too, when they feel like it. They know where all the birds live, for they are up and down every tree. They can watch the bush nests when they cut across lots on the fences and walls, as they do all the time, chattering and carrying tales about what they see.

"A pair of Red Squirrels made a nest under the old shingles in our woodshed. The little ones were very funny at first, with very big heads and bare skin, and as blind as kittens. I thought that these were day Squirrels, but this pair used to whisk out at night sometimes, and didn't they chatter and scold if any one went near the nest! Mother said they were good company for her."

"Why do you call them Red Squirrels, uncle?" asked Nat. "I saw the pair down at Rap's house, and they had bright brown coats and white vests, such as the Deer Mouse wears, not the same color that we call red in birds like the Tanager and Cardinal."

"It is a careless way of speaking, Nat; there are very few bright-colored Mammals anywhere in the world, and there are none, belonging on our tree, who wear gayer coats than the Ocelot or Red Fox. So for lack of anything brighter we call this Fox red when bright bay would be the exact term, and we say Red Squirrel when we mean rusty brown. However, you may call this happy-go-lucky fellow any color you please, it will not alter his disposition, for he is the most interesting, impertinent, inquisitive, and talkative member of his family. In spring and summer he is both heard and seen, leaping from stump to stump in some cleared field, exploring old logs, and rummaging in the brush pile, as if looking up storage for his pilferings, squabbling with birds, scolding Chipmunks that come too near his home, and keeping up an incessant chatter from morning until night. Then, as soon as the seeds are formed in the cones, he spends his days in the evergreen trees shelling off the cone scales and dropping the cobs to the ground, packing his cheek pockets full of seeds to carry home, or else, if he has plenty of time, dropping the cones to the ground, and carrying them one by one to his cupboard to shell at leisure.

"He makes his home in a great many places, both above and below ground, but prefers a nice tree hole for winter, with its crevices well stored with nuts and seeds, though he will eat almost anything he can find. He does not hibernate, but

merely stays indoors during bitterly cold and windy weather. If it is snowy and bright, you will often see his footprints in the vicinity of one of his storehouses. If his provisions fail, he gets into mischief by pruning trees of their biggest buds, or making excursions to the woods and meddling with the bait in traps set for better game; for though the Red Squirrel has sweet meat, he is rather small to be classed with food animals. That doubtful honor belongs to his big brothers, the Gray and Fox Squirrels. Cheerful as he is, he is not without troubles of his own. Hawks and Owls will pounce upon him, and many annoying insects insist upon living in his furry coat. These *parasites*, as they are called, abound on all 'nuisance animals,' and seem to be one of Nature's ways of keeping them from overrunning the earth.

"There is no need of describing the Gray Squirrel, for you have one to look at to your hearts' content. See! he has eaten all the nuts he wishes and is trying to bury that last one in the sand in the bottom of the cage."

"He uses his paws like hands," cried Dodo. "See how he pats and scratches to cover the nut, and curls his tail over his back. Now he has gone in the wheel for a race. He is ever so tame; how long have you had him, Rap?"

"Only about a week. Gray Squirrels grow tame very quick, but you must be careful they don't bite you. One nipped my hand almost through, a couple of years ago, when I put it into his nest."

"Then they live in holes, too," said Nat; "they must need quite big ones."

"Yes, and they build great wide tree nests, too, for I climbed up to what I thought was a Crow's nest one year, and it had four queer little blind Squirrels in it. They took ever so long to grow, nearly three months, and after that I used to see the old ones sleeping in the nest in daytime. They seem to go out most morning and night."

"Do they sleep in winter?" asked Dodo.

"I'm not sure," said Rap; "sometimes I've seen them in the winter and sometimes I have not."

"It depends upon the weather," said the Doctor. "The Gray Squirrel does not really *hibernate*, but stays curled up in bad weather like the Red Squirrel, just as in very cold places he nests in a hole; in a medium climate he uses either a hole or tree nest, and further south usually a tree nest. One remarkable thing about him is that instead of storing his food in piles, or filling rock or tree hollows, he makes a separate cache for each nut, and exactly how he finds the place again, the very wisest of Wise Men is not sure. Some say it is by a keen sense of smell, others a good memory. For myself, I think it would be easier to remember where a nut was buried than to smell it through several inches of snow and frozen ground."



THE GRAY SQUIRREL.

"Oh dear!" sighed Dodo, "if he has such a smeller as that, how he must choke when he lives in a wood where there are Skunks."

"One thing more about this popular Squirrel, who with us, as you see, wears a light gray winter coat tinged with brown. Further north he sometimes appears without rhyme or reason in a fine black coat, just as the Screech Owl is sometimes gray and sometimes red—a *Dichromatic Phase* is what the Wise Men call this.

"If the Gray Squirrel changes his hue according to where he lives, his cousin the great Fox Squirrel outdoes even the Varying Hare. I will show you some colored pictures of him in my Audubon and Bachman's Quadrupeds, that I sent for to town last week.

"See, one is black with white nose and ears, one is gray with yellowish legs, and a third is yellowish brown with white ears, nose, and a dark face. The commonest coat worn, and the one most often seen, is dappled gray, with the nose, ears, feet, and under-parts whitish. One thing you can be sure of, no matter what this Squirrel's coloring may be, he is very large (less than two inches shorter than a Woodchuck), has a long tail, and white ears and nose. He is found in some one of his many coats in most parts of the United States, where he can find high ground and tall pine trees. He likes cones and has his home nest and nursery in a tree hole, though he usually makes an outdoor nest which he uses as a summer house. If you happen to be near where the Fox Squirrels live, you will surely see or hear them, for they come out by day and have a loud, barking cry. As a rule, they take life easily, making their homes in colonies near grain fields and managing to do the farmers a great deal of damage. But as many of these Squirrels are shot for food, the farmer gets some of his grain back in the shape of Squirrel meat.



CHIPMUNK.

"Now let us spend five minutes on the ground with the Chipmunk and his kin. You all know the Chipmunk as well as you do the Chipping Sparrow, even if you had not his picture before you."

"Oh, yes. I know him just as well as I do a Robin," said Dodo. "He's the Squirrel that has a hole under one of the spruces where the hammock is hung, and stays mostly on the ground, but runs up trees for cones and to peep in nests, too, sometimes. He's little and jerky; his coat is brown and yellow, with black and light stripes running the long way of him. His tail is rather thin, and I know he's got cheek pockets, because I've seen them puffed out so full he couldn't speak, and that one by the hammock is as friendly as a Catbird."

"Good!" cried the Doctor, while the others clapped their hands. "You have given us an excellent snapshot picture of his Munkship. If you could look into that hole under the spruce, you would see that there are many little passages and storerooms running this way and that, from the bedroom where the Chipmunk is probably sleeping soundly at this moment. They have thin fur, like the Flying Squirrel, and dread the cold so much that they hole up early and never even peep out until March; so if you ever see a small Squirrel frisking over the snow, you will know that it is a Red Squirrel and not a Chipmunk, without looking for his stripes. They also cache food in different places, like the Gray Squirrel, and nest often in old stumps or under stone fences. They eat all sorts of seeds, from weed seeds to cherry pits, some insects, and they also, I am sorry to say, suck birds' eggs."

"Only this summer, Dodo, I saw your pet sitting near the hammock holding a Robin's egg carefully in his hands, while he was slowly sucking egg-nog out of its beautifully tinted cup. A book, and a big one at that, could be written about the Chipmunk's interesting ways, but we must leave him to glance at the pictures of two of his vagabond kin, of the *Spermophile* branch of the house, that bother the farmers of the plains and prairies, one even scrambling among the ledges of the Rocky Mountains."



STRIPED SPERMOPHILE.

"*Spermophile* means seed lover, and these little beasts eat seeds of every description, and are cannibals to boot. I have merely a bowing acquaintance with them, but the Chief of the Wise Animal Men at Washington says: 'Scarcely a seed or grain grows where they live that is not eaten by them . . . wheat, oats, barley, rye, corn, etc. . . . But their food is by no means restricted to seeds, for they are fond of fruits, roots, and insects . . . eat lizards, mice, or any kind of fresh meat. . . . If one of their own species is found dead, it is promptly eaten, thus proving that they are cannibals. . . .' They do eat harmful insects also, but not enough to pay for the crops of corn and grain, which they commence to devour as soon as the seed is planted. And they keep on, with the ear in the milk and the ripe grain, cutting and gnawing the season through. The Spermophiles, therefore, are on the farmer's misery list with the Gophers, and the owners of wheat fields, at least, are beginning to think the hungry Coyote a rather clever dog after all.

"The best known of these ground burrowers of the plains, that reach east of the Rockies from the Saskatchewan country down to Texas, is the pretty Striped Spermophile. He is an inch or so longer than a Chipmunk, lightly built and slender; his coat is striped with light brown bands, alternating with dark, light spotted bands, the whole coat being as exquisite and even as a woven fabric; yet he is a perfect nuisance, disliking woodlands, but appearing as soon as the trees are cleared, and never venturing far up mountain sides.

"His big brother, the gray mottled Rock or Line-tailed Spermophile, begins his range where the striped one halts, burrows among the loose rocks on the sides of the Rocky Mountains themselves, and is the commonest Mammal of the piñon belts. Here, being out of the wheat centre, he turns his attention to robbing hens' nests, and has a bad reputation."

"What is a piñon belt?" asked Rap.

"Piñons are the western nut-bearing pines, and of course the Ground Squirrels like to live near them."

"Why couldn't they train terriers to catch these Spermophiles?" asked Olive.

"They have a trick that dogs do not like," said the Doctor. "They let a dog or other animal come quite close, and then turn round and kick up the dust so rapidly that the poor beast is both blinded and choked. So much for the Mischief Makers!"

"Oh, look at Mr. Wolf and listen to Rod's puppy," whispered Nat; "they've had too much sausage party! The puppy is crying as if he was afraid, and Wolf's hair is all ridged up and he's growling!"

"I think he must be dreaming that the butcher's Newfoundland dog is walking on his side of the road, and he never allows that, you know!" said Olive.



ROCK SPERMOPHILE.

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## THE BEAVER'S STORY

(AS TOLD BY HIMSELF)



BEAVERS are strangely wise animals," said Dr. Roy, the evening that Nat chose a Beaver picture, "and the best way to give you a glimpse of their habits and homes will be to read you a Beaver's story of himself." So saying the Doctor took some sheets of paper from the table and asked Nat to bring a lamp, for they usually listened to the stories by the fire-light alone.

"Who wrote this story?" asked Dodo, "for of course a Beaver can't write, at least, I mean, in our language," for she had come to believe that animals can do almost everything. "Is it your writing, Uncle Roy, or is it daddy's?"

"Come and see for yourself."

"It is nobody's writing, it is printed with a typewriting machine," said Olive. "I suppose Olaf would say that the Dream Fox did it."

"No questions answered," laughed the Doctor. "No matter how the story found its way into words, or if it sounds like a fairy tale, I can promise that every word of it is true. If you doubt it, you may ask the very first Wise Man you meet."

(A BEAVER LEAVES HIS WORK TO CHAT A FEW MOMENTS IN THE MOONLIGHT)

"I am a fourfoot of a very ancient family and one of the oldest of Mammals. Land and water both desired to own me, so Nature planned me to be shared by both, giving me the fore paws of a land animal and the strong webbed hind feet of a swimmer.

"As I sit on this low bank and look at my reflection in the pond, it seems to me that, though I am a decidedly remarkable and intelligent beast, I am very plain, or, an ill-natured person might say, ugly in appearance. My body is about three feet long from my nose to the beginning of my tail. I slope fore and aft, humping up in the middle like a haystack. My long claws are of the pattern given to burrowers, from the Badger to the Gopher, and my four gnawing teeth, of a strange design, are curved and powerful, the lower two being five and the upper pair four inches long. Yet they are set so deeply in the jaw that little more than an inch of them is seen, like tools that are braced deeply in their handles to give extra strength. The outside of these teeth is of a stronger texture than the inside, which causes them to wear down toward the back, giving them the cutting edge of a keen chisel.

"Look at my tail! It is nine inches long, and in the middle half as wide as its length; it is a flat, scaly paddle, in fact. You shall see how it serves me as a rudder, a danger signal, and a mason's trowel.



BEAVERS AT WORK.

"The color of my fur coat is usually reddish brown, tinged variously with yellow and sometimes veiled with black. My under-fur is all plain brown, about half an inch long and soft as a Seal's. It was this fur that led my race into trouble, and caused us to be so popular with trappers that we were killed out from about the rivers and ponds where House Children might have seen our lodges and runways as freely as they do those of the Muskrat. Our soft, even fur made fine Beaver hats; our pelts were strong and elastic—they made good gloves; our tails were layered with fat—they made good eating for the Indians. Once we were so important that the great Fur Company of Hudson's Bay stamped our name upon a coin for a sign of value, "I Made Beaver."

"So we were trapped in and out of season, cruelly and wastefully, young and old together, until we are but a small tribe, and in all this wide country we inhabit but a few solitary spots, and so you do not know us.

"I am a wonder to the Wise Men, and there are many things about me that they cannot understand. According to their ways of measuring and judging, I am low among the Mammals. They find that I have a small heart and lungs, that I breathe slowly, have no skill as a hunter, and prefer to live on harsh vegetable food, such as the bark of soft-wooded trees. They look at my teeth and put me in the tribe of gnawers,—the family of Rats, Mice, and other nuisance animals. But when they come to watch me at my work, and see that I am a wood-chopper, architect, engineer, and mason, they are indeed puzzled, for they say: "A Beaver has a small, smooth brain; people who think have wrinkled brains. How comes this, for a Beaver thinks and plans?" Then the Wise Men confess that I am the most interesting animal on the whole Mammal tree (except man himself), and that they really know very little about me. The Indian, who knows all our ways, holds us more highly, weaving many stories about us, welcoming us as pets in the lodges, and loving us as House People love their dogs.

"Now you know how I look. I will tell you how and where I live, beginning with the springtime, in May, when every industrious pair of Beavers who own a home burrow and a woodpile, have, maybe two, or maybe half a dozen little Beavers in their house. As you know, we live about ponds and watercourses, and our summer homes are made in this fashion: Finding a good bank of clay or loam, by a favorite stream, we look for a place where the soil is braced by tree roots. Then we dive and begin a burrow under the water, going up into the bank, cutting through roots, and rolling out



stones, until we have made two chambers,—an outer one for food, and an inner one above the water level for a living room, with a place for air to come in at the top among the tree roots. You may wonder why our doorway is always under water. It is so that we may swim out and not rise to the surface near our home, showing enemies where we live. Does not the Ovenbird slip from her nest, and, running through the underbrush, make her flight at a distance, for the same reason?

"A few weeks after our young are born they begin to gnaw soft bark, and then they soon join us in our wood-cutting excursions. The trees we love best for food are those with juicy bark, like the yellow birch, cotton-wood, poplar, and willow. If we are very hungry, we can eat walnut, ash, and the harder maples; but we do not relish them, and we sometimes use lily roots and grass for salad. It would be wasteful merely to gnaw the bark around the trunks of trees, besides this is not as tender as the bark covering the branches; so, as we may not climb, nothing is left us but to fell the trees. Then we select a tree a foot or more in thickness, and begin our cutting from each side, upward and downward, our teeth making short, chisel-like grooves, hewing out wide chips. When the tree falls we run, and, diving, swim to our burrows lest some enemy should hear the noise and catch us at our work.

"When all is quiet, we come out again, and like good craftsmen begin to chop our wood in lengths to carry home. We cut our fagots, measuring by their weight instead of length, so that a thick limb will be chopped in strips a foot in length, a thinner one two feet long, and so on, for we know how much a Beaver may carry easily. The wood is then taken to the storehouse of the burrow. The thick pieces we roll along down the bank perhaps, holding them between paws and chin in swimming, which we do easily, using our tails as rudders to guide us with our load. The smaller twigs we hold in our mouths, the ends trailing over our shoulders to the ground. If any logs are hard to move, we often use our tails as levers to pry them along, and our tails also help us to lift up in our arms the great stones, which we often have to move in building.

"When the right trees are near our water homes, all goes well, but sometimes the near woods are all eaten or otherwise destroyed. The water from the ponds often runs back and floods the lowlands where we have cut down all the trees, making it so wet that no more trees will grow; and rich, tall grass springs up, covering the decayed stumps. House People call these places Beaver Meadows. We do not like the wood of evergreens, and so often we have to search far away from water for our food, and after the trees are cut, they must be carried a weary distance home. We have two ways of doing this: one is to make a straight pathway by felling everything that would interfere with us; the other is to dig a canal between ponds or streams and, letting in water, float our wood home, as House People float their logs from lumber camps to sawmills.

"Having made our canal, three feet wide and as many deep, we must arrange to keep the water deep enough for our work. Deep water is a "must be" in the Beaver world, whether in canals or in the ponds and rivers. The water must be high enough to cover the doorway of the burrows.

"Next comes our work as engineers, for we have to build dams to keep the water back and make it stand at the exact depth we wish.

"House People have all seen the dams that keep the water in their mill ponds; but we build longer, better ones than theirs, sometimes perhaps they may be only a few feet in length, but at others many hundred. Often we begin by interlacing growing bushes with sticks, filling the gaps with stones and mud on the water side, then adding sticks from time to time below, until we have made our barrier strong enough. At other times we build over fallen trees, and raise a dam from them of almost solid mud, strengthened with tree boughs. We are never wasteful, and seldom use fresh wood for this work, but save the sticks from which the bark has all been gnawed for all our building. Another thing we do,—we curve our dams *up* stream. Do you know why? If you were trying to push something, or some one back, would you stand straight up, or would you bend forward to meet the strain, and thus gain added strength? You would bend, of course, and so we bend our dams to push the waters back. We may be stupid and clumsy and ranked with Rabbits and Rats; our eyes and brains may be small, but you must see by this that we are rather clever at thinking.

"All summer we feed and work and play, making and repairing dams and felling our wood by night, but sometimes stopping to be idle, and rolling and basking in the sunlight. We are ever on the watch, however, even in play time, our keen ears catching the faintest sound of warning, and our alarm signal is far reaching. Our sentry has but to dive, bringing his flat tail with a quick, sharp blow upon the water, and the noise is echoed far and wide. Spat! spat! spat! go the tails

of all the Beavers in the region as they disappear. Even when we lie sunning ourselves, we are on the alert, for it is Beaver law that when at rest every pair must lie facing each other so that, one looking each way, nothing may steal up unawares, and if we are suspicious even, we rise up on our haunches and listen to catch every breath.

"In September the serious task of cutting winter wood begins. We do not sleep the winter sleep, so we need food in plenty and better shelter than our bank burrows, for we live in places where ice and snow have a long season. Once in the far back, perhaps, the climate was not so cold, but the Wise Men say that we American Beavers have been building dams and winter lodges for thousands of years, and they can prove their words by digging and showing you our ancient earthworks. How we came to need our island lodges is a legend in our family, but one that Heart of Nature will not yet let us tell, lest no one should believe it.

"Each Beaver family has its own lodge, for though we are sociable we do not approve of hotel life, and at most, several families may have lodges in the same pond. We Beavers know the places where warm springs, deep from the earth, feed the ponds, and near these spots we make our buildings. Starting from some sunken island, we begin our heap of sticks, building a thick mud and wicker wall and arching poles to support the roof of a living room, which is some half dozen feet across and well above the water line. This lodge has two entrances below water,—one for the family and one for food wood.

"Before ice and snow stop our tree-cutting excursions, every Beaver household moves into its lodge and has a sunken woodpile close at hand, from which the daily provisions can be taken by swimming under the ice. We Beavers can swim a half mile under water without rising through the breathing holes. You may wonder why, in the cold countries where we live, the ponds and rivers do not freeze to the bottom, or sudden thaws drown us out. In the first place, we make our dams the right height to give us the exact depth of water we need, and nature guides us where to build near the warm spring holes that keep the ice thin, and the heavy snows also helping us by shutting out the cold. Then, if we see a freshet coming, we make a gap in the dam to let the water off, or if it rises too quickly, as sometimes in early spring, we swim for refuge to our summer bank burrows. Sometimes our woodpile grows water-soaked and sour, and we are glad when a thaw lets us cut down a fresh supply; but usually our winter life is happy and comfortable, for here in this spot no trappers may come to harry us from our homes.

"Our children stay with us until they are two years old, so each lodge harbors, besides the parents, the eight or ten children of two seasons. We are affectionate among ourselves, but are bound to keep Beaver law, which says that the young of every lodge, when fully grown, shall go out, find mates, and build lodges for themselves. Also, that they shall always go further down stream than their old homes. Down stream means the building of new dams and extra labor, which is most suitable for those with strong young teeth. The older Beavers, when they need new lodges, may go up stream to easy quarters; for as a Beaver grows old, and toward the end of his fifteen years of life, his teeth are dulled, and he cannot cut wood so easily for house and dam building. Beaver law despises laziness and says no Beaver shall steal from another Beaver's woodpile, and the penalty for such a theft is death! The Indians know these laws and how well we keep them. Often in a long cold winter, when all our bark is eaten, we gnaw up the hard wood itself for food, or pinch and starve rather than break the law.

"Each pair of Beavers are rulers in their lodge, building and repairing their own dams unaided except by members of their families; for sociable as we are, we neither live nor work in colonies. If our young do not choose mates the first season that they leave us, they may come home that winter, but not again. Afterwards they must join the wanderers and those Beavers who, having lost their mates, refuse to take another. Thus our lives go on,—hewing, storing, planning, building, and repairing, unless trappers break up our peaceful homes.

"I who tell this story live on Lost Creek, which runs through protected land, where no trap may take me, and I am fat, happy, and content. I have a mate who is a clever tree chopper, and we are now building, raising our dam a foot or so, and mending places where our mischievous cousins the Muskrats have poked holes; sometimes they even try to share our lodges with us, like the impudent rats they are. We must deepen the water around a new lodge that we shall finish tomorrow; its roof poles are of poplars from the nearby bank, the sides are braced by willow and poplar basketwork, and I have beaten the mud covering hard and smooth with my flat tail. Our lodge has a broad entrance for wood also, where the cuttings will not stick when carried in, and a large dry room for my family of nine young and half-grown Beavers who helped me with the work, thus learning how to hew and build the lodges some of them will have to make for

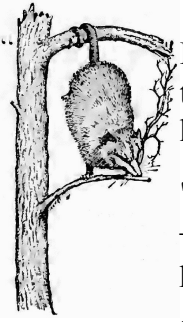
themselves next season.

"Yet in spite of all this work of mine, the Wise Men say, and think they prove it by my body, that I am but a slow, lowly Mammal, no huntsman, and a cousin of Rabbits and Rats, with a small smooth brain that has no business to think and plan. I prove by my own works that I have both thought and judgment, and I wish that you could visit me and see my work yourself.

"Hist! the alarm beat comes down river! Beaver law says dive and strike water with your tail in going; so travels the signal through the moonlight. I hear a crashing in the brushwood—now my turn comes! A good evening to you!" (The Beaver dives.)

"Splash! not a Beaver within sight. The September moon shows heaps of sticks and black water, while a restless Moose, seeking its mate, wades along the pond edge drinking and snatching mouthfuls of water-lily stems that will be soon cut down by the frost, then bellows a joyful answer to a faint call from far up the river."



**"B'ARS AND POSSUMS"**

“PERHAPS Mammy Bun will tell us a story about 'Possums and Bears,’” said Mr. Blake, as they gathered by the campfire before supper one Saturday evening in February, and Rap, on looking through the portfolio, had chosen these two animals of widely different sizes and families.

“Perhaps she will,” echoed Dodo, clapping her hands; “for she’s promised to cook supper for us to-night, —‘ole-time supper,’ she calls it, with hoe-cakes, eggs, frizzly bacon and rice done up somehow with pickle sauce. We had it once before, and it was dreffly good!”

“It says *Opossum* on the picture,” said Nat, “but everybody calls them Possums, from Mammy even to Uncle Roy. Mammy knows lots about them, and she says they are nicer to eat than spring chicken or little roast pig.”

“But how can she tell us about Bears?” said Dodo. “They are great savage beasts of cold countries and big mountains. Mammy never lived in any such places!”

“You are thinking of the Grizzly Bear and his great white brother who tramps along the shores of Arctic seas, but the beast of our picture is the common American Bear, called Brown and sometimes Black Bear, who is still found in almost every state in the Union and in a few places in Canada also, in spite of the fact that he has been diligently hunted from the moment House People set foot on these shores.”

“Are there any very near here now?” asked Dodo, anxiously.

“Not in this state, but in others near by; in Massachusetts, Maine, New York, Pennsylvania, Maryland, Virginia, and all down through the mountains of Kentucky, Tennessee, Mississippi, and Louisiana where Mammy was born, though she moved up to Kentucky later on.”

“Are they as strong and savage as Grizzlies?” asked Rap.

“They are as strong for their size, but not as savage and will never attack man unless cornered, or in defence of their young.”

“What made you choose a little and a big animal for a story, Rap?” asked Olive, “and two that aren’t alike in any way?”

“I’m not so sure about that,” said Mr. Blake; “for though they live far apart on the Mammal tree, there are four ways in which they do resemble each other. I will give you a riddle, and you must answer it at the end of the evening. Why is a Possum like a Bear?”

“Meanwhile, Dodo, run and ask Mammy if she will tell us a story, and while she is cooking supper I will tell you a few things about the Black Bear, as we see him in the North, that Mammy may not know.”

“Yes, she will come!” said Dodo, flying back; “she says thinking of making hoe-cakes by a wood fire takes her straight back to Possum days. Only she’s going to bring her griddle to bake the cakes on; for she says only poor trash that had no griddles baked their cakes on hoes down South, and she wants plenty of hot ashes raked out in front.”

“Mammy shall be obeyed,” said Mr. Blake, arranging the fire.

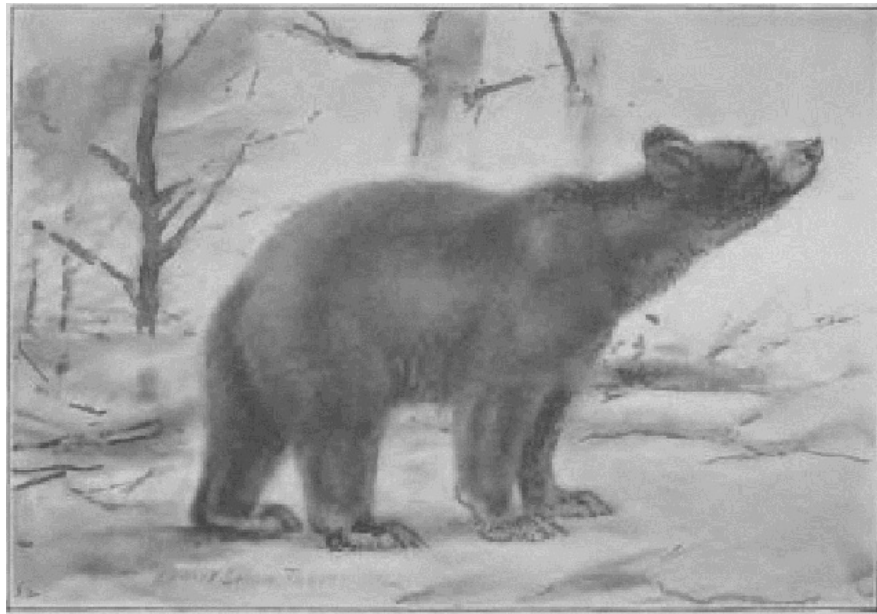
“Yes,” said his wife, smiling, “and I think we had better go in a far corner and keep out of Mammy’s way until supper is ready. She is very good-natured, but set in the opinion that ‘too many cooks spoil the broth!’”

“Good advice, as usual. Now look at this picture of the Black Bear. He stands a trifle under three feet at the shoulder, weighs commonly anywhere from four to six hundred pounds, and in the early part of the winter season at least, wears a smooth, glossy black outside coat that makes his pelt valuable for many purposes, from rugs to fur trimming. He has long

claws, and four sharp dog-teeth or meat-eaters. His hind legs seem longer than the fore legs when he ambles along, and he walks on the soles of his feet as man does, which make him what the Wise Men call a *plantigrade* Mammal.

"In the more northerly places this Bear lives in dense evergreen forests, and dens up from four to six months in the cold season, but in the South his haunts are among the cane-brakes and tangles of live oaks and palmettos, and he does not *hibernate*. Either in the North or South, however, he is a wary beast to hunt, having keen ears and many cunning ways. He is hard to reach unless trailed by dogs, which method of taking him is about as barbarous a sport as exists out of the country of Bull fighting. Even if the Bear has done evil things and you do not care for him, it is cruel to urge spirited dogs within reach of his teeth and claws, for Bruin is courageous when brought to bay and sells his life dearly.

"The Black Bear is ranked with flesh-eaters, but he should have an order all to himself, to be called, 'The Order of Gluttony,' for he is ready to eat anything at any time,—fish, flesh, game, poultry, turtles' eggs, frogs, fruits, and berries, all mixed together with as much honey in the comb and out of it as he can scoop from hollow trees, in spite of the pointed remonstrance of hordes of angry bees. Honey failing, he will sit in a cherry tree and gobble until you would expect to hear the cherry stones rattling about inside him.



BLACK BEAR.

"In winter, when Bears den up, they often unknowingly set traps to catch themselves. Sometimes a Bear prepares a cave home with a good bed, but more often merely hollows out a place under a bank or tree root to curl up in. Snow comes, covering everything many feet deep. Thawing and freezing makes a hard outside crust, and the Bear's warm breath melts the snow inside until it is turned into a thick ice cage that shuts him in. Sometimes hunters see the steam rising from these caves or break through them quite by accident, and Bruin is caught."

"Do they live in family holes, like Beavers?" asked Rap.

"No, each Bear has its own den. The cubs are born in these dens late in winter, and of all the feeble, miserable baby animals, Bear cubs are the most forlorn. They are no larger than kittens, furless and blind, and they do not open their eyes for a month or more, while their mother is obliged to play that she is a sitting hen and keep them warm under her fur until they are a couple of months old. When five or six months old, however, they become very clever, doing a hundred funny tricks. Only two or three cubs are found in a den, and they are usually two years old before any little brothers come to dispute their rights. Cowardly as these animals are generally, it is a very dangerous thing, when walking on snow-shoes, to break through into a she-Bear's den. If possible, she won't let you go to tell the tale of where you found her."

"Are Bears good to eat?" asked Rap.

"It depends upon circumstances; if they are young, fat, and have lived upon clean food, nuts and berries—yes. If they are old, stagy prowlers, who have been alongshore fishing for a living, or eating carrion—they make decidedly poor food."

"De bac'n am done to der turn, and de caikes is all ready," said Mammy, and they hastened to the table.

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"B'ars and Possums," chuckled Mammy, looking into the fire as they gave her the seat of honor, all having helped wash the dishes so that no time might be lost.

"B'ars and Possums, hoe-caikes and bac'n, dem was fine times—dat is, when they *was* fine! Seems like I can see der old cabin right on de edge 'tween the fields and de sweet-gum and gincos an' 'simmon trees!"

"Was that where the Possums lived?" asked Mrs. Blake, gently, because when Mammy went back to the good old times, they were so many miles off that it was sometimes difficult to get her home again.

"Possums? Possums lib eberywhar! Lib all ober Souf when I was a gal. Dem times gone, like 'nuf Possums gone too! Possum lib in tree holes, same as Coon does; eat ebery kind ob tings, same as Coon does. Possum goes a walkin' out at night, same as Coon does; Possum make good eatin', same as Coon does. My lan'! how Sambo did like Coon and Possum! Massa Branscomb he war very 'ticular no folks should hunt Possum and Coon in spring and summer time. An' when he dasn't go huntin' of 'em, Sambo he jest sing about 'em, like he'd fly away—'Possum up de gum tree' war his fav'rite song.

"Den when he war a cortin' me, time he stole de Mockers ter git de banjo, he corted me wif Coons and Possums too. My! didn't dis chile hab good eatin' long dose times!" and Mammy broke into a mellow laugh.

"Then Mr. Branscomb protected Possums on his plantation?" said Mr. Blake.

"Doan know if he call it pertected. All he says was—'Doan let me ketch none o' you boys a touchin' Possums till de corn's ripe. If dey need killin', I kin ten' to it myself till den.'

"One day he come roun' to de cabin and he says: 'Doan you know dat little Possums has big 'lashuns dat lib down Australy way, what carries dere babies in a big apron pocket, jest like Possum does, and am bigger dan a man, and jump, jump 'long on hind legs quicker dan Rabbits run? Well, den, you listen! Dis big cousin he swim ober sea and come here visitin' lit'le cousin along in spring and summer, and if he find niggers chasin' lit'le cousin in de woods, he put dem niggers in his pocket and carry dem off wif him. Hims name K-a-n-g-a-r-o-o!' Lan'! how Massa roll dat word out long! And dough we know he were a foolin' o' us wid stories, we didn't go in dem woods dose times nebber!

"Now de Possum am a cunnin' lit'le fellar, not much bigger dan a cat. He got bright lit'le eyes an' a white face and a snout mos' like a pig. He got a soft co't, some sho't brown fur, and some long and white, only it don't lie soft like cat fur; it all stick up and rumfles. His four legs has got hands on all ob dem, instead o' feet, and he can climb like de mischief. He hab got anoder han' too, a l-o-n-g rat tail, dat curl roun' like er snake. It holes on jest like it war a han', and Possum wind it roun' der branch and hang hissself down and go mos' ter sleep.



THE OPOSSUM.

"But ain' dem Possums got queer ways? I seen 'em often walkin' along der fiel's sidewise-like an' slow-like in de moonlite, lying down and playin' dey're daid if anybody touch 'em, den up to monkey tricks all by derselves. Dey can smell good too,—as good as dogs, and keeps roun' der oder side ob trees when folks is comin'. Ain' de lit'le Possum putty! Not when dey so bery lit'le, dough. Den dey is powerful small, like lit'le mice, and der ma she hab to keep 'em in her apron pocket morna month befo' dey can go out walkin' on dere own legs. Poor Ma Possum, she hab a dreffly worryin' time, an' am worse off'n Rabbits; for she hab in her tree hol' maybe twenty Possums ebery year, and habe ter tote 'em all roun'—Rabbit she kin leave hers in de grass nes'.

"When little Possums furst goes out walkin' dey want ter ride on der ma's back, and when she try to shake 'em off dey curls dey tails round her like dey was a hangin' to a branch! Yah! I'se seen 'em! De he-Possum he walk curious like—set him foot flat down like men does, an' shor's you born der B'ars walks dat way too!

"Doan I mind one frosty time afore Cris'mus, Sambo and me were goin' ober to his sister Liza's cabin, de caine-brake side er de plantation—she did de laundry fer de big house. But she weren't to home, and when we got dere, such a sight! Eberytin' was upset! De bake oven was all gone; de meal jar was cleaned out; de wash tubs was rolled out, and one was bust, and de nice rocker dat your gran'ma, Miss Olive, give Liza when she war mar-ied was split in kin'lin's.

"'Dere been a B'ar dis way!' sez Sambo, softlike, leanin' down an' lookin' at de footprints; 'an' a big B'ar too!'

"'Does yer tink he's eat Liza?' says I, a quakin' and sinkin' down like der jelly *some* cooks makes.

"'Sho, no! Liza's all right. B'ars doan eat folks,—only dey's full o' mischief. Lan' sakes! he's took Liza's pig! It's over yonder and part eat, and here der B'ar hab chawed and clawed der tree high up as him could stretch; dat's a sign for oder B'ars! Let's skip!' says Sambo, a grabbin' me and startin'.

"'What fer?' says I. 'You jest 'lowed he wouldn't eat us!'

"'What fer? Fer ter tell Massa Branscomb, and den he'll tak' de dogs out! 'Tain't offen B'ars come near de cabins, dough de far woods am full ob 'em!'

"'Twarn't an hour afore de dogs was out, and I could hear 'em yelpin'. Dere was most twenty of 'em. All kin's,—some hounds, some tarriers, and some not any kind at all. I heard 'em go along down de edge toward Liza's cabin, and den when Grip—he war an ole hound—let a yell, I knowd dey had struck de track! Well! well! Sambo he neber come back till nigh mornin'. He 'lowed dey had a long run and a glor'us fight wid dat B'ar. Dat Massa Johns (he was de oberseer) was clawed, and Grip was bit, and two cur dogs got kill'd; for dat B'ar jest backed against a tree, and fight all ober till Massa Branscomb shoot him in de side!

"Massa gib Sambo some ob der best meat, 'cause he found de B'ar tracks, a leaf o' fat, some libber, and er chunk er rump, and nex' day we chop it all up wif bac'n and peppers, and tie it tight in dat leaf'er fat, and fry it in der pan. It mak' de finest eatin' sassage in de worl'! Sambo he got er taste er sport and meat, and 'lowed he liked 'em boff, so nex' night, seein' dere was a moon, he went for Possums wid de Randolph boys,—Cæsar, Job, and Marcus-Relyus. Dey had some or'nery dogs, and Sambo took de axe, and he 'lowed to know where dere was fine 'Possums.

"Way dey do, dey get de dogs on de track, and follers 'em close up. Sometimes de Possum'll get co't on de ground, and den he roll up and play daid, and get kilt easy. Odder times he hide in de tree hole, and dey hab to cut down der tree, and odder times he stick to a branch and curl his tail aroun', and den de boys shake him off, and de dogs dey finish him. Do you know, shore as you born, if dat man Sambo didn't fotch home free Possums and one big Coon. My, we libbed high dat week! Roast Possum wid an apple in his mouf! Lan', I kin taste it dis yer minut'!"

"I don't see how you could eat anything as pretty as Billy Coon," said Dodo, reproachfully.

"Sho, honey! it was only meat to we uns, and meat was scource. We eat 'em like you uns eat chickens. We didn't eat no house pets like Billy. An' de B'ars, if dey warn't kep' down der wouldn't be a pig left to mak' bac'n on de 'hole plantation, and what ud we uns be without bac'n! Lan'! but dat furst Possum war good! De furst one Sambo an' me had after we got mar-ied. An' dat Coon he war as fat as grease, an' dem Car'lina taters dat Massa gib Sambo, 'count ob der B'ar, dey was jest meltin' wid der bac'n fat! Lan'! lan'! an' warn't dat Possum cracklin' all ober when he war roasted! We had comp'ny all dat week, I tells yer, but yer ought to see dat—Lan' sakes!" cried Mammy, coming suddenly North again, "Possums or no Possums, I near done forgot to set dat sponge for de buckwheat caikes!"

"Now, who can answer the riddle?" asked Mr. Blake, as soon as the laugh at Mammy's sudden exit had subsided. "Why is a Possum like a Bear?"

"I can," said Rap, eagerly. "They both walk on the soles of their feet, they can both climb trees, they will both eat 'most anything, and the little Bears and Possums are feeble and tiny and aren't good for much when they are born, and take a lot of tending before their eyes are open."

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## FROM MOLETOWN TO BATVILLE



BEFORE the next Saturday the measles had grown tired of visiting the children down in East Village and came up to the farm, without the least scrap of an invitation; they spread their rough, red blankets over Nat's and Dodo's faces, necks, arms, and chests, evidently making preparations for camping there some time. So instead of going to school the children were put to bed, each in a cot with the back to the light, and a screen to keep off draughts, in the south room, where there was a fine blazing log fire.

"I suppose we must stay in here for two weeks," said Dodo to Nat, while they were waiting for their mother to bring their breakfast. "Uncle Roy says if you are not polite to the measles when

they come to see you, and don't stay in the house to entertain them and keep them warm and comfortable, they will creep in through your skin and give you a cough or put their fingers in your eyes and make them ache."

"It's nice to have special buttered toast and mother all to ourselves," said Nat, "but I'll miss Rap and the camp awfully."

"Uncle says he will read to us, but we can't have the Audubon animal books or any of the others to hold in our hands or look at, for fear the measles should hide in between the leaves to steal a ride, and pop out and visit somebody else."

The children behaved very well. Dodo was a little fidgety at first and couldn't bear to look at her speckled hands, and, as gloves pinched, insisted upon having stockings pulled over them and fastened at the shoulders. Nat laughed until he cried when he saw her sitting up in bed trying to feed herself.

"O Dodo!" he gasped, "you look exactly like the picture of the Manatee fanning his food into his mouth with his flippers!"

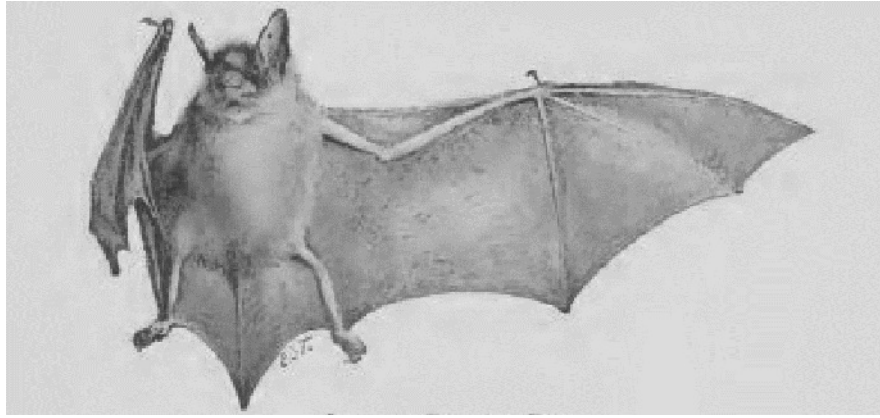
A week passed, and the children were sitting up by the fire playing checkers with a board ruled on a box cover, and black and white bone buttons for men, when they heard Doctor Roy's voice saying, "It was hanging upside down to the roof in the far end of the root cellar, so I fetched it for the youngsters; thought it might please 'em!"

"I wonder what it is," said Nat. "It must be a cocoon."

Then the Doctor came in carrying a board covered with a wire cheese screen. "Here is a visitor that you will be very glad to see, and who will not be afraid of the measles. Let me introduce you to *Vespertilio subulatus*,—the little Brown Bat who had hung himself up for the winter sleep, but, as you see, he is now quite wide awake and ready to bite my finger, though the light confuses him so that he is trying to find a dark corner of the board to hide in."

"Isn't it jolly!" cried Nat. "You said that we couldn't understand rightly about the Bat's wings, and how they were different from a bird's or a Flying Squirrel's, unless we saw one. Will you tell us about him here to-day? Because you said we couldn't go back to camp for another week."

"Yes, that is what I intended. See, I have brought up a few pictures. You can look at them, and then they shall have a whiff of sulphur to choke any measles that might wish to follow them back to the portfolio."



LITTLE BROWN BAT.

"We have climbed the ladder almost to the last branch of our Mammal tree. Here we find at the very top, close to man himself, two orders of very strange beasts, one living underground and one in the air. We have seen how our Mammals are adapted to the conditions in which they live. How water-lovers have webbed feet for swimming, and climbers sharp claws, but in these two great orders, Insectivora or Insect-eating and Chiroptera or Wing-handed Mammals, the particular development, which the Wise Men call *specialization*, is truly wonderful.

"Let us begin with the Insect-eaters and go underground to Moletown. This tribe has a great many different colonies scattered all over the earth, but the residents of Moletown, that you are likely to see, will be the Shrews or the Moles themselves. You would never know by mere sight that these stupid-looking, mouse-colored animals, with round, furry bodies, small eyes, and various kinds of shovel claws, belonged so high up in the Mammal tree, but the Wise Men have placed them there because of their *special* features, some of which you could not possibly understand.

"That the Mole was made to tunnel in the ground and live in the dark, you can see for yourselves very easily. Take this picture and notice how strong and powerful the head and fore parts of the body are compared to the small hind legs. The arms are fastened close to the short neck to take up as little side room as possible in burrowing, while the hands are broad, heavy shovels, flesh-colored inside and edged with five short fingers. The pink nose is pointed and very sensitive, the eyes small and so protected with skin that many people think them wholly blind. The fur is short, soft, of a beautiful silvery ash gray, darkening to lead color."

"I remember the fur," said Dodo, "and how badly it made my fingers smell when I tried to sew it, and you said the smell protected the Mole. Do all the people in Moletown have this smell, Uncle Roy?"

"Yes, our Moles and Shrews are so perfumed that only a very hungry fourfoot will eat them, but Hawks and Owls are not so particular.



COMMON MOLE.

"The Mole that you have often seen this summer is the common species. He has a cousin hereabouts, who wears an ornament on his nose like the rays of a tiny ox-eyed daisy made in flesh; this thing is supposed to aid his strong power of scent and has given him the name of Star-nosed Mole. This Mole has a longer, thicker, hairier tail than his common cousin, but his arms are not so powerful, and he has not the perfect shovel hands. Now, how do these tunnellers live, what do they eat, and are they doers of good or of evil?



STAR-NOSED MOLE.

"When the Mole enters fresh ground to make a home, he first burrows a slanting pathway a couple of inches underground; below this the main avenues are extended through the section he considers his farm. These wide avenues by being constantly used become smooth and firm from the pressure of the animal's body, and he does not willingly leave them, but often repairs them if they cave in. At intervals there are short side roads from these avenues, that serve as hiding-places or switch tracks, for a Mole to step into when he meets one of his family in the main passage. Six and eight inches, or even a foot or two, below ground, connecting with the main avenue we find the nest,—a comfortable, domed room something the shape of an inverted six-inch flower pot, furnished with a good bed in one corner. This nest also has several outlets to allow the family to escape in case of an earthquake, such as a sub-soil plough would cause in Moleville, but we must not confuse these avenues with the shallow burrows the Mole is constantly throwing up in his daily search for food.

"Moles live chiefly on animal food, insects, grubs, and earthworms being on their daily bill of fare. So when we see a lawn or field ridged and uneven from their tunnelling, we must remember that, annoying and unsightly as it is, if the piece of ground were not full of evil-minded insect or worm life, the Moles would not choose it for their hunting ground. The Mole once having established a home can make endless excursions from its main avenues directed to his prey, by his keen senses of touch and smell, as accurately as the Wolf or Fox. When frost seals the ground, he dives into a safe deep nest and stays there until early spring, when he goes in search of a mate, but in open winters I have seen his 'hills' rising through an old cornfield in January.

"People who say that the Mole eats bulbs and plant roots make a mistake and judge by appearances only, which you have both learned is a dangerous thing to do when climbing the animal tree. Moles do root up the ground and *disturb* plants, when grubs and larvæ are hidden among their roots. Also Meadow Mice follow in Mole tracks and nibble anything they can find, from tulips to turnips. But we have no positive proof that Moles eat vegetable food. In fact, they are ravenous meat-eaters, and when the experiment was made of feeding a captive Mole with vegetables he very soon died of starvation.<sup>[5]</sup>

"The Mole has his regular times of feeding, his surface burrows being made commonly at early morning, noon, and night, wet weather favoring his work by softening the ground. There are many traps invented to catch him, and owners of fine lawns and flower gardens owe him a grudge and would willingly besiege Moleville with fire and sword, killing every inhabitant if possible. From their standpoint he is a great nuisance. Nature would say I suppose: 'He is doing my work, get rid of the evil insects yourself,—cut off his reason for living with you and the Mole will go.' Meanwhile here at the farm I shall continue to set traps for him.

"There is another family of insect-eaters called Shrews who are closely related to the Moles, though looking much more like mice. They are small and slender, with tiny ears and eyes that can at least tell light from darkness, though their wonderful senses of touch and smell are their chief guides. They feed both day and night, sometimes running along the surface of the ground in broad daylight. They love the woods as a Mole does the open country, and have their holes in easily reached places under roots and in logs, for they lack the Moles' shovel hands for deep burrowing.

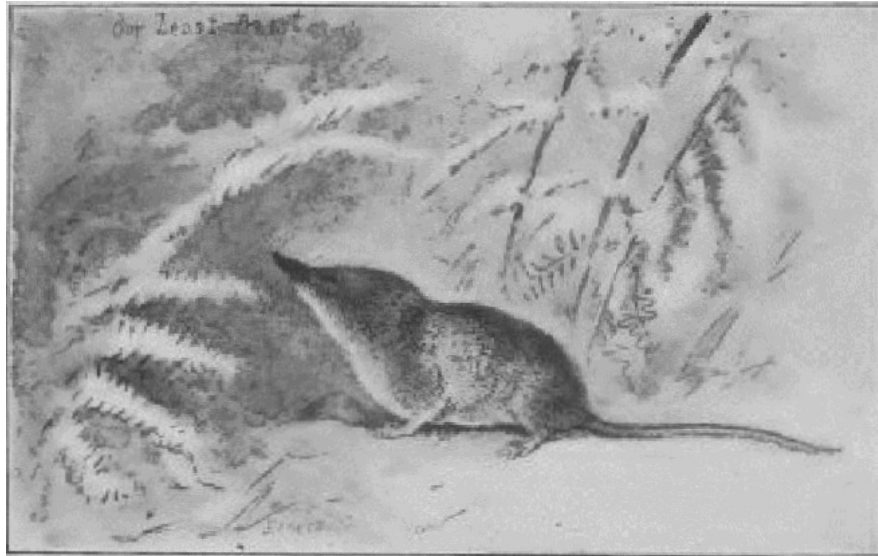
"The Short-tailed Shrew is our most common species. It is a vigorous animal, not hibernating in the coldest weather, and you may almost mistake its tiny footprints on the snow for bird-tracks. It is a savage little beast, too, and a blood-thirsty fighter, being the especial enemy of the Meadow Mouse, or Vole, as some people call it.



SHORT-TAILED SHREW.

"Many Wise Men whose words we can trust have told of battles between these Shrews only three and three-quarter inches long and Meadow Mice four and one-half inches long. One of these men, in order to see exactly how it was done, put a Shrew and a Meadow Mouse into a box and watched them. Soon they were rolling about in a rough-and-tumble fight, the Shrew biting at the ears of the Mouse, which he finally killed and immediately began to eat. So when we think how mischievous the Meadow Mouse is, we should be very grateful to this Shrew with the lead-colored fur and short tail.

"There is another Shrew, common in the middle West, that contests with a tiny pocket mouse the honor of being the 'least beast' on our Mammal tree. This is the Least Shrew, who measures only a trifle over two inches in length. When we think of the length of a Whale, and that both Shrew and Whale are living Mammals, belonging either on American soil or in American waters, our Mammal tree seems to bear the most wonderful fruit of which our country can boast. I hope that many children may follow us in our climb, as far as they are able, without being made dizzy by trying to explore the maze of the smaller branches and twigs.



THE LEAST SHREW.

"Look at your Bat; he has eaten the shreds of meat I gave him. I will take him out and spread his wings for you to see. It is always better to follow Nature's plan and travel upward instead of downward; so let us go up in the trees to Batville and see how its inhabitants live and work.

"First look at the *specialization* that enables the Bat to fly with real wings,—fly, and not merely sail like the Flying Squirrel," said the Doctor, holding the Bat's wings open. "See the shoulder, elbow, and long forearm. The fingers begin to divide at the wrist, so the hand has no palm. There is a sort of hooked thumb, and then the other fingers grow long and support the skin that makes the wing, as the frame supports an umbrella. The hind limbs, you see, are small and very weak in contrast to the strong collar-bone and long arms."

"Oh, yes!" cried Nat. "Rap said a Flying Squirrel's coat was like a blanket fastened to the wrist and ankles, and the Bat's wings are all skin like a three-cornered shawl, with its arms fastened in the top corners and the point fastened to the tip of its tail."

"Yes, and you remember how the bird's wing was like an arm with only the beginning of two fingers and thumb, that served as a frame to hold the fringe of feathers. Though birds are not Mammals, their branch of the animal tree grows very close by."

"Are all Bats made the same way, Uncle Roy? I remember a picture of one in a book that I had. It was called the Vampire Bat; it ate people and belonged to some very far away country. It must take a very big sort of Bat to kill people."

"The wings of all Bats are made on the same plan, though their bodies vary greatly in size; but the formation of teeth, noses, ears, and so forth, varies according to the needs of the different species. Thus the Fruit-eating Bat has ears and eyes of moderate size, while the insect-eaters have very large ears, small eyes, and wide mouths fringed with hair, that make a sort of fly-trap akin to the Whip-poor-will's beak. The Fruit-eating Bats have a raised-up ring on the tongue, which gives them great sucking power. They are thus able to suck the juice from large fruits that they cannot pick and eat. Sometimes when very hungry they have been known to suck the blood from the small surface veins, or *capillaries*, of cattle, or even people, but they never eat people or do any of the savage things that story books are so fond of relating. The real Vampire Bat of tropical America, *Desmodon rufus*, as the Wise Men call him, is a little fellow no larger than our Little Red Bat and has no middle front teeth or molars, but instead has two sharp dog-teeth that he uses to prick the flesh so that he may suck blood. He will sometimes fasten upon the toes of sleeping people, and the negroes are very much afraid of him. Our familiar Bats are small and of the insect-eating species. Four belong in the family of Twilight Bats, called *Vesper-til-ion-idæ*, and one to the family of House Bats.

"Numerous as Bats are, very little is seen of them, for they are lovers of darkness, not coming out to hunt their insect food until after the last Vesper Sparrow has gone to sleep, and the Whip-poor-will has begun to complain. They are obliged to take a very long winter nap. You have seen that the insect eating birds leave us earlier in autumn than the seed-eaters; so for the same reason Bats, who do not migrate, go to sleep when the frost clears the insects from their airy hunting grounds. Then they flit away to some dark old building, cavern, or abandoned mine shaft, far enough from the air not to freeze, and hanging themselves up by the hind feet, fall into such a deep sleep that you cannot detect the faintest breath."

"What a dreadfully cold way to sleep," said Dodo, shivering at the thought. "Hanging up so that the wind can blow right through them and nothing to keep their feet warm. Do they always sleep that way in summer, Uncle Roy?"

"Usually when found in the daytime hidden in outbuildings or under large leaves they are hanging in that way, and their young are often found clinging to them and nursing in this position."

"Do they build nests?" asked Nat.

"No, they either suspend themselves wherever they happen to be, or crawl under the roofs of old buildings, which they sometimes occupy in great parties. You see they hang up to go to sleep as naturally as we lie down."

"Can they walk at all, or do they always fly?" asked Dodo.

"They can walk along slowly and with a good deal of trouble by clinging with their hooked thumbs, their wings being folded and sticking up like the hind legs of a grasshopper."

"The House Bat (called the Snouty Bat by the Wise Men, because of its curious nose) is a small light-brown species common in the South, which makes attics and roofs its favorite resting-places. It seems to use its feet more than any other species and may be heard shuffling about after dark, making the same noise that you would imagine might come from a party of mice on crutches."

"This Little Brown Bat that Rod has brought seems to have been living alone in the root cellar, though I dare say if we looked we should find others. You saw them last summer flapping about when we were looking for Whip-poor-wills."

"The Bats we saw seemed much bigger than this," said Nat. "Aren't there any larger ones here that we might have seen?"

"Yes, we have the Brown Bat, who is the same color as this little brother, but spreads his wings two inches further, and the beautiful Red Bat with his shaded 'golden-red' coat frosted with white. This Red Bat is one of the earliest to come out at night, and may sometimes be seen even in cloudy days, and it is more common here than the Little Brown Bat, and is not much larger. It is a most devoted parent, and mothers have been known to follow their children, which are usually twins, to the rooms of houses where they were made prisoners. Still I am quite sure that our visitor, this Little Brown Bat, is the species that has flapped in our very faces this summer, for anything on the wing seems much larger than when held in the hand."

"There is a very beautiful species called the Hoary Bat, with frosty gray fur, that I have found in the far hickory woods, and though it ranges from the Saskatchewan country down through the highlands as far as Mexico, very few people except the Wise Men know it for a Bat—and why? Because in the first place it does not begin to fly until quite dark, and then its flight being both rapid and direct and its wings long and pointed, they may mistake it for an owl."

"Can it hoot like an Owl?" said Nat. "The Bats I've seen never make a scrap of noise; the first thing you know they seem close to you and before you can wink they have gone, and daddy says they will never touch you or claw your hair, as Rod says they do."

"You are right; the flight of a Bat is silent. See if you can tell me why."

"I can," said Dodo, whose eyes were sparkling and dancing as they always did when she thought of an answer almost before a question was asked. "You said a Nighthawk made a noise because the wind blew through its wing quills when it dropped, just like when I blow on my little comb and it whistles, and a Bat has only skin wings with no feathers to whistle with!"

"The exact reason—a stringless violin makes no sound. But what shall we do with our Little Brown Bat? Suppose I take him back to the root cellar and see if he will hang himself up and go to sleep again."

"Oh, yes!" said Dodo; "and then by and bye when he is all aired Rap can see him."

\* \* \* \* \*

"Did he hang up again?" the children asked eagerly when the Doctor returned.

"He flew about a few moments and then disappeared in a dark corner. When Rod brought a lantern, we found five others all hanging to the roof, like so many cocoons in a row. Their eyes were shut and they showed no signs of life, but I could tell our friend from the others because he was breathing quickly and shifted his position when the lantern flashed on him. So by and bye you can all go and see how Batville looks in winter."

"It will be nice to go back to camp again," said Nat, after a pause, "but what shall we do for stories? The pictures are almost used up, and we have climbed to the top branch of the tree, and by and bye it will be too warm for a campfire."

"Bless me!" exclaimed the Doctor, "how sad you are. One would think you had the knowledge of the whole world to carry. You have only made a little fluttering excursion in this wonderful tree, groping your way like a Bat in a strange garret; now you can begin at the root again and stop to rest on any branch that pleases you, reading delightful books on the way. Then, as soon as Nature opens her door again, the door of Camp Outdoors, you can use Camp Saturday for a museum, a place where you may bring your treasures,—cocoons, snake skins, twigs, stones, mosses,—all without let or hindrance.

"Speaking of museums, you have been so good while you have been ill, and obeyed about not popping your heads out of windows or doors, that I will tell you a secret—a great surprise!

"Dear, don't choke me! Dodo, you know I told you that you mustn't hug any one until you took the stockings off your arms, and turned from a Manatee back to a little girl.

"The secret is this! Early in March, when the days grow a little longer, your father and I expect to have a party, and your mother, Olive, Rap, Nat, and yourself are to be the guests. We are going to New York to spend the night at a hotel, and visit the Natural History Museum, and also to see a few four-footed Americans that live in the Park. I know that you often visited both these places when you lived in the city, but I am sure you feel a different interest in your four-footed countrymen since you have climbed their Family Tree."

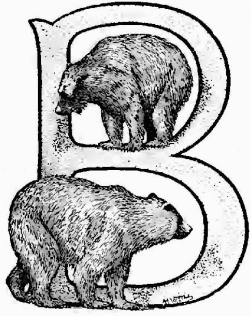
"I do already, Uncle Roy," said Dodo. "I used to look at the stuffed skins, but they seemed dead, far-away beasts, like the Lions and Tigers. Now they are real people, just like Quick and Mr. Wolf."

"Oh, how jolly it will be taking Rap around!" said Nat; "and then, if we go to a hotel, we can have striped ice cream and ride in an elevator! For, do you know, Uncle Roy, I've told Rap about them, but I don't think he really believes that elevators are real things."

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## A FOUR-FOOTED DANCE



BEFORE the children had tired of Camp Saturday, or the snow had quite disappeared from the north side of the stone fences, it was March, and that part of the month when the sun rises and goes to bed promptly at six o'clock. The time of the year when hepaticas, lodging in the leaf mould of sheltered banks, are unfurling their petals, when the brown carpet of the woods is fragrant and rosy with arbutus flowers, and tufts of broad green leaves dot the marshes and low meadows. The children were quite well again, school kindly took a double holiday to have a smoky furnace cured, and so all the family at Orchard Farm, except Mammy Bun and Rod, started on their excursion to New York. Now in some respects excursions are very much alike: people see, hear, and eat a great deal more than is good for them, and are consequently usually rather tired and peevish for several days afterward. This excursion, however, was of a different sort; it had only one motive, and that was to see in two days as many of the four-footed Americans as the city had to show.

When they were on the cars, Mr. Blake said incidentally that he was going to give Olive something as a reward for having been so patient with Nat and Dodo and their perpetual questions, but added that he was quite sure that they could never imagine what the gift was to be.

"A big box of books," ventured Rap.

"A new album to paste her pressed flowers in," guessed Dodo, "because the old one is crammed full."

"No, something bigger than those,—a nice pony cart so that she can drive herself anywhere she likes," said Nat, earnestly.

"Wrong," said Mr. Blake. "I know how fond you all are of birds and their nests, of beasts and flowers and bugs, so I thought you would like to make a collection of such things as you find about the farm, and let the village children see and enjoy them also. As I know that Olive may be trusted with it, I am going to buy her a fine new gun so that she may shoot all these things for you."

"Why, daddy, I'm perfectly astonished!" cried Dodo, turning red and fairly bristling with indignation. "Do you want to turn our Olive into a wicked Hunting Wolf, and just when we've coaxed the Wood boys to stop shooting Meadowlarks and made them promise not to take but one egg out of each nest if they *must* go collecting?"

"Don't worry, Dodo," said Olive, laughing; "for though I have not the least idea about the present, I can tell by the twinkle in Uncle Jack's eyes that it is some very harmless, nice sort of gun he means."

"Shall we have striped ice cream for lunch or dinner?" asked Dodo, suddenly changing the subject as they left the cars, Mr. and Mrs. Blake going down town, and the others up, in Dr. Roy's charge.

"No ice cream or sweets at all to-day," the Doctor said firmly, "if you wish to go tramping about to see the animals. First, we will go to the Park and see the live Grizzly and Polar Bears in their den, and I can promise you a peep at Coyotes, Timber Wolves, and Foxes, besides the Puma and the Ocelot. I know that you will think that they look very unhappy in their cages, and they are not nearly as comfortable as they will be when they go to live in the [Zoölogical Park](#)."

"Oh, there is a donkey!" shouted Nat. "I wonder if it is the same one that we used to ride when we lived here in the city? May Rap have a ride now, and then Dodo and I?"

"Why, uncle! I do believe you've brought a bag of dimes and quarters on purpose," said Dodo, as the Doctor took the necessary money for three rides from a well-filled pouch.

"I am not an old man and more or less wise, without knowing that plenty of small change is a *must-be*, if you wish the

wheels of an excursion to move smoothly and not jolt all the pleasure out of it," said the Doctor, pocketing his bag again.

\* \* \* \* \*

That night when the Orchard Farm family met at a hotel that overlooked one of the Park entrances, the first question the children asked was,—“Has Olive's gun come?”

“Yes, here it is,” said Mr. Blake, leading the way to a table that was covered with brown paper parcels and a mass of packing material. “Here is a gun, here are the bullets, and the trigger goes so—snap!”

“It is a beautiful camera!” exclaimed Olive in delight, sitting down by the table in a state of surprise and bewilderment. “A real camera, with legs to stand it on, as well as a handle to carry it by, and it holds glass plates or rolls of film, whichever you prefer,—not one of those miserable little trick boxes that was all that I ever expected to buy for myself.”

“Yes, and see all the trays and bottles and things, so that you can develop and print your own pictures,” said the Doctor, growing enthusiastic as he looked, “with yards of rubber tubing to work the shutter so that you can set the box on a fence, hide behind a tree, and catch snap shots of a Robin building his nest or a Squirrel scampering by. How would you like to go into partnership with me, daughter? For I think that we two can make a set of lantern slides that will open the eyes of the village children to wild things near home. What! supper time already?”

Then they all went down in the elevator to the dining-room, enjoying Rap's surprise at everything he saw.

“I don't like riding *down*,” he confessed; “it makes you feel all loose inside, just like when you've found a hornet's nest in an old tree and go to get down quick and have to slide because there aren't many branches.”

The next day the children went to the Museum of Natural History, and as they entered the great doors and were greeted by Tip, the elephant of circus fame, Dodo said: “Where shall we begin? If we begin downstairs, I am sure we shall never get to the top in one day, and if we begin up top, we shall never get down again before dark. Who lives on the very top floor, Uncle Roy?”

“Some of the Wise Men are there!”

“The Wise Men that count teeth and claws and say whether the little fur beasts that are white in winter moult all over or only change the color of their hair?” asked Rap.

“The very same.”

“Don't let's go there, then,” whispered Dodo to Nat, “because if they are so wise, they would be sure to know that it is time for another of my teeth to be shed, and they might want it pulled out now! What is next to the top?” she asked the Doctor hastily.

“Bones and stones and shells, but after you have been introduced to the Four-footed Americans in Mammal Hall, I will take you where you can meet all the home birds of the farm, the marshes, and the shore, beside many others that live within fifty miles hereabouts. For you see these Wise Men, in addition to studying dry bones, understand the needs of flesh-and-blood children, and know what will interest them the most in their winged and four-footed brothers, and so they have arranged them in a way that they may be easily found.”

“Oh! oh!” exclaimed Dodo as they wandered into the hall where the Mammals live, “here are Woodchucks that look as if they had just come from our rocky pasture and brought a piece of it with them!”

“See this!” said Rap, hopping toward the bit of mossy woods that sheltered a Moose family.

“Here are the Two Kings!” cried Nat, running toward the stretch of prairie where a magnificent Bison had stopped in his grazing and was eying a sand-colored rattlesnake.

“Hush! not so loud!” cautioned Mr. Blake, “or you will have the Indians downstairs breaking out of their glass cases and challenging you.”

Luncheon had little attraction for the children that day, and late afternoon found them still lingering. It was growing dusky when the Doctor caught Dodo by the hand, saying, "We must go now or we shall be shut in."

"I don't think I should quite like to stay here in the dark," she said, kissing her hand to a Red Fox as she passed him. "I wonder if he is a Dream Fox, and if he ever comes out of his case?"

\* \* \* \* \*

"If she only knew," whispered the Fox to the Wildcat across the room, "she wouldn't go home to-night."

"Knew what?" asked the Wildcat, without moving an eyelash or a whisker.

"Who are you that you do not know how, after dark on March 21, we fourfoots all come out of our cases and hold our spring dance?"

"I didn't know it," replied the Wildcat, "because last year I did not live in a case; I had a house in a hollow tree, a mate, and three kittens."

"Ah! I understand," said the Fox, asking no more questions out of respect to the Cat's feelings. "I will explain. There is an endless oval path in the sky that the sun walks round once every year. Spring lives at one turn of the path, and Autumn at the other, with Winter and Summer half-way between. Now on March 21 the sun always reaches the spot where Spring lives and steps over into her garden, walking through it until he reaches Summer; so, on the evening of that day, we fourfoots may leave our prisons and dance all night in honor of the season."

"How do you know all this, and who planned the dance?" questioned the Wildcat.

"The Wise Men have pictures of the sun's pathway in their books, and I know it and I planned the dance, *because I am a Dream Fox!*" he whispered. "When it is quite dark and every one has gone home but the night watchman, who will not tell tales that no one would believe, the dance will begin!"

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"How good one of those Rabbits will taste," said the Wildcat a few hours later. "It is a very long time since I ate fresh meat."

"What are you saying?" snapped the Fox. "Suppose every one of us ate what he wished, what would the Wise Men say in the morning when they found half of the cases empty?"

"See, the Possum and the Coon are out already and drawing up the window shades. Our friend the Moon is up; that is the signal. Now the Bison, Moose, and Elk are starting; they always take the lead in the social affairs of Four-footed Americans."

The larger animals soon took their places, two by two, in the entrance hall. The Bison first, with the Moose, Elk, Caribou, American Deer, and Antelope behind. The Musk Ox, Bighorn, and Mountain Goat presently sauntered along together, complaining of the heat. Meanwhile, the Wolves, Foxes, and various Cats had an argument about the right of way, the Puma so far forgetting himself as to raise a heavy paw and box the ears of the biggest Timber Wolf, and the Dream Fox was obliged to interfere to prevent a free fight.

The Rabbits, Squirrels, and little Gnawers kept getting under the feet of the others, until the Porcupine, as Marshal of his Order, undertook to prod them into place, using his prickly tail as a weapon. As for the Rats and Mice, it was impossible to make them walk in pairs, so they scrambled along to suit themselves, the Jumping Mice and Kangaroo Rats alone keeping in pairs and hopping along hand in hand.

It was fully nine o'clock when all were ready, and a belated street band on the opposite side of the avenue began to play "Dancing in the Barn."

"How lucky!" said the Dream Fox. "It is nice to have music to begin by, but after a little while it doesn't matter, for every

one dances his own way.

"Now! One, two, three, four,—face to face, skip—hop! Across the hall, and upstairs to the very top, and down again."

The Skunks immediately skipped forward, leading the way as an advance guard, waving their tails over their heads, the procession following merrily. Strange to say, however, all this multitude of prancing hoofs and paws made no sound.

"Why didn't they wait for us?" gasped a Walrus, who had been all this time trying to get out of his case, to a Seal, who was fanning himself with his flippers.

"What good would that do?" said the Sea Lion; "we couldn't climb up all those stairs and get down again before daylight. Suppose we slide down this flight to the basement; perhaps we can find some water and then we can go in swimming." Then they all flopped off; and you would have expected them to leave great wavy marks in the dust on the floor, but they did not.

At twelve o'clock the procession came downstairs again and ended by an elaborate breakdown, danced by the Polar, Barren Ground, Black, and Grizzly Bears; this was followed by a grand chain, hands all round. Then the animals were allowed to amuse themselves until the signal "back to cases" should be given.

"It does not seem much like spring," said the Moose to the Caribou. "I'm wearing my old horns yet, and I do not see a single green leaf."

"Hush!" said the Dream Fox. "The Wise Men say it is spring."

Meanwhile, the Foxes and the Civet Cats were roaming around the bird rooms trying to coax the fat Ducks and Grouse to come for a walk. But the birds seemed neither to see nor hear them, while the Weasels and Minks licked their lips, longingly but vainly, as they gazed at the trays of eggs.

The Bats tried to hang themselves up in dark corners, but found the ceiling too smooth; and the Woodchucks and Beavers who essayed to burrow holes in the floor were equally unsuccessful. The Possums and Coons went down to the wood room and tried to reach some fine tree-trunks in search of likely holes for homes; while the Mountain Goat and Bighorn practised mountain climbing by running up and sliding down the bannisters; and the Rats and Mice dulled their teeth in trying to gnaw holes in the iron doors.

During this time, the Walrus, Sea Lion, and Seal, who had flopped easily enough *downstairs*, were making frantic efforts to haul themselves up again. For, at the first corner, the Walrus had come face to face with one of his enemies from the North, an Eskimo chief, harpoon in hand, ready to charge, while close by was a kyack, or hunting canoe, covered with the skin of, perhaps, the Walrus' own brother.

The night wore on; fog had settled over the city, hiding the streets and the moon—the fog of an early spring morning.

"How I should like to go out and breathe that wet air!" said the Moose, wistfully, flapping his big ears. "Me, too," sighed the Beaver, sitting up to listen. "What was that?"

"Toot—toot—t-o-o-t!" shrieked a whistle from the long-legged railroad on the avenue.

"Hark!" bellowed the Bison, his nostrils quivering, as he panted with fear. "Hark! do you hear that cry, the voice of the Iron Horse? It was such a cry that gave the signal for my exile from the plains. Quick! Back to your places, Four-footed Americans!"

The fog lifted as the sun rose, and the Song Sparrow warbled merrily in the Park, while no one would have known that the beasts in the Museum had ever left the cases, unless the Dream Fox had whispered it to them.

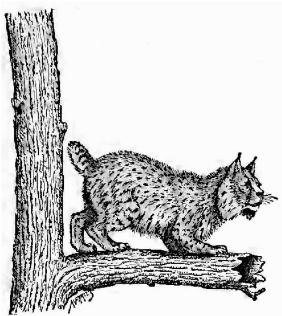
\* \* \* \* \*

The morning after their return from the excursion, Dodo and Nat were out bright and early to discover what had happened in their absence.

"It is spring even if the wind does blow," laughed Dodo, holding her hat on. "Do look at the crocuses on the lawn."

"Yes, it's spring, shor 'nuff!" exclaimed Rod, coming from the kitchen door. "I've got suthin' you won't like to hear, to tell yer, and suthin' yer will like, to show yer, if yer come right down to the barns."

"Mother! Daddy! Uncle!" called Dodo, rushing into the house a few moments later. "What do you think Billy Coon has done but run away, and Rod says he won't come back, because it's spring and he's gone to the woods to find a mate and hire a house. What else do you think has happened too? I can't wait to give you three guesses. Daisy has a beautiful little calf, and it's a lovely mousy color, with great eyes like a Deer. Please may I name her Clover? Rod says if she lives to grow up, she will be a fine cow and give as buttery milk as Daisy. Yes? Then I'll go back right away and tell her what her name is," and Dodo skipped down the walk, singing, "M—mammals; m—milk!"



ADDER FOR CLIMBING THE FAMILY TREE  
OF THE NORTH AMERICAN MAMMALS



## ORDER OF POUCHED MAMMALS

### Marsupialia

#### FAMILY DIDELPHIA

(Number of North American Species, One)

The females of this family carry their young, when first born, in a pouch on the lower part of the abdomen. They have four handlike feet, and a tail which is used like a hand (*pre-hen-sile*, the Wise Men call this sort of tail). These animals live on the ground and in trees. They are both flesh, fruit, and insect eaters.

#### Virginia Opossum

#### *Didelphis virginiana.*

Length of body, 17 inches; tail, 11-12 inches.

## ORDER OF SEA COWS

### Sirenia

(Number of North American Species, Two)

FAMILY OF MANATEES

**Manatidæ**

(Number of North American Species, One)

Clumsy animals of southern rivers, feeding upon water plants.

**American Manatee**

*Manatus americanus.*

Length, 8-10 feet.

**ORDER OF WHALES, PORPOISES, DOLPHINS**

**Cetacea**

(From *Cetus* and *Ketos*, the Latin and Greek words for Whale,—Whale meaning *roller*.) All of this order live on animal food and are helpless on land. One species, the Killer Whale, eats other warm-blooded animals.

FAMILY OF TRUE WHALES

**Balænidæ**

(Number of North American Species, Seventeen)

Has plates of baleen, the horny fibre known as whalebone, growing from its palate. Feeds on Sea mollusks.

**Bowhead Whale**

*Balæna mysticetus.*

Length, 45-50 feet.

**Finback Whale**

*Balænoptera musculus.*

Length, 65-70 feet.

FAMILY OF SPERM WHALES

**Physeteridæ**

(Number of North American Species, Two)

This family lives on squids and cuttlefish, among other things. It yields the perfume called ambergris. Spermaceti, a lardy substance used in making candles, is found in a great cavity in the skull. The fat blubber, which covers the body under the skin, making it easy for the Whale to float, yields sperm oil.

**Cachelot, or Common Sperm Whale**

*Physeter macrocephalus.*

Length, 55-60 feet.

FAMILY OF DOLPHINS

**Delphinidæ**

(Number of North American Species, Twenty-eight)

**Common Porpoise**

*Phocæna phocæna.*

Length, 4½ feet.

(Porpoise means *Sea Hog*, a name relating to the clumsy shape and small piglike eyes of the animal.)

**Dolphin**

*Lagenorhynchus acutus.*

Length, 10-15 feet.

**ORDER OF HOOVED QUADRUPEDS**

## Ungulata

Ground animals, living chiefly on vegetable diet, a few sometimes taking animal food.

### DIVISION I

(None are natives here)

Toes one, three, or five, ending in hoofs. The Rhinoceros belongs here; also the Horse and Ass, both having one toe, turned into a broad hoof. At the present day we have no native wild horses, those that rove the plains being the children of emigrants.

### DIVISION II

Hoofed toes, even, two or four. Horns, when present, in pairs.

#### A

#### Omnivora

Eaters of both animal and vegetable food.

#### FAMILY OF PECCARIES

#### Dicotylidæ

(Number of North American Species, Two)

Front foot of four toes, like the domestic pig; three toes on hind foot.

#### Collared Peccary

*Dicotyles angulatus.*

Length, 3 feet.

#### B

#### Ruminantia

Cud-chewing vegetable eaters.

#### DEER FAMILY

#### Cervidæ

(Number of North American Species, Nine)

Males (and in one species the females) having antlers that are shed annually.

#### American Deer

*Dorcelaphus americanus.*

Height at shoulder, 3 feet.

#### Elk or Wapiti

*Cervus canadensis.*

Height at shoulder, 5 feet.

#### Moose (Elk of Europe)

*Alces alces.*

Height at shoulder, 6 feet.

#### Caribou or Reindeer

*Rangifer caribou.*

Height at shoulder, 4 feet.

#### ANTELOPE FAMILY

## **Antilocapridæ**

(Number of North American Species, One)

Nearly related to the Beef Family, but having pronged horns, shed annually.

### **Pronghorn, Prong-horned Antelope**

*Antilocapra americana.*

Height at shoulder, 3 feet.

## **BEEF OR MEAT FAMILY**

### **Bovidæ**

(Number of North American Species, Five)

All the members of this family are good for food. Both males and females have hollow horns without branches, which are never shed. The horns of the males are generally very much larger than those of the females.

### **Bighorn or Mountain Sheep**

*Ovis cervina.*

Height at shoulder, 3½ feet.

### **Mountain Goat**

*Oreamnos montana.*

Height at shoulder, 2½ feet.

### **Musk Ox (really a big sheep)**

*Ovibos moschatus.*

Height at shoulder, 4½ feet.

Males and females with horns nearly equal in size.

### **American Bison, or Buffalo**

*Bison bison.*

Height at shoulder, 5½-6 feet.

## **THE ORDER OF GNAWERS**

### **Rodentia**

The largest and most widely distributed group of Mammals, found in all parts of the world. More than nine hundred have been named, and new ones are constantly being found.

These gnawers are mostly small animals, with four strong cutting teeth, living on or under the surface of the ground or in trees, a few being expert swimmers. They are chiefly vegetable eaters, though a few prefer animal food.

## **FAMILY OF SQUIRRELS**

### **Sciuridæ**

(More than Sixty North American Species)

### **Sciurus and Sciuropterus—Tree Squirrels**

Meaning those who "sit in the shadow of the tail." Good-sized ears, climbing feet, the front having four and the back five sharp long claws. Sometimes having pouched cheeks for carrying food, and, usually, long, plummy tails.

### **Flying squirrel**

*Sciuropterus volans.*

Length of body, 6½ inches; tail, 5 inches.

### **Red squirrel**

*Sciurus hudsonicus.*

Length of body, 7½ inches; tail, 6½ inches.

### **Gray squirrel**

*Sciurus carolinensis leucotis.*

Length of body, 10½ inches; tail, 10½ inches.



**Fox squirrel*****Sciurus niger cinereus.***

Length of body, 13 inches; tail, 13½ inches.

**Tamias—Ground Squirrels—Chipmunks**

Smaller and lighter than the true squirrels, with the back striped.

**Chipmunk*****Tamias striatus.***

Length of body, 6 inches; tail, 4½ inches.

**Arctomys—Woodchucks**

With heavy body, short ears and tail; cheek pouches imperfect or none. Gnawing teeth very broad and strong.

**Woodchuck*****Arctomys monax.***

Length of body, 14½ inches; tail, 7 inches.

**Cynomys—Prairie Dogs**Intermediate in size between Woodchucks and *Spermophiles*. Short ears; small cheek pouches; five clawed front feet. Live in burrows in large communities and feed on prairie grass.**Prairie Dog*****Cynomys ludovicianus.***

Length of body, 13 inches; tail, 4 inches.

**Spermophilus—Spermophiles**

Rather small and slender, tail variable. Ample cheek pouches; four front toes. Belong to prairies and dry, open plains; live in deep burrows and store up food for winter use.

**Rock Spermophile*****Spermophilus grammurus.***

Length of body, 13 inches; tail, 9 inches.

**Striped Spermophile*****Spermophilus tridecemlineatus.***

Length of body, 7 inches; tail, 4½ inches.

## BEAVER FAMILY

**Castoridæ**

(Number of North American Species, One)

Heavy skull; powerful teeth; strong front claws. Tail flat and tongue-like. The best builder among Mammals.

**Beaver*****Castor canadensis.***

Length of body, 2 feet; tail, 10 inches.

## FAMILY OF RATS AND MICE

**Muridæ**

(Nearly Two Hundred North American Species)

Clumsy, thickly furred body; small ears; short tail; small feet with furry soles.

**White Lemming*****Dicrostonyx torquatus.***

Length of body, 5 inches; tail, 1 inch.

Heavy animal, head set close to shoulders. Fore limbs with four toes and a small thumb; long claws for scratching and digging; five webbed toes on hind feet; compact scaly tail; soft under-fur with stiff hairs overlying it. Animal secretes a musky odor, from which it takes its name.

**Muskrat**

*Fiber zibethicus.*

Length of body, 11½ inches; tail, 11 inches.

Rats and mice—vermin. Large ears; bright eyes; long, naked tails; no cheek pouches; fur soft. Mostly vegetable feeders, but some eat insects and occasionally other animal food.

**Field Mouse**

*Microtus pennsylvanicus.*

Length of body, 4½ inches; tail, 1¾ inches.

**Deer or White-footed Mouse**

*Peromyscus leucopus.*

Length of body, 3¼ inches; tail, 3¼ inches.

**Cotton Rat**

*Sigmodon hispidus.*

Length of body, 6 inches; tail, 4 inches.

**Wood or Pack Rat**

*Neotoma floridana.*

Length of body, 8 inches; tail, 5¼ inches.

**Marsh Rat**

*Oryzomys palustris.*

Length of body, 6 inches; tail, 3½ inches.

GOPHER FAMILY

**Geomyidæ**

(Number of North American Species, Twenty to Thirty)

Burrowing animals, having large cheek pockets that open outside; wide cutting teeth; small eyes and ears; short legs.

**Pouched, or Mole Gopher**

*Geomys bursarius.*

Length of body, 8½ inches; tail, 3 inches.

**Gray Pocket Gopher**

*Thomomys talpoides.*

Length of body, 7 inches; tail, 2½ inches.

FAMILY OF POUCHED RATS AND MICE

**Heteromyidæ**

(Number of North American Species, Thirty to Forty)

**Kangaroo Rat**

*Perodipus richardsoni.*

Length of body, 5½ inches; tail, 6¼ inches.

**Pocket Mouse**

*Perognathus paradoxus.*

Length of body, 4¼ inches; tail, 3¾ inches.

JUMPING MOUSE FAMILY

**Zapodidæ**

(Number of North American Species, Four to Five)

Ground animals, with long springy hind legs and five-toed feet.

**Jumping Mouse**

*Zapus hudsonius.*

Length of body, 3 inches; tail, 5 inches.

PORCUPINE FAMILY

## **Erethizontidae**

(Number of North American Species, Two)

Of chunky build; legs of even length; back covered with stout quills, almost hidden by long hairs; short, stumpy tail. A vegetable eater.

### **Canada Porcupine**

*Erethizon dorsatus.*

Length of body, 2½ feet; tail, 8½ inches.

## **PIKA FAMILY**

### **Ochotonidae**

(Number of North American Species, Two)

No tail; short ears; legs of equal length.

### **Pika, Little Chief, or Whistling Hare**

*Ochotona princeps.*

Length of body, 7¼ inches; no tail.

## **HARE OR RABBIT FAMILY**

### **Leporidae. Leapers**

(Number of North American Species, Twelve or More)

Long ears; long hind legs; short, upturned tail; five front and four hind toes, with hairy pads. Vegetable eaters; living in forms or burrows.

### **Wood Hare (or Gray Rabbit)**

*Lepus sylvaticus.*

Length of body, 16 inches; tail, 2¼ inches.

### **Varying Hare**

*Lepus americanus.*

Length of body, 20 inches; tail, 2¼ inches.

### **Jack Rabbit**

*Lepus melanotis.*

Length of body, 2 feet; tail, 3 inches.

### **Marsh Hare**

*Lepus palustris.*

Length of body, 17 inches; tail, 1¾ inches.

## **ORDER OF FLESH EATERS**

### **Carnivora**

Having four long, pointed, curved, canine (doglike) teeth, with small, pointed incisors, or cutting teeth, between; never less than four toes on each foot. The animals in this order are chiefly meat eaters, living on the flesh of warm-blooded animals. Some individuals need a mixed diet, and eat vegetables liberally.

If we expect to remember their different habits, we must divide this order into: I. Land Livers; II. Water Men ([see page 427](#)).

## **DIVISION I**

### **TRUE FLESH-EATING LAND MAMMALS**

Toes sharply clawed. In some individuals the claws can be drawn back and concealed, to keep them sharp and free from wear and tear. (We see this when the house cat sheathes her claws.) Some of this group are sole walkers, and some step only on the toe pads.

## CAT FAMILY

### Felidæ

(Number of North American Species, Ten)

Our native Cats are flesh eaters, living in solitary pairs, never hunting in packs. They wear soft, thick fur; have round heads; ears of medium size, either round or pointed; large eyes, the pupil (the dark spot in centre) having the power to contract or expand; rough tongues, covered with sharp prickles; and very strong claws.

#### **Puma, Panther, or Mountain Lion of West**

*Felis concolor.*  
(subspecies)

Length of body, 5 feet; tail, 3 feet.

#### **Ocelot, or Tiger Cat**

*Felis pardalis.*

Length of body, 3 feet; tail, 15 inches.

#### **Wildcat, or Lynx**

*Lynx rufus.*

Length of body, 2¼ feet; tail, 7½ inches.

## DOG FAMILY

### Canidæ

(Number of North American Species, Seven or Eight)

We have no purely wild dogs in North America. The Indian and Eskimo Dogs are mongrels. But we have both Wolves and Foxes, which are the house dog's cousins. These have long jaws; limbs of moderate length; short feet, with five fore and four hind toes; blunt claws, which they cannot draw in; and tails of various lengths, bushy. They are more or less sociable animals, hunting in packs.

### Wolves

#### **Coyote, or Prairie Wolf**

*Canis latrans.*

Length of body, 3 feet; tail, 1½ feet.

#### **Timber, or Gray Wolf**

*Canis nubilis.*

Length of body, 4½ feet; tail, 1½ feet.

### Foxes

#### **Gray Fox**

*Urocyon cinereo-argenteus.*

Length of body, 2¼ feet; tail, 14 inches.

#### **Red, Black, or Silver Fox**

*Vulpes pennsylvanica.*

Length of body, 2½ feet; tail, 1½ feet.

#### **Arctic Fox**

*Vulpes lagopus.*

Length of body, 2 feet; tail, 14 inches.

## BEAR FAMILY

### Ursidæ

(Number of North American Species, Six to Eight)

Large, broad mammals, with soft, shaggy fur; round, hairy ears of medium size; five-toed feet, with naked soles and fixed claws; short tails. Can walk upright. Prefer a mixed diet.

#### **Black or Brown Bear**

*Ursus americanus.*

Height at shoulder, 2 feet 10 inches.

#### **Grizzly Bear**

*Ursus horribilis.*

Height at shoulder, 4 feet.

**Polar Bear**

*Thalarctos maritimus.*

Height at shoulder, 4 feet.

RACCOON FAMILY

**Procyonidæ**

(Number of North American Species, Three)

Little cousins of the Bear, resembling both the Bear and Cat. Broad head, pointed muzzle; stands on the sole of the foot; curved, pointed claws; long tail, covered with ringed fur. Fur on body thick and soft.

**Raccoon**

*Procyon lotor.*

Length of body, 2-1/3 feet; tail, 11 inches.

**Cacomistle, or Civet Cat**

*Bassaricus flavus.*

Length of body, 1½ feet; tail, 1-1/3 feet.

FAMILY OF LITTLE FUR BEARERS

**Mustelidæ**

(Number of North American Species, Twenty to Thirty)

A large family of small and medium sized fur bearers, of great commercial value. Grouped according to their teeth and claws.

**American Otter**

*Lutra canadensis.*

Length of body, 2½ feet; tail, 1½ feet.

Broad, flat head; close, short fur; long tail; round feet, with webbed toes and small, blunt claws. Aquatic and fish-eating.

■

**Common Skunk**

*Mephitis mephitis.*

Length of body, 1½ feet; tail, 13 inches.

**Little Striped Skunk**

*Spilogale putorius.*

Length of body, 1-1/3 feet; tail, 7½ inches.

Small head; small, round ears; long, plummy tail; body long, covered with black and white fur of good quality. Burrowing animals, living on mixed food. They secrete an offensive odor, which they use as a weapon of defence.

■

**American Sable, or Pine Marten**

*Mustela americana.*

Length of body, 1½ feet; tail, 10 inches.

**Fisher**

*Mustela pennanti.*

Length of body, 2 feet; tail, 14 inches.

Living among the trees of rocky woods. Savage animals for their size; agile climbers; great destroyers of small gnawers. Fur soft and beautiful.

■

**Weasel, or Ermine**

*Putorius noveboracensis.*

Length of body, 11 inches; tail, 7 inches.

**Mink*****Putorius vison.***

Length of body, 1½ feet; tail, 9 inches.

Small animals, with long bodies and a snake-like motion in moving; blood-thirsty, cunning, great destroyers of poultry and eggs. The northern Weasels are brown in summer, but turn white in winter, and are called Ermines. The Mink remains brown all the year.

■

**Wolverine*****Gulo luscus.***

Length of body, 3 feet; tail, 14 inches.

Stout body, resembling a small Bear; large feet, with curved, sharp claws; soles between pads, covered with stout hair; small eyes; thick, bushy tail; fur rather long and coarse. A very savage beast.

■

**Badger*****Taxidea americana.***

Length of body, 21 inches to 2 feet; tail, 7 inches.

Wide head; stout, flat body; short tail.

## DIVISION II

**FLESH EATERS, LIVING BOTH ON LAND AND IN THE WATER**

## SEALS AND WALRUSES

**Pinnipedia.** (Having pinnate or fin-like feet.)

These mammals have their limbs more or less hidden in the skin of the body, in the shape of five-fingered flippers arranged for moving through the water. They have round heads, soft, beautiful eyes, clumsy bodies, and short tails. All of this group spend most of their time in the water, living on marine food, and only coming on land for a few months in summer to bring forth their young.

## SEA LION FAMILY

**Otariidæ**

(Number of North American Species, Four)

Small ears, round head, and large eyes; long neck, and whiskers like seaweed. They walk clumsily on all fours, the limbs looking like feet joined to the body without legs. They are covered all over with stiff hair, and in some species there is a soft under-fur, which is the familiar "sealskin" of commerce. This is wrongly named, as it is the pelt of the Sea Bear, and not of a true Seal. Male much larger than the female.

**Sea Bear, Fur Seal*****Callotaria ursina.***

Length of male, 7¼ feet; female, 4½ feet.

**Sea Lion*****Zalophus californicus.***

Length of male, 15 feet; female, 8-9 feet.

## WALRUS FAMILY

**Odobenidæ**

(Number of North American Species, Two)

Walrus is a word adapted from the Russian, meaning *Whale Horse*. Animals of Arctic seas, measuring 10-13 feet from nose to rump. Bulky and thick, heaviest about shoulders, and sloping toward the rump. Thick, wrinkled skin covered with rough, yellowish hair which wears almost entirely off when the animal is old. They have a pair of long tusks which aid in fighting, climbing, and digging their shell-fish food. The Walrus is of commercial value on account of its oil, hide, and tusks.

**Atlantic Walrus**

*Odobenus rosmarus.*

Length, 12 feet 3 inches.

**Pacific Walrus**

*Odobenus obesus.*

Length, 12-14 feet.

FAMILY OF TRUE SEALS

**Phocidæ**

(Number of North American Species, Nine)

The true Seal is the most water-loving of the group. Its hind flippers drag uselessly when on land, where it moves by jerking the body along with its fore feet. It is hairy, having no under-fur.

**Harbor Seal**

*Phoca vitulina.*

Length, 4 feet.

**ORDER OF INSECT EATERS**

**Insectivora**

Chiefly small burrowing animals, having glands, where their fore legs join the body, that secrete an offensive odor which protects them from the attacks of flesh eaters. It is not entirely proven that this order lives wholly on insect food.

THE SHREW FAMILY

**Soricidæ**

(Number of North American Species, Twenty)

Mouse-like heads; bodies covered with hair. Shrews live in shallow burrows, and their young are blind and naked at birth.

**Short-tailed Shrew**

*Blarina brevicauda.*

Length of body,  $3\frac{3}{4}$  inches; tail, 1 inch.

**Least Shrew**

*Sorex personatus.*

Length of body,  $2\frac{1}{2}$  inches; tail,  $1\frac{1}{2}$  inches.

MOLE FAMILY

**Talpidæ**

(Number of North American Species, Eight)

**Common Mole**

*Scalops aquaticus.*

Length of body,  $4\frac{1}{2}$  inches; tail, 1 inch.

Having a simple pointed nose; front feet broad and shovel-like; back feet webbed; short, naked tail.

**Star-nosed Mole**

*Condylura cristata.*

Length of body,  $3\frac{3}{4}$  inches; tail, 3 inches.

End of snout surrounded by thread-like appendages, arranged in the shape of a star. Tail long and slightly hairy. Moles live in burrows which are reached by long tunnels.

## THE ORDER WING-HANDED MAMMALS

### Chiroptera

(Number of North American Species, Eighteen)

Fore limbs, or arms, much enlarged and forming membranous wings; hind limbs weak. Faces and ears of many different shapes are found in this order, which contains both insect and fruit eaters.

#### THE TWILIGHT BAT FAMILY

##### Vespertilionidæ

###### Hoary Bat

*Lasiurus cinereus.*

Length of body, 5 inches; spread of wings, 14 inches.

###### Red Bat

*Lasiurus borealis.*

Length of body, 4 inches; spread of wings, 12 inches.

###### Little Brown Bat

*Myotis subulatus.*

Length of body, 3½ inches; spread of wings, 10 inches.

#### MOUSE OR HOUSE BAT FAMILY

##### Emballonuridæ

(Number of North American Species, Three)

###### House Bat

*Nyctinomus brasiliensis.*

Length of body, 3¾ inches; spread of wings, 11½ inches.

## ORDER OF PRIMATES

#### MAN FAMILY

##### Hominidæ

###### The North American Indian

*Homo sapiens americanus.*

Height, 5 feet 10 inches.

This is the Indian race of the United States, and does not include the Eskimo.





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**FOOTNOTES**

- [1] The author is indebted to Mr. Abbott H. Thayer and Dr. E. A. Mearns for information regarding the habits of Porcupines.
- [2] See plate, [page 158](#).
- [3] Strychnine.
- [4] [See page 300](#).
- [5] Dr. C. Hart Merriam. *Mammals of Adirondacks*.

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**TRANSCRIBER'S NOTES**

The following changes were made to the original text:

Page 12: he bought it of the man → he bought it [off](#) the man

Page 242: unstopable → [unstoppable](#)

Page 320: different from each → different from [each other](#)

Page 405: Zoological → [Zoölogical](#)

Page 424: tail, 1½ inches → tail, 1½ [feet](#)

Variations in hyphenation and minor variations in spelling and punctuation have been preserved.

[The end of *Four-Footed Americans and Their Kin* by Mabel Osgood Wright]